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ON THE DRIVING FORCE FOR SYNTACTIC MOVEMENT

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requirements for the degree of

in

LINGUISTICS

by

Erik Zyman

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# Table of Contents

Abstract vi

Acknowledgments viii

1 Introduction 1

2 Janitzio P’urhepecha clause structure 8
   2.1 Introduction ................................................................. 8
   2.2 Using adverbials as syntactic landmarks ........................... 11
   2.3 Verb positions ............................................................. 15
   2.4 Polarity particles ........................................................... 19

3 Profligate subject movement 25
   3.1 Identifying the subject positions ..................................... 25
      3.1.1 [Spec, VoiceP] ........................................................ 25
      3.1.2 [Spec, AspP] ........................................................... 26
      3.1.3 [Spec, TP] ............................................................... 26
      3.1.4 [Spec, MoodP] .......................................................... 27
      3.1.5 [Spec, PolP] ............................................................. 27
      3.1.6 Summary ................................................................. 28
   3.2 What drives profligate subject movement? ......................... 30
      3.2.1 Hypothesis A: Profligate subject movement is altruistic 31
      3.2.2 Hypothesis B: Profligate subject movement is greedy 39
      3.2.3 Hypothesis C: Profligate subject movement is Labeling-driven 46

4 Subjecthood and quantifier float 52
   4.1 Introduction ............................................................... 52
   4.2 Where quantifiers can and can’t float .............................. 55
      4.2.1 Subjects ................................................................. 55
      4.2.2 Nonsubjects ............................................................ 59
      4.2.3 Interim summary ..................................................... 65
   4.3 Stranding vs. adjunction I: Testing the distributional predictions 66
5 Hyperraising to object

5.1 The phenomenon: "accusative + complementizer" (Acc-C) .............................. 97
5.2 The position question: Is $\text{DP}_{\text{ACC}}$ in the matrix or in the embedded clause? 99
5.2.1 Ordering with respect to matrix adverbials ................................................. 100
5.2.2 Condition B .................................................................................................. 101
5.3 The derivation question: Does $\text{DP}_{\text{ACC}}$ end up in the matrix by movement or base-generation? ............................................................... 104
5.3.1 Intervention effects ....................................................................................... 104
5.3.2 Interaction with islands ............................................................................... 108
5.3.3 Escape-hatch blocking ................................................................................ 111
5.4 Could Acc-C be finite object control? ............................................................... 114
5.4.1 $\text{DP}_{\text{ACC}}$ is not an argument of the matrix V ............................................. 116
5.4.2 A negative $\text{DP}_{\text{ACC}}$ can reconstruct into the embedded clause for scope ...................................................................................................................... 118
5.4.3 Eska-rationale clauses are relatively porous ............................................... 122
5.4.4 Interim conclusion ......................................................................................... 124
5.5 Analysis ............................................................................................................. 124
5.5.1 Not only Voice and V, but also $v$ ................................................................ 125
5.5.2 Hyperraising to object targets [Spec, $vP$] .................................................. 128
5.5.3 Putting it all together (with a derivation) .................................................... 131
5.6 Against Greed- and Labeling-based alternatives ............................................ 137
5.6.1 Alternative A: Case-driven greedy movement ............................................. 138
5.6.2 Alternative B: Non-Case-driven greedy movement .................................... 140
5.6.3 Alternative C: Labeling-driven movement ................................................ 142
5.7 Conclusion ........................................................................................................ 143

6 Conclusion ............................................................................................................ 145

A How high can the verb raise in Janitzio P’urhepecha? ........................................ 149

B Which quantifiers float in Janitzio P’urhepecha? ............................................... 156

C More on quantifier float in ditransitive clauses ................................................... 158
D Evaluating two alternative analyses of the Subject Condition effects

D.1 Bošković 2018a ........................................ 161
D.2 Ott 2015 .................................................. 164
Abstract

On the Driving Force for Syntactic Movement

by

Erik Zyman

This dissertation aims to push forward our understanding of syntactic displacement, a phenomenon—analyzed here as movement, or Internal Merge (Chomsky 2004)—in which an element occurs in one position in surface syntax but occupies some other position covertly. One open question about movement is what its “driving force” is. Three prominent hypotheses are Greed (a constituent moves to satisfy a feature of its own—Bošković 2007, a.o.), Enlightened Self-Interest (a constituent moves to satisfy a feature of its own or of the head to whose specifier it moves—Lasnik 1995, a.o.), and Labeling (a constituent moves so that every relevant constituent can be labeled—Chomsky 2013, a.o.).

This dissertation argues for option two, Enlightened Self-Interest, on the basis of P’urhepecha data elicited from native speakers. P’urhepecha is an isolate of Michoacán State, Mexico; the variety investigated here is Janitzio P’urhepecha (JP). Following an investigation (Chapter 2) of JP finite-clause syntax, Chapter 3 argues that JP allows the subject to move to any of a wide array of specifier positions in the inflectional layer (“profligate subject movement”), and that this movement is driven by features of clausal functional heads, not by a feature of the subject itself or by the Labeling Algorithm (LA). Chapter 4 investigates JP quantifier float, which further supports
the results of Chapter 3 and provides evidence that (JP) floated quantifiers are stranded adnominal elements, not adverbials. Chapter 5 argues that JP allows hyperraising to object (subject-to-object raising from finite clauses), and that this involves two steps of purely altruistic (higher-head-driven) movement, rather than being driven by properties of the moving element or by the LA.

Both profligate subject movement and hyperraising to object in JP, then, are driven by features of c-commanding heads, supporting Enlightened Self-Interest over Greed and Labeling. Furthermore, JP hyperraising to object provides evidence that the A/Ø-distinction does not emerge from two classes of syntactic positions, but is instead a consequence of features on particular functional heads. Finally, if indeed Internal Merge is feature-driven in the way argued for here, then we expect External Merge to be also—contra the Free Merge hypothesis.
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Chapter 1

Introduction

A crucial and fundamental task for syntactic theory is to answer the following questions:

(1)  
   a. What syntactic operations are made available by the human capacity for language?
   b. What are their properties?
   c. Why do they have the properties they do?

This dissertation will contribute to achieving this goal by pushing forward our understanding of displacement, a phenomenon which is pervasive in the syntax of natural languages and which is therefore of central importance to syntactic theory. Displacement is a phenomenon in which an element X occurs in one position in surface syntax (call it position Z for convenience) but shows evidence of occupying some other position (call it position Y) in some representation distinct from the one that determines pronunciation:

(2)  \( X_Z \ldots X_Y \)

On one influential approach to displacement, which has been dominant throughout the history of generative grammar, this is the result of movement. On this approach, X is
in position Y underlingly (or, in derivational terms, at a derivational stage that does
not directly feed pronunciation), but moves to position Z, producing the surface form
which is actually observed:

\[ X_Z \ldots X_Y \]  

(3)

For most of the history of generative grammar, displacement seemed like an
anomaly: it was unclear why it should exist. But a major step toward answering this
question was taken when Chomsky (2004) proposed that movement is in fact a subcase
of the basic structure-building operation Merge:

(4) \[ \text{Merge}(X, Y) \rightarrow \{X, Y\} \]  

(cf. Collins 2017)

As shown in (4), Merge takes two syntactic objects X and Y (which can be either lexical
items or complex syntactic objects previously constructed by Merge) and combines them
into a set \{X, Y\}. (Whether Merge is in fact more complex than this, incorporating
additional suboperations such as labeling/projection, is an important question, but not
immediately relevant here. See Merchant 2018:2 for a different definition of Merge
formulated to account for facts about selection.) Chomsky argues that Merge has two
subcases: External Merge and Internal Merge (cf. Collins & Stabler 2016:48, Freidin
X nor Y in (4) contains/dominates the other, Merge(X,Y) is an instance of External
Merge. When X does contain/dominates Y, however, Merge(X,Y) is an instance of
Internal Merge. Both subcases of Merge are exemplified below.

(5) **External Merge** (X does not contain/dominate Y)
    \[ \text{Merge}(see, her) = \{see, her\} \]

(6) **Internal Merge** (X does contain/dominate Y)
    \[ \text{Merge}(I \text{ won’t see her, her}) = \{her, I \text{ won’t see her}\} \]

2
(The example of Internal Merge in (6) abstracts away from the clause-internal phase, if there is one, for ease of exposition. On the related issue of how to distinguish copies from repetitions in a Merge-based system, see Chomsky 2013:40-41, 2015, Freidin 2016:702-705, and Collins and Groat 2018.) The result of the Internal Merge operation in (6) will surface as the topicalization sentence *Her, I won’t see*, given a suitable externalization algorithm for ensuring that non-highest copies are (normally) not realized overtly.

As Chomsky pointed out, if movement is simply Internal Merge—a subcase of the independently motivated structure-building operation Merge—then it is in fact not a theoretical anomaly after all. Indeed, it would be anomalous if it did not exist, since blocking it would require a stipulation (namely, that two syntactic objects X and Y could only be merged if neither contained/dominated the other).

This is real progress. But questions remain about this particular structure-building operation (“Internal Merge”):

(7) a. Precisely how should it be characterized/formulated?
   b. How does it function in the computational process (i.e., in syntactic derivations)?
   c. What constraints is it subject to?

In this connection, it is worth noting that a great deal of research has converged on the conclusion that derivations are (at least largely) driven by properties (“features”) of particular lexical items (heads)—selectional features, *ϕ*-features, Case features, etc.—and the interactions they enter into. If this is on the right track, then we can ask:

(8) What are the lexical items and features that drive this *particular* operation (Internal Merge) in the course of a derivation?

Or, for short:

(9) What is the driving force for movement?
Three prominent hypotheses about this matter that have been developed and defended are the following:

(10) a. **Greed:** A constituent moves to satisfy a feature of its own.


b. **Enlightened Self-Interest:** A constituent moves to satisfy a feature of its own (greedy movement) or a feature of the head to whose specifier it moves (altruistic movement).


c. **Labeling:** A constituent moves so that every relevant constituent in the structure can receive a label from the syntactic Labeling Algorithm.

(Chomsky 2013, 2015, 2016, Ott 2015, Rizzi 2015, Smith 2015, Bošković 2018a, a.o.)

As the references above make clear, each of these three hypotheses has had, and still has, numerous defenders. The question, then, of what the driving force for movement is remains highly controversial—there is nothing even approaching a consensus on the matter—despite extensive research into the issue spanning many decades.

This dissertation aims to make progress in resolving these important questions by investigating two varieties of movement in P’urhepecha that are relatively unusual from the perspective of the best-studied languages.

P’urhepecha is an isolate, an indigenous language of Mexico spoken in the
central-western state of Michoacán, in nearby states, and by P’urhepecha immigrants in the U.S. Vázquez Rojas Maldonado (2013:8-9) reports that, according to the 2010 National Population and Housing Survey (Censo Nacional de Población y Vivienda) administered by Mexico’s National Institute of Statistics and Geography (Instituto Nacional de Estadística y Geografía) (INEGI 2010), there are in Mexico 124,494 P’urhepecha speakers age 5 or older, of whom 112,131 also speak Spanish. The National Indigenous Languages Institute (Instituto Nacional de Lenguas Indígenas, INALI) reports that there are 128,344 P’urhepecha speakers age 3 or older (Vázquez Rojas Maldonado 2013:8-9; see Vázquez Rojas Maldonado 2013 for more information).


Capistrán (2002) shows that, in Lake Pátzcuaro P’urhepecha, of which Janitzio P’urhepecha is a subvariety, all six orders of S, V, and O are possible, though constituent-order permutation often has information-structural correlates. In Janitzio P’urhepecha, the basic constituent order is SVO. SVO is the constituent order that is typically provided by my consultants when they are asked to translate sentences from Spanish, and it is also, in my experience, the constituent order that is by far the most frequent (in clauses with an overt S and O) in spontaneous speech. Most types of phrases exhibit head–complement order in Janitzio P’urhepecha, although the basic

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1Which could in principle be a translation effect and hence not decisive evidence that Janitzio P’urhepecha is SVO by default.
native adpositions (jingoni ‘with’, anapu ‘from’, jimbo ‘in, at, by’) are postpositions, and auxiliaries (which will play almost no role in this dissertation) follow the verbal projections they take as their complements. These grammatical characteristics of Janitzio P’urhepecha will, of course—along with many others—be prominently on display throughout the examples in this dissertation.

The dissertation is organized as follows. **Chapter 2** establishes in some detail how the clause structure of Janitzio P’urhepecha is organized, focusing on finite clauses. A fine-grained understanding of the structure of such clauses will be crucial to the investigations that follow. **Chapter 3** argues that Janitzio P’urhepecha allows profligate subject movement (i.e., movement of the subject to any of a range of specifier positions in the inflectional layer of the clause; cf. Rizzi 1997:281, and see Cable 2012 on a similar phenomenon in Dholuo), and further argues that this movement is altruistic: it is driven by features of clausal functional heads rather than by a feature of the moving subject itself or by the Labeling Algorithm. These results in turn lay the foundation for **Chapter 4**, an investigation of quantifier float in the language, which yields further support for the conclusions reached in Chapter 3 and provides strong evidence that floated quantifiers, at least in this language, are stranded adnominal elements rather than adverbials adjoined to some clausal projection. **Chapter 5** argues that Janitzio P’urhepecha allows hyperraising to object (raising of the subject of an embedded finite clause to become an object of the matrix clause) and contends that this phenomenon involves two steps of purely altruistic (target-driven) movement, and that alternative analyses on which the movements are driven by features of the moving element itself or by the Labeling Algorithm face serious problems. Both profligate subject movement and hyperraising to object, then, are altruistic (driven by features of c-commanding heads), supporting the Enlightened Self-Interest hypothesis about the driving force for movement over the Greed and Labeling hypotheses. Almost as importantly, the facts of hyperraising to object also narrow down the space of possibilities for understanding the
A/\bar{A}-distinction, one of the fundamental puzzles in syntax. The phenomenon suggests that the traditional view that particular positions (e.g., [Spec,CP]) are inherently A- or \bar{A}-positions is untenable, but an approach on which A/\bar{A}-effects are consequences of features on particular functional heads (van Urk 2015, Fong 2017a,b, 2018) is much more promising. **Chapter 6** reviews the results established in the previous chapters and considers some yet larger questions about syntactic structure-building that emerge naturally from the investigations carried out in those chapters.
Chapter 2

Janitzio P’urhepecha clause structure

If we are to determine what the “unusual” types of movement found in Janitzio P’urhepecha reveal about the nature of movement and, in particular, about its driving force, it will be essential for us to have a reasonably clear and accurate picture of the clause structure of this language. It is to this preliminary investigation that we now turn.

2.1 Introduction

In beginning to ascertain the clause structure of Janitzio P’urhepecha, it will be useful to examine the morphology of the finite verb.

The finite verb consists of a root followed by typically optional derivational suffixes and obligatory voice, aspect, tense, and mood suffixes, in that order (the mood suffix being a portmanteau that also expones the person of the subject). This “template” is schematized below.

(11) Morphological structure of the Janitzio P’urhepecha finite verb

<table>
<thead>
<tr>
<th>√ROOT</th>
<th>(Derivational Suffixes)</th>
<th>Voice</th>
<th>Aspect</th>
<th>Tense</th>
<th>Mood+Person</th>
</tr>
</thead>
</table>

By the general logic of the Mirror Principle (Baker 1985:375, (4)), this provides
evidence for (at least) the following clause structure for Janitzio P’urhepecha:

(12)  

Janitzio P’urhepecha clause structure (to be revised)

\[
\ldots \text{MoodP} \\
\text{Mood} \quad \text{TP} \\
[\text{*Pers}:\square\star] \quad \text{T} \quad \text{AspP} \\
\text{Asp} \quad \text{VoiceP} \\
\text{Voice} \quad \text{VP} \\
\text{V} \quad \ldots
\]

Following Heck and Müller 2007, probe features (features that trigger a probing operation) are notated here with stars—[\text{F}\star]—and unvalued features with a box: [\text{F}:\square]. Features with both characteristics—i.e., unvalued features that trigger probing, which if successful will supply them with a value—are notated with stars and a box: [\text{*F}:\square\star]. Departing from Heck and Müller’s notation, features that trigger probing and bear an EPP subfeature are notated [\text{F}\star]_{\text{EPP}} or [\text{*F}:\square\star]_{\text{EPP}} (depending on whether they do not or do additionally start out unvalued, and therefore need to be supplied with a value).

(All the features discussed in this dissertation are syntactic features—i.e., properties of lexical items [cf. Chomsky 2008, Collins & Stabler 2016:44-45, Collins 2017] that are visible to the syntax and can therefore, at least in principle, enter into syntactic relations. An EPP subfeature is a diacritic on a probe feature of a head H that—after the relevant probing operation finds a goal [and, if applicable, all relevant feature valuation takes place]—forces the goal to internally merge with the highest available projection of H.)

All of this will be illustrated in detail in Chapter 3. It will, however, be worthwhile to clarify this feature system to some extent now by briefly considering some concrete examples. Present T in English (simplifying somewhat, perhaps) could be
analyzed as bearing two unvalued probe features $[^*\text{Pers}^\square_*]^{\text{EPP}}$ and $[^*\text{Num}^\square_*]$ (though it is not clear which of these features bears the EPP subfeature). If so, this $T$ probes (hence the stars); once it finds a suitable goal, the goal supplies the features on $T$ with values (hence the boxes); and then the EPP subfeature forces the goal to internally merge with the highest available projection of $T$. In Italian and Spanish, by contrast, no feature of finite $T$ obligatorily bears an EPP subfeature, so the DP that values the features of $T$ is not forced to move to $[\text{Spec},\text{TP}]$. The features just considered are unvalued features that are also probe features; by contrast, a DP’s Case feature ($[^*\text{Case}^\Box]$) is an unvalued feature (hence the box) that is typically thought not to be a probe feature (hence the absence of stars—though some analyses will be discussed in later chapters on which this assumption is rejected). Finally, the notion of a probe feature that is not an unvalued feature ($[^*\text{F}^\Box]$) will be useful for analyzing cases in which there is evidence that probing occurs, but there is no evidence for valuation or agreement of any sort; for example, subject movement in Mandarin and Japanese may be driven by $[^*\text{D}^\Box]^{\text{EPP}}$ (or perhaps $[^*\text{N}^\Box]^{\text{EPP}}$) on a clausal functional head.

On the decomposition of the verb phrase, see Johnson 1991, Larson 1988, 1990, 2017, Bowers 1993, 2002, Kratzer 1996, Diesing 1998, Phillips 2003, Takano 2003, Miyagawa and Tsujiioka 2004, Harley 2008, Janke and Neeleman 2012, Gribanova 2013, Marantz 2013, Tucker 2013, Legate 2014, Bruening 2015, Krejci and Tallman 2015, and McCloskey 2017, a.m.o. The lower “VP-shell” will be referred to here as VP and the higher one as VoiceP. (There is no overt voice suffix in the active voice.) There is some additional (nonmorphological) evidence for such a bipartite structure in Janitzio P’urhepecha specifically. In this language, the verb in a ditransitive verb phrase normally precedes both the direct and the indirect object, which can occur in either order. But the linearly earlier object seems to c-command the linearly later one, judging by the Barss-Lasnik tests (Barss & Lasnik 1986) that can be run, namely variable binding and $\text{mandani} \ldots \text{materu} \ (\approx \text{each} \ldots \text{the other})$. See Jackendoft 1990 and Bruening
However, for analyses of verb phrase structure on which Barss-Lasnik effects do not diagnose c-command.

2.2 Using adverbials as syntactic landmarks


To find such adverbials, let us use as our guide the Cinque hierarchy (Cinque 1999, Tescari Neto 2013:30). According to cartographic analyses such as those of Cinque (1999) and Tescari Neto (2013), clause structure is highly articulated, and AdvPs occupy the specifiers of dedicated functional heads. A barer clause structure, by contrast, will be adopted here, along with the more traditional assumption that AdvPs are adjuncts. However, some of the substantive claims of the cartographic analyses can be adapted straightforwardly to this more traditional framework of assumptions. Consider the AdvPs *frankly*, *then*, *suddenly*, and *well*. According to the Cinque hierarchy, they occupy the specifiers of the functional heads $\text{Mood}_{\text{SpeechAct}}^0$, $\text{T}_{\text{Future}}^0$, $\text{Asp}_{\text{Inceptive(I)}}^0$, and $\text{Voice}^0$, respectively. A natural way to implement this treatment of these AdvPs in a noncartographic framework would be to posit that they adjoin to MoodP, TP, AspP, and VoiceP, respectively. (For noncartographic approaches to the syntax of adverbials,
see Ernst 2002 and Svenonius 2002, a.m.o.)

If this analysis of those adverbials is correct for Janitzio P’urhepecha, then when the equivalents of two of them have been left-adjointed to their respective hosts in this language, the putatively higher adverbial should precede the putatively lower one, and exchanging them in the linear string should produce a less acceptable result. This prediction is correct, as shown below.

The adverbial sesimindu uandantani ia ‘frankly / honestly / to tell you the truth’ (a nonfinite clause meaning, semiliterally, ‘to inform very well’) can precede the adverb jimamberi ‘then’ ((13a)). Reversing these two adverbials yields a much less acceptable result ((13b)).

(13) Sesimindu uandantani ia ‘frankly, honestly’ (MoodP) precedes jimamberi ‘then’

(1P)

a. Sesi=mindu uandanta-ni ia Elena jimamberi
   well=very inform-INF already Elena then
   uera-si-Ø-ti ereta-rhu.
   go.out-PFV-PRS-IND3 town-LOC
   ‘Honestly, Elena then left town.’

b. **Jimamberi Elena sesi=mindu uandanta-ni ia
   then Elena well=very inform-INF already
   uera-si-Ø-ti ereta-rhu.
   go.out-PFV-PRS-IND3 town-LOC
   ‘Then Elena honestly left town.’

Although the deviance of jimamberi ‘then’ . . . sesimindu uandantani ia ‘honestly’ order is not always quite as strong as it is in (13b), this order is consistently judged less acceptable than the opposite order.

Jimamberi ‘then’, in turn, can precede isku jauembarini (or isku jauemberini) ‘suddenly’ ((14a)). Here too, reversing the expected order produces a decrease in acceptability ((14b)).
Finally, *isku jauembarini* ‘suddenly’ can precede manner adverbials such as *exeparini* ‘carefully’, *eskaparini* ‘carefully’, and *ikichakueni jasi* ‘badly’. If the opposite order is used instead, the sentence typically becomes degraded. This is shown in (15-17).

(15) **isku jauembarini** ‘suddenly’ (AspP) precedes **exeparini** ‘carefully’ (VoiceP)

a. Emilia *isku jauembarini* apojtsïta-sï-Ø-ti  *exeparini* koki-ni
   Emilia suddenly put-PFV-PRS-IND3 carefully toad-ACC
   uitsakua-rhu.
   grass-LOC
   ‘Emilia suddenly carefully put the toad on the grass.’

b. ??Emilia *exeparini* apojtsïta-sï-Ø-ti  *isku jauembarini* koki-ni
   Emilia carefully put-PFV-PRS-IND3 suddenly toad-ACC
   uitsakua-rhu.
   grass-LOC
   ‘*Emilia carefully suddenly put the toad on the grass.*’

(16) **isku jauembarini** ‘suddenly’ (AspP) precedes **eskaparini** ‘carefully’ (VoiceP)

a. Berta *isku jauembarini* mikanta-sï-Ø-ti  *eskaparini* takukata
   Bertha suddenly close-PFV-PRS-IND3 carefully book
   k’eri-ni.
   big-ACC
   ‘Bertha suddenly carefully closed the big book.’
b. Berta eskaparini mikanta-së-Ø-ti isku jauembarini takukata
Bertha carefully close-PFV-PRS-IND3 suddenly book
k’erî-ni.
big-ACC
‘*Bertha carefully suddenly closed the big book.’

(17) Isku jauembarini ‘suddenly’ (AspP) precedes ikichakueni jasi ‘badly’ (VoiceP)

a. Ikinari isku jauembarini unta-së-Ø-ti ikichakueni jasi
Ikinari suddenly fix-PFV-PRS-IND3 badly
uaxantsikua-ni.
chair-ACC
‘Ikinari suddenly fixed the chair badly.’

b. ∫Ikinari ikichakueni jasi unta-së-Ø-ti isku jauembarini
Ikinari badly fix-PFV-PRS-IND3 suddenly
uaxantsikua-ni.
chair-ACC
‘*Ikinari badly suddenly fixed the chair.’

Although the judgments are mostly gradient, and subtle at times, the contrasts
are quite telling. When an adverbial (AdvP_A) precedes another adverbial (AdvP_B) that
was hypothesized above to adjoin to a lower clausal projection, the result is perfect.
When the adverbials are exchanged in the linear string (AdvP_B ∫ AdvP_A), the result is
typically less acceptable. This is exactly as expected on the hypothesis laid out above—
namely, that sesimindu uandantani ia ‘honestly’ adjoins to MoodP, jimamberi ‘then’
to TP, isku jauembarini ‘suddenly’ to AspP, and manner adverbials to VoiceP. These
adverbials, then, can indeed be reliably used as syntactic landmarks, and our picture of
Janitzio P’urhepecha clause structure may be revised along the lines shown below:

1The focus here is on sentences such as and , in which it is reasonably clear that none of the adverbials
are right-adjoined to a clausal projection.
Note that \textit{AdvP} is used here as a cover term for \textit{adverbial} phrases, which almost certainly do not all belong to the same syntactic category in Janitzio P’urhepecha.

### 2.3 Verb positions

A few words are in order about the position of the (finite) verb. This element can appear to the right of low (VoiceP-adjoined) adverbials such as \textit{ikichakueni jasi} ‘badly’, indicating that it can surface in a very low position:

(19) Karlusí \textit{ikichakueni jasi} [\textit{atanta-sí-Ø-ti \textit{tsëntsikata-ni}}. Carl badly paint-PFV-PRS-IND3 wall-ACC

‘Carl painted the wall badly.’

This position must be Voice rather than V, since V moves to Voice\footnote{This cannot be demonstrated on the basis of the data shown so far, but the evidence is the following.} But the verb can
be realized in several other positions as well. It can surface between VoiceP-adverbials and the AspP-adverbial *isku jauembarini* ‘suddenly’ ([(15a), (16a), (17a)]), indicating that it can be realized in Asp. It can alternatively surface between the AspP-adverbial *isku jauembarini* ‘suddenly’ and the TP-adverbial *jimamberi* ‘then’ ([(14a)]—i.e., in T. Finally, it can surface to the left of *jimamberi* ‘then’ ([(20)]), suggesting that it can also be realized in Mood. (For a detailed investigation of how high the verb can raise in Janitzio P’urhepecha, see Appendix A.)

(20) Materu uexurini ereka-a-∅-ka=sï materu ereta-rhu.
     another year live-FUT-PRS-IND1=pS another town-LOC.
     Erenta-a-∅-ka=sï jimamberi sanderu sesi.
     live-FUT-PRS-IND1=pS then more well
     ‘Next year we’ll live in another town. Then we’ll live better.’

Although (20) was judged fully acceptable, it is perhaps more typical for verb-*jimamberi* order to be judged a bit marginal compared to *jimamberi*-verb order:

(21) Uexurini jimbanĩ erenta-a-∅-ka=sï materu k’umanchikua-rhu. Nande year new live-FUT-PRS-IND1=pS other house-LOC. mother
     {jimamberi pia-a-∅-ti / ?pia-a-∅-ti jimamberi} ma
     {then buy-FUT-PRS-IND3 / ?buy-FUT-PRS-IND3 then} a
     kojtsitarakua k’eri.
     table big
     ‘In the new year we’ll live in a different house. Mom will then buy a big table.’

Summarizing, then, the finite verb can be realized in Voice, Asp, T, or Mood. (At present, the verb/adverbial ordering facts just discussed are the only evidence available for the verb-raising operations posited. A logically possible alternative analysis on which...

In Chapter 5, it will be shown that the subject of an embedded finite CP can raise into the matrix clause, becoming an object of this clause (this is the phenomenon of *hyperraising to object*), and that the position it targets is a specifier position of vP (a projection lower than VoiceP but higher than VP, whose existence in Janitzio P’urhepecha will be argued for in Chapter 5). Sentences [(176) and (180)] in which the verb immediately precedes the hyperraised DP in [Spec,vP] (and is itself immediately preceded by a manner adverbial left-adjointed to VoiceP), are acceptable, but [(181)], which attempts to place the verb to the immediate right of the hyperraised DP in [Spec,vP], is highly degraded. This demonstrates that V obligatorily raises to Voice in Janitzio P’urhepecha. The interested reader is referred to the example sentences in Chapter 5 just mentioned.
it is not the verb that moves but the adverbials will not be considered here, primarily
because it would not be straightforward on such an analysis to explain why—or even
to state the generalization that—the adverbials are rigidly ordered with respect to one
another.)

Whichever of these head positions the verb word surfaces in, it always conforms
to the same morphological template: Root – (Derivational Suffixes) – Voice – Aspect
– Tense – Mood+Person ([11]). Even when the verb word occupies a relatively low
position (e.g., Voice), it bears suffixes that are the reflexes of higher syntactic heads,
in conformity with the Mirror Principle–compliant template just mentioned. In other
words, there is no correlation between the verb word’s position and its internal complex-
ity (except in the trivial sense that it always has the same complex internal structure,
regardless of the position it occupies). This strongly suggests that the interaction be-
tween head movement and word-building is not trivially straightforward (cf. Angeles
2017, §4-5; Arregi & Pietraszko 2018; Gribanova & Harizanov to appear). One way to
capture this (in the nonlexicalist framework assumed here) is as follows. V obligatorily
moves to Voice. Optionally, further head movement can take place—to Asp, to T, or
even to Mood. However much word-building is not done by head movement in a partic-
ular derivation is done by (possibly iterated) postsyntactic Lowering (Embick & Noyer
how exactly the pieces of the verb word are put together, what is important for present
purposes is that, as mentioned above, the verb word can be realized in Voice, Asp, T,
or Mood.

Because V, Voice, Asp, T, and Mood are ultimately packaged together into
a single morphophonological word, a Natural Language and Linguistic Theory reviewer
asks whether they might not be base-generated as a cluster, as Haider (2003, 2010) pro-
poses that Dutch verb clusters are. Adapting Haider’s analysis to Janitzio P’urhepecha,
we might posit that each head selects the next head down and projects as a head (rather
than as a phrase), yielding the base-generated complex head shown in (22), with the arguments being projected as sisters of (projections of) the entire complex head.

\[(22)\]

Evidence against this alternative is provided by the facts discussed above about the placement of the verb word with respect to adverbials. The landmark adverbials identified in \(\S2.2\) are rigidly ordered, and the verb word can surface in various positions in between them (which often results in its being linearly separated from the internal arguments, as in (15a), (16a), (17a), and (14a)). This is strongly suggestive of head movement. Therefore, if the verb word were base-generated as a head cluster ((22)), it would apparently still be necessary to posit that it can undergo head movement (sometimes multiple times in a single derivation)—but this would remove much of the motivation for the cluster analysis.

The reviewer also mentions a second alternative analysis, on which the voice, aspect, tense, and mood suffixes each spell out a component (presumably a feature) of a single complex AgrS head (cf. Pollock 1989), to which V moves. As the reviewer acknowledges, though, “this raises issues for adverb placement.” Like the cluster analysis ((22)), the complex-AgrS-head analysis does not on its own account for the fact that the verb word can occupy a number of different head positions in between the landmark adverbials. To capture this, it would be necessary to posit that the V-AgrS complex can undergo further head movement (sometimes multiple times), undercutting the motivation for positing the complex AgrS head in the first place.
For these reasons, neither the cluster analysis nor the complex-AgrS-head analysis will be adopted here.

2.4 Polarity particles

Before concluding this section, it will be worthwhile to make some observations about polarity particles that will give us a few more landmarks to orient ourselves by. Janitzio P’urhepecha has, among others, the polarity particles *ambu* ‘not’ and *k’o*, an emphatic affirmative particle that seems to express something like verum focus (Höhle 1992, Samko 2016). These particles precede the finite verb:

\[(23)\]

\[\text{a. Iasì } \textit{ambu} \textit{ts’irakuare-Ø-Ø-Ø}. \]
\[\text{today not be.cold-PFV-PRS-IND} \]
\[\text{‘It’s not cold today.’} \]

\[\text{b. Iasì } \textit{k’o} \textit{ts’irakuare-sí-Ø-tí}. \]
\[\text{today AFFM be.cold-PFV-PRS-IND3} \]
\[\text{‘Today it is cold.’} \]

*Ambu* ‘not’ and *k’o* ‘AFFM’ seem to merge higher than Mood; this is particularly clear in (23b), where Mood surfaces overtly (as the third-person indicative mood morpheme -tí).

A natural hypothesis is that these particles instantiate a functional category Pol(arity), the next functional head up above Mood (24). (On Pol heads, see Pollock 1989, Laka 1990, Zanuttini 1997, Lebowski 2016, and Desai 2017b; for related investigations, see Gianollo 2016, Hedding 2017, and Vincent 2018.)

\[(24)\]

\[
\begin{array}{c}
\text{...PolP} \\
\text{Pol} \\
\text{ambu ‘not’} \\
\text{k’o ‘AFFM’} \\
\text{Mood} \\
\text{MoodP} \\
\text{TP} \\
\text{*[Pers:*]} \end{array}
\]
If this is so, a question arises as to whether the finite verb—which has been shown to be able to surface as high as Mood—can alternatively surface one head higher, in Pol (in virtue of having incorporated into Pol, for example). At least when Pol is overt, the answer is no. This is illustrated here with *ambu ‘not’. If an attempt is made to incorporate the finite verb into *ambu ‘not’, and the would-be complex head this gives rise to is pronounced as a single prosodic word, the result is unacceptable:

    today be.cold-PFV-PRS-IND-not
int. ‘It’s not cold today.’

(The test run in (25) assumes that, following head movement, the Pol head *ambu ‘not’ would be linearized as a suffix. If it were linearized as a prefix, then the test probably could not be run: word-level stress falls on the first or second syllable in Janitzio P’urhepecha [the first in the case of *ambu ‘not’], and it is doubtful that a hypothetical sentence □Iasi *ambuts’irakuare, with the verb raising to Pol, could be distinguished from a version of (23a) without the verb raising to Pol but with verum focus on *ambu ‘not’.)

The result in (25) leads to the expectation that the verb should be unable to surface in a head position higher than Pol. It probably should not be able to reach such a head position by skipping over Pol, given the generally strictly local nature of head movement (at least of this “word-building” type; cf. the Head Movement Constraint [Travis 1984]; Angeles 2017, §4-5; Arregi & Pietraszko 2018; and Gribanova & Harizanov to appear). And it should not be able to reach a head position higher than Pol by incorporating into Pol and then excorporating from it, because the first step (incorporation) is impossible ((25)). Therefore, the verb should be unable to precede *ambu ‘not’ even if these two elements are pronounced as separate prosodic words. This prediction is correct:
At this point a small revision is needed to our clause structure. Given that Pol is higher than Mood, the working hypothesis from above that \textit{sesimindu uandantani ia} ‘honestly’ adjoins to MoodP predicts that polarity particles should obligatorily precede this adverbial. In fact, the opposite is true, as shown for \textit{ambu} ‘not’ in (27) and for \textit{k’o} ‘AFFM’ in (28).

(27) \textit{Sesimindu uandantani ia} ‘honestly’ must precede \textit{ambu} ‘not’

a. \textit{Sesi=mindu uandanta-ni ia} \textit{ambu} aparekuari-na-∅-ki.  
well=very inform-INF already not be.hot-PRG-PRS-IND  
‘It’s honestly not hot [out].’

b. \textit{Ambu} \textit{sesi=mindu uandanta-ni ia} aparekuari-na-∅-ki.  
not well=very inform-INF already be.hot-PGR-PRS-IND  
int. ‘It’s honestly not hot [out].’ / ‘It’s not honestly hot [out].’

(28) \textit{Sesimindu uandantani ia} ‘honestly’ must precede \textit{k’o} ‘AFFM’

a. \textit{Sesi=mindu uandanta-ni ia} \textit{k’o} aparekuare-si-∅-ti.  
well=very inform-INF already AFFM be.hot-PFV-PRS-IND3  
‘It honestly is hot [out].’

b. \textit{K’o} \textit{sesi=mindu uandanta-ni ia} aparekuare-si-∅-ti.  
AFFM well=very inform-INF already be.hot-PFV-PRS-IND3  
int. ‘It honestly is hot [out].’

This shows that \textit{sesimindu uandantani ia} ‘honestly’ does not in fact adjoin to MoodP, but rather adjoins at least as high as PolP. Taking it to adjoin to PolP, we arrive at the following revised clause structure for Janitzio P’urhepecha:
It will be tentatively assumed here that Pol is present even in finite clauses in which it is not overt; in these cases it presumably contributes ordinary, nonemphatic affirmative polarity. This assumption is supported by the fact that *sesimindu uandantani ia* ‘honestly’, which was just argued to adjoin to PolP, can occur in clauses with no overt polarity particle:

(30) *Iamindu uatsapi-cha sesi=mindu uandanta-ni ia* sesi all child-PL well=very inform-INF already well
t’ire-si-∅-ti=si.
eat-PFV-PRS-INd3=pS
‘All the kids honestly ate well.’

Although it is possible in principle that the verb can (or must) raise into Pol precisely when Pol is not overt, it is reasonable to assume, in the absence of evidence to the contrary, that the verb can only ever raise as high as Mood. (The former claim is made by Mitchell [2006, §2.1] for Finno-Ugric. In the relevant languages, the verb agrees with
the subject, unless a polarity particle is present, in which case the polarity particle agrees with the subject and the verb is uninflected. Mitchell, assuming that subject agreement takes place in a Spec-head configuration, concludes that the polarity particle and the verb compete for a single position—i.e., that the verb raises into this position precisely when no overt polarity particle is present. This analysis will not be adopted for Janitzio P’urhepecha here, because polarity particles do not bear agreement in this language, and because subject agreement in Janitzio P’urhepecha is more straightforwardly analyzed as taking place under Agree than as occurring in a Spec-head configuration [since Mood agrees with the subject in person even when the subject is lower than [Spec,MoodP], as will become clear in §3.1].

Given that the finite verb cannot be realized in or higher than Pol, the clause structure in (29) predicts that it should also be unable to precede sesimindu uandantani ia ‘honestly’, which is analyzed there as a PolP-adverbial. This prediction is correct:

(31) ̄*Xumo xepe-sï-Ø-ti sesi=mindu uandanta-ni ia sanderu Xumo be.lazy-PFV-PRS-IND3 well=very inform-INF already more eska iamindu-eecha. than all-PL
int. ‘Xumo’s frankly lazier than everyone else.’

The problem with (31) is not that sesimindu uandantani ia ‘frankly’ is too prosodically heavy to occur sentence-externally: it can perfectly well be preceded by the subject ((32)).

(32) Xumo sesi=mindu uandanta-ni ia sanderu xepe-sï-Ø-ti Xumo be.lazy-PFV-PRS-IND3 well=very inform-INF already more eska iamindu-eecha. than all-PL
‘Xumo frankly is lazier than everyone else.’

For other analyses of clause structure that are broadly compatible with the one in (29), see Compton and Pittman 2010 (for Inuit); Gribanova 2013 (for Russian); Tucker 2013 (for Maltese); Legate 2014 (for Acehnese); Hamilton 2015 (for Mi’gmaq);
Kalivoda 2015 (for Teotitlán del Valle Zapotec); Ostrove 2016b, 2017a,b (for San Martín Peras Mixtec); Baclawski 2017 (for Eastern Cham); Bruening 2017 (for Passamaquoddy-Maliseet); Desai 2017a,b (for Gujarati); Hedding 2017 (for Somali); McCloskey 2017 (for Irish); Adler, Foley, Pizarro-Guevara, Sasaki, and Toosarvandani 2018 (for Santiago Laxopa Zapotec); Clem 2018 (for Amahuaca); Hammerly 2018 (for Southwestern Ojibwe); Gribanova 2018 (for Uzbek); Kalivoda and Zyman 2018 (for Latin); Ostrove 2018 (for Irish); Pietraszko 2018 (for Ndebele and Swahili); Borise and Polinsky in press (for Georgian, though see also Flinn 2017); Danckaert to appear (for Latin); Haugen to appear (for Classical Nahuatl); and Ostrove submitted (for Scottish Gaelic), a.m.o.

Needless to say, there is much more to uncover about Janitzio P’urhepecha clause structure. In particular, nothing has been said here about the left periphery (Rizzi 1997; see Capistrán 2002 on leftward focus movement, topicalization, left-dislocation, and hanging topics in Lake Pátzcuaro P’urhepecha, of which Janitzio P’urhepecha is a variety). But the structure in (29) will suffice for present purposes.
Chapter 3

Profligate subject movement

This chapter shows that the subject in Janitzio P'urhepecha can either remain in its base position ([Spec,VoiceP] for external argument subjects) or raise to any of a wide array of specifier positions in the inflectional layer of the clause (cf. Rizzi 1997:281; see Cable 2012 for an investigation of a very similar phenomenon in Dholuo). The chapter then asks what this “profligate subject movement” reveals about the driving force for movement, and argues that it receives a straightforward and empirically adequate analysis under Enlightened Self-Interest, but not under Greed or Labeling.

3.1 Identifying the subject positions

The first step in this investigation will be to determine where in the structure of a Janitzio P’urhepecha clause the subject can surface overtly.

3.1.1 [Spec,VoiceP]

Although many of the sentences examined in the previous chapter were subject-initial—and, indeed, this seems to be common—Janitzio P’urhepecha allows its subjects, like its verbs, to surface extremely low, to the right of VoiceP-adverbials such as xarhin(t)kueri.
'early’ (but to the left of VP-internal material such as the direct object):

(33) Uitsindekua mita(a)nta-si-Ø-ti=sì xarhinkueri [iamindu uariti-cha]
yesterday open(pO)-PFV-PRS-IND3=pS early all woman_RESP-PL
ts’im-eri meiapekue-echa-ni.
they-GEN store-PL-ACC
‘Yesterday all the women opened up their stores early.’

This strongly suggests that the subject can surface in [Spec,VoiceP], which is presumably its base position when it is an external argument (as iamindu uariti-cha ‘all the women’ is in (33)).

3.1.2 [Spec,AspP]

The subject can also surface between VoiceP-adverbials like sesi ‘well’ and the AspP-adverbial isku jauembarini ‘suddenly’—i.e., in [Spec,AspP]:

(34) Unta-si-Ø-ti=sì isku jauembarini [iamindu iurhitskiri-cha] kanekua
fix-PFV-PRS-IND3=pS suddenly all young.woman-PL very
sesi ts’im-eri kojtsitarakue-echa-ni.
well they-GEN table-PL-ACC
‘All the young women suddenly fixed their tables very well.’

3.1.3 [Spec,TP]

A third possible position for the subject is between the AspP-adverbial isku jauembarini ‘suddenly’ and the TP-adverbial jimamberi ‘then’—i.e., in [Spec,TP]:

(35) Sesi=mindu uandanta-ni ia jimamberi [iamindu uatsapi-cha]
well=very inform-INF already then all child-PL
iske jauembarini ue-nta-si-Ø-ti=sì.
suddenly go.out-ITER-PFV-PRS-IND3=pS
‘Honestly, then all the kids suddenly went back out.’
3.1.4 [Spec,MoodP]

A fourth possible position for the subject is between the TP-adverbial *jimamberi* ‘then’ and the PolP-adverbial *sesimindu uandantani ia* ‘honestly’ ((36)). This will be tentatively analyzed here as indicating that the subject has the option of surfacing in [Spec,MoodP].

(36) **Sesi=mindu uandanta-ni ia** *(jamindu kustati-cha)* **jimamberi**

well=very inform-PL already all musician-PL then
erenta-a-∅-ti=sí materu ereta-rhu.
live-FUT-PRS-IND3=pS other town-LOC
‘Honestly, all the musicians will (by) then live in another town.’

(There are other analytical options here, however. The subject in (36) could in principle be in an outer specifier of TP, formed after the adjunction of *jimamberi* ‘then’ to TP. Alternatively, it could be in an inner specifier of PolP, formed before the adjunction of *sesimindu uandantani ia* ‘honestly’ to PolP. Perhaps more than one of these analyses is available: the sentence could be structurally two- or three-ways ambiguous. The quandary seems difficult to escape given the logic of Bare Phrase Structure [Chomsky 1995b; see also Carnie 2000, Hornstein & Nunes 2008, Jayaseelan 2008, a.m.o.], which leads us to expect that the adjunction of an adverbial to a projection of a head H should be able to either precede or follow, derivationally, the internal merger of an XP with the highest available projection of H—i.e., movement of the XP to “[Spec,HP].” It should, however, be possible to tease apart some of the possibilities just mentioned if an adverbial is discovered that invariably adjoins to MoodP in Janitzio P’urhepecha.)

3.1.5 [Spec,PolP]

Finally, the subject can also precede the PolP-adverbial *sesimindu uandantani ia* ‘honestly’:
‘All the kids honestly ate well.’

A natural initial analysis of this is that a subject immediately preceding that PolP-adverbial is in an outer specifier of PolP, formed after the adjunction of the adverbial to PolP.

The hypothesis that the subject can occupy [Spec,PolP] predicts that it should be able to precede a polarity particle (i.e., a Pol head). This is correct:

(38)  
\textbf{Ana ambu u(\text{a})nta-∅-∅-∅ p’orhechi-cha-ni, peru...}  
\textit{Anna not fix(pO)-PFV-PRS-IND pot-PL-ACC, but...}  
‘Anna didn’t fix the pots, but...’

3.1.6 Summary

To recapitulate, we have identified five subject positions in Janitzio P’urhepecha (boxed in (39) below), on the basis of where in the linear string the subject can appear with respect to various adverbials and other elements.
This dissertation uses the term DP in connection with Janitzio P’urhepecha largely for convenience. The question of how much evidence there is for this exact category in the language would be well worth investigating. See Bošković 2008 for arguments that some languages have NPs but not DPs, Bošković and Şener 2014 for arguments to this effect for Turkish specifically, and Bruening 2009 for arguments against the DP Hypothesis in general.

A Natural Language and Linguistic Theory reviewer asks whether Janitzio P’urhepecha has auxiliaries or modal verbs, since such elements might determine additional specifier positions in which the subject could appear. The language does have auxiliaries, but these follow the main verb (an example is ja- ‘be’ in (108b)), and therefore cannot be used to diagnose the position of subjects in leftward specifier positions. (The position of an Aux does not reveal whether a DP is in a leftward [Spec,AuxP] or somewhere else when AuxP is head-final.)
As for modal verbs, Janitzio P’urhepecha does have verbs with modal semantics, such as *uetari-* ‘need, be necessary’ ((41)) and *u-* ‘be able’ ((42)), but these are fully inflected like ordinary lexical verbs and may therefore be such.

(41) Chiti munieka [uetari-sín-ɔ-di] ioska-ni iumu sentimetrusanderu eski your doll need-HAB-PRS-IND3 be.long-INF five centimeter more than this.

‘Your doll has to be 5 cm longer than this one.’

(42) Tania xani iostara-sí-ɔ-ti eska [u-a-ɔ-ti] andaxa-ni

Tania so(.much) be.tall-PFV-PRS-IND3 that be.able-FUT-PRS-IND3 reach-INF

juchiti takukata-ni.

my book-ACC

‘Tania is so tall that she can reach my book.’

On the syntax of subject positions crosslinguistically, see Koopman and Sportiche 1991; Bobaljik and Jonas 1996; McCloskey 1997; Alexiadou and Anagnostopoulou 1998; Zubizarreta 1998, ch. 3; Goodall 2001; Kiss 2002; Svenonius 2002; Cardinaletti 2004; Cable 2012; Rizzi 2015; Poole 2016; Fong 2017a,b, 2018; and Danckaert to appear, a.m.o.

3.2 What drives profligate subject movement?

On the standard assumption that the subject originates relatively low in the clause, within the thematic domain (the Internal Subject Hypothesis, Koopman & Sportiche 1991, a.m.o.; see also Rizzi 1997:281), sentences of Janitzio P’urhepecha in which the subject occurs higher are most straightforwardly analyzed as derived by subject movement. This, of course, is the standard analysis of how the subject reaches its canonical
relatively high position in the inflectional layer in familiar languages such as English (in which this position is typically taken to be [Spec,TP]).

If, in Janitzio P’urhepecha, a subject occupying a position higher than [Spec, VoiceP] has moved there, a question arises as to what the driving force for this movement is. Answering this question will be the goal of the rest of this chapter. The discussion will proceed as follows. §3.2.1 will present an altruistic analysis of profligate subject movement in Janitzio P’urhepecha, on which this type of movement is driven by features of functional heads in the inflectional layer of the clause. §3.2.2 will present a Greed-based analysis of profligate subject movement, and will argue that it is untenable. Finally, §3.2.3 will present two Labeling-based analyses of profligate subject movement, and will argue that they too face serious problems. The conclusion, then, will be that profligate subject movement in Janitzio P’urhepecha is an instance of altruistic (target-driven) movement—i.e., movement driven by a feature of a c-commanding functional head, rather than by a feature of the moving element itself—and that this strongly supports the hypothesis that purely altruistic movement does indeed exist.

3.2.1 Hypothesis A: Profligate subject movement is altruistic

One possible analysis of profligate subject movement in Janitzio P’urhepecha is that it is an instance of altruistic movement—i.e., that it is driven by a feature of the head to whose specifier the subject moves. Let us see what such an analysis looks like concretely.

First, a structure of the following form is built up:
More precisely, what is built up first is the thematic domain (the VoiceP). (The sub-
scripts “subj” and “obj” in (43) are there only for ease of exposition; they have no
syntactic reality.) Then, the functional heads making up the backbone of the inflec-
tional layer begin to be merged in. The tree in (43) shows only a generic functional
head $H$, for convenience: the analysis to be developed for “$H$” will apply equally to Asp,
T, Mood, and Pol (the four functional heads to whose specifiers the subject can move).

$H$ bears a probe feature [*D*] with an EPP subfeature. (For various perspectives on
and investigations of the notion “EPP,” see Grohmann, Drury, & Castillo 2000; Goodall
2001; Bošković 2002, 2004 [appendix]; McFadden 2003; Epstein, Pires, & Seely 2005;
Landau 2007; Bailey 2010; Cable 2012; Chomsky 2013, 2015; Goto 2017b; Bošković &
Messick to appear; and references therein, a.m.o.)

The probe feature [*D*] on $H$ probes the c-command domain of $H$ for a goal
bearing the feature [D] (or, more precisely, the categorial feature [CAT:D]). It finds the
closest suitable goal—the subject in its base position, [Spec, VoiceP]—and is thereby
satisfied:
Then, the EPP subfeature of the probe feature \([*D*]\) on \(H\) forces the goal (the subject) to internally merge with the highest available projection of \(H\):

(45)

A probe will always find the closest goal bearing the feature it is probing for, where the notion “closest” is defined in terms of asymmetric c-command. (As discussed by Erlewine to appear, fn. 15, this idea has a long history and has appeared in a variety of guises; cf. Relativized Minimality [Rizzi 1990, 2001; see also Bhatia, Kusmer, & Vostrikova 2016], Shortest Move [Chomsky 1993], the Minimal Link Condition
Therefore, the altruistic movement analysis predicts that profligate subject movement in Janitzio P’urhepecha should display *intervention effects* of the sort that are a hallmark of A-movement.

There is evidence that this prediction is correct. Consider the following:

(46) A: ¿Ambe ukurincha-sï-Ø-ki uitsindekua?
‘What happened yesterday?’

B₁: Tate exéku-sï-Ø-ti i-ni parikutarakua-ni. ✓SVO
‘Dad fixed this car.’

dad fix-PFV-PRS-IND3 this-ACC car-ACC

B₂: ?I-ni parikutarakua-ni exéku-sï-Ø-ti Tate. ✓OVS
‘#This car Dad fixed.’

dad fix-PFV-PRS-IND3 this-ACC car-ACC

The question in (46A) induces an information-structurally neutral context: the answer will be an “all-new” or “broad-focus” sentence, without any internal topic-comment or focus-pseudopposition articulation. With this in mind, consider the two answers shown in (46B₁) and (46B₂). In B₁, the constituent order is SVO. Because the verb word can be realized in Voice (§2.3), this constituent order can be derived without moving any DPs (see the tree in (43)). But because the verb word can alternatively be realized in Asp, T, or Mood, and the subject can alternatively surface in [Spec,AspP], [Spec,TP], [Spec,MoodP], or [Spec,PolP], (46B₁) is in fact structurally many-ways ambiguous. Crucially, on all the parses of (46B₁) on which a DP has moved (regardless of whether or not the verb word is realized higher than Voice), it is the subject that has moved, not the object. So far, so good.

In (46B₂), on the other hand, the constituent order is not SVO but OVS, and this sentence is clearly less acceptable in the context given than is (46B₁). This is predicted by the altruistic analysis. On the altruistic analysis, H’s [∗D∗] feature will invariably find—and, therefore, its EPP subfeature will invariably attract—the subject,
not the object, because the subject asymmetrically c-commands the object prior to any movement. (As mentioned above, \( H \) is being used here as a cover term for the clausal functional heads Asp, T, Mood, and Pol.) This is shown in (47) below, which, for concreteness, shows a derivation in which the verb word is realized in Asp, and it is also Asp that bears \([\ast D\ast]^{\text{EPP}}\) (though nothing forces these two properties to be shared by the same head in any particular derivation). (For ease of exposition, many of the derivational snapshots in this dissertation “anachronistically” show the verb word in the position in which it will eventually be realized. In (47), for example, the verb word is shown in Asp, even though it contains a third-person indicative mood morpheme \(-ti\) that is the realization of a Mood head, which, however, has not yet been merged into the structure. This expository simplification does not affect the analysis.)

\[ (47) \]

(Note that there is no evidence that the probing and Internal Merge operations shown in (47) have anything to do with assignment of nominative case, which at any rate is not realized overtly in Janitzio P’urhepecha. An analysis on which case is relevant to subject...
movement in this language will be considered [and rejected] toward the end of §3.2.2.)

Because probing is constrained by asymmetric c-command in this way, (46B2) is underivable on any parse on which the object moves to [Spec, AspP], [Spec, TP], [Spec, MoodP], or [Spec, PolP] and the verb word is realized in Asp, T, or Mood (i.e., on which the object moves into the inflectional layer rather than the subject). The string in (46B2) can only be derived by realizing the verb word in Asp, T, or Mood and A-moving the object to the left periphery—but this last operation is apparently obligatorily associated with marked information structure in Janitzio P’urhepecha (e.g., a topic interpretation for the object; cf. Capistrán 2002), which is incompatible with the information-structurally neutral context induced by the question in (46A). (The fact that (46B2) does presumably have a well-formed parse, involving topicalization—even if it is not felicitous on that parse in the context given—is likely at least part of the reason why (46B2) was merely judged degraded in that context rather than fully infelicitous.)

It is worth noting that the information-structure facts are similar in English, as shown by the idiomatic translations in (46): canonical SVO order is felicitous in the response, but topicalization, which yields OSV order in English, is infelicitous.

The intervention effect shown in (46) is by no means a peculiarity of that particular example: the effect is general. Another example of this kind of intervention effect is shown below:

(48) A: ¿Ambe ukurincha-sī-∅-ki iasī?
   what happen-PFV-PRS-INT today
   ‘What happened today?’

   B1: Ataranta-sī-∅-ka=ni juchiti chekakua-ni. √VO
      sell-PFV-PRS-IND1=1sS my big.canoe-ACC
      ‘I sold my big canoe.’

      my big.canoe-ACC sell-PFV-PRS-IND1=1sS
      ‘#My big canoe, I sold.’
Interestingly, the object cannot be moved into the inflectional layer (as is attempted in (48B$_2$)) even when the subject is covert. This provides a strong argument that at least one type of null subject in Janitzio P’urhepecha—the kind found in (48B$_1$)—is a real, syntactically represented silent pronoun (pro).

Before concluding this discussion of the altruistic analysis of profligate subject movement, it will be worthwhile to move beyond the simplification “H” and confirm that the intervention effect currently under discussion is in fact induced by particular, precisely identifiable subject positions in Janitzio P’urhepecha—or, more precisely, by the functional heads determining them. As predicted by the altruistic analysis, this is indeed the case. The intervention effect is observed with movement to [Spec,AspP] (49), which linearly occurs between the VoiceP-adverbial eskaparini ‘carefully’ and the AspP-adverbial isku jauembarini ‘suddenly’:

(49) A: ¿Ambe ukurincha-sí-Ø-ki?
    what happen-PFV-PRS-INT
    ‘What happened?’

    B$_1$: Uitsindecua **isko jauembarini** [uatsapi] eskaparini unta-sí-Ø-ti
    yesterday suddenly [boy carefully fix-PFV-PRS-IND3
    kukuchi-ni k’umanchikua-rhu.
    jug-ACC house-LOC
    ‘Yesterday the boy suddenly carefully fixed the jug at home.’

    B$_2$: ?Uitsindecua **isko jauembarini** kukuchini eskaparini unta-sí-Ø-ti
    yesterday suddenly jug-ACC carefully fix-PFV-PRS-IND3
    [uatsapi] k’umanchikua-rhu.
    boy house-LOC
    int. ‘Yesterday the boy suddenly carefully fixed the jug at home.’

At this point, it might be objected that perhaps (49B$_2$) is degraded in the context given not because DP-movement to [Spec,AspP] displays intervention effects but because the subject uatsapi ‘the boy’ occurs to the right of the verb (and to the left of the clause-final adjunct), but this constituent order is underivable given what has been said so
far (especially the clause structure that has been uncovered so far). However, the constituent order manner adverbial \( \Rightarrow \) verb word \( \Rightarrow \) external argument \( \Rightarrow \) other VoiceP-internal material (where "\( \Rightarrow \)" = ‘precedes’) is generally possible in Janitzio P’urhepecha, suggesting that the external argument in fact originates not in the specifier of Voice but rather in the specifier of a lower, distinct head \( v \). This, however, will be set aside for the moment for convenience; the matter will be taken up again in Chapter 5, where it will become relevant to the proper analysis of hyperraising to object in Janitzio P’urhepecha. Until then, \( v \) will be suppressed, and external arguments will continue to be base-generated in \([\text{Spec}, \text{VoiceP}]\), for ease of exposition. (A related question that arises in this connection is whether the single argument of a verb expected to be unaccusative is generated in the complement position of \( V \), as predicted by the now standard interpretation of the Unaccusative Hypothesis [Perlmutter 1978, Burzio 1986, Levin & Rappaport Hovav 1995, a.m.o.]. This question will be set aside here, however, because there are at this time no known reliable clausal landmarks below the VoiceP level in Janitzio P’urhepecha that could be used to investigate this particular matter, though one hopes that some will eventually be discovered.)

Returning to the intervention effect under investigation, it is also observed with movement to \([\text{Spec}, \text{TP}]\) (50), which linearly occurs between the AspP-adverbial isku jauembarini ‘suddenly’ and the TP-adverbial jimamberi ‘then’:

(50) A: Ka tatsekua ¿ambe ukurincha-si-Ø-ki?
and afterwards what happen-PFV-PRS-INT
‘And then what happened?’

B: Sesi=mindu uandanta-ni ia jimamberi [uatsapi]
well=very inform-INF already then boy
isku jauembarini kaka-si-Ø-ti kukuchi-ni k’umanchikua-rhu.
suddenly break-PFV-PRS-IND3 jug-ACC house-LOC
‘Honestly, then the boy suddenly broke the jug at home.’
B₂: ?Sesi=mindu uandanta-ni ia \underline{**jimamberi**} kukuchi-ni
well=very inform-INF already then \underline{jug-ACC}  
isku jauembarini kaka-si-∅-ti \underline{uatsapi} k’umanchikua-rhu.
suddenly break-PFV-PRS-IND3 \underline{boy} house-LOC
int. ‘Honestly, then the boy suddenly broke the jug at home.’

And the intervention effect is further observed with movement to [Spec,MoodP] \((51)\), which linearly occurs between the TP-adverbial \underline{jimamberi} ‘then’ and the PolP-adverbial \underline{sesimindu uandantani ia} ‘honestly’:

\[(51)\] A: Ka tatsekua ¿ambe ukurincha-si-∅-ki?
and afterwards what happen-PFV-PRS-INT
‘And then what happened?’

B₁: Sesi=\underline{mindu uandanta-ni ia} \underline{uatsapi} \underline{**jimamberi**}
well=very inform-INF already \underline{boy} then
isku jauembarini kaka-si-∅-ti kukuchi-ni k’umanchikua-rhu.
suddenly break-PFV-PRS-IND3 \underline{jug-ACC} house-LOC
‘Honestly, then the boy suddenly broke the jug at home.’

B₂: ?Sesi=\underline{mindu uandanta-ni ia} kukuchi-ni \underline{**jimamberi**}
well=very inform-INF already \underline{jug-ACC} then
isku jauembarini kaka-si-∅-ti \underline{uatsapi} k’umanchikua-rhu.
suddenly break-PFV-PRS-IND3 \underline{boy} house-LOC
int. ‘Honestly, then the boy suddenly broke the jug at home.’

In Janitzio P’urhepecha, then, DP-movement into the inflectional layer displays pervasive intervention effects, as predicted by the altruistic analysis.

### 3.2.2 Hypothesis B: Profligate subject movement is **greedy**

The intervention effects just discussed will play a crucial role in our evaluation of the Greed-based analysis. But before that analysis is evaluated, it will, of course, be necessary to lay it out explicitly.

On the Greed-based analysis, profligate subject movement comes about because a D in Janitzio P’urhepecha—and therefore, derivatively, the DP it heads—can
optionally be endowed with any of four Bošković 2007–style unvalued features: [uAsp], [uT], [uMood], or [uPol]. (At the end of this section, an alternative Greed-based analysis will be considered on which the relevant unvalued feature is instead [uCase:□].) Suppose that, in a particular derivation, the subject DP is endowed with [uAsp]:

(52)

On Bošković’s (2007) analysis, not only does every probe bear an unvalued feature, but also, conversely, every element bearing an unvalued feature acts as a probe. That is, you’re a probe iff you bear an unvalued feature. (It would be easy to replace Bošković’s [uF] notation with the Heck & Müller 2007–style [*F*] and [*F:□*] notation used everywhere else in this dissertation, but Bošković’s [uF] notation will be retained here for continuity with his original proposal.) In (52), the subject DP cannot value its [uAsp] feature from where it is, because there are no potential goals bearing the feature [Asp] (more precisely, the categorial feature [cat:Asp]) in its c-command domain. Therefore, the DP moves to a higher position from which it can probe again, potentially successfully—i.e., potentially with the result that its [uAsp] feature will actually be valued this time. (If the DP didn’t move in this way, it would eventually be spelled out with its [uAsp] feature unvalued, causing the derivation to crash.) Concretely, it internally merges with the highest available projection of Asp—i.e., in traditional terms, moves to [Spec,AspP]:

40
The DP’s \([u\text{Asp}]\) feature probes again. This time, however, the DP does c-command an element bearing [Asp]—namely, the Asp head itself. (It is quite possible that the mother of Asp—i.e., the traditional “ Asp'”—is also an accessible and serviceable goal for the DP’s \([u\text{Asp}]\) probe, but this possibility will be set aside here, because nothing to follow will hinge on it.) Therefore, when the \([u\text{Asp}]\) feature probes, it finds Asp and is valued (shown in \((54)\) below as checking), and the derivation eventually converges.
So far, so good. Unfortunately, the intervention effects discussed in §3.2.1 show that this Greed-based analysis overgenerates. Consider why. In the derivation just laid out, the subject was endowed with \([u\text{Asp}]\), but the object was not. But nothing prevents the opposite situation from arising: it is perfectly possible, on this analysis, for the object to be endowed with \([u\text{Asp}]\) while the subject is not, as shown below.
In this derivation, the object cannot value its \([u_{Asp}]\) feature from where it is, because there are no goals bearing \([Asp]\) in its c-command domain. It therefore moves to a higher position and tries to value its \([u_{Asp}]\) feature under c-command from there. More specifically, it internally merges with the highest available projection of Asp, or, in traditional terms, moves to \([\text{Spec,AspP}]\): 

\(56\)

![Diagram of the derivation](image)

At this point, the object does c-command an element bearing the feature \([Asp]\)—namely, the Asp head. It probes its c-command domain and finds Asp, thereby valuing its \([u_{Asp}]\) feature:
On the Greed analysis, this is all perfectly licit. Therefore, after all the remaining operations have taken place (e.g., the merging in of T, Mood, etc.), the derivation should converge. But this incorrectly predicts that no intervention effects should arise. In (56), the object DP moved to [Spec,AspP] “in search of” a position from which it could value its [uAsp] feature under c-command, thereby crossing the subject DP in [Spec,VoiceP]. The intervention effects discussed in §3.2.1 strongly suggest that this is not in fact possible—i.e., that a DP undergoing A-movement cannot cross another DP on its way to its landing site—but this is incorrectly predicted to be possible on the Greed analysis. On this analysis, the movement of the object in the derivation just discussed is driven entirely by the object’s need to value its [uAsp] feature; there is no reason why greedy movement of this sort should be interfered with by another DP that happens to lie along the movement path. (We are led to this conclusion straightforwardly simply by considering how greedy movement works, on analyses such as Bošković’s 2007 analysis; but the conclusion comes into particularly clear focus once it is recalled that the putative greedy movement in this derivation is driven by a [uAsp] feature, and the subject DP in [Spec,VoiceP] in this derivation does not bear any type of [Asp]-related
feature at all.)

A defender of the Greed analysis might attempt to deal with this incorrect prediction (namely, that profligate subject movement should not display intervention effects) by adding a constraint to the effect that A-movement cannot cross a (filled—i.e., syntactically projected) A-position—or that, more generally, X-movement cannot cross a (filled) X-position, where $X \in \{A, \bar{A}\}$. However, this would be a pure stipulation; in particular, it would not follow from the nature of greedy movement at all.

Before this discussion of the Greed-based approach is concluded, an alternative Greed-based analysis should be considered. Is it possible that profligate subject movement is greedy after all, but the feature driving it is a Case feature ($[u\text{Case}:\Box]$) rather than features such as $[u\text{Asp}]$, $[uT]$, $[u\text{Mood}]$, and $[u\text{Pol}]$? This alternative would have the considerable advantage of being more principled than the first Greed analysis, since Case features (Vergnaud 1977/2008, a.m.o.) are in one form or another a well-established and independently motivated part of syntactic theory, whereas features such as $[u\text{Asp}]$, etc., have much less independent motivation. Unfortunately, a Case-based Greed analysis of profligate subject movement would be highly unmotivated and stipulative for Janitzio P'urhepecha. An initial concern with such an analysis is that profligate subject movement is optional (i.e., the subject can remain in $[\text{Spec,VoiceP}]$), which sits uneasily with the obligatoriness of Case licensing. Setting that aside, however (after all, it could in principle be that the Case-driven greedy movement can optionally occur covertly), there is a far more serious problem with the Case-based Greed analysis. Although it is plausible that nominative Case is assigned by Mood in Janitzio P'urhepecha (since Mood agrees with the subject—specifically, in Person), there is no evidence whatsoever that Asp, T, or Pol function as Case assigners in this language. In the absence of such evidence, the hypothesis that subject movement to $[\text{Spec,AspP}]$, $[\text{Spec,TP}]$, and $[\text{Spec,PolP}]$ is Case-driven greedy movement must be rejected as almost completely unmotivated.
3.2.3 Hypothesis C: Profligate subject movement is *Labeling-driven*

Finally, let us consider the possibility that profligate subject movement in Janitzio P’urhepecha is neither altruistic nor greedy, but rather Labeling-driven—i.e., driven indirectly by the Labeling Algorithm proposed by Chomsky (2013) and developed in Chomsky 2015, a.m.o.

The ideas from the Labeling framework that will be relevant to the following discussion can be summarized very simply. When a head and a phrase (= a non-minimal or non-zero-level constituent) merge, the resulting syntactic object is labeled by the head. When two phrases merge (call them XP and YP for convenience), the resulting syntactic object (call it Z) cannot be labeled, unless one of the phrases moves away (allowing the other to label Z) or XP and YP share a feature in common, in which case the shared feature can label Z. In this framework, it is posited that a great deal of movement is forced indirectly—by the need for every constituent (or every relevant constituent) in the structure to receive a label from the Labeling Algorithm. The interested reader is referred to Chomsky 2013 and Chomsky 2015 for more details.

**Labeling analysis A: Profligate subject movement is driven by a labeling problem within VoiceP** One possible way to account for subject movement in Janitzio P’urhepecha in the Labeling framework would be to posit that Voice in this language optionally bears a feature (call it \([F]\)) that it shares with the subject DP. (Let us posit that DPs in general bear \([F]\) in Janitzio P’urhepecha.) When a Voice head bearing \([F]\) is chosen and merged with its complement (VP), the resulting structure (the traditional “Voice’”) is an \{X, YP\} structure—in traditional terms, a head-complement structure—and is therefore labeled by the head (Voice). Under standard assumptions, then, this \{X, YP\} structure (call it \(\alpha\)) also bears \([F]\). Next, \(\alpha\) merges with the subject DP:
The subscript Greek letters in (58) and similar examples are there for ease of exposition; they have no syntactic reality.) Although this is an \{XP, YP\} structure, it is unproblematic for the Labeling Algorithm: \(\alpha\) and \(\beta\) share a feature, namely \([F]\), and therefore this feature can label \(\gamma\). (If the proposal about labeling by feature sharing in Chomsky 2015 is adopted, the label in this case will be not \([F]\) but \([F,F]\). Although it is not clear that the extra structure in the label is needed, the \([F,F]\) notation will be used here for continuity with Chomsky 2015.) Because \(\gamma\) can be labeled straightforwardly, no labeling problem arises. In particular, the subject is not forced to move so that \(\gamma\) can be labeled by \(\alpha\) (and conversely, \(\alpha\) is not forced to move so that \(\gamma\) can be labeled by the subject).

When a Voice head not bearing \([F]\) is chosen, on the other hand, \(\alpha\) will naturally not bear \([F]\) either:

\[
(59) \quad \gamma = \{\beta \text{DP}_{[\rho]} \cup \alpha \text{VoiceP}_{[\tau]}\}
\]

Here, \(\gamma\) is an \{XP, YP\} structure with no feature sharing, and is therefore unlabelable. Assuming that \(\gamma\) has to be labeled, this labeling problem could plausibly serve as the trigger for the movement of the subject to some higher position. (The labeling problem presumably cannot be solved by extrinsically assigning \([F]\) to \(\alpha\) as a Last Resort repair, enabling labeling by feature sharing, because that would violate the Inclusiveness Condition [Chomsky 1995:225]—and, more importantly, because positing such a repair would add an entirely new operation to the grammar, contra Minimalist goals.)

A question arises at this point as to whether the labeling problem in (58) is always solved by raising the subject or, alternatively, it can equally well be solved by raising \(\alpha\) (cf. Chomsky 2013:44, fn. 36). Although this is partially an empirical question, it will not be investigated here, because there is already good reason to believe that this \textit{particular} Labeling analysis of profligate subject movement in Janitzio P’urhepecha is...
on the wrong track.

This is so for at least two reasons. First, the feature \([f]\) that it relies on is entirely ad hoc; it does not at this point seem possible even to venture a plausible guess as to what it may actually be. Secondly, and worse, there is no evidence—morphological or otherwise—that Voice has a different featural composition in clauses in which the subject remains in “\([\text{Spec,VoiceP}]\)” than it does in clauses in which the subject raises. (Terms of the form “\([\text{Spec,XP}]\)” will be written in scare quotes in discussions of Labeling analyses, since the notion of specifier is not a part of the official Labeling framework as developed thus far; see Chomsky 2013:43, especially fn. 27.) This is a problem because even if \([f]\) could be given substantive content (e.g., if it were shown that Voice does share a particular feature with the subject in some language), there would be no real evidence that \([f]\) was involved in indirectly triggering optional subject movement in Janitzio P’urhepecha. We can conclude, then, that the analysis on which profligate subject movement in this language occurs to solve a labeling problem within VoiceP is highly stipulative and lacking in independent motivation, warranting its rejection.

**Labeling analysis B: Profligate subject movement is driven by weak clausal functional heads** It would be premature, however, to conclude at this point that profligate subject movement in Janitzio P’urhepecha cannot possibly be Labeling-driven, because there is at least one conceivable alternative Labeling analysis of the phenomenon. It is to this alternative analysis that we now turn.

Chomsky (2015) proposes a Labeling analysis of subject raising in English. He argues that in English, but not in Italian, T is too “weak” to label its projections (henceforth simply *weak*), and must therefore be reinforced by raising a DP to “[Spec,TP].” On this analysis, when T in English merges with its complement (vP or some other clausal projection), the result is an \(\{X, YP\}\) structure, but—atypically—this \(\{X, YP\}\) structure cannot be labeled in the normal way (i.e., by the head \(X = T\)), because T is
weak. But when the subject DP raises to “[Spec,TP],” the features shared by the DP and T (\(\phi\)-features) can label the traditional “TP” \(\langle\phi,\phi\rangle\). (Presumably, “T’” somehow receives the same label.)

In Italian, by contrast, T is strong, so it can label the traditional “T’” on its own; this is a standard case of labeling of an \{X, YP\} structure by X. According to Chomsky (2015), however, the subject can raise to “[Spec,TP]” in Italian; it simply doesn’t have to. When it does, “T’” is labeled by T, as before. Chomsky claims that, when the subject raises to “[Spec,TP]” in Italian, T labels not only “T’” but also the maximal “TP.” However, “TP” is an \{XP, YP\} structure, so it is presumably labeled \(\langle\phi,\phi\rangle\) under feature sharing, as in English. The fact that the subject can raise to “[Spec,TP]” in Italian even though this is not indirectly forced by the Labeling Algorithm is unproblematic on the assumption, which is common in Labeling analyses, that Merge (including Internal Merge) is free rather than triggered. On free-Merge vs. triggered-Merge (and/or crash-proof) approaches to syntax, see Boeckx 2010 vs. Stockwell 2016, §3.2.1, and Bošković and Messick to appear and references therein, a.m.o.

Can this analysis of subject raising in English and Italian be extended to profligate subject movement in Janitzio P’urhepecha? To extend it in this way, it would be necessary to posit that, in Janitzio P’urhepecha, Asp, T, Mood, and Pol—in fact, probably all the Asp, T, Mood, and Pol heads in the language—come in two versions in the lexicon, one strong (able to label projections) and one weak (unable to label projections). Let H stand for any of the relevant Asp, T, Mood, and Pol heads. It would further have to be posited that H bears a feature \([F]\) that is also borne by DPs (cf. the role of \([F]\) in the previous Labeling analysis, which was laid out in §3.2.3). On this analysis, when a weak H is chosen, “HP” will be successfully labeled only if a DP (the subject DP, for now) raises to “[Spec,HP].” The subject and H share a feature—\([F]\)—so “HP” (and presumably also “H’”) can be labeled \(\langle F,F\rangle\) under feature sharing.
If \([F]\) were not posited, then “AspP,” “TP,” and “PolP” (with the subject in “Spec”) would be \{XP, YP\} structures with no feature sharing, and would therefore be unlabelable. (On “MoodP,” see below.) This would be an undesirable result, since “AspP,” “TP,” and “PolP” are perfectly licit structures in Janitzio P’urhepecha. We will not consider here the possibility that “AspP,” “TP,” and “PolP” are unlabelable \{XP, YP\} structures that are actually licitly left unlabeled: the Labeling theorist who would make such a claim would have to substantiate it with an explicit account of when exactly a syntactic object can licitly be left unlabeled.

Returning to the Labeling analysis under consideration in this section, this analysis, like the one in §3.2.3, faces significant problems. First, it does not seem to be able to account (in a principled way) for the intervention effects observed in profligate subject movement in Janitzio P’urhepecha. If all that is needed to strengthen H for labeling purposes is for an element bearing \([F]\) to raise to “[Spec,HP],” then an object should be able to do that just as well as a subject, particularly in a free-Merge architecture like that adopted in Chomsky 2013 and 2015. In such an architecture, an object DP can simply be internally merged directly into “[Spec,HP]” without the need for a prior probing operation of the sort that was posited in the altruistic analysis (§3.2.1) and, on that analysis, is the source of the intervention effects (because probing is constrained to operate under closest c-command).

Secondly, the assumption that (probably all) Asp, T, Mood, and Pol heads in Janitzio P’urhepecha come in two versions in the lexicon, one strong and one weak, is highly stipulative. Chomsky’s (2015) proposal that T is weak in English but strong in Italian ties this putative difference to the traditional notion of richness of agreement (Rizzi 1982). Whether this will prove tenable is an open question, but at least the analysis ties the putative labeling-strength difference between English and Italian T to something observable. This is not possible in the case of Asp, T, Mood, and Pol in Janitzio P’urhepecha, none of which, as far as is known, have different morphological
realizations in sentences in which the subject has moved to their specifier and sentences in which it has not.

Thirdly, and relatedly, this Labeling analysis faces one of the same major problems as the previous one (in §3.2.3): it relies on an ad hoc feature \( [f] \) that is unidentified and lacks any independent motivation, morphological or otherwise. To be fair, Mood (unlike Asp, T, and Pol) is unproblematic in this regard, because Mood in Janitzio P’urhepecha agrees with the subject in person (§2.1). It would therefore be natural to posit that Mood in Janitzio P’urhepecha is always strong, like T in Italian: the subject need not move to “[Spec,MoodP]” (and when it doesn’t, Mood labels “MoodP” on its own), and if the subject does move to “[Spec,MoodP],” Mood labels “Mood’,” and “MoodP” is labeled (Pers,Pers) under feature sharing. Asp, T, and Pol, however, do not show any evidence in Janitzio P’urhepecha of bearing a feature \( [f] \) which is shared with the subject (or with DPs generally).

This last problem will be worth briefly recapitulating. “AspP,” “TP,” and “PolP” (with the subject in “Spec”) seem to be unlabelable \{XP, YP\} structures. The Labeling analysis based on weak clausal functional heads—along, for that matter, with the Labeling analysis based on an unlabelable “VoiceP” (§3.2.3)—is forced to render them labelable by positing covert feature sharing, involving the feature referred to here as \( [f] \). Such a move would surely render Labeling analyses unfalsifiable in general.

The conclusion that emerges from this whole discussion, then, is that profligate subject movement in Janitzio P’urhepecha can be analyzed in a reasonable and empirically adequate way as altruistic movement (though even this analysis involves some stipulations), but Greed- and Labeling-based analyses of the phenomenon run into severe empirical and/or conceptual problems. This in turn provides a strong argument that purely altruistic (target-driven) movement does indeed exist.
Chapter 4

Subjecthood and quantifier float

Having reached a reasonably firm understanding of the rich syntax of subjecthood in Janitzio P’urhepecha, we can proceed to investigate the phenomenon of quantifier float in the language. As this chapter will make clear, the two phenomena are closely interrelated. When investigated in detail, the facts of quantifier float in Janitzio P’urhepecha provide an important new body of evidence for the results established in Chapter 3. In addition, when combined with the results of Chapter 3, the investigation to be carried out in this chapter provides significant, perhaps decisive, evidence in favor of one of the analyses of quantifier float made available in the current theoretical context—at least for Janitzio P’urhepecha. If the arguments developed in this chapter are sound, and the proposals it makes about the nature and derivation of quantifier float survive skeptical scrutiny, the implications for syntactic theory will, as we will see, be substantial.

4.1 Introduction

An interesting and well-known fact about sentences containing a quantified nominal phrase is that, in many languages, they alternate with sentences in which the nominal
phrase seems to have been split in two, and at least one of the resulting parts placed in a different position. For example, in the English sentence (60a), the quantifier all immediately precedes and forms a constituent with the nominal phrase the walruses (its associate); but in (60b), which paraphrases (60a), all and the walruses not only surface in the opposite order but also do not form a constituent, as shown by the intervening auxiliary.

(60)  

a. All the walruses are painting murals.  
b. The walruses are all painting murals.

Because it seems as though the all in (60a) could optionally float off its associate to form (60b), sentences such as (60b) are said to exhibit quantifier float.

The alternation exemplified in (60) raises the question of how sentences containing floated and nonfloated quantifiers are derived—that is, what syntactic atoms and operations are responsible for their generation (Maling 1976, Sportiche 1988, Koopman & Sportiche 1991:221-222, Shlonsky 1991, Merchant 1996, McCloskey 2000, Bošković 2004, Henry 2012, Ott 2015, Al Khalaf submitted; see also Fitzpatrick 2006), the floated quantifier in a sentence like (60b) actually does form a constituent with its associate at some stages of the derivation, but this constituent is broken up by the movement of the associate out of it, which “strands” the quantifier. On this type of analysis, the structure of (60b), irrelevant details aside, is the following:

(61)  

Quantifier float as stranding

[The walruses]_{1} are [all ____]_{1} painting murals.
(Trace notation is used throughout this chapter, the traces being marked with underscores, for ease of exposition.)

On *adverbial* analyses, on the other hand (Doetjes 1992, Baltin 1995, Torrego 1996, Brisson 1998, Benamoun 1999, Bobaljik 2003; see also Fitzpatrick 2006), a floated quantifier and its associate do not form a constituent at any stage of the derivation. Rather, floated quantifiers such as *all, both, and each* are adverbial elements; these are typically analyzed as adjuncts, and specifically as adjuncts to the verb phrase or to some other projection in the clausal spine. On such an analysis, (60b) has a structure along the following general lines (cf. Brisson 1998:211-212, (79)):

(62)  *Quantifier float as adverbial adjunction*

[The walruses]₁ are [vP all [vP ₁ painting murals]].

As mentioned, then—and as shown in (61b, 62)—a floated quantifier and its associate form an underlying constituent on the stranding analysis, but not on the adverbial analysis. (Although each of these is a family of analyses, they will be referred to here as “the” stranding analysis and “the” adverbial analysis for convenience.)

Which of these analyses, or what type of combination of them, should be adopted has been the subject of extensive investigation (see the references cited above), but no fieldwide consensus has emerged. This chapter argues that the facts of quantifier float in Janitzio P’urhepecha strongly support the *stranding* analysis, at least for this language. This result stands as a challenge to adverbial-only analyses, on which quantifier float is universally derived by adjunction of the floating quantifier to some projection in the clausal spine.

The chapter is organized as follows. §4.2 surveys the empirical terrain, determining where quantifiers can and cannot float in Janitzio P’urhepecha. §4.3 shows that there is a virtually perfect correspondence between DP positions and floated quantifier positions in Janitzio P’urhepecha, strongly supporting the stranding analysis for this
§4.4 demonstrates that the stranding analysis is further supported by case-matching between floated quantifiers and their associates (cf. Merchant 1996). §4.5 considers some apparent counterevidence: some quantifier float sentences superficially appear to violate the Subject Condition, which seems to support the adverbial analysis. It is argued that this is in fact not a serious problem for the stranding analysis, and that only the latter analysis enables us to make sense of all the data. §4.6 concludes.

4.2 Where quantifiers can and can’t float

The first step will be to survey the empirical landscape. Which syntactic environments allow quantifier float in Janitzio P’urhepecha, and which ones forbid it?

(Like Bošković 2004 [see his p. 685, fn. 4), this chapter will largely restrict its attention to the quantifier ‘all’ [iamindu(eecho)]. On which quantifiers can float in Janitzio P’urhepecha, see Appendix B.)

4.2.1 Subjects

Quantifier float is possible from subjects. To see this, consider first some sentences in which quantifier float has not taken place. Two such sentences are given below.

(63) No quantifier float

a. Iamindu uatsapi-cha ch’ana-xa-∅-ti=sï juata-rhu.
   all child-PL play-DUR-PRS-IND3=pS hill-LOC
   ‘All the kids are playing on the hill.’

b. Iamindu uasïsï-cha kara-sin-∅-di=sï inchatiru-eri.
   all bat-PL fly-HAB-PRS-IND3=pS afternoon-GEN
   ‘All bats fly in the afternoon.’

The boldfaced string in each of (63a) and (63b) is the reflex of a nominal phrase consisting of the quantifier iamindu ‘all’, a noun, and the plural morpheme. This morpheme
can appear at the right edge of the entire nominal phrase, as in (63), or both phrase- 
finally and on the quantifier, in an instance of optional concord:

(64) *No quantifier float; plural concord*

   a. *Iamindu-eecha uatsapi-cha* ch’ana-xa-Ø-ti=sį juata-rhu.
      all-PL child-PL play-DUR-PRS-IND3=pS hill-LOC
      ‘All the kids are playing on the hill.’

      all-PL bat-PL fly-HAB-PRS-IND3=pS afternoon-GEN
      ‘All bats fly in the afternoon.’

There is a small amount of variation in the judgments on sentences such as (64a-b), as 
shown by the diacritics: the same speaker will judge some examples of this form perfect
and others a bit marginal. Sentences without concord such as those in (63), on the 
other hand, are always judged perfect, in my experience.

Now that we have examined some sentences in which quantifier float has not
occurred, we can proceed to consider some in which it has. The quantifier and the 
associate in sentences like (64a-b) can be inverted, producing sentences such as (65a-b).
(The sentences in (65) feature a plural morpheme both on the associate and on the 
quantifier, a fact to which we will return shortly.)

(65) *Short-distance quantifier float*

      child-PL all-PL play-DUR-PRS-IND3=pS hill-LOC
      ‘The kids are all playing on the hill.’

      bat-PL all-PL fly-HAB-PRS-IND3=pS afternoon-GEN
      ‘Bats all fly in the afternoon.’

This will be referred to here as “short-distance” quantifier float—a descriptive term
meant to convey only that the associate and the floated quantifier are string-adjacent.
Like sentences of the type shown in (64), sentences involving short-distance quantifier
float receive somewhat variable acceptability judgments: again, the same speaker will judge some such sentences perfect and others a bit marginal.

Finally, a floated quantifier and its associate can be separated by other material. In the examples in (66), this is the verb.

(66) Long-distance quantifier float

a. Uatsapi-cha ch’ana-xa-∅-ti=ksi iamindu-eecha juata-rhu.
   child-PL all play-DUR-PRS-IND3=pS all-PL hill-LOC
   ‘The kids are all playing on the hill.’

   bat-PL fly-HAB-PRS-IND3=pS all-PL afternoon-GEN
   ‘Bats all fly in the afternoon.’

This will be referred to as “long-distance” quantifier float—another purely descriptive term.

In every case of quantifier float examined so far, whether short- or long-distance, a plural morpheme has been present both on the associate and on the floated quantifier. This, it turns out, is obligatory. As shown in (63-64), plural concord is optional when no quantifier float has taken place—i.e., the quantifier may either bear a plural morpheme or not (Q Assoc-PL ~ Q-PL Assoc-PL). But if the plural morpheme is left off a floated quantifier, the result is full unacceptability:

(67) Quantifier float requires plural concord

   child-PL all play-DUR-PRS-IND3=pS hill-LOC
   int. ‘The kids are all playing on the hill.’

b. *Uatsapi-cha ch’ana-xa-∅-ti=sí iamindu juata-rhu.
   child-PL all play-DUR-PRS-IND3=pS all hill-LOC
   int. ‘The kids are all playing on the hill.’

(This is also the case in Hebrew (Shlonsky 1991:160-161). Shlonsky argues that, in Hebrew, a floated quantifier obligatorily bears a clitic agreeing with its associate DP
because the DP moves to the specifier of the quantifier ([Spec,QP]), triggering Spec-head agreement. Bošković (2004) argues that a quantifier cannot be floated in the θ-position of the containing nominal [which he calls QP], but only in a derived position, deducing this generalization from independent aspects of the theory. Bošković (2018a) argues that sentences such as (67a-b) are unacceptable because they involve attempted extraction from a moved QP, in violation of the Freezing Principle (Culicover & Wexler 1977, Wexler & Culicover 1980, a.o.), which bans movement out of moved elements. On Bošković’s analysis, this ban is circumvented if the associate to be moved out of QP enters into an agreement [feature-sharing] relation at the edge of QP, hence the well-formedness of (65-66). He deduces both the ban on movement out of moved elements and the status of apparent exceptions to it from independent aspects of the theory, working within the Labeling framework.)

Returning to the empirical survey, it is worth noting that (nominative) pronominal associates of quantifiers have essentially the same distribution as their ordinary nominal counterparts. In (68), which does not involve quantifier float, the associate of the quantifier iamindu(eecha) ‘all(-pl)’ is the pronoun jucha ‘we’. The quantifier can optionally bear the plural morpheme -eecha.

(68) **Iamindu(-eecha) jucha** nira-si-S-ka=sii kunguarikua-rhu.
  all(-pl)     we      go-PFV-PRS-IND1=pS meeting-LOC
  ‘All of us went to the meeting.’

When quantifier float does occur, as in (69), the associate jucha ‘we’ precedes the floated quantifier iamindueecha ‘all.pl’. The associate can either immediately precede the floated quantifier or be separated from it by other material (such as the verb word).

(69) **Jucha (iamindu-eecha)** nira-si-S-ka=sii (iamindu-eecha)
  we      (all-pl)     go-PFV-PRS-IND1=pS (all-pl)
  kunguarikua-rhu. meeting-LOC
  ‘We all went to the meeting.’

58
A non-nominative independent pronoun must bear a case morpheme and a clitic with matching features. Such pronouns apparently cannot be construed with quantifiers, whether un floated ((70-71)) or floated ((72)), for reasons currently unclear.

(70)  No quantifier float, no concord

*Exe-a-sï-Ø-ka     iamindu cha-n=sïni.  
    see-pO-PFV-PRS-IND1 all     youïpL-ACC=2pO  
    int. ‘I saw all of you.’

(71)  No quantifier float, full concord

??Exe-a-sï-Ø-ka     iamindu-eecha-ni cha-n=sïni.  
    see-pO-PFV-PRS-IND1 all-PL-ACC youïpL-ACC=2pO  
    int. ‘I saw all of you.’

(72)  Attempted quantifier float

*Exe-a-sï-Ø-ka     cha-n=sïni iamindu-eecha-ni.  
    see-pO-PFV-PRS-IND1 youïpL-ACC=2pO all-PL-ACC  
    int. ‘I saw you all.’

[Comment: “No, [this isn’t good] either; I’d say [(73)].”]

(73)  Exe-a-sï-Ø-ka=ni iamindu-eecha-ni.  
    see-pO-PFV-PRS-IND1=1sS all-PL-ACC  
    ‘I saw everyone.’

4.2.2 Nonsubjects

As shown above, Janitzio P’urhepecha allows both short- and long-distance quantifier float from subjects. But the language also has a number of types of nominal phrases that do not allow short-distance quantifier float, though they may allow long-distance quantifier float. One example is direct objects.

Direct objects  A nominal phrase introduced by *iamindu* ‘all’ can serve as an (accusative) direct object. In this situation too, concord is optional: the phrase-final plural and accusative morphemes may either be copied onto *iamindu* or not, as shown in (74).
(74) No quantifier float; no (or full) concord

\[
\begin{align*}
&\text{Pia-a-si-\text{-ka}=ni} & \text{iamindu(-eecha-ni)} & \text{uaxantsikue-echa-ni}. \\
&\text{buy-pO-PFV-PRS-IND1=1sS all(-PL-ACC) chair-PL-ACC} \\
\end{align*}
\]

'I bought all the chairs.'

(P’urhepecha has differential object marking (Chamoreau 1999, Vázquez-Rojas Maldonado 2011). In Janitzio P’urhepecha, the direct object in (74) may also surface as iamindu uaxantsikueecha, with no plural concord and no overt accusative morphemes.)

If short-distance quantifier float is attempted from such a direct object, the result is fully unacceptable, regardless of how much concord takes place:

(75) Direct objects forbid short-distance quantifier float, with any amount of concord

\[
\begin{align*}
*\text{Pia-a-si-\text{-ka}=ni} & \text{uaxantsikue-echa-ni} & \text{iamindu(-eecha(-ni))}. \\
\text{buy-pO-PFV-PRS-IND1=1sS chair-PL-ACC} & \text{all(-PL(-ACC))} \\
\text{int. ‘I bought all the chairs.’} \\
\end{align*}
\]

In Mexican Spanish, Quantifier-Associate order is the default, and Associate-Quantifier order, though possible, is perceived as marked—but it becomes more natural when the quantifier is stressed. It is therefore worth asking whether (75) improves with stress on the quantifier. The answer is no: *Piaasikani uaxantsikueechani iamindueechani is fully unacceptable. In my experience, stressing the quantifier in an unacceptable quantifier float sentence in Janitzio P’urhepecha produces no or at best modest improvement (and never full acceptability).

Long-distance quantifier float, however, is possible from direct objects. When the associate jiuatsichani ‘the coyotes’ in (76a) is separated from its quantifier iamindu(eechani) ‘all’ by the verb, forming (76b), the result is acceptable.
(76) [Context: I went on a trip to an area where there are a lot of pumas and coyotes.]

I didn’t see the pumas, but I did see all the coyotes.]

a. No quantifier float; no (or full) concord

Ambu exe-a-∅-∅-∅ puki-cha-ni, peru
not see-pO-PFV-PRS-IND wildcat-PL-ACC but
exe-a-si-∅-ka=ni iamindu(ʔ-eecha-ni) jiuatsi-cha-ni.
see-pO-PFV-PRS-IND1=1sS all(?-PL-ACC) coyote-PL-ACC
‘I didn’t see the pumas, but I saw all the coyotes.’

b. The direct object permits long-distance quantifier float

Ambu exe-a-∅-∅-∅ puki-cha-ni, peru jiuatsi-cha-ni
not see-pO-PFV-PRS-IND wildcat-PL-ACC but coyote-PL-ACC
exe-a-si-∅-ka=ni iamindu-eecha-ni.
see-pO-PFV-PRS-IND1=1sS all-PL-ACC
‘I didn’t see the pumas, but the coyotes I saw all of.’

Note that the context given in (76), together with the first conjunct of (76b), strongly suggests that the second conjunct of (76b) is a topic-comment structure, with jiuatsi-ʃanì ‘the coyotes’ a topic standing in contrast to the in-situ phrase puki-ʃanì ‘the pumas’ in the first conjunct.

Indirect objects Notionally “indirect” objects behave precisely like direct objects with respect to quantifier float: short-distance quantifier float is impossible from these phrases, but long-distance quantifier float is possible.

The impossibility of short-distance quantifier float from an indirect object is unaffected by whether the indirect object precedes or follows the direct object (both orders are licit). In (77a), the direct object katsikueechani ‘the hats’ is followed by the indirect object iamindu(eechani) achatichani ‘all the men’. String inversion of quantifier and associate is impossible (77b).

61
(77) DO-IO order

a. No quantifier float; no (or full) concord

Intsîmpe-a-sî-∅-ka=ni katsîkue-echa-ni iamindu(-eecha-ni)
give.as.gift-pO-PFV-PRS-IND1=1sS hat-PL-ACC all(-PL-ACC)
achati-cha-ni.
manRESP-PL-ACC

‘I gave the hats to all the men as a gift.’

b. The indirect object forbids short-distance quantifier float

*Intsîmpe-a-sî-∅-ka=ni katsîkue-echa-ni achati-cha-ni

give.as.gift-pO-PFV-PRS-IND1=1sS hat-PL-ACC manRESP-PL-ACC

iamindu-eecha-ni.
all-PL-ACC

int. ‘I gave the hats to all the men as a gift.’

Matters do not change when we move from DO-IO to IO-DO order. In (78a), the indirect object iamindu(eechani) achatichani ‘all the men’ precedes the direct object katsîkueechani ‘the hats’ rather than following it. Again, short-distance quantifier float from the indirect object is impossible (78b).
(78) **IO-DO order**

a. *No quantifier float; no (or full) concord*

Intsîmpe-a-sî-∅-ka=ni  iamindu(eechani) achatî-cha-ni
give.as.gift-pØ-PFV-PRS-IND1=1sS all(-PL-ACC) man_RESP-PL-ACC
katsîkue-echa-ni.
hat-PL-ACC
‘I gave all the men the hats as a gift.’

b. *The indirect object forbids short-distance quantifier float*

*Intsîmpe-a-sî-∅-ka=ni  achatî-cha-ni  iamindu(eechani)  all(-PL-ACC)
give.as.gift-pØ-PFV-PRS-IND1=1sS  man_RESP-PL-ACC all-PL-ACC
katsîkue-echa-ni.
hat-PL-ACC
int. ‘I gave the men all the hats as a gift’, i.e.,
‘I gave all the men the hats as a gift.’

[The judgment is strictly keyed to the interpretation indicated.]

Indirect objects do, however, allow long-distance quantifier float—just like direct objects. When the associate jorhenguariri(echanî) ‘the students’ in (79a) is separated by the verb from its quantifier iamindu(eechani) ‘all’, producing (79b), the result is well formed.

(79) [Context: I’m a student, and I just bought a new book. I took it to school, and I didn’t show it to the teachers, but I did show it to all the other students.]

a. *No quantifier float*

Ambu exera-a-∅-∅  jorhentperi-cha-ni juchiti takukata-ni, peru
not show-pØ-PFV-PRS-IND teacher-PL-ACC my book-ACC but
exera-a-sî-∅-ka=ni  iamindu(eechani)
show-pØ-PFV-PRS-IND1=1sS all(-PL-ACC)
jorhenguariri-cha-ni.
student-PL-ACC
‘I didn’t show the teachers my book, but I showed it to all the [other] students.’
b. *The indirect object permits long-distance quantifier float*

\[
\text{Ambu exera-a-Ø-Ø-Ø show-PFV-PRS-IND teacher-PL-ACC my book-ACC but jorhenguariri-cha-ni exera-a-si-Ø-ka=ni iamindu-eecha-ni.}
\]

\[
\text{student-PL-ACC show-PFV-PRS-IND1=1sS all-PL-ACC}
\]

‘I didn’t show the teachers my book, but the [other] students I showed it to all of.’

In (79b), too, the second conjunct seems to be a topicalization structure, with *jorhenguaririchani* ‘the students’ a topic standing in contrast to the untopicalized phrase *jorhentperichani* ‘the teachers’ in the first conjunct.

The structure of ditransitive clauses and the interactions between this structure and quantifier float are investigated in greater detail in Appendix C.

**Objects of postpositions** Finally, short-distance quantifier float is also impossible from the object of a postposition. In (80a), the quantified nominal *iamindu(eechani)* *achatichani* ‘all the men’ appears as the object of the postposition *jingoni* ‘with’. If short-distance quantifier float is attempted, the result is unacceptable (80b).

\[\text{(80) [Context: I’m at a party where there are a lot of men and women, and I want to tell my friend that I work with all the men who are there. I say…]}\]

a. *No quantifier float*

\[
\text{Anchikuari-sin-Ø-ga=ni iamindu(eechani) achati-cha-ni jingoni.}
\]

\[
\text{work-HAB-PRS-IND1=1sS all(-PL-ACC) man}_{\text{RESP}}\text{-PL-ACC with}
\]

‘I work with all the men.’

b. *The object of the postposition forbids short-distance quantifier float*

\[
*\text{Anchikuari-sin-Ø-ga=ni achati-cha-ni iamindu-eechani jingoni.}
\]

\[
\text{work-HAB-PRS-IND1=1sS man}_{\text{RESP}}\text{-PL-ACC all-PL-ACC with}
\]

int. ‘I work with all the men.’
Objects of postpositions diverge from direct and indirect objects, however, in that they also do not allow long-distance quantifier float. In (81a), *iamindu achatichani* ‘all the men’ again serves as the object of the postposition *jingoni* ‘with’. When long-distance quantifier float is attempted from this nominal, the result is quite degraded ((81b)).

(81) [Context: I’m at a party where there are a lot of men and women, and I want to tell my friend that I don’t know the women, but I work with all the men who are there. I say...]

a. *No quantifier float*

Ambu minariku-a-Ø-Ø uariti-cha-ni, peru
not meet-pO-PFY-PRS-IND woman*resp*-PL-ACC but
anchikuari-sín-Ø-ga=ni *iamindu(-eecha-ni) achatichani* jingoni.
work-HAB-PRS-IND1=1sS all(-PL-ACC) man*resp*-PL-ACC with
‘I don’t know (lit. ‘haven’t met’) the women, but I work with all the men.’

b. *The object of the postposition forbids long-distance quantifier float*

??Ambu minariku-a-Ø-Ø uariti-cha-ni, peru *achatichani*
not meet-pO-PFY-PRS-IND woman*resp*-PL-ACC but man*resp*-PL-ACC
anchikuari-sín-Ø-ga=ni *iamindu-eecha-ni* jingoni.
work-HAB-PRS-IND1=1sS all-PL-ACC with

int. ‘I don’t know (lit. ‘haven’t met’) the women, but the men I work with all of.’

4.2.3 Interim summary

Let us take stock. The generalizations we have just arrived at are the following:

(82) *Quantifier float possibilities in Janitzio P’urhepecha*

a. Subjects allow both short- and long-distance quantifier float.

b. Nonsubjects forbid short-distance quantifier float, but may allow long-distance quantifier float.
(It is worth noting that, in the examples examined above of long-distance quantifier float from nonsubjects ((76b) and (79b)), the associate seems to be occupying an $\tilde{A}$-position—likely $[\text{Spec,TopP}]$; cf. Rizzi 1997, Capistrán 2002—whereas this is not obviously the case in the examples of long-distance quantifier float from subjects ((66a-b)), in which the associate may well be in an A-position on at least one parse.)

With these descriptive generalizations established, we can now begin to determine what light can be shed by the facts of Janitzio P’urhepecha quantifier float on the longstanding stranding-vs.-adjunction question.

4.3 Stranding vs. adjunction I: Testing the distributional predictions

As discussed by Bobaljik (2003) and Fitzpatrick (2006), one major difference between the stranding analysis and the adverbial analysis of quantifier float lies in the predictions they make about the distribution of floated quantifiers.

On the stranding analysis, a floated quantifier is the surface reflex of a DP that has been evacuated by the corresponding associate. Associate movement is normally an alternative to movement of the containing DP. For example, when the subject base-generated in $[\text{Spec,}\text{vP}]$ is $[\text{DP} \text{ all} \ [\text{DP} \text{ the walruses}]]$, the EPP (however analyzed) can be satisfied by moving to $[\text{Spec,TP}]$ either the containing DP (all the walruses) or the associate DP inside it (the walruses). This optionality yields a clear prediction: if a particular position can host a DP that subsequently moves, it should be possible to fill that position with a DP like all the walruses and move only the associate inside this DP, stranding the quantifier. Correspondingly, if a particular position cannot host a DP such as \{all (of) / both (of) / each of\} the walruses to begin with, then the stranding analysis predicts that it should not be able to host a floated quantifier either. That is, the distribution of floated quantifiers should precisely track that of the corresponding
containing DPs, all else being equal.

On the adverbial analysis, by contrast, a floated quantifier does not form a constituent with its associate at any stage of the derivation; rather, it is an adverbial element adjoined to some clausal projection. Therefore, this analysis predicts that the distribution of floated quantifiers should not track that of ordinary DPs. The distributional predictions of the two analyses are summarized below.

(83) *Distributional predictions*

a. **Stranding analysis:** Floated quantifiers should appear in DP positions (specifically, positions that DPs can be merged in and then move out of).

b. **Adverbial analysis:** Floated quantifiers should not appear in DP positions.

As shown in §3.1 and §4.2, Janitzio P’urhepecha has a wide range of DP positions, including a strikingly large array of subject positions, making it possible to test the distributional predictions in (83) extensively and carefully.

### 4.3.1 Quantifier float in subject positions

[Spec,VoiceP] As shown in §3.1.1, the subject in Janitzio P’urhepecha can surface in [Spec,VoiceP], to the right of VoiceP-adverbials such as *xarhin(t)kueri* ‘early’ ((84a)). This position can also host a subject-associated floated quantifier ((84b)).

(84) a. Uitsindekua mita(a)nta-sī-Ø-ti=sī xarhintkueri
    yesterday open(pO)-PFV-PRS-IND3=pS early
    ūamindu uriti-cha tsīm-eri meiapekue-echa-ni.
    all woman_{RES}-PL they-GEN store-PL-ACC
    ‘Yesterday all the women opened up their stores early.’

   b. Uitsindekua uriti-cha mita(a)nta-sī-Ø-ti=sī xarhintkueri
    yesterday woman_{RES}-PL open(pO)-PFV-PRS-IND3=pS early
    ūamindu-echa tsīm-eri meiapekue-echa-ni.
    all-PL they-GEN store-PL-ACC
    ‘Yesterday the women all opened up their stores early.’

67
The subject can also surface between VoiceP-adverbials like sesi ‘well’ and the AspP-adverbial isku jauembarini ‘suddenly’—i.e., in [Spec,AspP] (§3.1.2; see (85a) below). This position too can house a floated quantifier ((85b)).

(85) a. Unta-si-∅-ti=sï isku jauembarini iamindu iurhitskiri-cha
    fix-pfv-prs-ind3=pS suddenly all young.woman-pl
    very well they-gen table-pl-acc
    ‘All the young women suddenly fixed their tables very well.’ (= (34))

b. iurhitskiri-cha unta-si-∅-ti=sï isku jauembarini
    young.woman-pl fix-pfv-prs-ind3=pS suddenly
    all-pl very well they-gen table-pl-acc
    ‘The young women suddenly all fixed their tables very well.’

The subject can alternatively surface between the AspP-adverbial isku jauembarini ‘suddenly’ and the TP-adverbial jimamberi ‘then’—i.e., in [Spec,TP] (§3.1.3; see (86a) below). Quantifier float is possible in this position as well, as shown by the reasonably acceptable status of sentences such as (86b).

(86) a. Sesi=mindu uandanta-ni ia jimamberi iamindu uatsapi-cha
    well=very inform-inf already then all child-pl
    isku jauembarini ue-nta-si-∅-ti=sï.
    suddenly go.out-iter-pfv-prs-ind3=pS
    ‘To tell you the truth, then all the kids suddenly went back out.’ (= (35))

b. ?Sesi=mindu uandanta-ni ia uatsapi-cha jimamberi
    well=very inform-inf already child-pl then
    iamindu-echa isku jauembarini ue-nta-si-∅-ti=sï.
    all-pl suddenly go.out-iter-pfv-prs-ind3=pS
    ‘To tell you the truth, the kids then all suddenly went back out.’

The subject can also surface between the TP-adverbial jimamberi ‘then’ and the PolP-adverbial sesimindu uandantani ia ‘honestly’ (§3.1.4; see (87a) below). This was tentatively analyzed in §3.1.4 as indicating that the subject has the
option of occurring in [Spec,MoodP]. Quantifier float is possible in this position too ((87b)).

(87) a.  
\[
\text{Sesi=mindu uandanta-ni ia } \text{ jamindu kustati-cha jimamberi}
\]
\[
\text{well=very inform-PL already all musician-PL then}
\]
\[
\text{erenta-a-Ø-ti=sī materu ereta-rhu.}
\]
\[
\text{live-FUT-PRS-IND3=pS other town-LOC}
\]
‘To tell you the truth, all the musicians will (by) then live in another town.’

(= (36))

b.  
\[
\text{Kustati-cha } \text{ sesi=mindu uandanta-ni ia } \text{ jamindu-eecha}
\]
\[
\text{musician-PL well=very inform-INF already all-PL}
\]
\[
\text{jimamberi erenta-a-Ø-ti=sī materu ereta-rhu.}
\]
then \[
\text{live-FUT-PRS-IND3=pS other town-LOC}
\]
‘The musicians will honestly all (by) then live in another town.’

[Spec,PolP] Finally, the subject can precede the PolP-adverbial sesimindu uandanta-ni ia ‘honestly’ (§3.1.5 see (88a)), which was analyzed in §3.1.5 as indicating that it can occupy an outer specifier of PolP. Quantifier float is possible in this position as well, as demonstrated by the reasonably acceptable status of sentences such as (88b). (In these sentences, the associate is presumably in [Spec,TopP]; cf. Rizzi 1997, Capistrán 2002.)

(88) a.  
\[
\text{Jamindu uatsapi-cha } \text{ sesi=mindu uandanta-ni ia}
\]
\[
\text{sesi all child-PL}
\]
\[
\text{well=very inform-INF already well}
\]
\[
\text{t’ire-sī-Ø-ti=sī.}
\]
\[
\text{eat-PFV-PRS-IND3=pS}
\]
‘All the kids honestly ate well.’

(= (37))

b.  
\[
\text{Uatsapi-cha } \text{ jamindu-eecha}
\]
\[
\text{sesi=mindu uandanta-ni ia}
\]
\[
\text{sesi all-PL}
\]
\[
\text{well=very inform-INF already well}
\]
\[
\text{t’ire-sī-Ø-ti=sī.}
\]
\[
\text{eat-PFV-PRS-IND3=pS}
\]
‘The kids all honestly ate well.’

If, as suggested by (88), a quantifier can be floated in [Spec,PolP], then a floated quantifier should be able to immediately precede a polarity particle. This prediction is correct,
as shown for *ambu* ‘not’ in (89) and for *k’o* ‘AFFM’ in (90).

(89) **Uatsapi-cha** uitsindekua **iamindu-eecha** **ambu** jikua-∅-∅-∅.  
boy-PL yesterday all-PL not bathe-PFV-PRS-IND  
‘The boys yesterday all didn’t bathe.’

(90) **Iasï**, uichu-eecha **ambu** ch’ana-∅-∅-∅. **Peru** **misitu-eecha** uitsindekua **ambu** not play-PFV-PRS-IND but **cat-PL** yesterday **iamindu-eecha** **k’o** ch’ana-si-∅-ti=sī.  
All-PL AFFM play-PFV-PRS-IND3=pS  
‘Today, the dogs didn’t play. But the cats yesterday all DID play.’

(In these sentences, the associate of the floated quantifier is presumably in [Spec,TopP] [Rizzi 1997; cf. Capistrán 2002].)

We see, then, that of the five subject positions identified in Janitzio P’urhepecha in §3.1 every single one is also a possible site for a floated quantifier. This type of situation is what is predicted by the stranding analysis of quantifier float, but is quite unexpected on the adverbial analysis.

### 4.3.2 Quantifier float in nonsubject positions

The distributional predictions of the two analyses can be further tested by determining whether quantifiers can be floated in *nonsubject* DP positions. As shown in (91–92), a direct- or indirect-object-associated quantifier can be floated in the postverbal field, where ordinary direct and indirect objects appear. In each of these examples, a low, VoiceP-adjoined adverbial (*sesi* ‘well’ or *exeparini* ‘carefully’) has been included to ensure that the verb is low, ruling out the possibility that the verb has raised high and the floated quantifier is not in fact in a θ-position but rather higher. (See also (76b) and (79b).)
A quantifier can be floated in direct object position

Ambu u(\(a\)nta-Ø-Ø-Ø) p’orhechi-cha-ni, pero \textbf{kukuchi-cha-ni \(\text{sesi\) not \textit{fix}(pO)-PFV-PRS-IND pot-PL-ACC} \text{but \textit{jug-PL-ACC well}}
\(u(\(a\)nta-si-Ø-ka=ni \textbf{\{IAMINDU-EECHA-NI\}} \text{fix}(pO)-PFV-PRS-IND1=1S all-PL-ACC}
‘I didn’t fix the pots, but the jugs I fixed \textit{ALL} of well.’

A quantifier can be floated in notional indirect object position

‘I didn’t give books to the babies, but the kids I carefully gave \textit{books} to \textit{ALL} of.’

The same test can be run using a passive subject, on the standard assumption that passive subjects are base-generated in object position. As shown in (93-94), a (nominative) floated quantifier associated with a raised passive subject can indeed surface postverbally. These examples too include a low VoiceP-adjoined adverbial (\textit{sesi ‘well’} or \textit{esekaparini ‘carefully’})—to ensure that the verb and the floated quantifier are both low, and the floated quantifier is actually in object position rather than in one of the many subject positions.

(93) \textbf{Joskue-echa \textit{sesi exe-na-sin-Ø-di=si \{iamindu-eecha\}} star-PL well see-PASS-HAB-PRS-IND3=pS all-PL CHURIKU-ERI.
\text{night-GEN}
‘The stars can all be seen \textit{well} at \textit{night}.’

(94) \textbf{\p’orhechi-cha \textit{eskaparini atanta-na-si-Ø-ti=si \{iamindu-eecha\}} pot-PL carefully paint-PASS-PFV-PRS-IND3=pS all-PL XARHINKUERI.
\textit{early}
‘The pots were all \textit{carefully} painted \{\textit{EArLY / in the MORNING}\}.’
Another position open to DPs that can be used to test the distributional predictions is the left-peripheral focus position, which immediately precedes the focus clitic =sĩ⁻. Adapting a proposal of Capistrán’s (2002), =sĩ⁻ will be analyzed here as a left-peripheral Foc head, and the focused phrase immediately preceding it as sitting in [Spec,FocP] (cf. Rizzi 1997, Servidio 2009, a.o.). Because [Spec,FocP] can host a DP, the stranding analysis predicts that it should be possible to float a quantifier in this position, with its associate occurring even higher (e.g., in [Spec,TopP]; cf. Rizzi 1997, Capistrán 2002). This prediction is correct. In (95), the quantifier iamindueecha ‘all.pl’ has been floated in the position immediately preceding =sĩ, and its associate (iurhitskiricha ‘the young women’) appears to its left, separated from it by the adverbial uitsindekua ‘yesterday’.


However, [Spec,FocP] can host both nominals and adverbials (as in Carapan P’urhepecha; see Lizárraga Navarro 2013:245-47). That [Spec,FocP] can host an adverbial in Janitzio P’urhepecha is shown in (96).


B: No, [XARHINI-RI]=sĩ. no early.morning-GEN=FOC ‘No, in THE MORNING.’

Because [Spec,FocP] can host both nominals and adverbials in Janitzio P’urhepecha, sentences such as (95) do not help us choose between the stranding and adverbial analyses.
4.3.3 Non-DP positions

Finally, the stranding and adverbial analyses also make different predictions about whether quantifier float should be possible in positions not open to ordinary DPs. On the stranding analysis, if a particular position cannot host a full DP, it should not be able to host a floated quantifier either. On the adverbial analysis, no such correlation is expected; indeed, it should be perfectly possible for a quantifier to float in a position not open to ordinary DPs.

One such position in Janitzio P’urhepecha is to the immediate right of a complement CP, as shown in (97). In (128b), the verb mite- ‘know’ takes as its complement a CP headed by the complementizer eska ‘that’. The matrix subject iamindu uatsapicha ‘all the kids’ is preverbal, and the sentence is perfect. In (97b), the matrix subject appears to the right of the embedded CP, and the result is unacceptable. Finally, (97c) attempts to float the quantifier iamindueecha ‘all.pl’ to the right of the embedded CP, with its associate preceding the matrix verb. This too is unacceptable.

(97)  
a. Iamindu uatsapi-ch a mite-sí-∅-ti=sí [CP eska tekua ambe all child-pl know-PFV-PRS-IND3=pS that honey INDEF aspe-j-∅-ka].  
be.tasty-HAB-PRS-SJV  
int. ‘All kids know that honey is tasty.’

[iamindu uatsapi-ch a] all child-pl  
int. ‘All kids know that honey is tasty.’

c. *[Uatsapi-ch a] mite-sí-∅-ti=sí [CP eska tekua ambe child-pl know-PFV-PRS-IND3=pS that honey INDEF aspe-j-∅-ka] [iamindu-eecha].  
be.tasty-HAB-PRS-SJV all-pl  
int. ‘Kids all know that honey is tasty.’

(Admittedly, though, this could have less to do with possible and impossible DP po-
sitions and more to do with a pressure for embedded CPs, which are generally heavy, to appear clause-finally. The proper analysis of the paradigm in (97), then, remains somewhat open.)

Another position that rejects DPs to some extent can be discerned in ditransitive clauses, as shown in (98), though here the judgments are gradient rather than categorical. In (98a), the order of major constituents is Subject \(\gg\) Verb \(\gg\) Direct Object \(\gg\) Indirect Object \(\gg\) Adjunct (the PP \textit{domimbu jimbo} ‘on Sunday’), and the result is perfect. Sentence (98b) attempts to place the subject between the indirect object and the adjunct, producing a clear decrease in acceptability: the result is marginal. Finally, (98c) attempts to float a quantifier in that position (between indirect object and adjunct), with its associate occurring in a preverbal position, and here too the result is marginal rather than fully acceptable.

(98) a. \textit{S-V-DO-IO-Adjunct}

\begin{verbatim}
Iamindu uariti-cha ints\textmp-s\textdigamma-o-ti=s\textgamma ma ch’anarakua
all woman\textsubscript{RESP-PL} give.as.gift-PFV-PRS-IND3=p\textbeta a toy
Xumu-ni domimbu jimbo.
Xumu-ACC Sunday ‘on’
‘All the women gave a toy to Xumu as a gift on Sunday.’
\end{verbatim}

b. \textit{?V-DO-IO-\textbf{S}-Adjunct}

\begin{verbatim}
Ints\textmp-s\textgamma-o-ti=s\textgamma ma ch’anarakua Xumu-ni
give.as.gift-PFV-PRS-IND3=p\textbeta a toy Xumu-ACC
\underline{Iamindu uariti-cha} domimbu jimbo,
all woman\textsubscript{RESP-PL} Sunday ‘on’
int. ‘All the women gave a toy to Xumu as a gift on Sunday.’
\end{verbatim}

c. \textit{?Associate-V-DO-IO-\textbf{FQ}-Adjunct}

\begin{verbatim}
\underline{Uariti-cha} ints\textmp-s\textgamma-o-ti=s\textgamma ma ch’anarakua Xumu-ni
woman\textsubscript{RESP-PL} give.as.gift-PFV-PRS-IND3=p\textbeta a toy Xumu-ACC
\underline{Iamindu-eeca} domimbu jimbo,
all-\textbeta PL Sunday ‘on’
int. ‘The women all gave a toy to Xumu as a gift on Sunday.’
\end{verbatim}
Because Janitzio P’urhepecha allows the direct object (here *ma ch’anarakua ‘a toy’) and the indirect object (here *Xumuni ‘Xumu.ACC’) to surface in either order, it is worth asking what happens when they are inverted stringwise in (98v-c). The answer is that the judgments remain unchanged, except that the counterpart of (98b) is a bit less marginal (“(?)

(99)

a. *S-V-IO-DO-Adjunct

Iamindu uariti-cha intsímpe-sí-Ø-ti=sí Xumu-ni ma all woman_RESP-PL give.as.gift-PFV-PRS-IND3=pS Xumu-ACC a ch’anarakua domimbu jimbo.
toy Sunday on
‘All the women gave Xumu a toy as a gift on Sunday.’

b. (?)*V-IO-DO-*S-Adjunct

(?)Intsímpe-sí-Ø-ti=sí Xumu-ni ma ch’anarakua
give.as.gift-PFV-PRS-IND3=pS Xumu-ACC a toy
Iamindu uariti-cha domimbu jimbo.
all woman_RESP-PL Sunday on
int. ‘All the women gave Xumu a toy as a gift on Sunday.’

c. ?Associate-V-IO-DO-*FQ-Adjunct

(?)*Uariti-cha intsímpe-sí-Ø-ti=sí Xumu-ni ma
woman_RESP-PL give.as.gift-PFV-PRS-IND3=pS Xumu-ACC a
ch’anarakua Iamindu-eecha domimbu jimbo.
toy all-PL Sunday on
int. ‘The women all gave Xumu a toy as a gift on Sunday.’

4.3.4 Interim summary

What this section has shown about the distribution of floated quantifiers in Janitzio P’urhepecha, and how it compares to that of ordinary DPs, is summarized in the following table:
The results in (100) show that the distribution of floated quantifiers in Janitzio P’urhepecha tracks that of ordinary DPs extremely closely. Before the implications of this result are discussed, though, the one major discrepancy between the two distributions should be addressed. The object-of-P position can be occupied by a full DP, but not by a floated quantifier. This discrepancy will be analyzed here as having a twofold source. The fact that a quantifier cannot be floated in object-of-P position under “short-distance” quantifier float ((80b)) can be subsumed under a broader generalization: Janitzio P’urhepecha in fact does not allow truly “short-distance” quantifier float at all—like French and unlike Hebrew (Shlonsky 1991).\footnote{And a quantifier cannot be floated in object-of-P position under “long-distance” quantifier float (81b) because the unacceptability of “short-distance” quantifier float from direct objects (76) and notional indirect objects (77b, 78b). It appears that, if an associate DP can move to the specifier of its D-quantifier, it must invariably move further. The same is true of nonpronominal associates of quantifiers in English (if quantifier float is derived by stranding in English): compare *I saw the walruses all (**) of with The walruses I saw all of. This is reminiscent of the fact that, when an English interrogative wh-phrase moves to the specifier of a noninterrogative C, it cannot stay there, but must move further (cf. Bosković 2007).}

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<table>
<thead>
<tr>
<th>Position</th>
<th>Acceptability of DP</th>
<th>Acceptability of FQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Spec,VoiceP]</td>
<td>✓ (subject)</td>
<td>✓</td>
</tr>
<tr>
<td>[Spec,AspP]</td>
<td>✓ (subject)</td>
<td>✓</td>
</tr>
<tr>
<td>[Spec,TP]</td>
<td>✓ (subject)</td>
<td>?</td>
</tr>
<tr>
<td>[Spec,MoodP]</td>
<td>✓ (subject)</td>
<td>✓</td>
</tr>
<tr>
<td>[Spec,PolP]</td>
<td>✓ (subject)</td>
<td>? (as diagnosed using sesimindu uandantani ia ‘honestly’) ✓ (as diagnosed using polarity particles)</td>
</tr>
<tr>
<td>Direct object position</td>
<td>✓</td>
<td>✓ (DO-associated)   ✓ (passive-subject-associated)</td>
</tr>
<tr>
<td>Indirect object position</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Object-of-P position</td>
<td>✓</td>
<td>?? (see §4.2.2)</td>
</tr>
<tr>
<td>[Spec,FocP]</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Right of complement CP</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>(DO, IO) PP</td>
<td>?</td>
<td>?</td>
</tr>
</tbody>
</table>
PPs are islands in Janitzio P’urhepecha (see (101-102)). (Alternatively, or in addition, it might be that this is ruled out by Bošković’s (2004) ban on quantifier float in θ-positions, which he deduces from independent aspects of the theory. See Appendix C for some discussion of the extent to which Janitzio P’urhepecha appears to obey this ban.)

(101)  a. **A PP can undergo interrogative wh-movement**

\[ \text{¿Ne-ni } \text{jingoni kusta-si-Ø-ki } \text{Ts’ieriti?} \]
\[ \text{who-ACC with play\_{music-PFW-PRT-INT} Ts’ieriti} \]
\[ \text{‘With whom did Ts’ieriti play \textbf{(music)}?’} \]

b. **The object of a P cannot undergo interrogative wh-movement**

\[ ?? \text{¿Ne-ni } \text{kusta-si-Ø-ki } \text{Ts’ieriti jingoni?} \]
\[ \text{who-ACC play\_{music-PFW-PRT-INT} Ts’ieriti with} \]
\[ \text{int. ‘Who did Ts’ieriti play \textbf{(music)} with?’} \]

(102)  a. **A PP can undergo interrogative wh-movement**

\[ \text{¿Ne-ri } \text{erachi-ni jingoni kusta-si-Ø-ki } \text{Ts’ieriti?} \]
\[ \text{who-GEN brother-ACC with play\_{music-PFW-PRT-INT} Ts’ieriti} \]
\[ \text{‘With whose brother did Ts’ieriti play \textbf{(music)}?’} \]

b. **The object of a P does not allow interrogative wh-movement out of it**

\[ * \text{¿Ne-ri } \text{kusta-si-Ø-ki } \text{Ts’ieriti erachi-ni jingoni?} \]
\[ \text{who-GEN play\_{music-PFW-PRT-INT} Ts’ieriti brother-ACC with} \]
\[ \text{int. } \approx \text{‘Who did Ts’ieriti play \textbf{(music)} with the brother of?’} \]

(As pointed out to me by Jorge Hankamer, though, the English translation given for (102b) is also unacceptable—at least for some speakers, including him—even though PPs are not islands in English.)

(1)  a. *Katie thinks what Mike should buy?
    b. **What** does Katie think \text{ (that) } Mike should buy?

Because an associate DP in Janitzio P’urhepecha cannot move to the specifier of its D-quantifier and stay there, surface Associate-Quantifier strings in which both parts are nominative ((65-b)) must be reflexes of nonconstituents. That is, in the relevant sentences, the associate moves string-vacuously out of the DP headed by *iamindueecha* ‘all.pl.’ and into a higher subject position.
Returning to (100), the results summarized in this table strongly support the stranding analysis of quantifier float, at least for Janitzio P’urhepecha, and constitute a problem for the adverbial analysis. To see why, consider first the positions in which a quantifier can be floated and then those in which one cannot.

Every position in (100) that can host a DP (aside from the object-of-P position just discussed) can also host a floated quantifier. On the stranding analysis, this is predicted. Floated quantifiers appear in DP positions in Janitzio P’urhepecha because they are DPs—more precisely, DPs that have been evacuated by the associates that were originally inside them. If we wished to adopt the alternative analysis—namely, that floated quantifiers are always adverbials adjoined to some clausal projection—we would be hard pressed to explain why these putative adverbials have the distribution of DPs in Janitzio P’urhepecha, and argument DPs at that.

The distributional matchup between floated quantifiers and ordinary DPs extends from positions in which DPs can appear ((100a-i)) to those in which they cannot appear, or cannot easily appear ((100j-k)). A full subject DP cannot occur to the right of a complement CP, and nor can a subject-oriented floated quantifier ((100)). On the stranding analysis, the latter fact follows from the former. On the adverbial analysis, the two facts are unrelated. To account for the impossibility of floating a quantifier to the right of a complement CP, it would have to be stipulated that a floated quantifier cannot be linearized to the right of the clausal projection it is adjoined to, but must be linearized to its left instead (unlike other adjuncts, such as *domimbu jimbo* ‘on Sunday’ in (98)).

The facts in ((100)), if anything, tell even more decisively in favor of the stranding analysis. If an ordinary subject surfaces to the right of the direct and indirect objects but to the left of the clause-final adverbial *domimbu jimbo* ‘on Sunday’, the result is marginal ((98b)). Replacing the ordinary subject with a floated quantifier (with the associate higher up) yields an equally marginal result ((98c)). On the stranding analysis,
this is predicted: the marginal structure in (98b) is also present in (98c). It is not clear how the adverbial analysis could account for this—particularly since, on this analysis, *iamindu*eecha ‘all.pl.’ would presumably have to be right-adjointed in (98c), contra the conclusion (discussed above) that floated quantifiers cannot be allowed to right-adjoin on the adverbial analysis.

But even if the adverbial analysis could be revised or supplemented to account for the data in (100-j-k) without too much stipulation, it would still suffer from a major theoretical problem: it misses the overarching generalization that the distribution of floated quantifiers in Janitzio P’urhepecha tracks that of ordinary DPs in a particularly close and striking way. The positions that allow, forbid, and marginally allow ordinary DPs treat floated quantifiers the same way (100). This is unexpected on the adverbial analysis, but is exactly what is predicted by the stranding analysis.

Before concluding this section, it will be worthwhile to note a prediction about quantifier float made by our analysis of Janitzio P’urhepecha clause structure. The analysis predicts that an Associate-Quantifier sequence should be able to surface not only preverbally, as in (89-90), but also postverbally. The reason is that it should be possible to generate a quantified nominal such as [DP *iamindu*eecha] [DP *uatsapicha*] ‘all the kids’ in [Spec,VoiceP]; move the associate DP to one of the higher subject positions; and spell out the finite verb in Mood, yielding Verb-Associate-Quantifier order. (It is assumed here for concreteness that *iamindu*eecha ‘all’ is a D, and its associate DP [here *uatsapicha* ‘(the) children’] is its complement (cf. McCloskey 2000:59, (6)).) This prediction is borne out: such sentences are indeed fully or relatively acceptable, as shown below.
(103) Verb-Associate-Quantifier order

   play-DUR-PRS-IND3=pS child-PL all-PL hill-LOC
   ‘The kids are all playing on the hill.’

   write-DUR-PRS-IND3=pS student-PL all-PL outside
   ‘The students are all writing outside.’

4.4 Stranding vs. adjunction II: Testing the case-matching predictions

The stranding and adverbial analyses of quantifier float also potentially make different predictions about what case patterns should be observed in quantifier float structures—and, in particular, whether or not a floated quantifier should match its associate in morphological case (Merchant 1996). The predictions about this that the two analyses make are laid out below.

(104) Case-matching predictions

a. **Stranding analysis:** It should be at least possible, and perhaps obligatory, for a floated quantifier to bear the same case as its associate (because the associate and floated quantifier originate as subconstituents of a single DP and should therefore display concord with one another [in relevant languages]).

b. **Adverbial analysis:** A floated quantifier is an adverbial element. If adverbials do not generally bear morphological case in a particular language, then floated quantifiers shouldn’t either, all else being equal.

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2 As a *Natural Language and Linguistic Theory* reviewer points out, Doetjes (1998), defending the adverbial analysis, proposes that the agreement in case and φ-features between a floating quantifier and its associate is “a reflex of the binding relation between the FQ and the DP trace” [p. 205; see also her p. 213]. This suggestion is difficult to assess in the absence of a more explicit analysis. See also the discussion of a proposal of Fitzpatrick’s (2006) below.
It has already become clear that there is at least some associate–quantifier case-matching in Janitzio P’urhepecha. In every quantifier float sentence examined so far, the associate and floated quantifier have either both borne nominative case or both borne accusative case. A natural question, then, is whether floated quantifiers and their associates share other case values as well. The answer is yes. To see this, consider the verb *uandontskuari-* ‘converse, talk’. This verb can cooccur with a genitive DP. *Uandontskuari-* + DP\(_{[\text{GEN}]}\) means ‘talk about [DP]’, and the genitive DP may well be an internal argument of the verb. In (105), the genitive internal argument of *uandontskuari-* ‘converse’ is associated with a floated quantifier, and this quantifier obligatorily bears genitive case as well. (Using the nominative form IAMINDU-EECHA ‘all-pl’ with a non-nominative associate—i.e., violating the case-matching requirement—produces full unacceptability [“*”] in (105) and degradation [“?”] in (106-107) below.)

(105) *Genitive case matching*

\[
\begin{align*}
\text{Ambu } & \text{uandontskuari-} \emptyset \emptyset \emptyset = \text{sí uaxastakue-ech-eri, peru orepati-ch-eri} \\
\text{not } & \text{uandontskuari-} \text{sí-ka=sí iamindu-eech-eri,} \\
\text{uandontskuari-} & \text{sí-ka=nS law-pl-gen but leader-pl-gen} \\
\text{uandontskuari-} & \text{converse-PFV-PRS-IND1=pS all-pl-gen} \\
\text{‘We didn’t talk about the laws, but the leaders we talked about ALL of.’}
\end{align*}
\]

*Uandontskuari-* ‘converse’ can also cooccur with a DP bearing comitative case; *uandontskuari-* + DP\(_{[\text{COM}]}\) means ‘talk with [DP]’. This comitative DP too may well be an internal argument of the verb. In (106), the comitative argument of *uandontskuari-* ‘converse’ is associated with a floated quantifier, and this quantifier obligatorily bears comitative case too.
Finally, a comitative DP can share its case value with a floated quantifier even when it is plausibly an adjunct. In (107), the comitative DPs receive an instrumental interpretation (e.g., ‘with pens and pencils’). The comitative nominal *ts’ï kantsakateechanguni* ‘with these computers’ is associated with a floated quantifier, and this quantifier obligatorily bears comitative case as well.

(107)  **Comitative case matching**

[Context: a friend and I are in a classroom where there are a lot of computers. I say to him about our friend Mariana, who’s a writer...]  


‘Mariana doesn’t write with pens and pencils, but these computers she writes on [lit. ‘with’] ALL of.’

These case-matching effects are unsurprising on the stranding analysis, but somewhat unexpected on the adverbial analysis. If a floated *iamindueecha* ‘all.PL’ is an adverbial adjoined to some clausal projection, it is not obvious why it should receive genitive or comitative case which is plausibly assigned by the verbal complex ((105-106)), or comitative case borne by an instrumental adjunct DP ((107)). The facts are particularly puzzling given that adverbials do not otherwise bear morphological case at all in Janitzio P’urhepecha.
The case-matching facts might become more tractable for defenders of the adverbial analysis if they adopted Fitzpatrick’s (2006) proposal that, although (some) floated quantifiers have the external distribution of adverbials (i.e., they are adjoined to a clausal projection), they contain within them a null pronominal. Extended to Janitzio P’urhepecha, this proposal entails that the internal structure of a floating iamindu-eecha ‘all-pl.’ is really $[\text{iamindu-eecha pro}]$ or $[\text{iamindu pro-eecha}]$. Fitzpatrick (2006) argues that the associate of an adverbial floating quantifier is restricted to A-movement and cannot undergo $\emptyset$ A-movement, because $\emptyset$-movement of the associate across the null pronominal would induce a weak crossover violation. Fitzpatrick’s null-pronominal analysis is lent plausibility by the obligatory presence of an overt clitic pronoun on floated quantifiers in Hebrew and Arabic (Shlonsky 1991, Benmamoun 1999, Al Khalaf submitted), and perhaps by English structures such as The wombats were [all of them] eating pizza. (As pointed out to me by Jim McCloskey, though, complex floating quantifiers such as all of them do not have exactly the same distribution as simplex ones—e.g., all—in all varieties of English; see Huddleston & Pullum et al. [CGEL] 2002:413.)

On this analysis, it can be posited that, when a floated quantifier seems to bear morphological case in Janitzio P’urhepecha, the case is not actually borne by an “adverb” but rather by a pronoun within the adverbial expression. But although this is probably an improvement, a question remains as to how the relevant cases can be assigned to two constituents—their ordinary bearer and the pronoun inside the complex floating quantifier. In particular, inherent cases assigned by the verbal complex (which the genitive and comitative cases in (105-106) may well be) are not ordinarily assigned twice.

A *Natural Language and Linguistic Theory* reviewer questions this claim, suggesting that perhaps a Fitzpatrick-style complex floating quantifier with the structure $[\text{FQ pro}]$ is “some kind of appositive to the associate DP” and noting that, in languages such as Latin, the verbal complex can assign a given inherent case both to a nominal and
to another phrase that is associated with it somehow—e.g., a depictive secondary predicate. This possibility initially seems attractive, because Janitzio P’urhepecha does have depictive secondary predicates that share the case of the nominal they are predicated of.

A possible solution to this “double case assignment” problem faced by the adverbial analysis, then, would be to try to assimilate case-matching under quantifier float to case-matching in secondary predication. It is unlikely that *iamindueecha ‘all’ is literally a depictive secondary predicate (let alone a resultative one), but perhaps it receives the same morphological case as its associate through a case-sharing mechanism similar to the one operative in secondary predication.

The problem with this solution is that case-matching between associate and floated quantifier is possible in Janitzio P’urhepecha in syntactic environments in which depictive secondary predication is not. It was shown above (106) that the comitative DP cooccurring with *uandontskuari- ‘converse’ can share its case with a floated quantifier associated with it. Apparently, though, it cannot share its case with the would-be depictive predicate *ts’inariricha ‘awake’ (108a). (The intended meaning of (108a) can be paraphrased reasonably well using an adjunct clause instead of a depictive (108b), making it unlikely that (108a) is ruled out independently on deep semantic grounds. That *ts’inariri ‘awake’ can indeed be used as a depictive is shown by (108c).)

(108) Ambu *uandontskuari-Ø-Ø-Ø pireri-cha-nguni, ka... not converse-PFV-PRS-IND singer-PL-COM and ‘I didn’t talk to the singers, and...’
      awake-PL-COM ‘*...the instrumentalists, I talked to awake.’

84
Control example: ts’inari ‘awake’ can be a depictive secondary predicate

M Elena mentku isī anchikuari-sī-∅-di TS’INARI. Elena always thus work-HAB-PRS-IND3 asleep

semilit. ‘Elena always works AWAKE.’

id. ‘Elena’s always awake when she’s working.’

(Sentence (109) is acceptable but marked. It becomes more natural if the depictive is replaced by the present participle ts’inaririni; cf. (108b).)

The comitative case borne by instrumental adjunct DPs behaves the same way. These DPs can share their case with a floated quantifier (107), but not with the would-be depictive ambarutantakateecha ‘sharpened.pl’ (110a). Here too, replacing the depictive with an adjunct clause fixes the problem (110b). (That ambarutantakateecha ‘sharpened.pl’ can be used as a depictive is shown by (111), in which the depictive displays accusative case-matching.)

Mariana ambu kara-j-∅-ki kantsakate-echa-nguni, ka...

Mariana not write-HAB-PRS-IND computer-PL-COM and ‘Mariana doesn’t write using computers, and...’

a. *karanaritakue-echa-nguni kara-sīn-∅-di
writing.implement-PL-COM write-HAB-PRS-IND3
ambarutanta-kate-echa-nguni.

sharpen-PTCP.PASS-PL-COM

‘*...with pencils she writes sharpened.’

b. karanaritakue-echa-nguni kara-sīn-∅-di enga=sī
writing.implement-PL-COM write-HAB-PRS-IND3 SUB=pS
ambarutanta-kate-ech-e-∅-∅-ka.

sharpen-PTCP.PASS-PL-COP-PFV-PRS-SJV

‘...with pencils she writes when they’re sharpened.’
Control example: *ambarutantakateecha* ‘sharpened.PL’ can be a depictive secondary predicate

A: ¿Urásín-gi-ri ts’i-ní kararanitakue-echa-ní pari kara-ní?
use-HAB-PRS-INT=2sS these-ACC writing.implement-PL-ACC for write-INF ‘Do you use these pencils to write with?’

B: Jo, ura-sín-∅-ga=ni *ambarutanta-kate-echa-ní.*
yes use-HAB-PRS-IND1=1sS sharpen-PTCP.PASS-PL-ACC ‘Yes, I use them sharpened.’

To recapitulate, a floated quantifier in Janitzio P’urhepecha shares the morphological case of its associate. On the stranding analysis, this is unsurprising, and can be analyzed as a reflex of concord between quantifier and associate, which start out as a single DP. On the adverbial analysis, by contrast, this case-matching is unexpected. Even if the morphological case apparently borne by the floated quantifier is analyzed as actually borne by a null pronominal local to the quantifier, a question remains as to how the associate and the null pronominal can bear the same case, since cases cannot normally be assigned twice. It does not seem promising to try to assimilate this instance of case-sharing to that observed in depictive secondary predication, since associate–floated-quantifier case-sharing is possible in Janitzio P’urhepecha in environments in which depictive secondary predication is not. The facts of case-matching under quantifier float, then, provide a second argument in favor of the stranding analysis for Janitzio P’urhepecha.

4.5 Stranding vs. adjunction III: Testing the island-sensitivity predictions

A third difference between the stranding and adverbial analyses (also discussed in Fitzpatrick 2006) has to do with the predictions they make about whether quantifier float should appear to be island-sensitive or -insensitive. To see why, consider the following
sentences:

(112)  
a. Both (of) the presidents were guilty of stealing raisins.

b. The presidents were both guilty of stealing raisins.

On the stranding analysis, the derivation of (112b) involves moving to [Spec,TP] the DP the presidents, a subconstituent of the DP generated in the thematic subject position:

(113) [DP The presidents]₂ were [DP both ₂] guilty of stealing raisins.

As pointed out by Fitzpatrick (2006), this seems to pose a problem for the stranding analysis, because the derivation in (113) appears to violate the Subject Condition. It involves extracting a DP from a (larger) subject DP, which is generally unacceptable (though see Chomsky 2008, Jurka 2013, and Bibbs 2018 for relevant discussion):

(114) *[DP Which country]₃ were [DP both former presidents of ₃] guilty of stealing raisins?

On the adverbial analysis, however, the derivation of (112b) does not involve extracting a DP from within a subject DP, because [DP the presidents] is never inside any larger DP. Both is simply an adverbial adjoined to some clausal projection. Therefore, on the adverbial analysis, the derivation of (112b) proceeds along the lines sketched in (115), incurring no violation of the Subject Condition.

(115) [The presidents]₂ were [AP both [AP ₂ guilty of stealing raisins]].

On the basis of this and other considerations, Fitzpatrick (2006) argues that floating all, both, and each in English are adverbial adjuncts rather than stranded adnominal elements. At any rate, what is important for present purposes is that the predictions about island-(in)sensitivity made by the stranding and adverbial analyses can be tested in Janitzio P’urhepecha to gain additional insight into which analysis is superior for this language. These predictions are laid out below.
Island-sensitivity predictions

a. **Stranding analysis:** Quantifier float structures should not be able to even appear to violate the Subject Condition. They are derived by genuine movement, and must therefore obey all applicable constraints on movement.

b. **Adverbial analysis:** Quantifier float should be able to appear to violate the Subject Condition—but the violations will be illusory, because no extraction from a subject DP is actually involved.

As has already become clear, Janitzio P’úrhepecha is like English in this respect: quantifier float from subjects is acceptable in a variety of configurations in this language (§4.2.1, §4.3.1). An example is given in (117).

     bat-PL    fly-HAB-PRS-IND3=pS all-PL       afternoon-GEN
     ‘Bats all fly in the afternoon.’ (= (66b))

On the stranding analysis, sentences such as (117) would appear to violate the Subject Condition; but an adverbial analysis of these sentences would not have any such problematic implication. This seems like preliminary evidence in favor of the adverbial analysis. But how much weight should be accorded to this evidence depends crucially on whether the Subject Condition is in force in Janitzio P’úrhepecha to begin with.

Although the empirical picture is complex (as in English and German; see Chomsky 2008, Jurka 2013, Bibbs 2018), the core cases show that something like the Subject Condition is indeed in force in Janitzio P’úrhepecha. To see this, consider first the baseline example in (118), which shows that Janitzio P’úrhepecha allows extraction from *object* nominals. In this sentence, the genitive nominal *neri* ‘of whom’ has been extracted from the nominal phrase introduced by *ma* ‘a’.
(118) [Context: I know that the baby is scared of a picture of someone, but I don’t know who. I want to know who the picture is of. I ask...]?

? ¿Ne-ri chere-sín-∅-gi charaku ma p’itakata?
who-GEN be.afraid.of-HAB-PRS-INT baby a picture
‘Who’s the baby scared of a picture of?’

In the same context, the corresponding extraction from a subject is severely degraded. This is shown in (119), which uses the verb chera- ‘scare’, the transitive counterpart of chere- ‘be afraid of’.

(119) [Context: I know that the baby is scared of a picture of someone, but I don’t know who. I want to know who the picture is of. I ask...]?

?* ¿Ne-ri chera-sín-∅-gi ma p’itakata charaku-ni?
who-GEN scare-HAB-PRS-INT a picture baby-ACC
semilit. *Who does [a picture of ___] scare the baby?’
int. ‘Who is such that a picture of them scares the baby?’

Similarly, the following sentence, which also attempts extraction from a subject, is completely unacceptable:

(120) [Context: I know that there’s a baby who’s scared of a picture, but I don’t know whose baby it is. I want to know. I ask...]?

* ¿Ne-ri chere-sín-∅-gi charaku ma p’itakata?
who-GEN be.afraid.of-HAB-PRS-INT baby a picture
semilit. *Who is [the baby of ___] scared of a picture?’
int. ‘Whose baby is scared of a picture?’

The sentence in (120) is in fact string-identical to that given as reasonably acceptable in (118). The difference is that the context provided for (118) forces the extraction-from-

3This sentence was in fact judged perfect out of context. It may have been judged a bit marginal in context because, for the consultant who supplied these judgments, it is more natural in this context to use the pied-piping option shown in (1) below.

(1) ¿Ne-ri p’itakata-ni chere-sín-∅-gi charaku?
who-GEN picture-ACC be.afraid.of-HAB-PRS-INT baby
‘Whose picture is the baby scared of?’
object parse, whereas that provided for (120) is only compatible with the (unavailable) extraction-from-subject parse.

It seems, then, that Janitzio P’urhepecha does indeed have some version of the Subject Condition. This gives rise to a quandary. On the one hand, the distributional and case-matching facts presented above (§§4.3-4.4) argue convincingly in favor of the stranding analysis for Janitzio P’urhepecha. On the other hand, this analysis entails that a subject-oriented floating quantifier in this language is stranded by the movement of its associate out of a containing subject DP—which would apparently violate the Subject Condition, now known to be active in Janitzio P’urhepecha. This latter consideration seems to tell in favor of the adverbial analysis, on which quantifier float does not involve violating the Subject Condition. How can this problem be solved?

If the Subject Condition evidence were interpreted as establishing conclusively that floated quantifiers are adjoined adverbials in Janitzio P’urhepecha, it would be extremely difficult to explain why the distribution of floated quantifiers is essentially identical to that of ordinary DPs in this language (not to mention how case-matching occurs under quantifier float). It will therefore be argued here, instead, that the stranding analysis is superior for Janitzio P’urhepecha (after all, it explains the striking distributional correlation uncovered in §4.3) and that the Subject Condition evidence does not tell as unambiguously in favor of the adverbial analysis as it initially appears to.

The argument from the Subject Condition in favor of the adverbial analysis is the following. On the stranding analysis, a DP consisting of a quantifier and its associate can be broken up by moving the associate out of it regardless of whether the containing DP is an object or a subject. But the wh-questions in (118, 120) show that a DP can be extracted from an object but not from a subject in Janitzio P’urhepecha. Therefore, the stranding analysis is untenable, and the adverbial analysis—which does not need to posit any Subject Condition-violating movement—is to be preferred.

The force of this argument derives largely from the implicit assumption that the
same category moves in quantifier float and in the \textit{wh}-movement structures investigated above: DP. In other words, a \textit{wh}-phrase such as \textit{neri} `who.gen / of whom’ is a DP just as much as an associate nominal such as \textit{uasiščha} `the bats’ in (117) is. But this is not particularly obvious. If "nominal" \textit{wh}-phrases turned out to belong to some category other than DP, then the categorial difference between \textit{wh}-phrases and associates of quantifiers would be one that extraction operations could be sensitive to. In particular, it could be that, in Janitzio P’urhepecha, DPs (including associates of quantifiers) can be extracted both from objects and from subjects, whereas \textit{wh}-nominals can be extracted from objects but not from subjects. This would still call for an explanation, but it would be similar to a situation found in English—namely, that extracting a DP from a subject generally produces severely degraded results (for many speakers; the judgments in (121) are mine), but some PPs can be extracted quite unproblematically from subjects that are thematically internal arguments (122); cf. Chomsky 2008):

\begin{enumerate}
\item *(Who did a biography of appear last month?\)
\item *(Who was a biography of published last month?\)
\item *(Who did a biography of receive several awards last month?\)
\end{enumerate}

\begin{enumerate}
\item Of whom did a biography appear last month?
\item Of whom was a biography published last month?
\item Of whom did a biography receive several awards last month?
\end{enumerate}

Suppose that this is on the right track—i.e., that in Janitzio P’urhepecha, associates of quantifiers are DPs, but nominal \textit{wh}-phrases belong to some other category (call it QP, following Cable 2010, for concreteness). If this is so, then that categorial difference should be detectable elsewhere. There is some evidence that this expectation is borne out. Ordinary DPs can be extracted from larger DPs headed by the quantifier \textit{iamindu} `all’, yielding quantifier float (on the stranding analysis, of course). But nominal
wh-phrases apparently cannot be, judging by examples such as (123-124), which are degraded or unacceptable:

(123) * ¿ Naki tumbi-cha
which young.man-PL
pire-si-Ø-ki=sì
sing-PFV-PRS-INT=pS
iamindu-eecha
all-PL
k’uinchikua-rhu?
festival-LOC
int. ‘ ¿ Naki tumbi-cha
which young.man-PL
sing-PFV-PRS-INT=pS
iamindu-eecha
all-PL
k’uinchikua-rhu?
festival-LOC
int. ‘Which young men all sang at the festival?’

(124) ?? ¿ Naki iajchakue-echa-ni
which pillow-PL-ACC
tesku-a-Ø-ri
give-pO-PFV-PRS-INT=2S
iamindu-eecha-ni
Anita-ACC
Anita-ni?
all-ACC
int. ‘Which pillows did you give all of to Anita?’

This difference between ordinary associates of quantifiers and nominal wh-phrases would be mysterious if both types of phrases were DPs, but becomes much more tractable if they belong to different categories (DP and QP respectively). On the latter analysis, it can be posited that the D *iamindu ‘all’ can optionally bear a [*D]*EPP feature (which attracts the closest DP in its c-command domain to its specifier, allowing it to escape the *iamindu*-DP phase), but it cannot be endowed with a [*Q]*EPP feature, and as a result, a QP cannot be extracted from a *iamindu*-DP.

Summarizing, the fact that Subject Condition effects do not show up across the board in natural language, but rather appear and disappear in part as a function of the category of the extracted element ((121-122)), substantially weakens the argument from the Subject Condition that floated quantifiers in Janitzio P’urhepecha must be adverbials.

4.6 Conclusion

This chapter has focused in large part on the intricate interactions between two parts of Janitzio P’urhepecha grammar: the remarkably wide array of DP positions (most of
them “subject” positions) and the process of quantifier float. (The sheer number of subject positions in Janitzio P’urhepecha provides yet further support for the “distributed” view of subjecthood which has become standard in generative syntax; see Koopman and Sportiche 1991; Bobaljik and Jonas 1996; McCloskey 1997; Alexiadou and Anagnostopoulou 1998; Zubizarreta 1998, ch. 3; Goodall 2001; Kiss 2002; Svenonius 2002; Cardinaletti 2004; Cable 2012; Rizzi 2015; Poole 2016; Fong 2017a,b, 2018; and Danckaert to appear, a.m.o.) As shown above, the distribution of floated quantifiers in Janitzio P’urhepecha tracks that of ordinary DPs virtually perfectly: whether an ordinary DP is possible, impossible, or marginal in a given position, a floated quantifier behaves the same way in that position. This correlation is predicted by the stranding analysis, but unexpected on the adverbial analysis. The stranding analysis is further supported over the adverbial analysis for Janitzio P’urhepecha by the facts of case-matching between floated quantifiers and their associates (cf. Merchant 1996).


The conclusion that quantifier float is derived by stranding in Janitzio P’urhepecha is important in ways that go considerably beyond the study of the phenomenon itself, and the accompanying stranding-vs.-adjunction debate. First, as has often been noted, if the stranding analysis is shown to be correct for a particular language, then quantifier float becomes one of the most powerful diagnostics for derivational histories in that language, making it possible to determine fairly straightforwardly (at least some of) the positions that particular nominals have occupied on their way to their surface
positions (cf. Koopman & Sportiche 1991:222). This is an especially valuable diagnostic
to be able to use in languages such as Janitzio P’urhepecha, in which clause structure
is highly articulated, and both the subject (§3.1) and the verb word (§2.3) can occupy
a strikingly wide range of positions. Languages like Janitzio P’urhepecha exploit, in a
particularly dramatic way, possibilities for deriving clause structures which are made
available by current syntactic theory. In such shifting syntactic landscapes, reliable
diagnostics and positional landmarks are all the more necessary.

Furthermore, the result that at least one language implements quantifier float
via stranding—i.e., extraction of one nominal from within another, despite their cate-
gorial similarity—should prove key as we continue to sharpen our understanding of the
locality conditions governing movement (or Internal Merge, Chomsky 2004—and/or
probing, if the former depends on the latter; cf. Chomsky 2001).
Chapter 5

Hyperraising to object

Classical syntactic theory was designed to ensure that raising would be able to proceed out of nonfinite clauses, but not out of finite clauses. It has since become clear, however, that a number of languages in fact allow raising out of finite clauses, otherwise known as hyperraising. This chapter argues that Janitzio P’urhepecha allows hyperring to object (cf. Bruening 2002, Tanaka 2002, Halpert & Zeller 2015, Deal 2016, Fong 2017a,b, 2018), and develops an analysis of this phenomenon on which it involves two steps of purely altruistic (target-driven) movement—i.e., movement driven exclusively by a featural requirement of an attracting head. Alternative analyses of the phenomenon based on Greed (Chomsky 1995a, Bošković 2007, a.o.) or Labeling (Chomsky 2013, 2015, 2016, a.o.) are considered and shown to face serious problems. Janitzio P’urhepecha hyperring to object, then, sheds light on the driving force for movement: it provides an argument for Enlightened Self-Interest (Lasnik 1995, 2003, a.o.), the hypothesis that movement may be driven by a feature either of the moving element or (as in this case) of an attracting head. The phenomenon will also be shown to narrow down the space of possibilities for understanding the A/Ā-distinction, one of the fundamental puzzles in syntax.

As is well known, raising in English and other familiar languages can proceed
out of a nonfinite clause, but not out of a finite clause: compare *She seems [INF _i to be happy] with She seems [FIN _i is happy], and I believed him incorrectly [INF _i to be happy] with *I believed him incorrectly [FIN _i was happy]. Classical syntactic theory was developed in such a way as to ensure this result (see, e.g., the Tensed-S Condition, Chomsky 1973:238). But as empirical investigation has progressed, it has become clear that some languages in fact make use of derivations along the lines of the two just starred (Tanaka 2002, Martins & Nunes 2010, Carstens & Diercks 2013, Halpert & Zeller 2015, Deal 2016, Halpert 2016, 2018, Fong 2017a,b, 2018, Petersen & Terzi to appear, a.m.o.; see also Bruening 2002). On a traditional understanding of the A/Ā-distinction, this is unexpected: finite clauses should allow Ā-movement out of them, but not A-movement. But that traditional understanding is being revisited and challenged (Chomsky 2008, Obata & Epstein 2008, Safir 2015, van Urk 2015, Fong 2017b, 2018), and the phenomenon of hyperraising provides one of the several motivations for this rethinking.

Against that background, this chapter argues that Janitzio P’urhepecha permits hyperraising to object—i.e., A-raising out of a finite clause which creates an object. It then develops an analysis of this type of raising—and specifically of the syntactic mechanisms that permit hyperraising in this language—and considers the theoretical implications of the phenomenon.

This chapter is organized as follows. §5.1 presents novel data from Janitzio P’urhepecha exemplifying a phenomenon that will provisionally be referred to as “accusative + complementizer” (ACC-C). §5.2 shows that the crucial accusative DP in ACC-C is in the matrix clause and not at the left edge of the embedded clause. §5.3 argues that ACC-C is hyperraising to object—i.e., movement—rather than prolepsis. §5.4 considers, and rejects, a third possible analysis of ACC-C, on which it is finite object control. §5.5 presents an explicit analysis of ACC-C in Janitzio P’urhepecha, on which it involves two steps of purely altruistic (target-driven) movement. The analysis
has the important consequence that a traditional position-based approach to the A/Â- distinction is untenable. §5.6 argues against alternative analyses of the phenomenon on which the movement is greedy or Labeling-driven. §5.7 concludes.

5.1 The phenomenon: “accusative + complementizer” (Acc-C)

In Janitzio P’urhepecha, the verb *ueka* ‘want’ can take as its complement a subjunctive clause with a nominative subject. This is shown in (125), in which the embedding complementizer *eska* ‘that’ is boldfaced and the embedded nominative subject *Xumo* is boxed. (Nominative case is not realized overtly in P’urhepecha. The subjunctive mood is used in many or most types of embedded clauses, at least in the Janitzio variety of the language, and may therefore be essentially a reflex of subordination.)

(125) *Ueka*-sïn-∅-di=sï  **eska** Xumo  u-a-∅-ka  ma k’umanchikua.
    want-HAB-PRS-IND3=pS that Xumo make-FUT-PRS-SJV a  house
    ‘They want Xumo to build a house.’

Some speakers of Janitzio P’urhepecha, however, allow a variant of this kind of structure in which (apparently) the embedded subject surfaces to the left of the embedding C, rather than to its right, and bears accusative case (exponed by the morpheme *-ni*) rather than nominative case:

(126) “Accusative + complementizer”

*Ueka*-sïn-∅-di=sï  **eska** u-a-∅-ka  ma k’umanchikua.
    want-HAB-PRS-IND3=pS  Xumo-ACC that make-FUT-PRS-SJV a  house
    ‘They want Xumo to build a house.’

The phenomenon exemplified in (126) will for the time being be referred to pretheoretically as the “accusative + complementizer” phenomenon, or ACC-C.
ACC-C is possible only with certain matrix verbs. Another one besides ueka- ‘want’ that allows it is uetarincha- ‘need’:

(127) a. ‘Need’ without ACC-C

Uetarincha-sín-∅-ga=ni eska Elena k’uanatsinta-a-∅-ka Xanich-uo.
need-HAB-PRS-IND1=1sS that Elena return-FUT-PRS-SJV Janitzio-RESID
‘I need Elena to return to Janitzio.’

b. ‘Need’ with ACC-C

Uetarincha-sín-∅-ga=ni Elena-ni eska k’uanatsinta-a-∅-ka
need-HAB-PRS-IND1=1sS Elena-ACC that return-FUT-PRS-SJV
Janitzio-RESID
‘I need Elena to return to Janitzio.’

In addition, some speakers find ACC-C with mite- ‘know’ fully or relatively acceptable:

(128) a. ‘Know’ without ACC-C

Mite-sí-∅-ka=ni eska Ikinari Xanich-uo
know-PFV-PRS-IND1=1sS that Ikinari Janitzio-RESID
anapu-e-∅-∅-ka.
from-COP-PFV-PRS-SJV
‘I know that Ikinari’s from Janitzio.’

b. ‘Know’ with ACC-C

%Mite-sí-∅-ka=ni Ikinari-ni eska Xanich-uo
know-PFV-PRS-IND1=1sS Ikinari-ACC that Janitzio-RESID
anapu-e-∅-∅-ka.
from-COP-PFV-PRS-SJV
semilit. ‘I know Ikinari to be from Janitzio.’


(Bracketed diacritics represent acceptability judgments provided by individual speakers; they accompany sentences for which judgments from multiple speakers are available that display some variation. The subscript capital letters corresponding to individual
speakers are used consistently throughout the chapter; hence every diacritic followed by a subscript B was provided by the same speaker, and likewise for all the other letters.)

Two questions about acc-C that arise immediately are the following:

(129) **Questions about acc-C in Janitzio P`urhepecha**

- **Position question**
  Is the accusative DP in the matrix clause, or at the left edge of the embedded clause (e.g., in [Spec,CP])?

- **Derivation question**
  If the accusative DP is in the matrix, does it get there by movement (hyper-raising) or by base-generation (prolepsis)?

Each of these questions will be taken up in turn.

### 5.2 The position question: Is DP\textsubscript{ACC} in the matrix or in the embedded clause?

One respect in which simple examples of acc-C underdetermine the analysis of the phenomenon is that it is impossible to tell simply by inspecting such examples which clause the accusative DP is in in surface syntax. The mere fact that the accusative DP (henceforth DP\textsubscript{ACC}) precedes the C in acc-C does not guarantee that it is in the matrix clause at any stage of the derivation: it could instead be at the left edge of the embedded clause (e.g., in [Spec,CP]). Fortunately, the question can be settled empirically, because the two available hypotheses about the surface position of DP\textsubscript{ACC} make different predictions about certain phenomena.
5.2.1 Ordering with respect to matrix adverbials

One such phenomenon is the relative order of DP\textsubscript{ACC} and matrix adverbials. The predictions of the two hypotheses are laid out below.

(130) Predictions about matrix adverbials

a. Matrix hypothesis: DP\textsubscript{ACC} may well be able to precede a matrix adverbial that in turn precedes the embedded CP. (Cf. Postal 1974:146-154, Halpert & Zeller 2015:485-486.)

b. Embedded hypothesis: DP\textsubscript{ACC} should not be able to precede such a matrix adverbial.

Admittedly, even if DP\textsubscript{ACC} is in the matrix, there is no guarantee that it will be separable from the embedded CP by a matrix adverbial: whether or not it will be will depend in part on the exact position of the relevant matrix adverbials. But if DP\textsubscript{ACC} is at the left edge of the embedded clause, then it certainly should not be separable from the rest of the embedded clause by a matrix adverbial.

The relevant sentences—involving DP\textsubscript{ACC} \gg \textsc{Matrix Adverbial} \gg CP order—are judged relatively or even quite acceptable. Two examples follow.

(131) (\?)Emilia ueka-sïn-ɔ-di Xumo\textsubscript{-ni} mintsita-ni jingoni eska
Emily want-HAB-PRS-IND3 Xumo-ACC heart-ACC with that
jaruata-a-ɔ-ka pauani.
help-FUT-PRS-SJV tomorrow
‘Emily wants Xumo with all her heart to help her tomorrow.’

(132) (\?)Axuni ueka-sïn-ɔ-di Ana\textsubscript{-ni} alma-ni jingoni eska
Axuni want-HAB-PRS-IND3 Anna-ACC soul-ACC with that
pire-a-ɔ-ka pauani.
sing-FUT-PRS-SJV tomorrow
‘Axuni wants Anna with all his soul to sing tomorrow.’

If DP\textsubscript{ACC} were at the left edge of the embedded clause, and could never be in the matrix, it would be essentially impossible to derive the constituent order observed in (131) (132).
Such sentences therefore provide strong evidence that $\text{DP}_{\text{ACC}}$ can occupy a position in the matrix clause.

(The opposite order [matrix adverbial $\gg$ $\text{DP}_{\text{ACC}} \gg$ eska... ] is also possible: the judgments given for (131) remain unchanged if the boxed $\text{DP}_{\text{ACC}}$ is placed to the immediate right of the boldfaced matrix adverbial. What is important for present purposes, though, is that (131) constitute strong evidence that $\text{DP}_{\text{ACC}}$ can be in the matrix.)

5.2.2 Condition B

The matrix and embedded hypotheses also make different predictions about Condition B effects in acc-C (given a certain assumption about binding domains, discussed directly below):

(133) Predictions about Condition B

a. **Matrix hypothesis:** If a pronoun, $\text{DP}_{\text{ACC}}$ should be unable to corefer with the closest c-commanding subject.

b. **Embedded hypothesis:** If a pronoun, $\text{DP}_{\text{ACC}}$ should be able to corefer with the closest c-commanding subject.

If the position occupied by $\text{DP}_{\text{ACC}}$ is at the left edge of the embedded clause, we may expect a pronominal $\text{DP}_{\text{ACC}}$ to be able to corefer with the closest c-commanding subject, if the domain (in the extended projection of V) within which pronouns must be free is CP. But if $\text{DP}_{\text{ACC}}$ is in the matrix, then a pronominal $\text{DP}_{\text{ACC}}$ should be unable to corefer with the closest c-commanding subject, because the two DPs will be in the same minimal CP, inducing a Condition B violation.

In order to test the Condition B predictions in (133), it will be necessary to identify anaphoric expressions that are subject to Condition B in Janitzio P’urhépecha. Independent pronouns such as ima ‘he/she/it’ (also a distal demonstrative, ‘that’) seem
to fit the bill. In (134), the pronominal object \textit{ima-ni} ‘him/her-ACC’ cannot be interpreted as coreferent with the local subject \textit{Irepani}, suggesting that \textit{ima} ‘he/she/it’ is subject to Condition B.

\begin{equation}
\text{Irepani}, \text{kuaajpe-si-Ø-ti} \quad \text{ima-ni}_{k/Ø}.
\end{equation}

\text{Irepan} \text{ defend-PFV-PRS-IND3 3-ACC}

‘Irepan defended him/her/*himself.’

The interpretation that (134) lacks, namely ‘Irepan defended himself’, is conveyed by (135), in which the reflexive morpheme -\textit{kuare} appears in the verbal complex:

\begin{equation}
\text{Irepani}, \text{kuaajpe-kuare-si-Ø-ti.}
\end{equation}

\text{Irepan} \text{ defend-REFL-PFV-PRS-IND3}

‘Irepan defended himself.’

\textit{Ima} ‘he/she/it’, then, can be used to test the Condition B predictions in (133). This is done in (136), which uses coordinate structures to avoid possible obviation effects. Sentence (136a) shows that, when ACC-C does not occur, the \textit{ima} ‘(s)he’ in an embedded nominative subject of the form ‘\textit{ima} and X’ can corefer with the matrix subject. When ACC-C does occur, however—as in (136b)—the \textit{ima-ni} ‘3-ACC’ in the accusative coordinate DP \textbf{cannot} corefer with the matrix subject.

\begin{equation}
(136) \quad \text{a. No ACC-C}
\end{equation}

\text{Jimena}, \text{ueka-sín-Ø-di eska ima, ka Luisa}

\text{Jimena} \text{ want-HAB-PRS-IND3 that 3 and Louisa}

\text{andape-a-Ø-ka=sì.}

\text{win-FUT-PRS-SJV=pS}

‘Jimena wants herself and Louisa to win.’

\[\checkmark_A, \checkmark_B, \checkmark_F, \checkmark_G\]
b. **ACC-C**

\[ *\text{Jimena}_i \text{ueka-sín-Ø-di} \text{ima-ni}, \text{ka Luisa-ni} \text{eska} \]
Jimena want-HAB-PRS-IND3 3-ACC and Louisa-ACC that
\[ \text{andape-Ø-ka}=sì. \]
win-FUT-PRS-SJV=pS
lit. ‘Jimena wants her and Louisa to win.’


One more minimal pair, which is precisely analogous to the one in (136), is given below.

(137) a. **Marta** \text{ueka-sín-Ø-di} \text{eska ima, ka Paula} \text{sesi}
Martha want-HAB-PRS-IND3 that 3 and Paula well
\[ \text{ereka-Ø-ka}=sì. \]
live-FUT-PRS-SJV=pS
‘Martha wants herself and Paula to live well.’

b. **Marta** \text{ueka-sín-Ø-di} \text{ima-ni, ka Paula-ni} \text{eska sesi}
Martha want-HAB-PRS-IND3 3-ACC and Paula-ACC that well
\[ \text{ereka-Ø-ka}=sì. \]
live-FUT-PRS-SJV=pS
lit. ‘*Martha wants her and Paula to live well.’

The problem with (136b) and (137b) is not that a coordinate structure cannot serve as the accusative DP in **ACC-C**: it can, as shown in (138).

(138) Ueka-sín-Ø-ga=ni Maria-ni ka Ana-ni \text{eska}
want-pO-HAB-PRS-IND1=1sS Mary-ACC and Anna-ACC that
\[ \text{tsipenta-Ø-ka}=sì. \]
be.happy-FUT-PRS-SJV=pS
‘I want Mary and Anna to be happy.’

Taking stock, DP\text{ACC}’s ability to be separated from the embedded CP by a matrix adverbial (§5.2.1) and its inability to corefer with the closest subject c-commanding it (§5.2.2) suggest strongly that it occupies a position in the matrix clause, not a position at the left edge of the embedded clause.
5.3 The derivation question: Does $\text{DP}_{\text{ACC}}$ end up in the matrix by movement or base-generation?

Now that $\text{DP}_{\text{ACC}}$ has been shown to be in the matrix, a crucial question that arises is how it gets there. Two possibilities come to mind: either the DP raises from within the embedded clause (the hyperraising hypothesis) or it is base-generated in the matrix and anaphorically linked to a $\text{pro}$ in embedded subject position (the prolepsis hypothesis):

\begin{enumerate}
  \item Hyperraising hypothesis: The DP raises from within the embedded CP.
    \[ \ldots \text{DP} \ldots [\text{CP} \ldots \text{DP} \ldots] \]
  \item Prolepsis hypothesis: The DP is base-generated in the matrix and anaphorically linked to a $\text{pro}$ in embedded subject position.
    \[ \ldots \text{DP} \ldots [\text{CP} \ldots \text{pro} \ldots] \]
\end{enumerate}

(A third possibility—that $\text{acc-C}$ is finite object control—will be considered [and rejected] in §5.4.)

These two hypotheses make different predictions about a range of empirical phenomena—predictions to which we now turn.

5.3.1 Intervention effects

The hyperraising and prolepsis hypotheses make different predictions about whether $\text{acc-C}$ should show intervention effects:
(140) Predictions about intervention effects

a. Hyperraising hypothesis: ACC-C should show intervention effects. DP$_{ACC}$ should correspond to the subject of the embedded clause and not to any lower argument.

b. Prolepsis hypothesis: ACC-C should not show intervention effects. DP$_{ACC}$ should be able to correspond to DPs within the embedded clause other than the highest subject.

If ACC-C is hyperraising (i.e., A-movement—or, more precisely, if the first step in hyperraising is A-movement), it should show intervention effects, which are a signature of A-movement. The claim that this is so is supported by contrasts such as those in (141)-(142), which show that, in both ordinary subject movement and raising to subject, it must be the highest DP that moves to [Spec,TP], not any lower DP.

(141) Intervention effects in subject movement

a. The preschool$_i$ has long $\_$ served caviar.

b. *Caviar$_k$ has long the preschool served $\_$$_k$.

(142) Intervention effects in raising to subject

a. The preschool$_i$ seems [$\_$ to serve caviar].

b. *Caviar$_k$ seems [the preschool to serve $\_$$_k$].

If, by contrast, ACC-C involves prolepsis (i.e., the base-generation of a structure involving an anaphoric link between two DPs), then it should not display intervention effects, any more than English prolepsis structures such as those in (143) do.

(143) No intervention effects in English prolepsis

a. Wayne said about the Doberman$_i$ [that it$_i$ had chased the ballerina].

b. Wayne said about the Doberman$_i$ [that the ballerina had chased it$_i$].
It turns out that ACC-C in Janitzio P’urhepecha does show intervention effects. Hence (144a), which does not involve ACC-C, has as its ACC-C counterpart (144b), in which DP_{ACC} corresponds to the subject of the embedded clause. If an attempt is made to construct a second ACC-C version of (144a) in which DP_{ACC} corresponds to the object of the embedded clause, the result is unacceptable (144c).

(144) a. No ACC-C

\[
\text{Ueka-sïn-∅-ga=ni} \quad \text{[CP eska Elena jananari-∅-ka want-HAB-PRS-IND1=1sS [CP that Elena respect-FUT-PRS-SJV Bertha-ni]. Bertha-ACC]}
\]

‘I want Elena to respect Bertha.’

b. ACC-C: DP_{ACC} can correspond to the highest DP in the embedded clause

\[
\text{Ueka-sïn-∅-ga=ni} \quad \text{[CP eska Elena jananari-∅-ka want-HAB-PRS-IND1=1sS [CP that Elena respect-FUT-PRS-SJV Bertha-ni]. Bertha-ACC]}
\]

‘I want Elena to respect Bertha.’

\[\checkmark_A, \checkmark_1, \checkmark_J\]

c. ACC-C: DP_{ACC} cannot correspond to a lower DP in the embedded clause

\[
*\text{Ueka-sïn-∅-ga=ni} \quad \text{[CP eska Bertha-ni jananari-∅-ka want-HAB-PRS-IND1=1sS Bertha-ACC respect-FUT-PRS-SJV Bertha-ni]. Bertha-ACC int. ‘I want Elena to respect Bertha.’}
\]

A second, analogous paradigm is given in (145). The ACC-C sentence in (145b), in which DP_{ACC} corresponds to the embedded subject, was judged marginally acceptable by three of four speakers consulted. In this it contrasts sharply with (145c), in
which $\text{DP}_{\text{ACC}}$ corresponds to the embedded object: this latter sentence was judged fully unacceptable by all four speakers.

(145) a. *No $\text{ACC-C}$*

$$\text{Ueka-sín-∅-ga=ni } \textbf{eska} [\text{Luisa}] \text{ minariku-a-∅-ka } \text{ Ikinari-ni.}$$

want-HAB-PRS-IND1=1sS that Luisa meet-FUT-PRS-SJV Ikinari-ACC

‘I want Louisa to meet Ikinari.’

b. *$\text{ACC-C}$: $\text{DP}_{\text{ACC}}$ can correspond to the highest DP in the embedded clause*

$$?\text{Ueka-sín-∅-ga=ni } [\text{Luisa-ni}] \text{ [CP } \textbf{eska } \text{ minariku-a-∅-ka}$$

want-HAB-PRS-IND1=1sS Luisa-ACC [CP that ____ meet-FUT-PRS-SJV

Ikinari-ni].

Ikinari-ACC

‘I want Louisa to meet Ikinari.’

$[?_A, ?_B, ?_F, *_G]$

c. *$\text{ACC-C}$: $\text{DP}_{\text{ACC}}$ cannot correspond to a lower DP in the embedded clause*

$$*\text{Ueka-sín-∅-ga=ni } [\text{Ikinari-ni}] \text{ [CP } \textbf{eska } \text{ Luisa}$$

want-HAB-PRS-IND1=1sS Ikinari-ACC [CP that Louisa

minariku-a-∅-ka ____].

meet-FUT-PRS-SJV ____]

int. ‘I want Louisa to meet Ikinari.’

$[*_A, *_B, *_F, *_G]$

(The fourth speaker simply does not permit $\text{ACC-C}$; in this respect, his idiolect is like English. That the other three speakers who judged (145b) found it only marginally acceptable is not particularly surprising: $\text{ACC-C}$ in Janitzio P’urhepecha is a relatively “peripheral” part of the language, the ordinary and unmarked structure being the one with no $\text{ACC-C}$, exemplified in (145a). $\text{ACC-C}$ is somewhat delicate, and even speakers who allow it find some instances of it less than fully acceptable.)

107
We see, then, that ACC-C does display intervention effects, a hallmark of movement.

5.3.2 Interaction with islands

The hyperraising and prolepsis hypotheses also make different predictions about how ACC-C should interact with islands (cf. Bruening 2002, §3.1.4):

(146) Predictions about islands

a. **Hyperraising hypothesis:** ACC-C should obey island constraints.

b. **Prolepsis hypothesis:** ACC-C should not obey island constraints.

On the hyperraising hypothesis, the relation between DPACC and the corresponding position in the embedded clause is a movement relation, and should therefore obey island constraints. On the prolepsis hypothesis, it is an anaphoric relation, and should therefore be island-insensitive.

The relation does indeed obey island constraints, as shown by the paradigm below. In (147a), which does not involve ACC-C, the sole argument of the embedded verb k’uanatsenta- ‘return’ is the DP uariti enga minarikuka juramutini ‘the woman who knows the president’, which contains a relative clause. This DP shows up as DPACC in the ACC-C version of this sentence, (147b) (in which the accusative suffix -ni surfaces on the head noun uariti ‘woman’). In (147c), an attempt has been made to construct a second ACC-C version of the sentence in which most of the complex DP remains in the embedded clause, but juramutini ‘the president (ACC)’ surfaces as the matrix accusative DP. The result is unacceptable, showing that the relation between DPACC and the corresponding position in the embedded clause cannot be established across an island boundary (in this case, a relative clause boundary).
(147)  a. No ACC-C

Ueka-sïn-∅-ga=ni  eska k’uanatsenta-a-∅-ka [uariti]  enga
want-HAB-PRS-IND1=1sS that  return-FUT-PRS-SJV  womanRESP  SUB
minariku-∅-∅-ka  juramuti-ni.
meet-PFV-PRS-SJV  president-ACC
‘I want the woman who knows the president to return.’

b. ACC-C: DP\textsubscript{ACC} can correspond to the highest DP in the embedded clause

Ueka-sïn-∅-ga=ni  [uariti-ni]  enga minariku-∅-∅-ka
want-HAB-PRS-IND1=1sS  womanRESP-ACC  SUB  meet-PFV-PRS-SJV
juramuti-ni  eska k’uanatsenta-a-∅-ka __ i.
president-ACC that  return-FUT-PRS-SJV
‘I want the woman who knows the president to return.’

c. ACC-C: DP\textsubscript{ACC} cannot correspond to a DP inside the relative clause

*Ueka-sïn-∅-ga=ni  juramuti-ni [eska k’uanatsenta-a-∅-ka]
want-HAB-PRS-IND1=1sS  president-ACC that  return-FUT-PRS-SJV
uariti  [RC enga minariku-∅-∅-ka __ i].
womanRESP  [RC SUB  meet-PFV-PRS-SJV __ i]
semilit. ‘I want the president\textsubscript{k} for the woman who knows ∅\textsubscript{k} to return.’
int.  ‘I want the woman who knows the president to return.’

Similar facts are observed with adjunct islands. The ACC-C-less sentence in
(149a) has (for some speakers) the ACC-C alternant in (149b), in which DP\textsubscript{ACC} corresponds
to the subject of the embedded clause. Two of the four speakers consulted found
this ACC-C sentence marginally acceptable. In (149c), by contrast, DP\textsubscript{ACC} corresponds
to the subject of an adjunct clause inside the clausal complement to the matrix verb.
This sentence is fully unacceptable, demonstrating that the relation between DP\textsubscript{ACC}
and the corresponding position in the embedded clause cannot cross the boundary of
an adjunct island (of this type, at least).
(148)  a. **No ACC-\(C\)**

\[
\text{Ueka-s\~n-\text{-}\text{-}ga=ni eska } \underline{\text{iamindu-eecha}} \text{ kurandi-a-\text{-}\text{-}ka=s\~i} \\
\text{want-HAB-PRS-IND1=1sS that all-PL listen-FUT-PRS-SJV=pS} \\
\text{enga jorhentperi uanda-na-\text{-}\text{-}ka.} \\
\text{SUB teacher talk-DUR-PRS-SJV} \\
\text{‘I want everyone to listen when the teacher’s talking.’}
\]

b. **ACC-\(C\): DP}_{ACC} \text{ can correspond to the highest DP in the embedded clause}

\[
\text{%Ueka-s\~n-\text{-}\text{-}ga=ni eska} \underline{\text{iamindu-eecha-ni}} \text{ i eska that i eska} \\
\text{want-HAB-PRS-IND1=1sS all-PL-ACC_{i} all-PL} \\
\text{kurandi-a-\text{-}\text{-}ka=s\~i enga jorhentperi uanda-na-\text{-}\text{-}ka.} \\
\text{listen-FUT-PRS-SJV=pS SUB teacher talk-DUR-PRS-SJV} \\
\text{‘I want everyone to listen when the teacher’s talking.’} \\
\]

c. **ACC-\(C\): DP}_{ACC} \text{ cannot correspond to a DP inside the temporal adjunct clause}

\[
\text{*Ueka-s\~n-\text{-}\text{-}ga=ni eska} \underline{\text{jomhentperi-ni}} \text{ i eska} \\
\text{want-HAB-PRS-IND1=1sS that all-PL} \\
\text{kurandi-a-\text{-}\text{-}ka=s\~i [adjunct enga i uanda-na-\text{-}\text{-}ka].} \\
\text{listen-FUT-PRS-SJV=pS [adjunct SUB i talk-DUR-PRS-SJV]} \\
\text{semilit. ‘I want the teacher_i for everyone to listen when \text{-}_{i} \text{ is talking.’} \\
\text{int. ‘I want everyone to listen when the teacher’s talking.’}
\]

A second and particularly revealing paradigm involving adjunct islands, this one with the matrix verb \text{mite-} ‘know’, is given below.

(149)  a. **No ACC-\(C\)**

\[
\text{Mite-s\~i-\text{-}\text{-}ka=ni eska } \underline{\text{iamindu-eecha}} \text{ kurandi-j-\text{-}\text{-}ka=s\~i} \\
\text{know-PFV-PRS-IND1=1sS that all-PL listen-HAB-PRS-SJV=pS} \\
\text{[adjunct enga jorhentperi uanda-na-\text{-}\text{-}ka].} \\
\text{SUB teacher talk-DUR-PRS-SJV} \\
\text{‘I know that everyone listens when the teacher’s talking.’}
\]

110
b. **ACC-C: DP\textsubscript{ACC} can correspond to the highest DP in the embedded clause**

\begin{quote}
?Mite-sï-\textsubscript{\text{-}}ka=ni \textsubscript{i} \text{[\text{iamindu-eecha-ni]} eska } \textsubscript{i} \text{that } \textsubscript{i} \\
know-PFV-PRS-IND1=1sS all-PL-ACC\textsubscript{i} \\
kurandi-j-\textsubscript{\text{-}}ka=sï \textsubscript{i} \text{[adjunct enga jorhentperi uanda-na-\textsubscript{-}ka]} \\
listen-HAB-PRS-SJV=pS SUB teacher talk-DUR-PRS-SJIV \\
\text{‘I know that everyone listens when the teacher’s talking.’}
\end{quote}

\begin{quote}
\textbf{ACC-C: DP\textsubscript{ACC} cannot correspond to a DP inside the temporal adjunct clause}

\begin{quote}
*Mite-sï-\textsubscript{-}ka=ni \textsubscript{i} \text{[jorhentperi-ni]} eska \textsubscript{i} \text{iamindu-eecha} \\
know-PFV-PRS-IND1=1sS teacher-ACC\textsubscript{k} all-PL \\
kurandi-j-\textsubscript{-}ka=sï \textsubscript{i} \text{[adjunct enga uanda-na-\textsubscript{-}ka]} \\
listen-HAB-PRS-SJV=pS SUB talk-DUR-PRS-SJIV \\
\text{int. } \approx \text{‘I know about the teacher\textsubscript{k} that everyone listens when (s)he’s\textsubscript{k} talking.’}
\end{quote}

\end{quote}

Summing up, then, ACC-C does obey island constraints.

### 5.3.3 Escape-hatch blocking

A third phenomenon about which the hyperraising and prolepsis hypotheses make different predictions is escape-hatch blocking. The relevant predictions are laid out below.

\begin{enumerate}
\item \textbf{Hyperraising hypothesis:} In raising into the matrix, DP\textsubscript{ACC} should pass through the embedded [Spec,CP], after which we may well expect it to be impossible to extract another constituent from the embedded CP.

\item \textbf{Prolepsis hypothesis:} ACC-C should not interfere with extraction from the embedded CP.
\end{enumerate}

If ACC-C is derived by movement, then, in raising into the matrix, the DP that surfaces with accusative case (DP\textsubscript{ACC}) should transit through the specifier of the embedded CP, on the standard assumption that CP is a phase. We may well expect this intermediate movement to [Spec,CP] to block the movement of any other constituents out of the
embedded CP. If ACC-C is prolepsis, on the other hand, the embedded C will not project a specifier in the basic case, and hence extraction from the embedded CP should be perfectly possible (and will create a specifier of CP on the way, as a reflex of intermediate movement).

The prediction made by the hyperraising hypothesis is being informally discussed here in terms of the traditional idea of [Spec,CP] as the CP “escape hatch,” which should be “blocked” by the intermediate copy in this position of the hyperraising DP. However, the prediction is a bit different in Bare Phrase Structure (Chomsky 1995b, Carnie 2000, Hornstein & Nunes 2008, Jayaseelan 2008, a.o.), which is officially adopted here. The Bare Phrase Structure hypothesis rejects, as an undesirable stipulation, the older idea that every head projects a classical X-theoretic template (Chomsky 1970) containing at most one specifier position. Therefore, if ACC-C is hyperringing, but the embedded C happens to be able to bear two features with EPP subfeatures, then it should be possible after all to extract from the embedded CP both the hyperringing DP and another constituent. The predictions in (150) are still worth testing, though: if ACC-C is compatible with extraction from the embedded CP, this will not help us choose between the two hypotheses, but if ACC-C blocks extraction from the embedded CP, this will constitute evidence for the hyperringing hypothesis, as well as for the conclusion that the embedded C in ACC-C can bear at most one feature with an EPP subfeature.

This, it turns out, is exactly what is observed: ACC-C is incompatible with extraction from the embedded CP. Sentence (151a) shows that, when ACC-C does not occur, the wh-phrase ambe ‘what’ can be extracted from the complement CP. In (151b), ACC-C does take place, but interrogative wh-movement does not. In (151c), both are attempted, and the result is highly degraded. ACC-C apparently cannot cooccur with interrogative wh-extraction from the embedded CP.
One more paradigm of this type is given below. *Ambe* ‘what’ can be extracted from the CP complement of *ueka-* ‘want’ ([152a]), and *ueka-* ‘want’ permits ACC-C in the absence of wh-extraction ([152b]), but the combination of ACC-C and wh-extraction is overwhelmingly rejected ([152c]).

**a. No ACC-C; extraction from the embedded CP is licit**

<

b. ACC-C; no (additional) extraction from the embedded CP

---

113
c. **ACC-C blocks extraction from the embedded CP**

\[ \text{¿Ambe=ri ueka-sín-∅-gi} \quad \text{Alicia-ni} \quad \text{eska kusta-a-∅-ka?} \]

int. ‘What do you want Alice to play?’


ACC-C, then, is incompatible with (further) extraction from the embedded CP.

(As pointed out to me by Amy Rose Deal, though, the embedded CP in German prolepsis structures behaves like a [weak] island [Salzmann to appear]. The data in this subsection could therefore be reconciled with the prolepsis hypothesis by analyzing ACC-C as German-rather than English-style prolepsis. As shown in §§5.3.1-5.3.2, however, there is quite a bit of independent evidence that ACC-C is not prolepsis.)

5.4 **Could ACC-C be finite object control?**

Let us take stock. ACC-C shows intervention effects, is island-sensitive, and blocks extraction (of constituents other than DP_{ACC}) from the embedded CP. All of this is predicted if ACC-C is hyperraising, but in every case the opposite is predicted by a prolepsis analysis. The evidence, then, strongly favors the conclusion that ACC-C is hyperraising.

There is, however, one more alternative: that ACC-C is finite object control. Let us consider what such an analysis would look like, using (153) as an example.

(153) **Ikinari ueka-sín-∅-di \quad Xumo-ni \quad eska jaruata-a-∅-ka \quad pauani.**

Ikinari want-HAB-PRS-IND3 Xumo-ACC that help-FUT-PRS-SJV tomorrow

‘Ikinari wants Xumo to help him tomorrow.’

The finite object control analysis would work as follows. In (153), Xumo-ni ‘Xumo-ACC’ does not originate as the subject of the embedded clause, and is not a proleptic object

\[ \text{And, in the case of the third prediction (about extraction), if the embedded C can bear at most one feature with an EPP subfeature (§5.3.3).} \]
(with an interpretation along the lines of ‘with regard to Xumo’ or ‘in connection with Xumo’). Rather, it is a genuine argument of the matrix verb *ueka*- ‘want’. In other words, (153) conveys that Ikinari wants *Xumo* in some sense. The CP *eska jaruataaka pauani* ‘that he help him tomorrow’ is a rationale clause, with an interpretation like ‘in order that he may help him tomorrow’ or ‘for the purpose of his helping him tomorrow’. (Some consideration will be given below to a variant of this analysis on which the CP is not in fact a rationale clause, but rather receives some other type of interpretation.) Although this CP is finite, its subject is PRO, which when controlled (as here) needs its controller to be highly local to it:

(154)  

**ACC-C: Finite object control analysis**

\[ ... V [DP] ... [CP ... PROi ...] \]

This finite control analysis deserves careful attention, because it seems to be able to account for all the data argued above to favor the hyperraising analysis over the prolepsis analysis—as follows. First, it accounts for the *intervention effects* because PRO must be the closest subject c-commanded by its controller. Therefore, the controller (DP\textsubscript{ACC}) must “correspond to” (i.e., control) the *subject* of the embedded CP, not any lower DP within this CP. Secondly, the analysis accounts for the *island-sensitivity* of ACC-C because the highly local nature of the controller–PRO relation (which forces PRO to be the closest subject c-commanded by the controller) ensures that no island boundary will be able to separate controller and PRO. Finally, the analysis accounts for the *incompatibility between ACC-C and extraction from the embedded CP* because it posits that the embedded CP is an adjunct (specifically, a rationale clause); if this is so, then it is not particularly surprising that extraction from the embedded CP produces highly degraded results.

But although the finite control analysis seems as promising as the hyperraising analysis in the light of the data considered so far, there are three strands of evidence
that strongly suggest that ACC-C must in fact be *hyperraising* and not finite object control.

### 5.4.1 DP\(_{\text{ACC}}\) is not an argument of the matrix V

The first piece of evidence is that ACC-C is relatively acceptable even in certain sentences for which the finite control analysis would be implausible, such as the following:

(155) [Context: Near my house there’s another, old house that blocks my view, and no one lives there.]

```cyperun
?Ueka-sín-∅-ga=ni [inde-ni k’umanchikua-ni eska] want-HAB-PRS-IND1=1sS that\(_{\text{MED}}\)-ACC house-ACC that
xembanta-na-a-∅-ka.
destroy-PASS-FUT-PRS-SJV
‘I want that house to be destroyed.’
```

(156) [Context: In the park there’s an old abandoned car that I think is really ugly.]

```cyperun
?Ueka-sín-∅-ga=ni [ima-ni parikutarakua-ni eska] want-HAB-PRS-IND1=1sS that\(_{\text{DIST}}\)-ACC car-ACC that
pinande-a-∅-ka.
disappear-FUT-PRS-SJV
‘I want that car to disappear.’
```

(157) [Context: There’s a guy who’s kind of a pain, and who makes everyone’s life difficult.]

```cyperun
?Ueka-pirin-∅-ga=ni [inde-ni tumbi-ni eska] want-COND-PRS-IND1=1sS that\(_{\text{MED}}\)-ACC young.man-ACC that
motsenta-a-∅-ka materu ereta-rhu.
move-FUT-PRS-SJV another town-LOC
‘I’d like for that young man to move to another town.’
```

In none of these sentences can it be reasonably claimed that DP\(_{\text{ACC}}\) is an argument of *ueka- ‘want’, as the finite control analysis would have it. The hypothetical utterers of
would not respectively want “that house,” “that car,” or “that young man”—quite the opposite. Note in this connection that, in the contexts given for (155–157), the English sentences in (158–160) are completely infelicitous:

(158) [Context: Near my house there’s another, old house that blocks my view, and no one lives there.]
   a. #I want that house in order that it may be destroyed.
   b. #I want that house for the purpose of its being destroyed.

(159) [Context: In the park there’s an old abandoned car that I think is really ugly.]
   a. #I want that car in order that it may disappear.
   b. #I want that car for the purpose of its disappearing.

(160) [Context: There’s a guy who’s kind of a pain, and who makes everyone’s life difficult.]
   a. #I want that young man in order that he may move to another town.
   b. #I want that young man for the purpose of his moving to another town.

The reason for this is clear: in (158), for example, the speaker does not want “that house,” so there can be no question of their wanting it for the purpose specified in the post-object adjunct. The contrast between the total infelicity of these English sentences and the relative acceptability of (155–157) in Janitzio P’urhepecha tells strongly against the hypothesis that ACC-C is finite object control.

There remains a question as to why (155–157) are merely reasonably acceptable and not perfect. One possibility is that, in each of them, the Accusative Nominal + CP string has an alternate parse as a relativization structure: ‘that house that will be destroyed’, ‘that car that will disappear’, ‘that young man who will move to another town’. The likely existence of this parse does not threaten the argument from (155–157) that ACC-C is not finite object control, because the sentences would be infelicitous.
on the relativization parse in the contexts given, and therefore a hyperraising parse is required to explain why they are reasonably acceptable. But although (155-157) should be infelicitous on their relativization parse in the contexts provided, it could be that the existence of this parse adds a layer of complexity to the task of judging them, and it is this that resulted in their being judged less than fully acceptable.

As much as possible, the acc-C sentences investigated in this chapter use a proper name as DP_{ACC}, to rule out the (probable) parse on which the embedded CP is a relative clause modifying the accusative nominal.

5.4.2 A negative DP_{ACC} can reconstruct into the embedded clause for scope

The second piece of evidence against the finite control analysis is also semantic in nature, having to do with where a negative DP_{ACC} can take scope.

If acc-C is hyperraising, this opens up the possibility that a negative DP_{ACC}—though in the matrix clause in surface syntax—could take scope in the embedded clause it had raised from. But if acc-C is finite control, then a negative DP_{ACC} is generated in the matrix, and therefore should not be able to take scope in the embedded clause (where there is a PRO controlled by DP_{ACC}, but no occurrence of DP_{ACC} itself). Rather, a negative DP_{ACC} in a biclausal acc-C sentence should be forced to take matrix scope.

(On the Movement Theory of Control [MTC, Hornstein 1999, Nunes 2016, a.o.], “PRO” is nothing but a lower copy of its controller, which moves from “PRO” position to controller position. Therefore, it might initially appear that, on the MTC, acc-C could be finite control via hyperraising. But this is not so, because a genuine control relation involves more than one $\theta$-role [or semantic argument-of relation; cf. Heim & Kratzer 1998, ch. 3], both on the MTC and on other approaches, and it was just shown in §5.4.1 that there are acc-C sentences in which DP_{ACC} is clearly an argument only of the embedded predicate and not of the matrix V.)
Returning to the the scope of negative DP\textsubscript{ACC}s, it turns out that a negative DP\textsubscript{ACC} in ACC-C can take scope in the embedded clause, supporting the hyperraising analysis over the finite control analysis. To see this, consider the following:

(161) [Context: In the library there’s a teacher who’s trying to concentrate on her reading, but can’t, because there are people there who are talking and making noise. She says...]

(a. With strong verbal morphology

(?) None-ni uetarincha-sín-∅-ga=ni eska uandana-a-∅-ka.
no.one-ACC need-HAB-PRS-IND1=1sS that talk-FUT-PRS-SJV
‘I need [no one to talk].’

b. With weak verbal morphology

(?) None-ni uetarincha-j-∅-ki=ni eska uandana-a-∅-ka.
no.one-ACC need-HAB-PRS-INT=1sS that talk-FUT-PRS-SJV
‘I need [no one to talk].’

(In (161a), the verbal suffixes are in their usual [“strong”] forms: the habitual aspect morpheme surfaces as -sín and the first person indicative mood morpheme as -ga [underlyingly /-ka/]. In (161b), the verbal suffixes are in their “weak” forms [as also occurs in the presence of a clausemate ambu ‘not’]: habitual aspect surfaces as -j, and the mood morpheme surfaces as -ki, which normally expones interrogative or “clarificational” mood. On strong and weak morphology in P’urhepecha, see Wares 1974:99, §3.4.)

In these sentences, DP\textsubscript{ACC} is noneni ‘no one’. (Negative objects, and in fact certain other types of negative nonsubjects, surface in a preverbal position in Janitzio P’urhepecha.) Sentence (161a) is quite decently acceptable, and (161b) is reasonably acceptable, on the intended reading—one on which none ‘no one’ takes scope in the embedded clause, below uetarincha- ‘need’: ‘I need [there to be no one who talks].’ On the finite control analysis, noneni ‘no one’ is generated in the matrix in (161a-b), and
should therefore be forced to take matrix scope, above uetarincha- ‘need’—yielding the reading ‘There’s no one who I need to talk’. But this would be an irrelevant and bizarre assertion for the teacher to make in the context given in (161). (The discussion here abstracts away from the fact that, on the finite control analysis, the embedded CP is a rationale clause; the matter will be taken up again in the discussion following (163) below.) It seems, then, that the finite control analysis cannot explain why (161a-b) are as acceptable as they are in the context provided (or the intuition of the consultant who supplied these judgments that (161a-b) are as acceptable as they are on the reading ‘I need [no one to talk]’).

Sentences (161a-b) are probably the strongest evidence currently available that a negative DP ACC in ACC-C can reconstruct into the embedded clause for scope, because the readings ‘I need [no one to talk]’ and ‘There’s no one who I need to talk’ are so utterly different. But supporting evidence can also be found—from sentences with ueka- ‘want’:

(162)  
a. With strong verbal morphology

(?) None-ni  ueka-sun-Ø-ga=ni  eska=rini molestari-a-Ø-ka
no.one-ACC want-HAB-PRS-IND1=1sS that=1sO bother-FUT-PRS-SJV
pauani.  tomorrow
‘I want [no one to bother me tomorrow].’

b. With weak verbal morphology

(?) None-ni  ue-j-Ø-ki=ni  eska=rini molestari-a-Ø-ka
no.one-ACC want-HAB-PRS-INT=1sS that=1sO bother-FUT-PRS-SJV
pauani.  tomorrow
‘I want [no one to bother me tomorrow].’

Sentence (162a) is quite decent, and (162b) is reasonably acceptable, on the reading shown—‘I want [no one to bother me tomorrow]’—in which none ‘no one’ takes scope
in the embedded clause, below *ueka*- ‘want’. On the finite control analysis, *noneni* ‘no one’ would have to take matrix scope, yielding the rather strange interpretation ‘There’s no one who I want to bother me tomorrow’.

One final example of a negative DP<sub>ACC</sub> taking scope in the embedded clause is given in (163):

(163) With strong verbal morphology

[Context: A teacher has taken the kids in her class to visit a handicrafts workshop, and wants all of them to be careful. She says...]

\[
\text{None-ni} \quad \text{ueeka-sín-∅-ga=ní} \quad \text{eska} \quad \text{kaka-ua-∅-ka} \\
\text{no-one-ACC} \quad \text{want-HAB-PRS-IND1=1S} \quad \text{that} \quad \text{break-FUT-PRS-SJV} \\
kukuchi-chá-ní. \quad \text{jug-PL-ACC} \\
\text{‘I want [no one to break the jugs].’}
\]

This sentence is acceptable on the reading shown, in which *none* ‘no one’ takes scope in the embedded clause, below *ue(e)ka*- ‘want’. On the finite control analysis, *noneni* ‘no one’ would have to take matrix scope, and therefore (163) could only mean ‘There’s no one who I want to break the jugs.’ Again, this would be a strange and irrelevant assertion for the teacher to make in the context given. The finite control analysis, then, cannot account for the felicity of (163) in this context, or for the intuition of the consultant who provided these judgments that it can mean ‘I want [no one to break the jugs].’

Furthermore, as mentioned above, the finite control analysis posits that the embedded CP in ACC-C is a rationale clause. This will only make it even more difficult for defenders of said analysis to account for the data in this section. The finite control analysis, once its rationale-clause component is taken into account, predicts that (161a-b) should in fact have the interpretations of the following English sentences, which are bizarre in the relevant context:

121
(164) [Context: In the library there’s a teacher who’s trying to concentrate on her reading, but can’t, because there are people there who are talking and making noise. She says...]
   a. #There’s no one I need in order that they may talk.
   b. #There’s no one I need for the purpose of their talking.

In parallel fashion, the finite control analysis predicts that (163) should have the interpretation of the English sentences in (165), which are also ludicrous in the relevant context:

(165) [Context: A teacher has taken the kids in her class to visit a handicrafts workshop, and wants all of them to be careful. She says...]
   a. #There’s no one I want in order that they may break the jugs.
   b. #There’s no one I want for the purpose of their breaking the jugs.

Summing up, then, a negative DP_{ACC} in ACC-C can take scope in the embedded clause. The hyperraising analysis can account for this straightforwardly, as an instance of scope reconstruction. The finite control analysis, by contrast, cannot account for it (and the rationale-clause component of this analysis only makes things worse).

5.4.3 Eska–rationale clauses are relatively porous

A third argument against the finite control analysis has to do with the opacity of the embedded CP in ACC-C to extraction (which was shown in (151c) and (152c), repeated below).

(166) **ACC-C blocks extraction from the embedded CP**

?? ¿Ambe uetarinja-sín-Ø-gi=si Emilia-ni [eska pia-a-Ø-ka?]
what need-HAB-PRS-INT=3pS Emily-ACC that buy-FUT-PRS-SJV
int. ‘What do they need Emily to buy?’
ACC-C blocks extraction from the embedded CP

\[ ?^* \text{¿Ambe-ri ueka-sín-∅-gi Alicia-ni eska kusta-∅-ka?} \]
\[ \text{what=2sS want-HAB-PRS-INT that Alice play-music-FUT-PRS-SJV} \]
int. ‘What do you want Alice to play?’


On the finite control analysis, attempting to extract ambe ‘what’ from the eska-CPs in (166-167) yields highly degraded results because these eska-CPs are rationale clauses, a type of adjunct, and hence the extractions incur adjunct island violations.

This account of the degradedness of (166-167) initially seems promising, especially because eska does seem to be able to introduce rationale clauses (in which function it alternates with the complex element pariki ‘for-that’):

\[(168) \text{Ana k’uanatsenta-∅-ti chen-emb-o } \{\text{eska / pari-ki}\} \text{ amamba} \]
\[ \text{Anna return-PFV-PRS-IND3 house-POS.3-RESID } \{\text{that / for-that}\} \text{ mother} \]
\[ \text{intska-nta-∅-ka takukate-echa-ni.} \]
\[ \text{give-ITER-FUT-PRS-SJV book-PL-ACC} \]
\‘Anna went back home so that her mother could give her back her books.’

The problem for the finite control analysis is that clear cases of eska–rationale clauses, such as the one in (168), are only modestly resistant to extraction (at least of ambe ‘what’):

\[(169) \text{¿Ambe k’uanatsenta-∅-ki Ana chen-emb-o eska amamba} \]
\[ \text{what return-PFV-PRS-INT Anna house-POS.3-RESID that mother} \]
\[ \text{intska-∅-ka? give-FUT-PRS-SJV} \]
\‘¿What did Anna go back home so that her mother could give her?’

In this, clear eska–rationale clauses resemble similar adjuncts in English, from many of which what (for example) can be extracted with only a mild, if any, decrease in acceptability:
What did Anna go back home [so that her mother could give her]?

What did Anna go back home [in order to get from her mother]?

What did Anna go back home [to get from her mother]?

The relative porosity of clear *eska*-rationale clauses casts doubt on the hypothesis that the serious degradedness of is due to their involving extraction from such a clause. That being so, it appears that the finite control analysis no longer has an explanation for the pronounced degradedness of such sentences. The hyperraising analysis, however, still does: on this analysis, extraction from the embedded CP in ACC-C produces highly degraded results because DP has already been extracted from it, and the embedded C involved can bear at most one feature with an EPP subfeature (or, in more traditional terms, the hyperraising DP blocks the CP escape hatch).

### 5.4.4 Interim conclusion

Evidence from intervention effects, island effects, and extraction from the embedded CP favors a hyperraising analysis of ACC-C over a prolepsis analysis. Furthermore, evidence from ACC-C sentences in which DP cannot be an argument of the matrix V, and ACC-C sentences in which a negative DP reconstructs into the embedded clause for scope—along with evidence concerning the relative porosity of *eska*-rationale clauses—favors a hyperraising analysis over a finite object control analysis.

We can conclude, then, that ACC-C is neither prolepsis nor finite object control but hyperraising. The phenomenon will therefore be referred to throughout the rest of the chapter as hyperraising to object.

### 5.5 Analysis

In order to determine what hyperraising to object in Janitzio P’urhepecha reveals about the driving force for movement, it will be necessary to construct an explicit, detailed
analysis of it—which it is this section’s task to provide. The section is divided into three parts. §5.5.1 revises our current understanding of Janitzio P’urhepecha clause structure, showing that there is an extra head position between Voice and V (which is identified there with $v$). §5.5.2 argues that hyperraising to object targets a specifier position of $vP$. §5.5.3 provides an explicit analysis of hyperraising to object, illustrating it with a derivation.

5.5.1 Not only Voice and V, but also $v$

Chapter 2 argued that finite clauses in Janitzio P’urhepecha have the following structure:

\[(171) \ldots [PolP \ldots [MoodP \ldots [TP \ldots [AspP \ldots [VoiceP \ldots [VP V \ldots ]]]]]]\]

(Set aside here is the left periphery. See Capistrán 2002 for a detailed investigation of the left periphery in Lake Pátzcuaro P’urhepecha, of which Janitzio P’urhepecha is a variety.) Let us briefly recapitulate some of the results of the investigation in Chapter 2 (and Chapter 3). The verb word can surface in Voice, Asp, T, or Mood. The subject can appear in $[Spec,VoiceP]$, $[Spec,AspP]$, $[Spec,TP]$, $[Spec,MoodP]$ (this is somewhat tentative), or $[Spec,PolP]$. Profligate subject movement in Janitzio P’urhepecha is driven by optional \([+D\delta]^{EPP}\) features on clausal functional heads. (A very similar analysis of profligate subject movement is argued for convincingly for Dholuo by Cable [2012].)

Janitzio P’urhepecha has adverbials that are specialized to adjoin to particular projections in the clause structure in (171). For example, $isku\ jauembarini$ ‘suddenly’ adjoins to AspP, whereas manner adverbials adjoin to VoiceP. This analysis predicts that when $isku\ jauembarini$ ‘suddenly’ and a manner adverbial both precede VoiceP-internal material (i.e., are left-adjoined), they should have to appear in that order. The prediction is borne out: $isku\ jauembarini \supseteq$ MANNER ADVERBIAL order is perfect, whereas the opposite order is consistently judged degraded in comparison.

There is, then, good evidence that manner adverbials adjoin to VoiceP in
Janitzio P’urhepecha. That being so, everything that has been said so far leads us to expect that if a clause in this language contains a (left-adjoined) manner adverbial, a maximally low (external-argument) subject, and a maximally low verb word, the constituent order should be MANNER ADVERBIAL $\gg$ SUBJECT $\gg$ VERB WORD $\gg$ OTHER VoiceP-internal material:

(172)

```
VoiceP
   AdvP  VoiceP
   manner adverbial
   DP      Voice
   subject  verb word
   VP       V...
```

In particular, assuming that external arguments are generated in [Spec,VoiceP] (the standard assumption given the clause structure in (171); cf. Kratzer 1996), it should not be possible to generate the constituent order MANNER ADVERBIAL $\gg$ VERB WORD $\gg$ SUBJECT $\gg$ OTHER VoiceP-internal material. In fact, however, this constituent order is possible. This is shown in (173-176), in each of which the manner adverbial is boldfaced, the verb word is underlined, and the subject is boxed.

(173) Uitsindekua xarhintkueri mitanta-şi-Ø-ti=şi iamindu uariti-cha yesterday early open-PFV-PRS-IND3=pS all woman RESP-PL
    ts’üm-eri meiapkekue-echa-ni.
    they-GEN store-PL-ACC
    ‘Yesterday all the women opened up their stores early.’

(174) Mentku isī sesi pire-sin-Ø-di Maria ima-ni pirekua.
    always thus well sing-HAB-PRS-IND3 Mary that DIST-ACC song
    ‘Mary always sings that song well.’

(175) Churiku-eri ikichakueni isī xosta-şi-Ø-ti Axuni japonda-rhu.
    night-GEN badly thus row-PFV-PRS-IND3 Axuni lake-LOC
    ‘At night, Axuni rowed badly on the lake.’

126
The fact that this constituent order is possible indicates that the verb word can be realized in a head position higher than the base position of the external argument while still remaining within VoiceP (and hence to the right of left-adjoined VoiceP-adverbials). This can be captured perfectly by positing that external arguments are generated not in [Spec, VoiceP] (as argued in Chapter 2) but in the specifier of a head between Voice and V on the clausal spine—which, following much recent work, will be identified here as $v$.

Hence (175), for example, has the structure in (177). The external argument Axuni is generated in [Spec, $vP$]; the verb word is realized in Voice (in this particular sentence); and the manner adverbial ikichakueni isi ‘badly’ is left-adjoined to VoiceP—yielding the constituent order MANNER ADVERBIAL $\gg$ VERB WORD $\gg$ SUBJECT $\gg$ CLAUSE-FINAL ADJUNCT. (This last adjunct is shown right-adjoined to $vP$ for concreteness, but little hinges on this here.)

(177)

```
(177) ...
     |
  VoiceP  \
     |  \
     |  ikichakueni isi
     |   badly
     |
   VoiceP  \
     |  \
     |  Voice
     |     |  verb word
     |     |     |
     |     |  vP
     |     |     |
     |     |  vP  \
     |     |     |  DP
     |     |     |     |
     |     |     |     |  Axuni
     |     |     |     |     |  V(P)
     |     |     |     |     |     |  KP/PP
     |     |     |     |     |     |  japonda-rhu
     |     |     |     |     |     |   lake-LOC
```
Summarizing, this section has made two main points. First, there is an extra head in the clausal spine between Voice and V (which is here identified with $v$). Secondly, external arguments are generated in $[\text{Spec}, v_P]$, not in $[\text{Spec}, \text{VoiceP}]$.

5.5.2 Hyperraising to object targets $[\text{Spec}, v_P]$

Now that this more accurate picture of Janitzio P’urhepecha clause structure has been arrived at, it can be determined where exactly a hyperraising DP in this language raises to.

Consider the following sentence:

(178)  "Mentku isí mintsita-ni jingoni ueka-sín-∅-di [Juanu-ni] Maria
always thus heart-ACC with want-HAB-PRS-IND3 John-ACC Mary
eska jaruatpe-∅-ka k’umanchikua-rhu.
that help-FUT-PRS-SJV house-LOC
‘Mary always wants John with all her heart to help out at home.’

This sentence features the constituent order MANNER ADVERBIAL ($\text{mintsitani jingoni}$ ‘with all X’s heart’) $\gg$ VERB WORD $\gg$ SUBJECT ($\text{Maria}$) $\gg$ EMBEDDED CP (taking “$\gg$” to mean ‘precedes’, not ‘immediately precedes’). As discussed in §5.5.1 this constituent order indicates that the manner adverbial is left-joined to VoiceP, the verb word is being realized in Voice, and the subject is in its base position ($[\text{Spec}, v_P]$). These landmarks allow us to pinpoint the precise position of $\text{DP}_{\text{ACC}}$ in (178): it must be in a second (outer) specifier of $v_P$, as shown below.
That is, hyperraising to object must target a specifier position of $v_P$. Now, in (179), the matrix subject ($Maria$) is externally merged with the highest available projection of $v$, and then the hyperraising DP is internally merged with the new highest available projection of $v$. But if External and Internal Merge are simply subcases of a single operation (Merge—Chomsky 2004, Collins & Stabler 2016:48, Freidin 2016:702, Collins 2017:48, Collins & Groat 2018:1; see Graf 2018 for relevant discussion), then, all else being equal, it should alternatively be possible to internally merge the hyperraising DP and then externally merge the matrix subject, yielding the order $\text{MATRIX SUBJECT } \Rightarrow DP_{\text{ACC}}$. This is correct:

(180) (7)Mentku isi  **mintsita-ni jingoni** ueka-sîn-Ø-di  **Maria**[Juanu-ni]
always   thus heart-ACC   with  want-HAB-PRS-IND3 Mary  John-ACC
eska jaruatpe-Ø-ka  k’umanchikua-rhu.
that help-FUT-PRS-SJV house-LOC
‘Mary always wants John with all her heart to help out at home.’

It is worth noting that this provides an argument against both Merge over Move (Chom-
and Move over Merge (Shima 2000, Larson 2015) (see Freidin 2016:700-702 for discussion). Alternatively, as pointed out to me by Maziar Toosarvandani, it could in principle be that the External and Internal Merge steps are rigidly ordered, but tucking-in (Richards 1997) can optionally occur in this case.

Sentence (180) is quite acceptable, despite its considerable complexity, as shown by the diacritic given for it. Its counterpart in (178) is also reasonably acceptable, though not quite as much—perhaps because the parser expects nominative DPs to precede accusative ones by default, and in (178) the reverse occurs.

Before this section is concluded, it should be mentioned that Amy Rose Deal has proposed to me an alternative analysis (call it Analysis B) on which hyperraising to object in Janitzio P’urhepecha targets not [Spec,vP] but [Spec,VP] (cf. Deal 2017:9, (25), (27)), accounting straightforwardly for the matrix subject \( \Rightarrow \) DP\(_{ACC}\) order in (180), and (178) is derived by optional short scrambling of DP\(_{ACC}\) from [Spec,VP] to [Spec,vP]. As she points out, this would make it straightforward to capture the effect of V choice (the fact that hyperraising is possible only with certain Vs). Both analyses must “say something” to account for all the data: Analysis A (but not Analysis B) must capture the effect of V choice by positing that the hyperraising \( v \) selects only certain Vs; Analysis B (but not Analysis A) must posit optional short scrambling. (The scrambling must target [Spec,vP] specifically: attempting to move DP\(_{ACC}\) in (180)/(178) one specifier position higher, to [Spec,VoiceP], produces a highly degraded result, as shown in (181).)

that help-FUT-PRS-SJV house-LOC
int. ‘Mary always wants John with all her heart to help out at home.’

With those provisions made, both analyses are empirically adequate. Analysis A will be further developed here, but it should be noted for reference that Analysis B seems equally viable.
5.5.3 Putting it all together (with a derivation)

Let us lay out our analysis of hyperraising to object in Janitzio P’urhepecha by deriving (180) (repeated in (182)).

(182) (?)Mentku isí mintsita-ni jingoni ueka-sín-∅-di Maria Juanu-ni always thus heart-ACC with want-HAB-PRS-IND3 Mary John-ACC eska jaruatpe-a-∅-ka k’umanchikua-rhu.
that help-FUT-PRS-SJV house-LOC
‘Mary always wants John with all her heart to help out at home.’ (= (180))

First, the core of the embedded CP is built:

(183) 

\[
\begin{array}{c}
\text{PolP} \\
\text{Pol} \\
\text{MoodP} \\
\quad \text{Mood} \\
\quad \text{TP} \\
\quad \text{T} \\
\quad \text{AspP} \\
\quad \text{Asp} \\
\quad \text{VoiceP} \\
\quad \text{Voice} \\
\quad \text{vP} \\
\quad \text{vP} \\
\text{DP} \\
\quad \text{Juanu} \\
\text{v} \\
\text{V(P)} \\
\text{jaruatpe} \\
\text{help} \\
\text{k’umanchikua-rhu} \\
\text{house-LOC}
\end{array}
\]

(For ease of exposition, the discussion here abstracts away from the derivational effects of the clause-internal phase, if there is one [e.g., vP or VoiceP; see Fox 1999, Legate 2003, Harwood 2015, van Urk 2015, van Urk & Richards 2015, Ingason & Wood 2017, a.o.; see also Freidin 2016:693-694 for discussion]. Also, the antipassive suffix -pe in
jaruat-pe- ‘help-ANTIP’ is tentatively analyzed here as a v. None of this should affect the proposals of interest here.)

As shown in (184), the subjunctive Mood head -ka bears an unvalued Person probe. (The basis for this supposition is the fact that the indicative Mood suffix is a portmanteau that also expones the person of the subject, being realized as -ka in the first and second persons and as -ti in the third. [These suffixes assimilate to -ga and -di immediately following /n/.] It will be assumed here for concreteness that the indicative Mood head not only agrees with the subject in person but also assigns it nominative Case, and that the subjunctive Mood head behaves identically—even though it does not agree with the subject overtly, but rather always surfaces as -ka(#/ga). This derivation uses simplified person features such as [Pers:3] for ease of exposition; see Bobaljik 2012:210-212 for relevant discussion.)

The unvalued Person probe on the subjunctive Mood head -ka probes its c-command domain for a constituent bearing a valued Person feature, finds [DP Juanu], and copies the value for its Person feature (3) onto itself. Another effect of this Agree operation is that the unvalued Case feature of [DP Juanu] is valued nominative. The result is as follows.
Merged in next is the C eska ‘that’. There are two versions of eska: one without and one with a feature \([*D]*\)EPP. In hyperraising to object, the version of eska bearing \([*D]*\)EPP is chosen. It probes its \(c\)-command domain for a goal bearing the feature \([D]\) (more precisely, \([\text{CAT}:D]\)) and finds \([\text{DP } \text{Juanu}]\), thereby satisfying its own \([*D]*\) feature. This feature’s EPP subfeature forces the goal of the probing operation, \([\text{DP } \text{Juanu}]\), to internally merge with the highest projection of eska (the traditional \(\tilde{C}\)):
On the standard assumption that CP is a phase, *eska* is a phase head, so its complement (PolP) is spelled out. The highest copy of *Juanu* is at the phase edge, and therefore still accessible. The derivation continues, yielding the following structure:

As shown in (186), the hyperraising *v* selects the V *ueka*-‘want’. (In other derivations, it selects other Vs compatible with hyperraising to object.) This *v* also bears an unvalued Number probe with an EPP subfeature. The Number probe probes *v*’s c-command domain, finds [DP *Juanu*], and copies the value of its Number feature (sg) onto itself, thereby valuing itself singular. That is, *v* is essentially an “object agreement” probe.

134
The valued Number feature’s EPP subfeature forces the goal of the probing operation, \([\text{DP} \ Juanu]\), to internally merge with the highest projection of \(v\) (the traditional \(\bar{v}\)):

(187)

Importantly, the valued Number feature on \(v\) can be exponed overtly. For the consultant who supplied these judgments, a plural \(\text{DP}_{\text{ACC}}\) optionally triggers the appearance of the plural object agreement morpheme \(-a\) in the matrix verbal complex; omitting this \(-a\) produces a result which is still acceptable but marked by comparison ((188a)). The same pattern obtains in an ordinary transitive clause ((188b)).

(188)  

\[\text{Ueka-}^M(a)-\text{sin-}^\text{O}-\text{ga=}ni \text{ mintsita-ni jingoni Maria-}^\text{ni ka} \text{ Klara-}^\text{ni eska pire-}^\text{O-}^\text{ka}=s\text{i}.\]  
\[\text{want}^M(pO)-\text{HAB-PRS-IND1}=1sS \text{ heart-ACC with } \text{Maria-ACC and } \text{Klara-ACC that sing-FUT-PRS-SBJV}=pS\]  
\[\text{‘I want Maria and Clara with all my heart to sing.’}\]

[Judgments identical when \(\text{DP}_{\text{ACC}}\) immediately precedes \text{mintsitani jingoni}.]
yesterday  see-M(pO)-PFV-PRS-IND1=1S Xumo-ACC and Axuni-ACC
‘Yesterday I saw Xumo and Axuni.’

(The question of how the hyperraised DP ends up accusative is set aside here, since our main goal is to understand the precise mechanics of the movements. Three possibilities, schematically described, are the following: 1) case stacking, 2) case overwriting, 3) dependent case assignment [without DP relicensing] (Fong 2017b).) Merged in next is the matrix subject (Maria):

(189)

The matrix vP merges with Voice, forming a VoiceP, to which the PP mintsitani jingoni ‘with all her heart’ left-joins. Later, the matrix subject Maria values the Person feature of matrix Mood, and receives nominative Case in return. These and other operations complete the derivation of the sentence, which is repeated below.

(190) Mentku isî  mintsita-ni jingoni  ueka-sîn-ɔ-di  Maria  Juanu-ni
always  thus heart-ACC  with  want-HAB-PRS-IND3  Mary  John-ACC
eska jaruatpe-a-ɔ-ka  k’umanchikua-rhu.
that  help-FUT-PRS-SJV  house-LOC
‘Mary always wants John with all her heart to help out at home.’  (= 180)
On this analysis, what is special about Janitzio P’urhepecha that permits hyperraising to object in this language is that it allows a certain C (eska ‘that’) to bear a feature \([*D^*]_{EPP}\), and allows (at least the hyperraising) \(v\) to bear a feature \([*Num:*^*]_{EPP}\). In languages such as English, by contrast, no C bears \([*D^*]_{EPP}\), so hyperraising cannot get off the ground. The difference between hyperraising and nonhyperraising languages, then, resides in properties of particular lexical items. The analysis is therefore compatible with the Borer-Chomsky Conjecture (Borer 1984, Chomsky 1995a, Baker 2008:353, Knochenhauer 2016).

5.6 Against Greed- and Labeling-based alternatives

Consider again how a hyperraising-to-object sentence in Janitzio P’urhepecha is derived on this analysis:

\[ (191) \]

\[ \cdots [vP \text{DP}_1] \quad \text{Num} \quad \text{V} \quad \text{CP} \quad \text{CP} \quad \text{C} \quad \text{DP}_2 \quad \cdots [vP \text{DP}_1] \cdots ] ] \]

On this analysis, each of the two movement steps is altruistic—i.e., driven by a featural requirement of an attracting head. (More precisely, each of the two movements is driven by an EPP subfeature of a feature of an attracting head.) But there are in principle two salient alternatives. Rather than being altruistic, these movement steps could be greedy or Labeling-driven. The three hypotheses under consideration about what the driving force for movement is are laid out more explicitly below.
a. **Greed:** A constituent moves to satisfy a feature of its own.


b. **Enlightened Self-Interest:** A constituent moves to satisfy a feature of its own (*greedy* movement) or a feature of the head to whose specifier it moves (*altruistic* movement).


c. **Labeling:** A constituent moves so that every relevant constituent in the structure can receive a label from the syntactic Labeling Algorithm.

(Chomsky 2013, 2015, 2016, Ott 2015, Rizzi 2015, Smith 2015, Bošković 2018a, a.o.)

The following three subsections argue that P’urhepecha hyperraising to object is neither greedy nor Labeling-driven.

### 5.6.1 Alternative A: Case-driven greedy movement

If hyperraising to object is greedy, it is driven by a feature of the raising DP. A natural possibility is that the DP raises to get Case. It receives accusative Case in the matrix (plausibly from *v*), and consequently surfaces bearing the accusative case morpheme -ni.

Assuming that nominative Case is assigned by Mood in Janitzio P’urhepecha (§5.5.3), it would therefore have to be posited that the subjunctive Mood head *-ka*
only optionally bears a [Case: NOM] feature that can Case-license the embedded subject. However, embedded finite CPs whose subjects hyperraise are otherwise identical to embedded finite CPs whose subjects do not hyperraise (and consequently bear nominative case) ([125-128]), which makes the Case-based analysis look artificial. (See also Halpert 2016:187 and Deal 2017:9-10 for arguments that hyperraising is not Case-driven in Zulu or Nez Perce either.)

Even worse for the Case-based analysis, there is evidence that nominative Case is in fact always available in embedded finite CPs in Janitzio P’urhepecha. In hyperraising to object, DP_{ACC}, though accusative, can be linked to a nominative floated quantifier in the embedded CP:

(193) [Context: There are three dogs, named Alonzo, Paco, and Puki (= Lion). I want the three of them to play, so that they get enough exercise. I say...]

\[
\text{Ueka-sín-∅-ga=ni\hspace{1cm}Alonsu-ni, Paku-ni ka Puki-ni\hspace{1cm}eska=sì}
\]
\[
\text{want-HAB-PRS-IND1=1sS\hspace{1cm}Alonzo-ACC, Paco-ACC and Lion-ACC that=pS}
\]
\[
\text{iamindu-eecha\hspace{1cm}ch’ana-a-∅-ka.}
\]
\[
\text{all-PL(NOM)\hspace{1cm}play-FUT-PRS-SJV}
\]
\[
\text{‘I want Alonzo, Paco, and Puki to all play.’}
\]

(194) \[
\text{?Ueka-pirin-∅-ga=ni\hspace{1cm}Maria-ni, Klara-ni ka Ana-ni\hspace{1cm}eska}
\]
\[
\text{want-COND-PRS-IND1=1sS\hspace{1cm}Maria-ACC, Clara-ACC and Anna-ACC that}
\]
\[
\text{iamindu-eecha\hspace{1cm}pire-a-∅-ka=sì}
\]
\[
\text{all-PL(NOM)\hspace{1cm}sing-FUT-PRS-SJV=pS tomorrow}
\]
\[
\text{‘I’d like for Maria, Clara, and Anna to all sing tomorrow.’}
\]

Regardless of whether floated quantifiers in Janitzio P’urhepecha are stranded adnominal elements (as argued in Chapter 4 and Bošković 2018a) or clause-level adverbials, the acceptability of sentences such as (193 194) strongly suggests that nominative Case is available in the embedded CP even when the subject of this CP hyperraises to object.

As pointed out to me by Bern Samko, a defender of the Case-based analysis could argue that the embedded CP in hyperraising to object is always nominative-
deficient, and the nominative case on a floated quantifier like *iamindueecha* ‘all’ in (193) is a default case. But this would raise the question of why the associate of the floated quantifier does not also receive default nominative case in the embedded CP, rendering hyperraising to object unnecessary (and therefore, by hypothesis, impossible; cf. Bošković & Messick to appear)—particularly given that a floated quantifier in Janitzio P’urhepecha obligatorily matches its associate in case (§4.4) (except, admittedly, when the associate hyperraises to object).

(Sentences such as (193-194) also provide evidence that the Activity Condition is not an inherent, universal constraint on Agree [contra Chomsky 2000, 2001]. [For other arguments against the Activity Condition, see Nevins 2004; see also Halpert 2016 and Chomsky 2016, fn. 5.] The floated quantifier shows that nominative Case is available in the embedded CP, suggesting strongly that the embedded subject receives nominative Case as usual. [Indeed, how would this be prevented, since nominative Case is available?] But this DP is still able to hyperraise and enter into further A-relations: it can trigger plural “object agreement” in the matrix (188), and it receives [a new] accusative Case. From the standpoint of our analysis, on which P’urhepecha hyperraising to object is altruistic movement, this is a welcome result, since, as pointed out by Bošković [2002:175] and Bošković and Messick [to appear], subjecting supposedly altruistic [target-driven] movement to the Activity Condition essentially smuggles Greed back in through the back door.)

5.6.2 Alternative B: Non-Case-driven greedy movement

There is, however, a second possible Greed-based analysis to consider: one on which the feature driving the movement is not a Case feature.

Bošković (2007) argues for an analysis of movement on which all movement is greedy. In his system, not only does every probe bear an unvalued feature, but also, conversely, every element bearing an unvalued feature (e.g., a DP with an unvalued
Case feature) acts as a probe. If (and only if) an element bearing an unvalued feature
cannot value it under Agree from where it is (by probing its c-command domain), it
moves to a c-commanding position and tries to value it under Agree from there.

Let us attempt to extend this analysis to hyperraising to object in Janitzio
P’urhepecha. Because a hyperringaing DP in this language ends up in a matrix [Spec,vP]
(§5.5.2), we could posit that a D in Janitzio P’urhepecha (and, derivatively, the DP it
heads) can optionally bear a feature [uv], and it is this feature that drives hyperraising
to object. (This is conceptually less attractive than the Case-based Greed analysis
§5.6.1, but still implementable and worth considering. Note that [uv] in Bošković’s 2007
notation corresponds to [*v*] in the Heck & Müller 2007–style notation used elsewhere in
this dissertation.) On this analysis, hyperraising to object would be derived as follows.
An embedded subject DP bearing [uv] moves to [Spec,CP], the CP phase edge position.
(If it doesn’t, it will be spelled out with its [uv] feature unvalued, causing the derivation
to crash.) It then moves to a matrix [Spec,vP]. Once there, it c-commands the matrix
v. It can therefore value its [uv] feature under Agree, and the derivation converges.

There are two major problems with this analysis. First, a [uv] feature could
not cause an embedded subject to raise into the matrix, because the embedded CP
also contains a v. From the embedded external argument base position ([Spec,vP]), the
embedded subject would c-command the embedded v; it would therefore not have to
move at all to satisfy its [uv] feature. When the embedded subject was base-generated
in an internal argument position, it could satisfy its [uv] feature merely by moving to
an embedded [Spec,vP]. Further movement (into the matrix) would be unmotivated and

Moreover, even if that problem could be dealt with somehow, a second problem
would remain. If a D(P) could optionally bear [uv], then, in some derivations, [uv] would
show up on the embedded object and not the embedded subject. Then, the object
would hyperraise into the matrix. Hyperraising to object would thus be predicted not to show

141
intervention effects (a hallmark of A-movement-type locality), contrary to fact (§4.2; cf. McFadden 2003:144-145).

5.6.3 Alternative C: Labeling-driven movement

A third possible alternative analysis is one on which hyperraising to object in Janitzio P’urhepecha is indirectly driven by the Labeling Algorithm (Chomsky 2013, 2015, 2016, Ott 2015, Rizzi 2015, Smith 2015, Bošković to appear, a.o.).

Descriptively speaking, hyperraising to object is optional. It is therefore unlikely that it occurs to solve a labeling problem arising in the embedded CP—e.g., to allow labeling of a (problematically symmetrical) \{XP, YP\} structure with no feature sharing. Instead, let us try to adapt to the hyperraising case Chomsky’s (2015) analysis of subject-raising to [Spec,TP] in English (also discussed in §3.2.3, but briefly rediscussed here for convenience). Chomsky proposes that in English, but not in Italian, T is too “weak” to label its projections (henceforth simply weak), and must therefore be reinforced by raising the most prominent DP to “[Spec,TP]” (using the term Spec only for convenience). When this happens, the features shared by the DP and T (\(\phi\)-features) can label the traditional “TP” \(\langle \phi, \phi \rangle\) (though see Richards 2017:3, fn. 6, for a conceptual argument against this conclusion). Returning to hyperraising to object, we could posit that the hyperraising \(v_{[\text{Num}]}\) comes in two versions in the lexicon, one strong and one weak. (On this analysis, the hyperraising \(v_{[\text{Num}]}\) does not bear an EPP subfeature, since the analysis attempts to attribute to the Labeling Algorithm the effects ascribed to EPP subfeatures on other analyses [specifically, analyses on which movement is feature-driven and can be altruistic].)

See Boeckx 2010 for relevant discussion.) When the weak version of \(v_{[\text{Num}]}\) is chosen, the matrix “vP” will be successfully labeled only if a DP (which also bears a [Num] feature) raises to a matrix “[Spec,vP].” When the embedded subject DP raises to a matrix “[Spec,vP],” it and v share a feature—[Num]—so the “vP” can be labeled \(\langle \text{Num},\text{Num} \rangle\).
This analysis too faces problems. First, the assumption that the hyperraising $v$ (which is silent) comes in two versions, one of which is too weak to label its projections, is stipulative. As discussed in §3.2.3, Chomsky’s (2015) proposal that English T is weak but Italian T is strong for labeling purposes relates this putative difference to the traditional idea of richness of agreement (Rizzi 1982). Whether this will prove correct is an open question, but at least the analysis relates the putative labeling-strength difference between English and Italian T to something independently observable; this is not possible in the case of the putative labeling-strength difference between the two putative versions of $v_{[Num\vdash\ast]}$ in Janitzio P’urhepecha. Secondly, Chomsky (2015) proposes that V is really a categoryless root R (see Marantz 1997 and other references in Chomsky 2015), and although R is weak, R-to-$v$ raising produces an R-$v$ complex which is strong. If this is so, then it cannot be claimed that a certain $v$ in Janitzio P’urhepecha is weak, because R raises to $v$ in this language (cf. Chapter 2; note that $v$-to-Voice raising carries R along in (178-180)).

5.7 Conclusion

This chapter has argued that some speakers of Janitzio P’urhepecha allow hyperraising to object (cf. Bruening 2002, Tanaka 2002, Halpert & Zeller 2015, Deal 2017, Fong 2017a,b, 2018, a.o.). The Janitzio P’urhepecha case joins a growing body of evidence that hyperraising is in fact possible in natural languages, indicating that the theory of grammar should not exclude this type of derivational path after all.

Hyperraising to object in Janitzio P’urhepecha was analyzed above as involving two steps of purely altruistic movement—i.e., movement driven exclusively by a featural requirement of an attracting head. If this analysis is on the right track, it strongly supports the hypothesis known as Enlightened Self-Interest (Lasnik 1995, 2003, a.o.)—namely, that movement may be driven either by a feature of the moving element or,
as here, by a feature of an attracting head. (Alternative Greed- and Labeling-based analyses of the phenomenon, by contrast, face serious problems, as shown in §5.6.)

The analysis also contributes to the endeavor of narrowing down the space of possibilities for understanding the A/Å-distinction. Janitzio P’urhepecha hyperraising to object suggests that an approach to the distinction on which [Spec,CP] is invariably an Å-position, and an element that moves there cannot enter into further A-relations, is untenable. By contrast, a featural analysis of A/Å-effects—on which A- and Å-effects are consequences of the presence of different types of features on particular functional heads (van Urk 2015, Fong 2017a,b, 2018)—looks much more promising. If a language allows the feature [\textquoteright*D\textquoteright] to appear not (only) on functional heads in the inflectional layer of the clause (cf. Rizzi 1997:281) but also on a finite C—a possibility which, crucially, nothing in the current theory rules out—then we should expect that language to allow A-raising out of finite CPs. Hyperraising to object, then—along with hyperraising to subject—ceases to be an anomaly and is revealed instead to be in line with theoretical expectation.
Chapter 6

Conclusion

Consider again the three prominent hypotheses about the driving force for movement that we have been trying to adjudicate among:

195  a. **Greed:** A constituent moves to satisfy a feature of its own.


b. **Enlightened Self-Interest:** A constituent moves to satisfy a feature of its own (*greedy* movement) or a feature of the head to whose specifier it moves (*altruistic* movement).

c. **Labeling:** A constituent moves so that every relevant constituent in the structure can receive a label from the syntactic Labeling Algorithm.

(Chomsky 2013, 2015, 2016, Ott 2015, Rizzi 2015, Smith 2015, Bošković 2018a, a.o.)

This dissertation has brought us closer to the goal of being able to choose among these hypotheses by investigating in detail the properties of two varieties of movement in Janitzio P’urhepecha that are unusual from the perspective of the most intensively studied languages: *profligate subject movement* (cf. Cable 2012 on Dholuo) and *hyperraising to object* (cf. Bruening 2002, Tanaka 2002, Halpert & Zeller 2015, Deal 2017, Fong 2017a,b, 2018). It has been argued here that both of these varieties of movement are purely altruistic—i.e., driven exclusively by features of higher, c-commanding heads, with no corresponding featural benefit for the moving element in either case. Alternative analyses of these varieties of movement on which they are greedy (driven by features of the moving element) or labeling-driven (indirectly forced by the need for every relevant constituent in the structure to receive a label from the Labeling Algorithm) have been argued here to face serious problems. The facts of these two varieties of movement in Janitzio P’urhepecha, then, provide strong evidence in favor of Enlightened Self-Interest (the hypothesis that movement may be driven either by a feature of the moving element or, as here, by a feature of the head to whose specifier it moves—Lasnik 1995, 2003, a.o.), and against the Greed and Labeling hypotheses.

It is worth noting, though, that the evidence for purely altruistic movement (and hence for Enlightened Self-Interest) provided by hyperraising to object is stronger than that provided by profligate subject movement. The reason is that, as pointed out to me by Sandy Chung and by a Natural Language and Linguistic Theory reviewer, it is logically possible that profligate subject movement in fact always involves movement of the subject to the highest subject position ([Spec,PolP])—which could probably be
analyzed as greedy or labeling-driven movement without too much stipulation—with optional spellout of non-highest copies. To be sure, it is by no means obvious at this point that such an alternative (non-altruistic) analysis would actually be viable, given that, as shown in Chapter 3, profligate subject movement shows intervention effects. Still, defenders of the Greed and Labeling approaches to driving movement might consider taking up the challenge of trying to reanalyze profligate subject movement in Janitzio P’urhepecha (and in Dholuo, Cable 2012) in a way that is consistent with their hypotheses and provides some independent motivation for the putative spellout of non-highest copies that such analyses would require. By contrast, the facts of hyperraising to object in Janitzio P’urhepecha seem to pose considerably more severe problems for the Greed and Labeling hypotheses, and it is not at all clear that a truly viable Greed- or Labeling-based analysis is possible for hyperraising to object (at least in its Janitzio P’urhepecha instantiation).

In this connection, it will be worthwhile to mention some of the other theoretical consequences of the investigation of hyperraising to object carried out in Chapter 5. The Janitzio P’urhepecha version of the phenomenon is yet another example of a syntactic process—hyperraising—that is being discovered in more and more languages, indicating that syntactic theory should not in fact exclude this type of derivational path, contrary to what was previously thought. The facts of hyperraising to object in Janitzio P’urhepecha also help us narrow down the space of possibilities for understanding A/Å-effects. As discussed in Chapter 5, an analysis of A/Å-effects on which [Spec,CP] is inherently and invariably an Å-position, and a constituent that moves there cannot enter into further Å-relations (Å-movement, accusative case assignment, object agreement, etc.), is untenable. By contrast, a featural analysis of Â-effects—on which Â-effects are consequences of the features on particular functional heads (van Urk 2015, Fong 2017b, 2018)—looks much more promising. If a language allows the feature [\*Dₜ] to appear not (only) on functional heads in the inflectional layer of the clause
but also on a finite C (which nothing in the current theory rules out), then we should expect that language to allow A-style raising out of finite CPs.

Finally, we should consider what the implications of our results are for a larger question still. If indeed Internal Merge is feature-driven in the way argued for here, and if Internal and External Merge are in fact just two subcases of a single structure-building operation Merge (Chomsky 2004, Collins & Stabler 2016:48, Freidin 2016:702, Collins 2017:48, Collins & Groat 2018:1; see also Graf 2018), then we fully expect External Merge to be feature-driven as well.

This expectation in turn opens up in a salient and straightforward way the possibility that the most accurate theory of the syntax of human languages is one on which all syntactic operations are triggered by features of lexical items (and cannot apply in the absence of a suitable trigger of this sort; see Stockwell 2016, §3.2.1; Müller 2017; and Boštović & Messick to appear for relevant discussion). On such a theory, lexical items (or, more precisely, the features thereof) are the fundamental drivers and regulators of syntactic derivation—contra the Free Merge approaches (Boeckx 2010; Ott 2010; Chomsky 2013, 2015, 2016; Chomsky, Gallego, & Ott 2017, a.m.o.) that have recently seen such a marked and striking surge in interest.
Appendix A

How high can the verb raise in Janitzio P’urhepecha?

Section 2.3 argued that the finite verb in Janitzio P’urhepecha can be realized in Voice, Asp, T, or Mood, but no higher. This appendix tests a prediction of that conclusion: that the verb should be able to precede any adverbial that (left-)adjoins at the TP level or below, but no adverbials that (left-)adjoin at the MoodP level or above.

In testing this prediction, let us take as our guide a recent version of the Cinque hierarchy (Cinque 1999). Although the cartographic framework has not been adopted here, it is clear that many of the observations about possible and impossible orders of adverbials that have been incorporated into the Cinque hierarchy are empirically well supported. Therefore, it will be possible to use the Cinque hierarchy to test the prediction just mentioned even without committing ourselves to the cartographic framework. It should be noted, though, that the analysis of Janitzio P’urhepecha clause structure being developed here should be straightforwardly translatable into that framework should that prove desirable.

A recent version of the Cinque hierarchy is given in (196). A few adverbs have been added to it for greater comprehensiveness, but without creating any new positions.

(196) A recent version of the Cinque hierarchy (based on Tescari Neto 2013:30, (7))

\[
\begin{align*}
\text{[\textit{frankly}\,\textit{honestly}] & \text{Mood}_{\text{SpeechAct}}^0} \\
\text{[\textit{lucky}] & \text{Mood}_{\text{Evaluative}}^0} \\
\text{[\textit{allegedly}] & \text{Mood}_{\text{Evidential}}^0} \\
\text{[\textit{probably}] & \text{Mod}_{\text{Epistemic}}^0} \\
\text{[\textit{once}] & \text{T}_{\text{Past}}^0} \\
\text{[\textit{then}] & \text{T}_{\text{Future}}^0} \\
\text{[\textit{perhaps}] & \text{Mood}_{\text{Irrealis}}^0}
\end{align*}
\]
Although the clause structure developed for Janitzio P’urhepecha in the body of the chapter (and in this investigation in general) is a noncartographic one, the verb/adverbial ordering statements below are annotated with indications of the positions that the adverbials occupy according to the cartographic framework.

The verb can stay extremely low, to the right of \textit{xarhintkueri} ‘early’:

\begin{equation}
\textit{xarhintkueri} \text{ ‘early’} ([\text{Spec, Asp}\text{Celerative(II), P}]) > \text{verb}
\end{equation}

\begin{tabular}{l}
Iasi’ nande \textbf{xarhintkueri} \text{mikanta-si-Ø-ti} \text{meiapekua-ni.} \\
today mother early \text{close-PFV-PRS-IND3 store-ACC} \\
‘Today Mom closed the store early.’
\end{tabular}

(The symbol “\textgreater” is used throughout to mean ‘can precede’, not ‘must precede’.)

150
Alternatively, the verb can surface to the left of *zarhintkueri* ‘early’, suggesting that Janitzio P’urhepecha has (at least some) optional verb raising:

(198) $\verb > xarhintkueri \ 'early' \ ([Spec,AspCelerative(II)P])$

\[
\begin{align*}
\text{Jasí } & \text{ nande mikanta-sí-ʔ-ʔ } \text{xarhintkueri mēakekua-ni.} \\
\text{today } & \text{ mother } \text{ close-PFV-PRS-IND3 } \text{store-ACC}
\end{align*}
\]

‘Today Mom closed the store early.’

It can also surface to the right of the manner adverbials *sesi* ‘well’, *ikichakueni jasi* ‘badly’, and *eskaparini* ‘carefully’ (though *eskaparini*-verb order was judged marked):

(199) $\text{sesi } \text{‘well’ } ([Spec,\text{VoiceP}]) > \verb$

\[
\begin{align*}
\text{Paula sesi } & \text{pire-sí-ʔ-ʔ } \text{ma pirekua.} \\
\text{Paula well } & \text{ sing-PFV-PRS-IND3 a } \text{song}
\end{align*}
\]

‘Paula sang a song well.’

(200) $\text{ikichakueni jasi } \text{‘badly’ } ([Spec,\text{VoiceP}]) > \verb$

\[
\begin{align*}
\text{Karlusí ikichakueni jasi atanta-sí-ʔ-ʔ } & \text{tsĩntsíkata-ni.} \\
\text{Carl badly/uglily } & \text{paint-PFV-PRS-IND3 wall-ACC}
\end{align*}
\]

‘Carl painted the wall badly.’

(201) $\text{eskaparini } \text{‘carefully’ } ([Spec,\text{VoiceP}]) > \verb$

\[
\begin{align*}
\text{MJulianu eskaparini } & \text{unta-sí-ʔ-ʔ } \text{porhechi kaka-kata-ni.} \\
\text{Julian carefully } & \text{fix-PFV-PRS-IND3 pot break-PTCP.PASS-ACC}
\end{align*}
\]

‘Julian carefully fixed (lit. ‘remade’) the broken pot.’

But the verb can also surface to the left of these manner adverbials:

(202) $\verb > \text{sesi } \text{‘well’ } ([Spec,\text{VoiceP}])$

\[
\begin{align*}
\text{Paula } & \text{pire-sí-ʔ-ʔ } \text{sesi ma pirekua.} \\
\text{Paula } & \text{ sing-PFV-PRS-IND3 well a } \text{song}
\end{align*}
\]

‘Paula sang a song well.’

(203) $\verb > \text{ikichakueni jasi } \text{‘badly’ } ([Spec,\text{VoiceP}])$

\[
\begin{align*}
\text{Karlusí } & \text{atanta-sí-ʔ-ʔ } \text{ikichakueni jasi tsĩntsíkata-ni.} \\
\text{Carl } & \text{paint-PFV-PRS-IND3 badly/uglily wall-ACC}
\end{align*}
\]

‘Carl painted the wall badly.’

(204) $\verb > \text{eskaparini } \text{‘carefully’ } ([Spec,\text{VoiceP}])$

\[
\begin{align*}
\text{MJulianu } & \text{unta-sí-ʔ-ʔ } \text{eskaparini porhechi kaka-kata-ni.} \\
\text{Julian } & \text{fix-PFV-PRS-IND3 carefully pot break-PTCP.PASS-ACC}
\end{align*}
\]

‘Julian carefully fixed the broken pot.’
It seems, then, that Janitzio P’urhepecha does indeed have optional verb raising. This conclusion immediately raises the following question: How high can the verb raise in this language?

Let us work our way up the adverb hierarchy:

(205) \[ \text{verb} > \text{isku jauembarini} \ '\text{suddenly}' \  ([\text{Spec,AspInceptive(I)} \text{P}]) \]

K’uaki=rini \[ \text{achichi-s-ð-ti} \ \text{isku jauembarini} \ '\text{suddenly}' \ \text{juchiti kurinda.} \]
crow=1sO eat-PFV-PRS-IND3 suddenly my bread
‘A crow suddenly ate my bread.’

(206) \[ \text{verb} > \text{maratitku} \ '\text{for a little while}' \  ([\text{Spec,AspDurative,P}]) \]

Marikua \[ \text{rapi-ji-s-chi-sï-ti} \ \text{maratitku} \ '\text{for a little while}' \ \text{juchiti} \]
young.woman small hide-APPL.1-PFV-PRS-IND3=1sO a.little.while my
book-ACC but find-PFV-PRS-IND1=1sS already
‘The girl hid my book for a little while, but I’ve already found it.’

(207) \[ \text{verb} > \text{sontku} \ '\text{soon}' \  ([\text{Spec,AspProximate,P}]) \]

U-a-ð-ka=rini \[ \text{sontku} \ '\text{soon}' \ \text{ma chekakua jimbani.} \]
make-FUT-PRS-IND1=1sS soon a big.canoe new
‘Soon I’m going to build a new chekakua (big canoe).’

(208) \[ \text{verb} > \text{iasïmindu} \ '\text{just}' \  ([\text{Spec,AspRetrospective,P}]) \]

Misitu \[ \text{kaka-chi-s-ð-ti} \ \text{iasï=mindu} \ '\text{now=exactly}' \ \text{kukuchi-ni.} \]
cat break-PFV-PRS-IND3 now=exactly jug-ACC
‘The cat just broke the jug.’

(209) \[ \text{verb} > \text{mentku isï} \ '\text{always}' \  ([\text{Spec,AspContinuous,P}]) \]

Sara \[ \text{pia-sïn-di} \ \text{mentku isï} \ '\text{always}' \ \text{mansana xarapiti-cha-ni.} \]
Sara buy-HAB-PRS-IND3 always thus apple red-PL-ACC
‘Sara always buys red apples.’

(210) \[ \text{verb} > \text{utasï} \ '\text{still}' \  ([\text{Spec,AspContinuous,P}]) \]

Laura \[ \text{ataranta-sïn-di} \ \text{utasï} \ '\text{now=exactly}' \ \text{tsuntsu-eecha-ni.} \]
Laura sell-HAB-PRS-IND3 still pot-PL-ACC
‘Laura still sells pots.’

(211) \[ \text{verb} > \text{ia} \ '\text{already}' \  ([\text{Spec,TAnterior,P}]) \]

Ikinari \[ \text{u-sï-ð-ti} \ \text{ia} \ '\text{already}' \ \text{ma jirumekua jimbani.} \]
Ikinari make-PFV-PRS-IND3 already a motorboat new
‘Ikinari has already built a new motorboat.’
(212) verb > *jijirisì* ‘quickly’ ([Spec, Asp Celerative(I)P])
Louis k’orosìta-sì-∅-ti *jijirisì* kojtsìtarakua-ni.
‘Louis quickly cleaned the table.’

(213) verb > *uekaparini* ‘voluntarily’ ([Spec, Mod VolitionalP])
Uatsapi=mindu *peta-sì-∅-ti* *uekaparini* ikichakua ambe.
boy=exactly take.out-PFV-PRS-IND3 voluntarily garbage INDEF
‘The boy himself voluntarily took out the trash.’

(214) verb > *uekaparini* ‘on purpose’ ([Spec, Mod VolitionalP])
Ana *kaka-sì-∅-ti* *uekaparini* bentana-ni.
Anna break-PFV-PRS-IND3 on.purpose window-ACC
‘Anna broke the window on purpose.’

(215) verb > *ambu exeparini* ‘accidentally’ ([Spec, Mod VolitionalP])
Mateo *kaka-sì-∅-ti* *ambu exeparini* basu.
Mateo break-PFV-PRS-IND3 not carefully glass
‘Matt accidentally broke the glass.’

(216) verb > *mentku isì* ‘often’ ([Spec, Asp Frequentative(I)P])
Anaa *kamanari-a-sìn-∅-di* *mentku isì* uajpe-echa-ni.
Anna hug-PHAB-PRS-IND3 always thus child-PL-ACC
‘Anna hugs her kids often.’

(217) verb > *ts’imapurhu isì* ‘twice’ ([Spec, Asp Frequentative(I)P])
Julia *pire-sì-∅-ti* *ts’ima-purhu isì* ima-ni *pirekua.
Julia sing-PFV-PRS-IND3 two-in.n.parts thus that(DIST)-ACC song
‘Julia sang that song twice.’

(218) verb > *menchani* ‘sometimes’ ([Spec, Asp Frequentative(I)P])
Jorge *pia-sìn-∅-di* *menchani* tomaa tsìpambiti.
George buy-PHAB-PRS-IND3 sometimes tomato yellow
‘George sometimes buys yellow tomatoes.’

(219) verb > *mentku isì* ‘usually, normally’ ([Spec, Asp HabitualP])
Sara *pia-sìn-∅-di* *mentku isì* mansana xarapiti-cha-ni.
Sara buy-PHAB-PRS-IND3 always thus apple red-PL-ACC
‘Sara usually buys red apples.’
The following two sentences initially seem to suggest that, although it is relatively acceptable for the verb to follow nandi ‘maybe’ (220), it cannot raise past nandi (221).

(220) nandi ‘maybe’ ([Spec,Mood\_IrrealisP]) > verb


(221) ?*verb > nandi ‘maybe’ ([Spec,Mood\_IrrealisP])


Under cartographic assumptions, this would seem to suggest that the verb can potentially raise as high as Mood\_Irrealis, but cannot move one head up, to T\_Future (see (196)). But in fact the verb can move past the next adverb up on the Cinque hierarchy—namely, jimamberi ‘then’:

(222) verb > jimamberi ‘then’ ([Spec,T\_FutureP])

Materu uexurini ereka-a-Ω-ka=sī materu ereta-rhu. another year live-FUT-PRS-IND1=1pS another town-LOC. Ṗreinta-a-Ω-ka=sī jimamberi sanderu sesi. live-FUT-PRS-IND1=1pS then more well ‘Next year we’ll live in another town. Then we’ll live better.’

As mentioned in the body of the chapter, although (222) was judged fully well formed, it is perhaps more usual for verb-jimamberi order to be judged a bit marginal in comparison to jimamberi-verb order:

(223) jimamberi ‘then’ ([Spec,T\_FutureP]) > verb ~ ?verb > jimamberi ‘then’

Uexurini jimbani ereka-a-Ω-ka=sī materu k’umanchikua-rhu. Nande year new live-FUT-PRS-IND1=1pS other house-LOC. mother {jimamberi [pia-Ω-ti] / [pia-Ω-ti] jimamberi} ma {then buy-FUT-PRS-IND3 / buy-FUT-PRS-IND3 then} a kojtsitaraka k’eri. table big ‘In the new year we’ll live in a different house. Mom will then buy a big table.’

The verb’s ability to precede jimamberi ‘then’ (yielding perfect or slightly marginal results, (222)(223)), but not nandi ‘maybe’, suggests that nandi ‘maybe’ is higher than jimamberi ‘then’ in Janitzio P’urhepecha, contra the predictions of the Cinque hierarchy.
(or, more precisely, the version of it under consideration). On the strengths, weaknesses, and crosslinguistic robustness of the Cinque hierarchy, as well as what the ultimate etiology of rigid adverbial orders might be, see Zyman 2012 and references therein.

Proceeding to the next adverbial up for which data are available, the verb can surface to the right of *sesimindu uandantani ia* ‘frankly / honestly / to tell you the truth’:

$$\text{(224) } \text{*sesimindu uandantani ia} \text{ ‘frankly’ \{Spec,Mood_{SpeechAct} P\} > verb}$$

\[
\begin{array}{ll}
\text{Sesi}=\text{mindu uandanta-ni ia,} & \text{Xumo sanderu xepe-si-Ø-ti} \\
\text{well}=\text{very inform-INF already Xumo more be.lazy-PFV-PRS-IND3} \\
eska \text{ iamindu-eecha.} & \text{than all-PL} \\
\text{‘Frankly, Xumo’s lazier than everyone else.’}
\end{array}
\]

But the verb cannot precede *sesimindu uandantani ia* ‘frankly’:

$$\text{(225) } \text{*verb > sesimindu uandantani ia} \text{ ‘frankly’ \{Spec,Mood_{SpeechAct} P\} (= (31))}$$

\[
\begin{array}{ll}
\text{Xumo xepe-si-Ø-ti} & \text{sesi=mindu uandanta-ni ia sanderu} \\
\text{be.lazy-PFV-PRS-IND3 well=very inform-INF already more} \\
eska \text{ iamindu-eecha.} & \text{than all-PL} \\
\text{int. ‘Xumo’s frankly lazier than everyone else.’}
\end{array}
\]

As noted in the body of the chapter, the unacceptability of (225) cannot simply be due to the sentence-internal placement of *sesimindu uandantani ia* ‘frankly’—a heavy phrase which is in fact a full (nonfinite) clause—since this is perfectly acceptable when it is not the verb but the subject that precedes the adverbial:

$$\text{(226) } \text{Xumo sesi=mindu uandanta-ni ia sanderu xepe-si-Ø-ti}$$

\[
\begin{array}{ll}
\text{Xuno well=} \text{very inform-INF already more be.lazy-PFV-PRS-IND3} \\
eska \text{ iamindu-eecha.} & \text{than all-PL} \\
\text{‘Xumo frankly is lazier than everyone else.’} & \text{(= (32))}
\end{array}
\]

In the context of the noncartographic analysis of Janitzio P’urhepecha clause structure developed in the body of the chapter, then, the findings in this appendix, together with those in (23-28) above, support the conclusion that the verb can raise as high as Mood in this language, but no higher. Why this should be is an interesting question that will have to be investigated in crosslinguistic perspective, but must be left open for now.
Appendix B

Which quantifiers float in Janitzio P’urhepecha?

Janitzio P’urhepecha has quantifiers that float other than *iamíndu-eecha* ‘all-PL’. For example, *ts’mararani* ‘both’ produces reasonably acceptable results when floated either “short-” or “long-distance”:

(227)  ⟨Ts’mararani⟩ uatsapi-cha ⟨?ts’mararani⟩ ch’ana-xa-Ø-ti=sí ⟨both⟩ child-PL ⟨?both⟩ play-DUR-PRS-IND3=pS ⟨?ts’mararani⟩ juata-rhu. ⟨?both⟩ hill-LOC ‘Both kids are playing on the hill.’

*Kanekua* ‘a lot (of)’ also seems to be able to float. With this quantifier, “short-distance” float is acceptable (though highly marked), and “long-distance” float is marginally acceptable:

(228)  ⟨Kanekua⟩ itsí ⟨MM kanekua⟩ jata-sí-Ø-ti ⟨a.lot.of⟩ water ⟨MM a.lot.of⟩ mount-PFV-PRS-IND3 ⟨?a.lot.of⟩ icharuta-rhu. canoe-PL ‘A lot of water got in the canoe.’

*Maru(-eecha)* ‘some(-PL)’ can either precede or follow its associate, but it cannot float “long-distance”:

(229)  ⟨Maru(-eecha)⟩ tumbi-cha ⟨?(?)maru-eecha⟩ ⟨some(-PL)⟩ young.man-PL ⟨?(?)some-PL⟩ uandontskuari-xa-Ø-ti=sí ⟨*maru-eecha⟩ uerakua. converse-DUR-PRS-IND3=pS ⟨*some-PL⟩ outside ‘Some young men are chatting outside.’

This may suggest that, in *tumbi-cha maru-eecha* ‘young.man-PL some-PL’, *maru-eecha* is not a floated quantifier but a rightward (postnominal) modifier.
Finally, numerals such as *\textit{tanimu} ‘three’, and the quantifier *\textit{uanekua} ‘many’, do not float:

(230) \begin{align*}
\langle \text{Tanimu} \rangle \text{achati-cha} \langle \text{\textit{tanimu}} \rangle \text{cherema-xa-Ø-ti=sɨ} \langle \text{\textit{tanimu}} \rangle \\
\text{three} \text{man-PL} \text{fish.with.net-PRS-IND3=pS} \text{\textit{tanimu}} \\
\text{lake-LOC} \\
\text{‘Three men are fishing with a net on the lake.’}
\end{align*}

(231) \begin{align*}
\langle \text{Uanekua} \rangle \text{tumbi-cha} \langle \text{\textit{uanekua}} \rangle \text{uandontskuari-xa-Ø-ti=sɨ} \\
\text{many} \text{young.man-PL} \text{\textit{uanekua}} \\
\text{converse-PRS-IND3=pS} \langle \text{\textit{uanekua}} \rangle \text{uerakua.} \\
\text{outside} \\
\text{‘A lot of young men are chatting outside.’}
\end{align*}
Appendix C

More on quantifier float in ditransitive clauses

As discussed in §4.2.2, in a ditransitive clause in Janitzio P’urhepecha, the direct and indirect objects can surface in either order.

In (232), the indirect object (IO) *Anitani* ‘Anita’ precedes the quantified direct object (DO) *iamindu iajchakueechani* ‘all the pillows’.

(232)  IO–DO order; no quantifier float

\[
\text{Intsku-a-nta-si-0-ka=ni \quad Anitani \quad iamindu iajchakue-echa-ni.}
\]
\[
\text{give-pO-iter-pfv-prs-IND1=1sS \quad Anita-ACC \quad all \quad pillow-PL-ACC}
\]

*I gave Anita all the pillows.*

If the DO-associated quantifier remains to the right of the indirect object *Anitani*, but the associate *iajchakueechani* ‘pillows’ surfaces to the immediate left of this indirect object, the result is unacceptable:

(233)  DO–IO-Q\text{\textsubscript{DO}} order is not allowed

\[
*\text{Intsku-a-nta-si-0-ka=ni \quad iajchakue-echa-ni \quad Anita-ni}
\]
\[
\text{give-pO-iter-pfv-prs-IND1=1sS \quad pillow-PL-ACC \quad Anita-ACC}
\]
\[
\text{iamindu-eecha-ni.}
\]
\[
\text{all-PL-ACC}
\]
\[
\text{int. ‘I gave Anita all the pillows.’}
\]

The paradigm in (232)–(233) might initially seem amenable to the following explanation. In Janitzio P’urhepecha, the IO-DO structure is basic, and the DO-IO structure is derived by moving the DO leftward past the IO: [DO ... IO ... t\text{\textsubscript{DO}}]. However, this movement cannot strand a DO-associated quantifier in the base position of the DO, because quantifiers cannot be stranded in \(\theta\)-positions (Bošković 2004).

In fact, this analysis would also be able to account for analogous facts in DO–IO clauses. In (234), the direct object *siranda* ‘paper’ precedes the quantified indirect object *iamindu jorhenguairirichani* ‘all the students’:

\[
\]
(234)  **DO-IO order; no quantifier float**

Intsku-a-nta-sï-∅-ka=ni  siranda  iamindu  jorhenguariri-cha-ni.

give-pO-ITER-PFV-PRS-IND1=1sS  paper  all  student-PL-ACC

‘I gave paper to all the students.’

If the IO-associated quantifier remains to the right of the direct object *sïranda* ‘paper’, but the associate *jorhenguariri* ‘students’ surfaces to the immediate left of this direct object, the result is unacceptable:

(235)  **IO-DO-Q order is not allowed**

*Intsku-a-nta-sï-∅-ka=ni  jorhenguariri-cha-ni  siranda*

give-pO-ITER-PFV-PRS-IND1=1sS  student-PL-ACC  paper

*iamindu-eecha-ni.*

all-PL-ACC

int.  ‘I gave paper to all the students.’

Sentence (235) could in principle be ruled out much as (233) was. It contains the substructure \[ \text{[IO-ASSOC-i} \ldots \text{DO}_k \ldots \text{[Q}_\text{IO} t_i \ldots t_k] \]—but this is not allowed, because a quantifier cannot be floated in the base position of the indirect object, which is a \( \emptyset \)-position.

Although this seems like an elegant account of the paradigm in (232-235), there is reason to believe it is not the right analysis. When long-distance quantifier float occurs, a DO-associated floated quantifier can either precede or follow the IO ((236)), and an IO-associated floated quantifier can either precede or follow the DO ((237)).

(236)  **A DO-associated floated quantifier can precede or follow the IO**

[Context: Two brothers are talking about their dad.]

A:  ¿Ne-ni  intsku-a-nta-sï-∅-ki  misitu-eecha-ni?

who-ACC  give-pO-ITER-PFV-PRS-INT  cat-PL-ACC

‘Who did he give the cats to?’

B1:  Misitu-eecha-ni  ambu  mite-∅-∅-∅,  pero  uichu-eecha-ni

cat-PL-ACC  not  know-PFV-PRS-IND  but  dog-PL-ACC

intsku-a-nta-sï-∅-ti  iamindu-eecha-ni  Anita-ni.

give-pO-ITER-PFV-PRS-IND3  all-PL-ACC  Anita-ACC

‘The cats I don’t know (about), but the dogs he gave all of to Anita.’

B2:  ¿Misitu-eecha-ni  ambu  mite-∅-∅-∅,  pero  uichu-eecha-ni

cat-PL-ACC  not  know-PFV-PRS-IND  but  dog-PL-ACC

intsku-a-nta-sï-∅-ti  Anita-ni  iamindu-eecha-ni.

give-pO-ITER-PFV-PRS-IND3  Anita-ACC  all-PL-ACC

‘The cats I don’t know (about), but the dogs he gave Anita all of.’
An IO-associated floated quantifier can precede or follow the DO

[Context: Two sisters are talking about their mom.]

   ‘What did she give to the babies?’

B₁: Charaku-eecha-ni ambu mite-ð-ð-ð baby-PL-ACC not know-PFV-PRS-IND but child-PL-ACC
    intska-anta-sï-ð-ti iamindu-eecha-ni tekua ambe. give-pO-ITER-PFV-PRS-IND3 all-PL-ACC honey INDEF
   ‘The babies I don’t know (about), but the kids she gave all of honey.’

   ‘The babies I don’t know (about), but the kids she gave honey to all of.’

The generalizations about these structures are as follows. When a floated quantifier associated with one object precedes the other object, the structure is perfect. When the floated quantifier occurs in absolute clause-final position, the structure is marginally acceptable. Crucially, though, this is so regardless of which object (direct or indirect) the floated quantifier is associated with.

These facts are not compatible with an analysis of (232-235) on which one order for the two objects is derived from the other and (following Bošković 2004) quantifiers cannot be floated in ◊-positions. On such an analysis, two of the sentences in (236-237) would be predicted to be unacceptable.

All the data in this appendix can, however, be accounted for by positing that both the DO-IO and the IO-DO structure are base-generated in Janitzio P’urhepecha (as argued for Japanese by Miyagawa & Tsujioka 2004, a.o.). If this is so, then (233) and (235) involve unmotivated movement of the associate and are plausibly ruled out for that reason.

As for the putative ban on quantifier float in ◊-positions, the data in (236-237) seem to constitute a prima facie challenge to it. Alternatively, it could be that the ban is in fact in force, and none of the floated quantifiers in (236-237) are in ◊-positions, the internal structure of VoiceP being more complex than it initially appears. (The same issue arises in connection with floated quantifiers associated with shifted objects in Irish nonfinite clauses; see McCloskey 2017:264.)
Appendix D

Evaluating two alternative analyses of the Subject Condition effects

D.1 Bošković 2018a

Bošković (2018a) argues that the Subject Condition is one of many effects of a ban on movement out of moved elements (i.e., it is a freezing effect; see his paper for extensive references). On this analysis, extraction from subjects is generally impossible because subjects generally move. Interestingly, though, his analysis of freezing effects leaves room for a class of exceptions, in a way that makes it possible to correctly distinguish between the cases in Janitzio P’urhepecha in which a Subject Condition effect is observed and those in which no such effect is observed.

Bošković develops a Labeling-based analysis of freezing effects, according to which unlabeled constituents cannot move. The analysis works as follows. Suppose we want to move a phrase YP out of another phrase XP that has itself moved. Bošković, following several other researchers, assumes that only phases can move. If this is so, then XP must be a phase. Therefore, in order for YP to move out of XP, it must first move to the edge of XP. The principle of cyclic derivation dictates that YP must move to the edge of XP before XP itself moves. When YP moves to the edge of XP, the result is an \{XP, YP\} structure, in Labeling terms (Chomsky 2013, 2015; call this structure Z for convenience). If YP and XP do not share a feature that can label Z, Z will be temporarily unlabeled. (If the derivation is to converge, either XP or YP must move, allowing the other to label Z; see Chomsky 2013:43-44.) Therefore, Bošković argues, Z is (at that point in the derivation) not a phase, because it is not a \(vP\) or \(CP\), or any other type of phrase which is phasal (if there are such). Because Z is not a phase, it cannot move. A fortiori, it is impossible for Z to move and YP to subsequently move out of it.

This explains why \texttt{neri ‘who\_gen’} cannot move out of the nominal \texttt{ma p’itakata neri ‘a picture of whom’} in (119-120), assuming that those two phrases do not share a feature (e.g., a categorial feature [\texttt{CAT:D}]) that could label the \{XP, YP\} structure \[[\texttt{neri}] \ [\texttt{ma p’itakata} \underline{\_\_}]\], and assuming that subjects always undergo at least some
movement in Janitzio P’urhepecha (i.e., they in fact originate in some position lower than [Spec, VoiceP] but obligatorily vacate that low base position).

However, Bošković’s analysis also predicts that YP should be able to move out of XP if they share a feature (call it [f]) that can label Z. When YP moves to the edge of XP, if YP and XP both bear [f], this feature can label Z. Because Z (now in fact FP) is labeled, it can in principle be a phase. Therefore, it can move, and YP can subsequently move out of it—i.e., the freezing effect is called off. Bošković actually argues that quantifier float in Janitzio P’urhepecha (as well as German and Hebrew) is precisely an instance of this. In Janitzio P’urhepecha, the quantifier iamindu(eecha) ‘all(-PL)’ agrees with its associate in number optionally when quantifier float does not occur, but obligatorily when it does. This is explained by Bošković’s analysis: feature-sharing in the structure [[[Associate]7 [D _7]]] (specifically, sharing of the feature [Num:PL]) calls off the freezing effect (the Subject Condition effect) that would otherwise have arisen, allowing the associate to move further.

Another piece of evidence supporting this analysis comes from extraction from certain adjuncts. As shown in (107), quantifier float is possible from a comitative adjunct (one bearing the comitative case morpheme -nguni ‘with’). However, ordinary wh-extraction is not possible from such an adjunct:

(238) * ¿Ne-ri7 kara-xa-ɓ-ki uatsapi [__7 karanaritakua-nguni]?  
    who-GEN7 write-DUR-PRS-INT boy [__7 writing.implement-COM]  
    int. ‘Whose pencil is the boy writing with?’

Bošković (2018a) argues that Adjunct Condition effects (like Subject Condition effects, and freezing effects in general) are called off if the extractee, once at the left edge of the adjunct, shares a feature with its sister that can label their mother. Importantly in this connection, extraction from a comitative adjunct in Janitzio P’urhepecha improves significantly if the extractee overtly bears comitative case as well:

(239)  ¿ Ne-ri-nguni8 kara-xa-ɓ-ki uatsapi [__8 karanaritakua-nguni]?  
    who-GEN-COM8 write-DUR-PRS-INT boy [__8 writing.implement-COM]  
    ‘Whose pencil is the boy writing with?’

This finding makes it possible to understand why, although the Adjunct Condition is in force in Janitzio P’urhepecha ((238)), quantifier float does not display Adjunct Condition effects in this language ((107)). When the associate DP moves to the edge of the containing nominal, it and its sister share a comitative case feature. This feature-sharing calls off the Adjunct Condition effect that would otherwise have been observed, and has a visible reflex in that both the moved associate DP and the stranded quantifier overtly bear the comitative case morpheme -nguni ‘with’.

If Bošković’s (2018a) analysis is adopted, then, we can maintain the stranding analysis for quantifier float in Janitzio P’urhepecha—which explains the distributional and case-matching facts (Sects. 1.3.4.4) better than the adverbial analysis—while simultaneously explaining why quantifier float in this language does not show Subject Condition or (oblique) Adjunct Condition effects, unlike ordinary wh-movement.
Although this analysis is elegant and achieves impressive empirical results, it faces some problems as well. First, as mentioned above, it requires positing that all subjects undergo some movement in Janitzio P’urhepecha. In other words, even a subject that surfaces as low as [Spec,VoiceP] must have moved there from a lower position. As a matter of fact, it will be shown in Chapter 5 that external-argument subjects can surface lower than [Spec,VoiceP]—more precisely, in the specifier of a head v distinct from Voice. This, however, does nothing to alleviate the problem under discussion. Given that a subject can surface in [Spec,vP], Bošković’s (2018a) analysis is in fact forced to posit that all subjects, even external-argument subjects, originate in a position even lower than that, but they all obligatorily vacate their base position. Although this is logically possible, there is currently no evidence that all subjects (even those that surface as low as [Spec,vP]) move to their surface position from a lower position. The assumption that there always is such a lower position, lower even than [Spec,vP], is therefore a pure stipulation needed to get the analysis to work for Janitzio P’urhepecha.

There is, however, a second and substantially more serious problem with Bošković’s (2018a) analysis, which becomes particularly clear when considered in crosslinguistic perspective. Bošković’s analysis predicts that, in the absence of feature-sharing at the edge, movement out of moved elements should be impossible in general. This prediction faces severe challenges from English. In this language (in elevated registers) an argument PP can be extracted from an internal-argument DP that itself undergoes A-movement to [Spec,TP]—in a passive or unaccusative clause, for example (cf. Chomsky 2008). This is illustrated in (240-242) below. In these sentences, there is strong evidence that the extracted PP does indeed originate inside the moved subject DP: in each case, the P heading the PP is lexically selected by the N at the core of the DP (or possibly, in some cases, by a V or categoryless root [Marantz 1997, Chomsky 2015, 2016, a.o.] within the “noun”; see Merchant 2018, esp. §2.6, for relevant discussion).

(240)  
  a. To whom is obedience demanded by the law?  
  b. To what sorts of parents would a close attachment generally be discouraged?  
  c. To which emotions would a marked proneness on his part be lamented by all?  
  d. To whom had a resemblance been developed by the politician?  
  e. To which performances had tickets been purchased by the event organizer?

(241)  
  a. For what function had a specialization been developed by the organ?  
  b. For what chemicals is an affinity displayed by these cells?  
  c. For whom had an unexpected affection been developed by the protagonist?  
  d. For what actions could a capacity be developed by such a simple organism?  
  e. For what type of art had a talent been developed by the sophomores?  
  f. For what activities had a penchant been developed by the students?
(242) a. From which islands is extraction most readily tolerated?
b. From which of these airports can a timely departure be expected?
c. From which institutions is alienation engendered by grinding poverty?
d. From which bank account had a withdrawal been attempted?
e. From what portion of public life had retirement been recommended by the therapist?
f. From which of his relatives had a temporary separation been recommended?

For these reasons, Bošković’s (2018a) analysis of Subject Condition effects, despite its considerable virtues, is problematic and will not be adopted here.

D.2 Ott 2015

Ott (2015) argues for a different Labeling-based analysis of quantifier float, on which the quantifier (analyzed as a [phrasal] QP) and its associate DP are initially merged as in (243) below.

(243)  

Because (243) is an \{XP,YP\} structure (call it \(\alpha\)), it is unlabelable. Therefore, either DP or QP must move, allowing the other phrase to label \(\alpha\). When DP moves, QP is stranded (and labels \(\alpha\)), yielding quantifier float. Ott posits that the following holds (p. 179, (61)):

(244) In a syntactic object \([ZP \ldots XP \ldots]\), ZP can be a barrier for extraction of XP.

That is, he hypothesizes that constituents that block extraction do so in virtue of their category labels (see his §4.3.2). If this is so, then \(\alpha\) (= (243) above) cannot block extraction of DP, because it has no label before DP extracts. This hypothesis, together with other parts of Ott’s analysis, accounts elegantly for the immunity of German quantifier float (and German split topicalization) to certain island constraints that are otherwise robust in German—namely, the prohibitions on extraction out of dative objects, free datives, and other adjuncts.

Can this approach to quantifier float and islandhood be extended to Janitzio P’urhepecha? Suppose the structure in (243) is correct for this language. If (243) were generated in [Spec, VoiceP], then, on Ott’s assumptions, we would correctly expect DP to be extractable (i.e., quantifier float would be correctly predicted not to show Subject Condition effects). Extraction of a \(wh\)-phrase from a subject nominal, by contrast, is not possible ((119)-(120)). This could be accounted for as follows. When the \(wh\)-phrase moves to the edge of the subject DP (presumably because DP is a phase), the structure is as in (245):

164
The wh-phrase and its sister share a feature—the categorial feature [CAT:D]—which might reasonably be expected to label their mother (call it $\beta$). If DP is a barrier for extraction in Janitzio P’urhepecha (i.e., ZP in (244) can be DP), then $\beta$, being a DP, will block extraction of the wh-phrase—the right result. However, this analysis is too restrictive, because it incorrectly predicts that it should be equally impossible to extract a wh-phrase from an object nominal in Janitzio P’urhepecha, which in fact is possible ((118)). It seems, then, that Ott’s (2015) approach to islandhood cannot be extended to explain the profile of Subject Condition effects in Janitzio P’urhepecha.
References


168


170


Desai, Mansi. 2017b. “Negation in Gujarati.” Handout from Syntax & Semantics Circle (S-Circle), University of California, Santa Cruz.


Fong, Suzana. 2017b. “A featural and edge-based analysis of hyper-raising.” Ms., MIT.


Gribanova, Vera. 2018. “On the interaction between syntax and postsyntax in Uzbek (non-)verbal predicate formation.” Handout from Syntax & Semantics Circle (S-Circle), University of California, Santa Cruz.


173

Hammerly, Christopher. 2018. “A verb raising analysis of the Ojibwe VOS/VSO alternation.” Handout from Syntax & Semantics Circle (S-Circle), University of California, Santa Cruz.


Holmberg, Anders, Michelle Sheehan, and Jenneke van der Wal. 2016. “Movement from the double object construction is not fully symmetrical.” Ms., Newcastle University/University of Cambridge, Anglia Ruskin University, and Harvard University. Available online at (http://ling.auf.net/lingbuzz/003075).


Kalivoda, Nick, and Erik Zyman. 2018. “XP- and X0-movement in the Latin Verb: Evidence from Mirroring and Anti-Mirroring.” Handout from the 92nd Annual Meeting of the Linguistic Society of America (LSA 2018), Salt Lake City, UT.


McGarry, Lauren. 2016. “VS word order and presentational constructions in Russian.” Ms., University of California, Santa Cruz.


Ostrove, Jason. 2016b. “Predicate Complexes in San Martín Peras Mixtec.” Handout from Morphology Reading Group (MRG), University of California, Santa Cruz.


Ostrove, Jason. 2017b. “WH-Movement in San Martín Peras Mixtec.” Handout from the Workshop on the Languages of Meso-America (WLMA), University of California, Santa Cruz.


van Urk, Coppe. 2015. *A uniform syntax for phrasal movement: A case study of Dinka Bor.* Diss. MIT.


