

LOCALITY:
A CASE STUDY FROM ÄIWOO

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Locality: a case study from Äiwoo

by

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ABSTRACT

This thesis explores issues in the syntax of Äiwoo, an understudied Oceanic language from the Solomon Islands. This language showcases an intricate system of clausal alternations, where several parameters vary independently from each other: verbal morphology, word order, and possibilities of Ā-extraction (i.e., which argument(s) may or may not be extracted). As the title indicates, this thesis is set up as a case study, in a sort of “learn by doing” fashion. I attempt to build a descriptively and explanatorily adequate formal model of the clausal alternation system in Äiwoo, within a Minimalist framework. By doing so, I examine what a theory of grammar must look like for the model to work as intended.

Building such a model of Äiwoo teaches us something about a number of central issues in syntactic theory such as the locality of movement, the A/Ā-distinction, and the syntax of Austronesian languages specifically. I show that conjoining [van Urk's \(2015\)](#) theory of the A/Ā-distinction and the independent idea of featurally relativized probes ([Béjar 2003](#)), we predict the existence of “non-local A-movement”, that is, movement with the binding-theoretical properties of A-movement that nonetheless does not obey strict DP-locality, and crucially without the need of invoking the notion of “mixed A/Ā-movement”. I show that two instances of this predicted kind of movement are attested in the Äiwoo clause: movement to both spec,TP and spec,CP can target either the subject or – non-locally – the object, depending on their features. I also propose that features assigned by a probe to a goal (“goal-flagging”; [Deal to appear, Clem & Deal 2024](#)) can be further manipulated by the syntax, being searched for by a higher probe.

Further, Äiwoo shows an interesting instantiation of the Austronesian “pivot-only” Ā-extraction restriction, in that it comes with a series of exceptions. I argue that in Äiwoo, this restriction is caused by an Ā-intervention effect, *contra* analyses of this phenomenon in other Austronesian languages based on phasehood ([Rackowski & Richards 2005, Erlewine & C. Lim 2023, Hsieh 2025](#), a.o.) or DP-intervention ([Aldridge 2004, 2008](#), a.o.). Notably, as soon as the highest DP in a clause does not carry Ā-features, the restriction vanishes, thus allowing for the “exceptional” extraction of lower arguments.

Thesis Supervisor: Norvin Richards
Title: Dean's Distinguished Professor of Linguistics

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We come to this place... for magic.

— Nicole Kidman, about the 8th floor
of the MIT Stata Center, probably

This dissertation is too long. Therefore, it's only fair to balance that with an equally too long acknowledgment section. Luckily, writing the acknowledgments is by far the most pleasant, most entertaining, and most fun part of this whole process – if anything, dissertations should involve way less contentful text and way more acknowledgments. I imagine that this must be very similar to how writing Christmas cards feels for those people who do write Christmas cards to their dear and loved ones (I've never written one, but this is how I think I would feel if I did). Like with Christmas cards, there's a few obligations (people I must thank, out of tradition/politeness/respect/diplomacy) – and for what my word's worth, all the people who would fall into this class would've still been included in these acknowledgments even in the absence of said obligations. Aside from that, there's really no set boundary on how many people, or what kind of people, I'm allowed to include in my acknowledgments. And I intend to make full use of this lack of boundaries: there's gonna be a lot of Christmas cards. The other nice part about writing Christmas cards/thanking people here is that in both cases, the receiver can't say no. You can't send a card back (I mean, I guess technically you can, but let's be very serious now). And if you've been thanked here, even if you're the kind of person who doesn't usually like getting compliments and thanks, sorry, tough luck: there's literally nothing you can do about it, the compliment is now in print and archived for eternity in some MIT database.

That said, I can now start thanking people. The sequence is going to be the traditional one. For the academia people, you're first. For family people, you're after that. For my friends, skip to the bottom of page vi. (I low-key love that I have a verbose preamble even for my acknowledgments – absolutely not foreboding for the rest of the dissertation.)

Doing a PhD is hard¹. It's also somewhat extra hard if your PhD starts during a global pandemic and finishes during uh, *turbulent times*. Not that this really has much to do with everything else, but I just wanted to mention it so that you'd feel bad for me. However,

¹ I don't know if other jobs are harder. I haven't tried those. Not really looking forward to finding out.

doing a PhD was made much, much easier by the people on my committee. There's four of them and any order would come with unintended implications, so let's just neutrally pick reverse alphabetical order; it's as good an order as any.

Norvin Richards is first up. I've never really left a meeting with Norvin in anything less than a lovely mood – and I can't stress this enough: that says a lot, given what goes on in Äiwoo (and given the nature of a PhD program too). His expertise on Tagalog and Dinka – which is so strikingly syntactically similar to Äiwoo – was invaluable. Often he would quickly work out the predictions of what I was trying to say, and immediately advise me on how those could be tested. Equally invaluable was his skill at spotting meaningful parallels from the chaotic data I'd present to him to other phenomena in other languages discussed in other literature, connections that I would never have made myself. At those times when I was getting bogged down into the depth of the mechanical technicalities of the framework (which has been *often*), Norvin helped a lot in lifting my gaze up to abstract away from the specific implementational details and rather think about the general shape of the analysis, and its deeper conceptual content. All of this was incredibly motivating.

David Pesetsky helped me make connections I wouldn't have thought of to both older and recent literature, and this was often very helpful in avoiding various kinds of wheel reinventions. Something that would often happen in our meetings is that David would impromptu suggest an alternative analysis to the one I was trying to present to him, and though this alternative might sometimes not be great on its own (his words, not mine), it often prompted me to reframe the question from a different and fruitful perspective. David also never failed to let me know when I was selling myself short, and always made me see when what I was saying could actually have a larger and more meaningful impact than I was imagining.

Athulya Aravind very explicitly made sure that I would remember that {a/the} implementation is not (the most interesting part of) {an/the} analysis. Losing the forest for the trees was a real and frequent danger throughout this process, and it was unvaluable to have a reminder that there's an important distinction between what's a purely contingent detail that will change in 5, 10, or 15 years, vs. what is a deeper and more long-lasting insight that will hopefully still teach us something once our theory improves. Also, though I don't think this dissertation as it is now is a paramount example of the clearest writing and exposition by any stretch of imagination, it was *much worse* before Athulya got involved. Despite the complexity, I've tried to make it as roadmappy² as possible, and that's largely thanks to her insistence.

Finally, I want to thank Amy Rose Deal for welcoming me to UC Berkeley for a lovely Fall semester, for throwing a party for me when I left, and for agreeing on joining this committee. At the very start of the project, she helped me see how all of these ideas would fit into a single coherent narrative that could become a dissertation – one that was not just worthy of writing, but hopefully also worthy of reading. During the research work then, I need to thank her for repeatedly telling me to stop what I was doing. That is: she kept me on the right track on the many, many occasions I was getting lost in

² Adjective credit to Keely New.

various minute details. While I was losing my mind on trying to get data covering every single possible combination of various parameters_i that I didn't know whether $_i$ would ultimately matter or not, Amy Rose told me to pause that completely, go read what the theories on the market are, see what works and what does not, how and why, and where things break. Needless to say, I wouldn't have made much progress without that.

Outside of the committee proper, I want to thank some other (temporary, alas) MIT faculty: Ksenia Ershova for following me at early stages of the process (please come back!), and Peter Grishin for always letting me chat about the various intricacies I met (also please come back!). My bothering linguists did not stop at MIT, and a lot of people out there should by now be somewhere between fearful and annoyed if they hear the word “Äiwoo” ever again (they might). Obviously there is Åshild Næss, without whom I would never even have heard about Äiwoo in the first place, and who encouraged me to work on this language as a lost MA student (and made it possible by sharing her data with me for years). There's Rajesh Bhatt, Henrison Hsieh, Victoria Chen, mitcho, the Berkeley syntax faculty (Justin Royer, Line Mikkelsen, Peter Jenks), Gary Thoms, Michelle Yuan, Coppe van Urk, Matt Hewett, Sandhya Sundaresan, Karlos Arregi, David Adger, Patrick Elliott, and probably more that I'm forgetting. All of these people have at one time or another been a precious sounding board (whether willingly or by coercion), and all their contribution is in here somewhere. Finally, but definitely not least importantly, I must thank the biggest Äiwoo expert of them all: my consultant Luke Gitakulu, who has been demonstrated incredible patience, generosity, and linguistic expertise in sharing with his language with me. *Wâkâlou-mana*, Luke.

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I don't think I'm in any risk of running out of linguists to thank, but I would be remiss to limit these mentions to only MIT people (we already have a reputation, so maybe let's not do that). Thanks to Amy Rose, who as mentioned accepted to have me at UC Berkeley for the Fall of 2023, I was able to go inconvenience even more people than just at

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There's people outside of academia who also need to be thanked. As it goes at every respectable award show: I would like to thank my mom and my dad, my brother, and my grandparents, for always believing in me and supporting me, and I would not stand on this stage today if it hadn't been for them. Or something like that, I've never won an award. Though that was a standard script, it doesn't make it any less true: my family has relentlessly supported me in so many ways through the years that it feels silly to even try to enumerate them. It is absolutely true in a very literal sense that I would not be here without them, and that all I've accomplished goes in some measure back to them. Grazie grazie grazie. As if one family wasn't enough, I'm also lucky enough to have a second family in Norway, who though I've seen less often in the past few years (unnskyld!), never fails to make me feel warm and welcome as the wayward bonus son I am. Especially during my first year, when I was still in Norway, their support was invaluable, and having the possibility of just visiting them at a moment's notice was so incredibly precious when things got rough (which they did, at the time). Lars, Marianne, Julie, Martin: tusen takk.

The last group of people I feel very strongly about including in here is also a family of sort – they collectively very much function as one³. People who know me know that I am not a person who is often particularly proud of much of what I do. However, this group of people – this is something I *am* proud of, because it really does take a village, and I'm both proud and extremely grateful for having been part of this village. There's something very particular that only a solid circle of individuals who might all be called one or multiple slurs can do for each other. Like my family/-ies, this extra family also consists of people who, fortunately for them, know absolutely nothing about what's in the 300+ pages of this document – and I really hope that it stays that way: no linguistics should be inflicted upon them. They have done nothing wrong to deserve that, and in fact quite the opposite, they have more than deserved to stay blissfully out of the academia of it all.

When I moved to Boston in August 2021, I was coming out of a series of frankly awful personal circumstances that had been lasting for a very long time, and I had only barely begun the long process of shaking them off and growing around them. In the very first week after my moving, Magdiel and Albie Lorenzo Martinez Tsoi had no hesitation, and

³ Note to the readers who are not familiar with the English variety I'm silently code-switching to in these last few paragraphs: here, kinship is not transitive. If someone_i is my mother and someone else_j is my daughter, this does not entail that they_i are their_j grandmother. Also, 'she/her' and 'mother/daughter/sister/aunt' are all gender-neutral. I will not elaborate, nor accept any questions.

immediately took under their wings what was at the time a very lost stranger, with no clear sense of who I was, nor who I was going to be. Ever since, and even after their moving to Chicago, my moms have never showed me anything else than generosity, kindness, patience, and mentorship (and, impossible to omit, they also let me spend precious time with their dog/my niece Pika and the most recently arrived, potato-shaped menace Yoshi). They have always been an incredibly strong and consistent support system for me to rely on when times got rough. And even more importantly – they saw my qualities way before I saw them myself, they showed me how to build a support system for myself, how to put in the effort to let friendships flourish and thrive, and they let me understand that I was worthy of that. I genuinely believe that I would not be as fully realized a person as I am today had it not been for them, and for all the times and ways they have showed up for me through these last four years without ever asking for anything in return, aside from the occasional tray(s) of lasagne or tiramisù. Thank you, and see you soon.

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To all of you: you have always kept me as happy as I could ever ask to be, you've offered me help when I needed it, company when I needed it, entertainment, laughs, and took my brain off this whole linguistic stuff that is ultimately, truly, not all that important. Without you, this dissertation might perhaps still have been finished, but it would've been written by a much, much sadder human being. Thank you.

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GLOSSARY

1	first person	F	feminine
2	second person	FOC	focus
3	third person	FUT	future
12	first person inclusive	GEN	genitive
A	agent	HAB	habitual
ABS	absolutive	HESIT	hesitation
ACC	accusative	IMP	imperative
ADDR	addressee	INCL	inclusive
ADJ	adjective	IND	indicative
ADV	adverbial	INDEF	indefinite
APPL	applicative	INTR	intransitive
APPR	apprehensive	IPFV	imperfective
ASP	aspect	IRR	irrealis
AUG	augmented number	KÄ	Attitude predicate <i>kä/kâ</i>
AUTH	author	LK	linker
AV	actor voice	LOC	locative
CAUS	causative	LV	locative voice
COLL	collective	M	masculine
COM	comitative	MIN	minimal number
CV	circumstantial voice	NEG	negative
DAT	dative	NOM	nominative
DEF	definite	NPIV	non-pivot
DEIC	deictic	NVOL	non-volitional/abilitative
DET	determiner	OBJ	object
DIR	directional	OBL	oblique
DIST	distal	P	patient
DOM	differential object marking	PART	participant
DU	dual	PFV	perfective
ERG	ergative	PIV	pivot
EXCL	exclusive	PL	plural

PN	proper name	PV	patient voice
POSS	possessive	REL	relative
PREP	preposition	SBJV	subjunctive
PRF	perfect	SG	singular
PROG	progressive	SUBJ	subject
PROH	prohibitive	TAM	tense/aspect/mood
PRON	pronoun	TEMP	temporal
PROX	proximal	TOP	topic
PRS	present	TRI	trial number
PRT	particle	UA	unit-augmented number
PST	past	UV	undergoer voice

TYPOGRAPHICAL CONVENTIONS

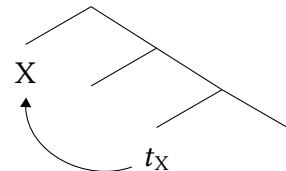
(A) **Movement:**

- a. $X \xrightarrow{\quad} Y$: movement
- b. $X \xrightarrow{\times} Y$: failed/impossible movement

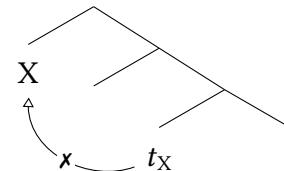
(B) **Agree:**

- a. $X \dashrightarrow \bullet Y$: yes interaction, no satisfaction
- b. $X \dashrightarrow \bowtie Y$: yes interaction, yes satisfaction
- c. $X \dashrightarrow \circ Y$: no interaction, no satisfaction
- d. $X \dashrightarrow \diamond Y$: no interaction, yes satisfaction

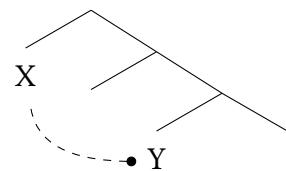
(C) a. **Movement:**



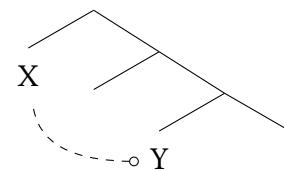
b. **Failed/impossible movement:**



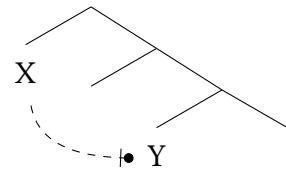
(D) a. **+INT, -SAT:**



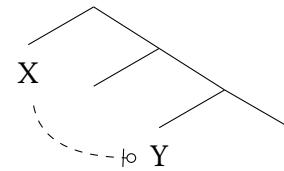
c. **-INT, -SAT:**



b. **+INT, +SAT:**



d. **-INT, +SAT:**



CHAPTER 1

WHAT THIS DISSERTATION IS ABOUT

1.1 INTRODUCTION

The kind of theoretical questions this dissertation explores revolves around the locality profiles of different types of movement. To elucidate these theoretical issues empirically, I use as a case study the syntax of Äiwoo, an understudied Oceanic language from the Solomon Islands. In this language we see an intricate pattern of multiple clause-internal A-movements. Moreover, this system interacts in non-trivial ways with the syntax of Ā-extraction, sometimes restricting which argument(s) can be Ā-extracted from certain types of clauses, and sometimes not. At a bigger-picture level, the whole dissertation can be thought of as building on [van Urk \(2015\)](#), supporting the argument that the locality of movement is solely determined by Relativized Minimality ([Rizzi 1990](#)). By conjoining these proposals to the independently motivated notion of featurally relativized probes ([Béjar 2003 et seq.](#)), I argue that we can derive the precise patterns of locality and intervention we observe – including some that I show were implicitly predicted to exist by our theory.

Äiwoo's syntactic properties make it an interesting language to test these theoretical proposals on, offering a particularly clear view on a series of questions that have otherwise received diverging answers in the literature. These concern, among others, the syntax of Austronesian languages and their voice systems, the locality properties of both A- and Ā-movement, the relation between intra-clausal A-movement and the nature of Ā-extraction restrictions, and the internal and external syntax of different categories of nominals. Precisely because the Äiwoo dataset is rather complex and involves several interacting moving parts, this lets us tease apart analytical options that – given a simpler pattern – would be equally plausible on the theoretical side, but otherwise empirically indistinguishable.

In the next section (§1.2), I present the two central puzzles that will constitute the empirical domain of inquiry of the dissertation. In §1.3 I present how Äiwoo contributes to answering the theoretical questions mentioned above. In §1.4 I discuss how the empirical data at the basis of this dissertation was collected. The following section (§1.5) contains a discussion of the theoretical framework I assume in this dissertation. Finally, in §1.6 I give an overview of the following chapters.

1.2 TWO PUZZLES: WORD ORDER AND EXTRACTABILITY

The Äiwoo language presents a complex system of clausal alternations. Any declarative clause will fall into one of several types, all of which differ in their word order patterns and their Ā-extraction profiles, that is, which argument(s) can or cannot be extracted. This empirical landscape presents us with two puzzles, highly intertwined with each other: why and how does the word order change, and how is this related to Ā-extraction possibilities? Let us now try and examine the two puzzles separately, to get a first-glance idea of the kind of empirical problem this dissertation aims to solve.

THE WORD ORDER PUZZLE: VARIABLE, YET STRICT A striking property of Äiwoo at first glance is its variety of word order patterns. In this language, word order is variable, in the sense that clauses can look a variety of different ways. Just as an illustration, consider the four sentences in (1). These are all simple transitive, monoclausal declaratives. For ease of tracking, I have colored **subjects** and related morphemes in **red**, and **objects** and related morphemes in **blue**; I will use this same color scheme throughout the dissertation. We can immediately see the variability in word order. In (1a), we have what looks like a relatively run-of-the-mill SVO clause. The subject is preverbal (*mikilitei* ‘fishermen’), the verb carries agreement with it (*lu*- 3AUG), and the object is postverbal (*nulei* ‘crab’) – nothing shocking so far. However, this changes in (1b): now the object is preverbal, the verb ‘bring’ has a different stem (*tu* instead of *tou*) and it lacks agreement, and the subject intervenes between the verb and the future marker. Further, consider (1c): we still have a preverbal object, the *tu*-stem of ‘bring’, and no prefixal subject agreement, but now we have some suffixes on the verb indexing the object (-*gu-de* ‘OBJ-12AUG’), and the subject is to the right of the future marker instead of to its left. Finally, in (1d), we see SVO word order again, but now with the *tu*-stem of ‘bring’ instead of the *tou*-stem; moreover, there is no prefixal agreement, but a suffix indexing the subject instead (-*i* ‘3AUG’).

- (1) Examples of different clausal word orders in Äiwoo:

(250717)

- a. *mikilitei ku-lu-tou-mä=kaa nulei ngå nuwopa*
fishermen IPFV-3AUG-bring.AV-DIR1=FUT crab to house
‘The fishermen will bring crab(s) home’
- b. *nulei ku-tu-mä mikilitei=kaa ngå nuwopa*
crab IPFV-bring.UV-DIR1 fishermen=FUT to house
‘The fishermen will bring the crab(s) home’

- c. (*iumu*) *ku-tu-mä-gu-mu=waa* *mikilitei ngâ nuwopa*
 2MIN IPFV-bring.UV-DIR1-OBJ-2MIN=FUT fishermen to house
 'The fishermen will bring you home'
- d. (*iji*) *ku-tu-mä-i=laa* *iumu ngâ nuwopa*
 3AUG IPFV-bring.UV-DIR1-3AUG=FUT 2MIN to house
 'They will bring you home'

The variation shown in (1) is not completely chaotic or unconstrained. What varies is the position of the arguments and the verbal morphology (the stem morphology, and the presence/position of agreement-like affixes). Other aspects remain constant: importantly, we see a V2 effect, with exactly one argument always occurring to the left of the verb.

The robust V2 effect is a symptom of the fact that despite its variability, word order in Äiwoo is **strict**. No changes can be made to any of the sentences in (1) without resulting in ungrammaticality. In other words, these different word orders are not optionally available alternatives. For each sentence, only the given combination of word order and verbal morphology is grammatical, and any of the other three options will be impossible. We thus have a rather rigidly regimented system: depending on some factors that we will need to understand, Äiwoo clauses may end up looking quite different, but there's always only one correct answer. This is our first puzzle: what determines what an Äiwoo clause will look like? What factors govern the distribution of the different word orders, and of the varying verbal morphology? How do the arguments end up in their different positions, and why there and not elsewhere?

THE EXTRACTION PUZZLE: SOMETIMES RESTRICTED, SOMETIMES NOT Our second puzzle concerns patterns of Ä-extraction. Depending on the type of clause, some arguments may be Ä-extracted (e.g., relativized), but not others. To observe the scope of the problem, an overview of different word order and Ä-extractability profiles is shown in (2); note that this table includes types of clauses that were not shown in (1)¹. A superscript (\checkmark/\times) on an argument indicates whether it can or cannot be Ä-extracted; "NA" means that the argument in question cannot be extracted, but for independent/orthogonal reasons. A few more notational remarks: (i) "V.Av" and "V.uv" identify the two different stems that transitive verbs can show, like *tou* and *tu* for 'bring' across the examples in (1); (ii) the symbol " φ_S " represents prefixal subject agreement, like *lu*-3AUG in (1a); (iii) " $-\pi_{S/O}$ " represents a pronominal suffix indexing the features of the subject or object respectively.

¹ The shorthand names in the first column ("UV_{plain}", "UV_{gu}", etc.) are just arbitrary mnemonics for convenience, and they are of no great importance now. I will use them throughout this chapter to handily refer to particular clause types, but the actual motivations behind the different shorthands will become clear in the chapters to follow.

(2) Alternations of word order and \bar{A} -extractability:

Clause type:	Word order:			
a. AV:	S ✓	φ_S -V.AV	=TAM	O ✗
b. UV _{plain} :	O ✓	V.UV	S ✗	=TAM
c. UV _{only} :	O ✓	V.UV	S ✓	=TAM
d. UV _{inā} :	O ^{NA}	V.UV	S ✓	=TAM
e. UV _{gu} :	O ^{NA}	V.UV	- π_O =TAM	S ✓
f. UV _{SVO} :	S ^{NA}	V.UV	- π_S =TAM	O ^{NA}

In the upper third of the table (2a,b), for “AV” and “UV_{plain}” clauses, we see that only the highest argument can be extracted – respectively the subject and the object. Then, in the middle third (2c,d) we see clauses that have the same word order as the UV_{plain} ones in (2b), but here, extraction is less restricted: the subject can be extracted, despite being lower than the object. Finally, in the bottom third (2e,f), we see clauses with different word orders, and another case of extraction being possible from a lower position across a higher argument, i.e., the subject in “UV_{gu}” clauses (2e).

Importantly, extractability and word order are only partially correlated. For example, the subject of a “UV_{plain}” clause (2b) cannot be extracted, but in other types of clauses, the subject is in the exact same position and yet it can be extracted (2c,d). Furthermore, the subject in (2e) can be extracted despite being in a lower position – but this is not shared with the object in (2a). Our goal will therefore be to devise a model that simultaneously accounts for the two puzzles: the word order alternation patterns, and how these correlate (or not) with restrictions on \bar{A} -extraction.

1.3 WHAT DO WE LEARN?

1.3.1 THE SYNTAX OF AUSTRONESIAN VOICE SYSTEMS

The two empirical puzzles outlined above showcase a complex interplay of several syntactic phenomena, including word order, \bar{A} -extraction, and Austronesian voice. I will start discussing the contributions of this dissertation from the latter. Austronesian languages are notorious for – among other things – their “voice systems”, which we can describe in coarsely simplified terms as follows. Any verb can take several morphological forms (different “voices”), and each form corresponds to a different argument in the clause becoming “special”. Depending on the specific language, “special” can concretely mean e.g. being in a particular position in the clause, showing a particular case marking, etc. This “special” argument has variously – and at times confusingly – been labelled the “subject”, “trigger”, “topic”, “focus”, and “pivot” (see [Chen & McDonnell 2019](#) and references therein). In this section, I will use the term “pivot” for consistency.

An example of this kind of system is given in (3), from Paiwan (Formosan). Here, the voice morphology of the verb correlates with which argument takes the marker *a* (glossed as ‘PIV’); I use color-coding and boldface to highlight the correlation. In the Actor Voice (3a), the verb *qalup* ‘hunt’ is marked by the infix ⟨*m2, marked by the suffix *-en*, now the direct object/internal argument/patient/theme takes the PIV marking, and the agent is marked as non-pivot (“NPIV1”). In the Locative Voice (3c) the verb has a suffix *-an*, and now the locative argument is the pivot; both the subject and the direct object are marked as non-pivots (with two different case markers, “NPIV1” and “NPIV2”). Finally, in Circumstantial Voice (3d), the verb has a prefix *si-*, and the pivot is the instrumental argument.*

- (3) An example of an Austronesian voice system (Paiwan) (elaborated from Ferrell 1979: 202, Chen & McDonnell 2019: 174):

a. Actor Voice:

q⟨m⟩alup a caucau tua vavuy i gadu tua vuluq
 ⟨AV⟩hunt PIV man NPIV2 pig LOC mountain OBL spear
 ‘The man hunts wild pigs in the mountains with a spear’

b. Undergoer Voice:

qalup-en nua caucau a vavuy i gadu tua vuluq
 hunt-UV NPIV1 man PIV pig LOC mountain OBL spear
 ‘The man hunts wild pigs in the mountains with a spear’

c. Locative Voice:

qalup-an nua caucau tua vavuy a gadu tua vuluq
 hunt-LV NPIV1 man NPIV2 pig PIV mountain OBL spear
 ‘The man hunts wild pigs in the mountains with a spear’

d. Circumstantial Voice:

si-qalup nua caucau tua vavuy i gadu a vuluq
 CV-hunt NPIV1 man NPIV2 pig LOC mountain PIV spear
 ‘The man hunts wild pigs in the mountains with a spear’

This system of clausal organization has been object of a rich literature, and has been interpreted and analyzed in a number of ways. For some, these different “voices” reflect actual argument structure alternations, with one argument per clause being able to become “the subject” in certain senses (Payne 1982, De Guzman 1988, Gerdts 1988, Aldridge 2004, 2008, 2017, a.o.). In this way, “Austronesian voice” as a system pertains to the A-syntax of the language. For others, there is no argument structure alternation, and the verbal morphology we call “voice” actually tracks notions related to information structure and discourse, such as topicality (e.g., the “pivot” is conceptually similar to a topic; Richards 2000, Pearson 2001, 2005, Rackowski 2002, Rackowski & Richards 2005, van Urk 2015, V. Chen 2017a,

2 The cited sources use the term “Patient Voice” (glossed PV) instead of “Undergoer Voice”. Terminological variation of this kind is abundant in the Austronesianist literature. I use the term “Undergoer Voice” here simply for ease of comparability with Äiwoo, with no deeper significance.

Hsieh 2020, a.o.). For these kinds of approaches, “Austronesian voice” is more connected to the \bar{A} -syntax of the language.

In addition to the system of clausal alternations, Austronesian voice systems also often show a notorious \bar{A} -extraction restriction (Schachter & Otanes 1972, Keenan & Comrie 1977, Aldridge 2004, Rackowski & Richards 2005, van Urk 2015, Hsieh 2020, V. Chen 2023, a.m.o.). Descriptively, only the pivot argument in any clause can be \bar{A} -extracted, or framed the other way around, to \bar{A} -extract an argument one must use the voice that would make that argument the pivot. Concretely: subject extraction is only possible with AV, object extraction is only possible with UV, etc.

This pivot-only extraction restriction has also been analyzed in a number of ways³. For some approaches, these languages feature a “highest DP-only” condition on \bar{A} -extraction (Nakamura 1996, Aldridge 2004, 2008, a.o.). The pivot always ends up as the structurally highest nominal in a clause, and no lower arguments can undergo \bar{A} -movement across it. This kind of locality profile is different from that of canonical \bar{A} -movement, which is usually not blocked by intervening DPs as long as they don’t have \bar{A} -features (consider, e.g., any object *wh*-question in English, where the object can be *wh*-moved to spec,CP despite the subject being higher; see also Branan & Erlewine 2024). For others, this \bar{A} -extraction restriction is a byproduct of phasehood (Rackowski & Richards 2005, Erlewine & C. Lim 2023, Hsieh 2025, a.o.). In any clause, only the pivot is above the clause-internal phase boundary, whereas all other arguments are below it. As a result, only the pivot is accessible for \bar{A} -extraction.

Having established some background, we can now bring Äiwoo back into the picture. At first glance, what we see is a relatively traditional or “well-behaved” system, with the typical characteristics of what we would expect from an Austronesian language. Äiwoo has a binary opposition between “Actor Voice”, where the “special” argument is the subject/agent/external argument, and “Undergoer Voice”, where the “special” argument is the object/theme/undergoer/internal argument (at first analyzed as such in Næss 2015b)⁴. The opposition between Actor Voice and Undergoer Voice in Äiwoo is perhaps morphologically unusual in being realized largely through idiosyncratic stem alternations (e.g. *tou~tu* ‘bring.AV~UV’, but *togo~togulo* ‘hit.AV~UV’, *vängä~ngä* ‘eat.AV~UV’, etc.) rather than with dedicated affixes as in other better-studied Austronesian languages, such as Paiwan in (3). However, syntactically it behaves more or less as one would expect. Compare, e.g., Actor Voice and “UV_{plain}” clauses (2a,b), repeated in (4). Although Äiwoo doesn’t have any case marking, in both kinds of clauses the pivot argument is identified by being in a consistent dedicated position (preverbal). We also have an \bar{A} -extraction restriction: only the subject can be extracted from Actor Voice, and only the object can be extracted from Undergoer

³ Although prominent, the two family of approaches discussed here don’t exhaust the range of proposals that have been put forward, especially outside of Minimalist/generative syntax; see e.g. Himmelmann (2002), W. A. Foley (2008), and Riesberg (2014) for other ideas.

⁴ A third construction, “Circumstantial Voice”, is not in paradigmatic alternation with these two, and has different properties that make it less clearly part of the voice system, despite its label (from Næss 2015b). I will not focus on Circumstantial Voice in this dissertation. See Appendix A for some notes.

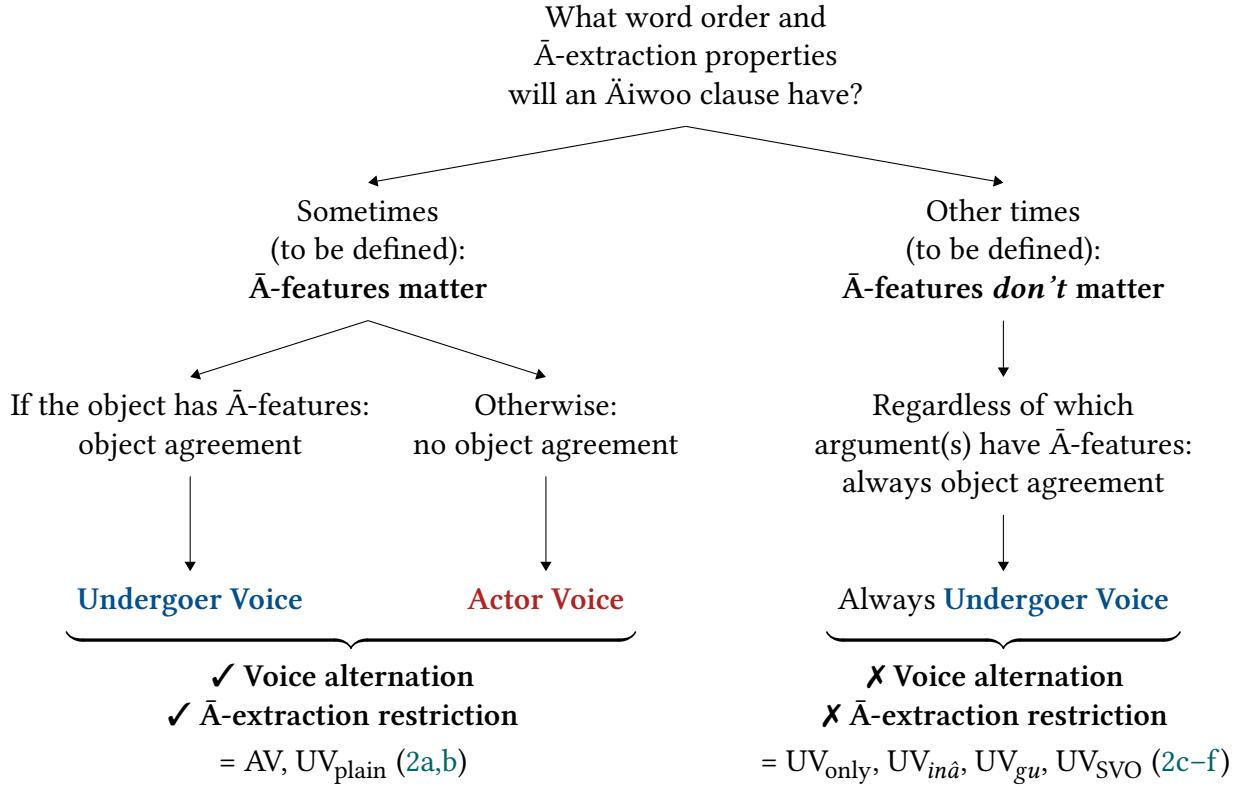
Voice. For ease of exposition, I don't actually show this here, but merely indicate it with superscripts; see chapter 4.

- (4) The basic contrast between Actor Voice and Undergoer Voice: (250717)
- a. *mikilitei*[✓] *ku-lu-tou-mä=kaa* *nulei*^X *ngâ nuwopa* (AV)
fishermen IPFV-3AUG-**bring.AV**-DIR1=FUT crab to house
 ‘The fishermen will bring crab(s) home’
 - b. *nulei*[✓] *ku-tu-mä* *mikilitei*^{X=kaa} *ngâ nuwopa* (UV)
crab IPFV-**bring.UV**-DIR1 fishermen=FUT to house
 ‘The fishermen will bring the crab(s) home’

However, once one scratches the surface, the Äiwoo system also shows some additional complications that are not found in other Austronesian languages. As we saw from our description of the Word Order Puzzle, word order varies both across and within the two voices, without a one-to-one correlation: in certain clauses (“UV_{SVO}”, (2f)) the verb has UV morphology, but the argument in the preverbal “pivot” position is the subject, not the object. Moreover, there are transitive verbs that do not participate in the voice alternation system at all (“UV-only verbs”): they only exist in Undergoer Voice, and completely lack an Actor Voice form. Finally, Ā-extraction is sometimes indeed restricted in the usual Austronesian “pivot-only” fashion (2a,b), yet other times it is not, and non-pivot arguments can be extracted (2c–e).

The analysis we will build works, in very simplified terms, as follows. I will argue that “Undergoer Voice” in Äiwoo is the morphological spell-out of *v* entering in an agreement relationship with the object. Only certain classes of objects (to be defined) are agreed with by *v*, and not others. When object agreement does not take place, Actor Voice is inserted as the default/elsewhere form of the verb. The contrast between Actor Voice and Undergoer Voice in Äiwoo will then be tied to the Ā-system of the language, but – crucially – only indirectly. Under standard conditions (2a,b), this contrast tracks the distribution of Ā-features. If the object carries Ā-features, *v* agrees with it and therefore we get UV; else, there is no object agreement, and we get AV. These are also the cases where we see an Ā-extraction restriction. In other words: as long as both voices are an option, each shows a restricted extraction profile. In other circumstances, however, the system “forces its hand”. For various reasons to be defined, in these cases the object is *always* agreed with. As a result, UV is the only possible outcome, no matter where Ā-features may or may not be (2c–f). Precisely in these cases, the Ā-extraction restriction ceases to apply: now any argument can be extracted (*modulo* orthogonal reasons). The general contour of the analysis is schematized informally in (5).

(5) Informal description of the analysis:



I will argue that the specific incarnation of the Austronesian Ā-extraction restriction we see in Äiwoo is not due to phasehood (unlike for [Rackowski & Richards 2005](#), [Erlewine & C. Lim 2023](#), [Hsieh 2025](#), a.o.), and it is not a “highest DP-only” restriction either (unlike for [Aldridge 2004, 2008](#), a.o.), but rather it is due to **Ā-intervention**. In the sub-part of the system where a voice alternation is available (left side of the schema in (5)), the highest argument in a clause will be highest because it carries Ā-features, and therefore it will intervene for the extraction of any lower argument; this is where the extraction restriction applies. Viceversa, in those sub-parts of the system where only one voice is possible (right side of the schema in (5)), the highest argument in a clause will end up in that position even when it does not carry Ā-features; therefore, there will be no Ā-intervention, and extraction will be free.

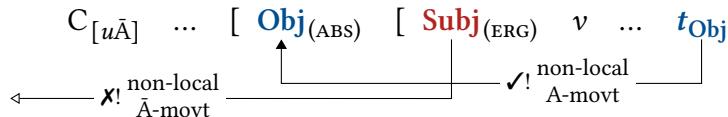
Äiwoo shows us an example of an Austronesian voice system where “voice” is connected to *both* the A- and Ā-syntax of the language. The voice contrast in Äiwoo clearly feeds the A-syntax, in the sense that it (partially) controls word order, i.e., where different arguments (A-)move. In addition, voice is also influenced by the Ā-syntax of the language, seen as it sometimes tracks the distribution of Ā-features on different arguments. However, this can be “overwritten” by other concerns, in which case voice stops being reflective of where Ā-features are. The coming and going of the Ā-extraction restriction

in Äiwoo is thus due precisely to the tie between voice and the distribution of Ā-features being only indirect, and not one-to-one.

1.3.2 THE LOCALITY OF MOVEMENT, SYNTACTIC INVERSION, AND Ā-EXTRACTION RESTRICTIONS

Zooming out from the Austronesian-specific aspects of our puzzles, Äiwoo also teaches us something about the locality of syntactic movement in general. A rich literature has discussed potential connections between two phenomena: “syntactic inversion” or “leapfrogging”, (that is, the A-movement of a lower argument above a higher one), and restrictions on Ā-extraction (Bittner 1994, Bobaljik 1995, Bittner & Hale 1996a,b, McGinnis 1998, Coon et al. 2014, 2021, a.o). This has often been investigated in the context of languages with “syntactic ergativity”, here intended in the narrow sense of a ban on the Ā-extraction of transitive subjects. This is the case, for example, in “high Absolutive” Mayan languages (Coon et al. 2014, 2021, Assmann et al. 2015, Royer 2022), Inuit languages (Bittner 1994, Bittner & Hale 1996a,b, Yuan 2018, 2022, though see Deal et al. 2024 for a contrasting analysis), and even under some theories of Austronesian voice (Aldridge 2004, 2008), among others. Abstracting away from a lot of details, the general pattern is schematized in (6). The object A-moves to a position above the subject. Simultaneously, it is impossible to Ā-extract the subject. This represents what Deal (2016b) labels the “standard theory of syntactic ergativity”: the A-movement of the (absolutive) object above the subject somehow blocks the Ā-extraction of the (ergative) subject.

- (6) “Standard theory of syntactic ergativity:”



Two aspects of this type of proposal are particularly interesting: the connection between these two movements, and their (im)possibility (independently from each other). Let us start from the former issue.

A type of critique that has been raised against this kind of approach is precisely that this posited connection is not in fact motivated; see e.g. Deal et al. (2024) and references therein. The presence of the object above the subject should not, by itself, bring about restrictions on Ā-extracting the subject. This is because canonical Ā-movement does not need to be strictly local, and can typically skip intervening nominals. This kind of proposed intervention effect would thus require additional assumptions. For example, one would need to assume that in the relevant languages, Ā-extraction is idiosyncratically restricted to the highest DP (“Ā-probing for the closest DP”; see Branan & Erlewine 2024). In principle then, these two phenomena need not be connected: one could have (i) “syntactic inversion” without any restrictions on Ā-extraction, as proposed for West Circassian (Ershova 2019, 2022, 2024), or (ii) the opposite, an Ā-extraction restriction with no syntactic

inversion, as proposed for e.g. Tongan (Otsuka 2006, 2010), Nukuoro (Drummond 2023), Kalaallisut (Deal et al. 2024), and Northern Tuja (Liu 2025).

Aside from the posited connection between them, these two movements have interesting locality properties in and of themselves, which should be investigated independently. The first has already been mentioned: we observe a restriction on Ā-extraction. Another way to frame this is that although Ā-movement should in principle be possible non-locally, here surprisingly it is not. The second is the opposite kind of problem, that is, the possibility of A-moving the object across the subject. This kind of A-movement has received a couple handy monickers, e.g. “leapfrogging” (Bobaljik 1995, McGinnis 1998), “syntactic inversion”, etc. Once again, its locality profile is surprising: canonical A-movement is strictly local and cannot skip intervening nominals, but here, this is possible. In other words, in a derivation like (6) we have both surprisingly strictly local Ā-movement, and surprisingly non-local A-movement.

Äiwoo is an interesting case study with respect to this discussion, because it offers a fine-grained dataset where Austronesian voice, syntactic inversion, and Ā-extraction restrictions can be observed operating independently from each other. Consider again the overview in (7), now augmented with two columns. Within one and the same language, we see Undergoer Voice both with and without accompanying inversion (7b–e) vs. (7f), and simultaneously, we have inversion with or without an accompanying Ā-extraction restriction (7b) vs. (7c–e). (The fact that the object is raised past the subject by A-movement in (7b–e) is demonstrated in chapter 3, §3.7.)

(7) Alternations of word order and Ā-extractability:

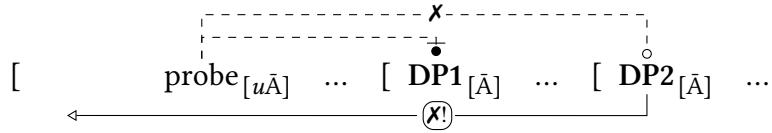
Clause type:	Word order:			Syntactic inversion?	Ā-extraction restriction?
a. AV:	S^{\checkmark}	$\varphi_{\text{S}}\text{-V.AV}$	=TAM	O^{\times}	no
b. UV _{plain} :	O^{\checkmark}	V.UV	S^{\times} =TAM		yes
c. UV _{only} :	O^{\checkmark}	V.UV	S^{\checkmark} =TAM		yes
d. UV _{inā} :	O^{NA}	V.UV	S^{\checkmark} =TAM		yes
e. UV _{gu} :	O^{NA}	V.UV	$-\pi_{\text{O}}$ =TAM	S^{\checkmark}	yes
f. UV _{SVO} :	S^{NA}	V.UV	$-\pi_{\text{S}}$ =TAM	O^{NA}	no

The fact that these phenomena come apart from each other in Äiwoo lets us gain insights into the particular locality profiles of the different types of movements in question. To repeat, the two cases under discussion are surprisingly local (restricted) Ā-movement (7a,b), and surprisingly non-local A-movement (7b–e). I adopt a conceptually unified approach to both of these. What we will see is essentially a “it’s just Relativized Minimality all the way down” type of proposal.

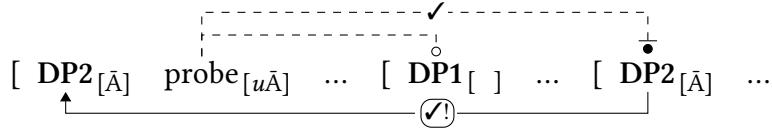
Let us start from restricted/surprisingly local Ā-movement, already discussed in the previous section. I propose that despite appearances, in Äiwoo it is in fact not “surprisingly local” at all. As mentioned above, I will argue that the Ā-extraction restriction found UV_{plain} clauses and, more indirectly, AV ones (7a,b) is not a case of Ā-extraction being

restricted to the highest DP, or an effect of phasehood, but an \bar{A} -intervention effect. The general idea is schematized in (8). The impossibility of \bar{A} -moving a lower argument across a higher one in (7a,b) is then not due the presence of a higher nominal in and of itself, but to the presence of \bar{A} -features on the higher argument (8a). The probe triggering \bar{A} -movement will find the \bar{A} -features on the higher DP1, and stop. The lower DP2 cannot be reached, and therefore not \bar{A} -moved either. This predicts that when these features aren't present on DP1 (7c-f), the extraction restriction should indeed disappear (8b). Therefore, the Äiwoo pattern actually respects the canonical locality profile of \bar{A} -movement, based on Relativized Minimality: constituents carrying \bar{A} -features are interveners for \bar{A} -movement (8a), but constituents without these features are not (8b).

- (8) a. The highest DP has \bar{A} -features: “ \bar{A} -extraction restriction”



- b. The highest DP does not have \bar{A} -features: no extraction restriction

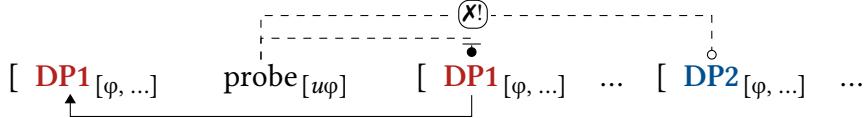


The second type of movement with a surprising locality profile is **non-local A-movement**, which we will see two instances of. In both, the object moves across the subject: (i) in one case, to the preverbal position (7b-d); (ii) in the other, to the position between the verb and the TAM particles (7e). I will argue that this kind of movement should not be thought of as a case of “mixed A/ \bar{A} -movement” (van Urk 2015 et seq.), or at least not in the literal sense of a probe simultaneously searching for both φ and \bar{A} -features, and that in fact, it should not be considered a novel or surprising type of movement at all. I argue that this kind of movement is already predicted to exist by our theory, and its existence in Äiwoo is thus a welcome confirmation of this prediction. Specifically, its existence is predicted by the union of two independently motivated theoretical concepts: (i) featurally relativized probes (Béjar 2003 et seq.), and (ii) the featural theory of the A/ \bar{A} -distinction (van Urk 2015), ultimately grounded in featural Relativized Minimality (Rizzi 1990).

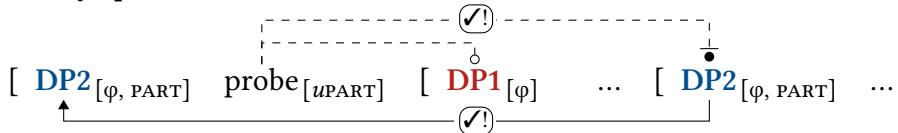
The core idea, schematized in (9), is simple, and conceptually isomorphic to the one presented above for the \bar{A} -extraction facts. If a probe triggering A-movement searches for $[\varphi]$, a feature that *all* nominals have, then every nominal will count as potential goals, and thus interveners (van Urk 2015 et seq.). This gets us the canonical “no skips” locality profile of A-movement (9a): because every nominal is a valid goal, only the closest one to the probe can be agreed with and (A-)moved. However, consider what would happen, in contrast, if a probe triggering movement is featurally “picky” (9b) – i.e., it is relativized to a particular feature that only some nominals have, e.g. [PARTICIPANT]. In this case, a nominal that doesn't have the relevant feature will *not* constitute a valid goal. Therefore, a nominal that is less local to the probe may be agreed with and moved. Depending on

the specific feature(s) being probed for, this movement may have the binding-theoretical properties of canonical A-movement despite its laxer locality profile.

- (9) a. “Flat” probe: strictly local A-movement (= classic A-movt)



- b. “Picky” probe: non-local A-movement



Importantly, this is not a case of “mixed A/Ā-movement” in any clear sense: Ā-features just don’t play any role in this at all. I will show that both cases of non-local A-movement in Äiwoo are precisely of this kind. Äiwoo then fills a gap in our typology of movement, validating a particular prediction made by the combination of two pre-existing and independently needed theoretical ingredients.

1.3.3 LEXICAL DPs, PRONOUNS, φ -FEATURES, AND NOMINAL LICENSING

The notion of featurally motivated non-local A-movement that we just discussed provides a good *segue* to another area of syntactic theory that Äiwoo lets us learn something about. This is the relation between the internal and external syntax of different types of nominals: lexical DPs, pronouns, their φ -features, and their licensing needs (or lack thereof).

Let us start from their external syntax. Different corners of Äiwoo grammar make quite fine-grained contrasts between how they treat different types of nominals. We will see that v and T make two cross-cutting distinctions. First, v draws a cut between how it interacts with lexical DPs (nominals with lexical content: “a/the teacher”, “fish”, “Mary”, etc.) and pronouns. Specifically, v will only agree with lexical DP objects when they carry Ā-features⁵, but it will always agree with pronominal objects, whether or not they have Ā-features. In contrast to v , T is not interested in the categorial distinction between lexical DPs and pronouns. Rather, T draws an orthogonal cut between nominals that are 3MIN (\approx 3SG; see chapter 2, §2.5.1), vs. nominals with “marked” φ -features (i.e., anything else than 3MIN: 1st/2nd person pronouns, and 3AUG pronouns)⁶. This featural distinction is at the base of the hierarchy effect that results in one of the two instances of non-local A-movement of the object across the subject, discussed above.

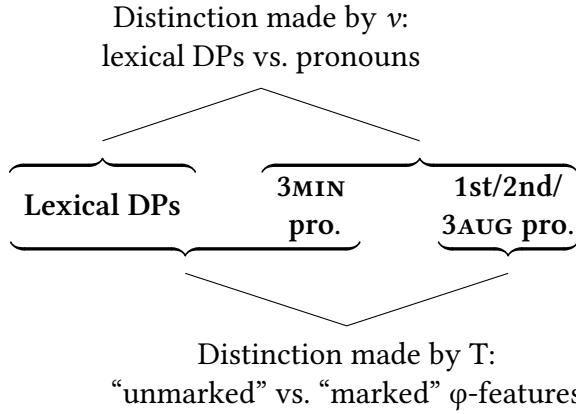
The two cross-cutting distinctions made by v and T are schematized in (10). The crucial difference between the two groupings lies in how pronominal 3MIN arguments ('he/she') are treated. For the purposes of v , they pattern together with the other pronouns, and

⁵ As mentioned above, this is actually a simplification; see chapter 4, §4.5.

⁶ See the discussion in chapter 6, appendix 6.A for where plural DPs fit into this picture.

unlike lexical DPs. For T, instead, they pattern unlike the other more featurally marked pronouns, and identically to lexical DPs.

(10) Groups of nominals as treated by *v* and T:



These two orthogonal cuts, i.e. the way *v* and T interact with the different groups of nominals, is what ultimately results in the complex word order alternation pattern at the core of one of our puzzles. In other words, to know what an Äiwoo transitive clause will look like – in terms of the typology of clause types set up in (7): their word order, verbal morphology, and Ä-extraction possibilities – what we need to know is the categorial and φ-features of both arguments.⁷

Of course, word order alternations based on distinctions between different types of nominals are nothing new. Consider, for example, Object Shift in Mainland Scandinavian languages (where pronominal objects obligatorily shift, but lexical DP ones do not), or object cliticization in Romance languages (where – simplifying extremely – pronominal objects obligatorily cliticize onto the verb, while lexical DP objects remain postverbal)⁸. A classic type of explanation for these kind of patterns centers around the idea that pronominal elements (clitics, “weak” pronouns, etc.) are “deficient” in certain ways, and therefore they must move to fix this deficiency in order for the derivation to converge (Roberts & Shlonsky 1996, Cardinaletti & Starke 1999, Holmberg 1999, Koopman 1999, a.o.). This kind of explanation is based on the concept of “Greed” (Chomsky 1993, 1995): these pronouns have certain particular needs and must move to meet these needs (these could be prosodic needs, a need for licensing/abstract Case assignment, a need to escape the domain of existential closure, etc.). Crucially, in this kind of approach, lexical DPs don’t have the same kind of needs, and thus they don’t move in the same way.

⁷ This makes the Äiwoo word order alternation pattern reminiscent of “global case splits” (Keine 2010, Georgi 2012, Bárány 2017, Yuan 2020, Bárány & Sheehan 2024, Clem & Deal 2024, a.o.). These are systems where in order to correctly predict the case properties (or agreement profile, or final landing site, etc.) of a particular argument in a clause, one must know the properties of *multiple* arguments. Äiwoo does not have any morphological case (see chapter 2, §2.5), but its word order alternations can be cast in the same kind of logic: “iff the subject has [properties α] and the object has [properties β], then the clause will be of [type γ]”. See chapter 6 for discussion.

⁸ Word order alternations based on φ-features are rarer, but they are also attested; see chapter 3, §3.7.3.

This type of approach – and the general notion of Greed – has been criticized (Sichel 2001, 2002, Sichel & Toosarvandani 2020, 2024, a.o.). Under Greed-based analyses, the movement of these pronouns takes place for the sakes of the moving element (i.e., the pronouns' particular requirements). In contrast, many other movement phenomena (e.g. *wh*-movement, etc.) are known to take place for the sakes of the landing position, not of the moving element. Consider for example *wh*-movement in English. In general, a *wh*-word moves to spec,CP, but in multiple *wh*-questions only the highest *wh*-word will raise, and all others remain *in situ*. This shows that *wh*-words have no inherent need to move in and of themselves: they will move if something makes them, but nothing will necessarily go wrong if they happen not to move. This, Sichel (2001, 2002) and Sichel & Toosarvandani (2020, 2024) argue, is a problem of theoretical parsimony: we have two different reasons why movement may be triggered, but *all* movement seems to otherwise obey the same constraints (locality, the Extension Condition, etc.). Therefore, it would be better if we could do with just one, and they propose that the various attested patterns where pronouns move differently from lexical DPs can be reanalyzed without any Greed, but purely in terms of probe-goal attraction mechanisms – like all other movement.

From the perspective of this debate, my analysis of the Word Order Puzzle in Äiwoo supports this latter line of work, as a sort of proof of concept: even for a rather intricate dataset involving different intra-clausal movements, a fully Greed-free analysis is not only possible, but better than a Greed-based one. In fact, strikingly absent from the whole model I build is the concept of nominal licensing (Vergnaud 1977/2008, et seq.). This notion (however one wants to implement it) does not seem to play any particular role in Äiwoo syntax. We will see that depending on the type of clause, both subjects and objects may surface in any of the three available argument positions (preverbal, between the verb and the TAM particles, and postverbal). This is shown in (11)–(12); the structural labels and traces will be motivated throughout the following chapters.

(11) The subject may end up surfacing in any argument position: (25.07.28)

- a. [CP ***ijii*** *ku-lu-tou-mä* [TP ***t_S***=*kaa* [_{vP} ***t_S*** *sii*]
3AUG IPFV-3AUG-bring.AV-DIR1 =FUT fish
 ‘They will bring fish’
- b. [CP *sii* *ku-tu-mä* [TP ***Jon***=*kaa* [_{vP} ***t_S*** *to*]
 fish IPFV-bring.UV-DIR1 **John**=FUT
 ‘John will bring the fish’
- c. [CP ***(iumu)*** *ku-tu-mä* [TP ***-gu-mu=waa*** [_{vP} ***Jon*** *to*]
 2MIN IPFV-bring.UV-DIR1 -OBJ-2MIN=FUT **John**
 ‘John will bring you’

(12) The object may end up surfacing in any argument position:

- a. [CP ***sii*** *ku-tu-mä* [TP ***-i=laa*** [_{vP} ***t_S*** *to*]
 fish IPFV-bring.UV-DIR1 -3AUG=FUT
 ‘They will bring the fish’

- b. [CP *nuwopa* *to* *ki-te-kä*] [TP *-gu-i*=*laa=kä*] [_{vP} *Mary* *to*
 house my IPFV-see.UV-DIR3 -OBJ-3AUG=FUT=CV Mary
 ‘Mary will see them in my house’⁹ (240724)
- c. [CP (*iumu*) *ku-tu-mä*] [TP *-mu=waa*] [_{vP} *t_S* *ijii*] [_{3AUG} (250728)
 2MIN IPFV-bring.UV-DIR1 -2MIN=FUT
 ‘You will bring them’]

Above, we discussed how *wh*-words may remain *in situ* if their movement happens to be blocked by something else, and how this shows that they have no inherent need to move anywhere; if they happen not to move, everything is fine. The data in (11)–(12) makes the same point for arguments of transitive clauses in Äiwoo. A subject or an object, whatever its category or φ -features, does not *need* to move to any particular position for the derivation to converge¹⁰. In other words, this is a system where nominals have no apparent requirements of their own to be agreed with or moved (or licensed). Rather, nominals just get moved around by different probes, each with particular featural desires. Whatever does not get moved may either be moved later on by a higher probe, or remain where it is, without further consequences.

Aside from the external syntax of different types of nominals in Äiwoo, their internal structure is also interesting in its own respects. Particularly, I will focus on the internal syntax and morphology of pronouns. For example, a 3AUG pronoun is realized as the standalone word *ijii* in the preverbal position (11a) or the postverbal one (12c). However, in the position between the verb and the TAM particles we don’t see the full pronoun form, but rather a suffix *-i* (12a), or *-gu-i* when this pronoun is an object (12b). These forms are part of a full paradigm of verbal suffixes that look like a shorter/reduced version of the corresponding full pronoun; compare e.g. the full 2MIN pronoun *iumu* to the 2MIN suffix *-mu* (12c). Moreover, we have cases where both the full pronoun and the corresponding suffix are realized simultaneously (11c)–(12c).

In this domain, Äiwoo contributes to the theoretical discussion revolving around pronouns, clitics, and agreement. A rich literature has inquired into how to determine whether a particular morpheme in a given language is an instance of one or another of these categories (Woolford 2008, Nevins 2011, Kramer 2014, Baker & Kramer 2018, Yuan 2018, 2020, 2021, a.m.o.). Moreover, it has also been debated whether a morpheme’s morphophonological properties are sufficiently informative to diagnose its underlying syntactic nature, with both positive answers (Zwicky & Pullum 1983, and partially Nevins 2011, a.o.) and negative ones (Yuan 2021, Akkuş et al. 2025, a.o.).

I argue that Äiwoo supports the latter camp: a morpheme’s morphophonology cannot be taken as decisive evidence for a particular syntactic analysis. In other words, “looks

⁹ Sentence (12b) is an example of a clause in “Circumstantial Voice”; I won’t treat this kind of construction in this dissertation (see Appendix A). However, picking this was necessary to show an example of a clause where the object is only surfacing in the position between the verb and the TAM material, but not also further up in the preverbal position, as in (11c).

¹⁰ These six sentences (11)–(12) do not exhaust all the possible combinations of different types of subjects/objects. They were just picked for the sake of exposition. See chapter 6.

can be deceiving”. In chapter 5 I will argue that despite these suffixes’ morphophonology, they are syntactically full pronouns, that occupy a specifier position (as indicated by the bracketing); they do not spell out agreement, and they are not clitics. The reason for the full form vs. suffixal contrast, I propose, is purely morphological. A pronoun in the position between the verb and the TAM particles undergoes obligatory post-syntactic Local Dislocation to its left, becoming thus prosodically incorporated into the verb word. This step of Local Dislocation may also end up forcing the overt pronunciation of a lower copy in a movement chain, which would have otherwise been deleted. This accounts for the cases of “doubling”, where the same argument is pronounced simultaneously as a full pronoun and as a suffix (12c).

1.4 DATA AND METHODOLOGY

The Reef Islands, where Äiwoo is spoken, are a rather remote location (see chapter 2, §2.2), and traveling there involves considerable logistical difficulties (sheer distance and cost, poor infrastructure, unreliable flight and boat connections, etc.). As a result, the kind of targeted elicitation that is necessary for the type of research in this dissertation was simply not possible until recently, when the internet connection on the islands improved and remote fieldwork over Zoom became possible. The bulk of the data in this dissertation was thus collected through fieldwork with a native Äiwoo speaker, Luke Gitakulu.

Luke is from the Otelo village in the Reef Islands, and currently lives on the islands. For several decades, Luke has been a language expert, collaborator, and consultant on a variety of projects related to linguistic research, documentation, and translation. He has earlier collaborated with Åshild Næss during her fieldwork in the Reef Islands (see chapter 2, §2.3), and is collaborating on translating the Bible to Äiwoo. In addition to Äiwoo, Luke also speaks English and Pijin/Solomon Islands Pidgin; the medium language in the fieldwork process was English. Luke is also literate in Äiwoo, which is uncommon in the community (see chapter 2, §2.2)

Starting in May 2023, Luke and I have been holding approximately weekly meetings on Zoom, of one hour length; every meeting was recorded. Luke was compensated \$ 32 USD an hour, plus the price for the internet connection at the local internet café in the Reef Islands. The meetings involved a screen-shared Google Docs document, where Luke could see what I was writing, both in English and in Äiwoo, and correct my transcriptions. After the meeting, the resulting file would be tagged for what linguistic topics were covered (e.g. relativization, word order, pronominal morphology, voice alternations, etc.), and exported as a .pdf file for archival. Then, I created a copy of the raw file where I would provide interlinear glosses for every sentence; this was also archived as a .pdf file. Both the raw and annotated transcription files, in addition to the Zoom recordings, are stored in a Google Drive folder. With Luke’s consent, this folder has been made available to Åshild Næss and her collaborators, to aid with their research on Äiwoo.

The methodology employed in our meetings was the relatively standard variety of tasks used in linguistic elicitation-based fieldwork. These included translation tasks (from English to Äiwoo and viceversa), acceptability judgments in a particular context or for a particular reading, etc. One limitation of this dissertation is that the Äiwoo data was collected in collaboration with only one speaker (namely Luke); for logistical reasons, the plan of consulting more speakers had to be postponed. To partially make up for this, every judgment was replicated across multiple sessions and with multiple lexicalizations. Throughout the dissertation, every sentence (or group of sentences) I elicited is labelled with a six digit code, representing the date of elicitation in YYMMDD format; the label will be placed wherever is most typographically convenient, and whether it refers to a single sentence or a group of sentences should hopefully be clear in the relevant contexts. For example, both sentences in (13) were elicited on June 22, 2023. The only exceptions will be examples consisting of a single word, reported in isolation; these will be unlabelled, as they are amply attested in the corpus.

- (13) [Context: a house has just been sold.]

- a. *i-ve ibesi*
ASP-buy.UV friend.1MIN
'My friend bought it'
- b. ?* *ibesi i-veve*
friend.1MIN ASP-buy.AV
Intended: 'My friend bought it'

(230622)

↑
elicitation date
(YYMMDD)

In addition to my own fieldwork, two more data sources were consulted. One is the corpus collected by Åshild Næss over several fieldwork trips from 2004 to 2015¹¹. This consists of recorded and transcribed natural speech by a number of Äiwoo speakers, including Luke. The corpus contains a 72 texts of widely varying length (from 82 to 8079 words), for a total of about 72 000 words. The texts are mostly of narrative and procedural genre (i.e., explaining how to do something, e.g. a particular fishing technique, building a house, etc.). The second source is the Äiwoo translation of the Gospels of Mark, Luke, and Matthew, developed by John Rentz (at SIL) in collaboration with Luke and other Äiwoo speakers. Sentences from the Bible translation are marked with a label indicating the book, chapter and verse of origin, e.g. "MK 9:41" for Mark, chapter 9, verse 41 ("MK" = Mark, "LU" = Luke, "MT" = Matthew). Sentences from Næss' corpus are labelled with the name of the text they belong to and their line index, e.g. "Nyeliwânubona toponu 141".

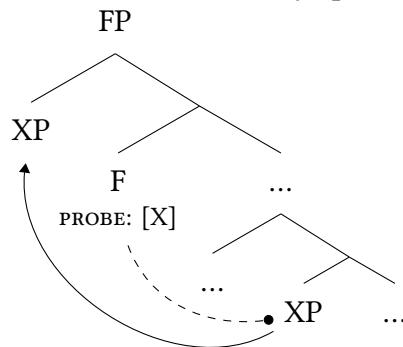
¹¹ The data collection that led to the creation of this corpus was funded by the Research Council of Norway, grant no. 148717, and the Endangered Languages Documentation Programme, grant no. SG0308. I kindly thank Åshild Næss for making it available to me.

1.5 THEORETICAL ASSUMPTIONS

The theoretical framework this dissertation assumes is a relatively standard generative one, generally based on the Minimalist Program (Chomsky 1995, 2000, 2001) combined with a strictly non-lexicalist model of word building (i.e., Distributed Morphology; Halle & Marantz 1993, Marantz 1995, 1997, Harley & Noyer 1999). I want to focus this section on two particular aspects of the theoretical apparatus that will be important in the development of the model of Äiwoo syntax I propose.

The first is a relatively standard assumption within Minimalism, which Deal (to appear) labels the “Merge-Agree Hypothesis”, that is, the idea that the only two syntactic operations in natural language are Merge and Agree. The former applies only very locally, whereas the latter regulates dependencies between elements at a distance. This goes together with (or rather, entails) the idea that *all* syntactic (phrasal) movement is feature-driven, that is, it is always triggered by a step of Agree (14)¹². Formally, “movement” is then just a shorthand term for the sequence of operations Agree + (Internal/re-)Merge. (See below for a discussion of how exactly Agree works.)

- (14) All movement is always preceded by Agree:



Within Minimalist literature, this is nothing new, but rather a widely shared and *de facto* standard assumption¹³. However, I take a strict interpretation of this idea to entail that some typical descriptions of movement phenomena cannot be held to happen literally as described, at least in a mechanic sense. For example, under a strictly feature-driven view movement, a DP cannot move to a particular position “to get (abstract) case/Case”, or “to escape from its phase” – at least not in the literal, teleological sense of these statements. Mechanically speaking, a constituent is only ever moved because a probe agreed with it. This concretely means that there must exist a particular featural configuration that makes this probe-goal relationship possible, crucially respecting relativized minimality.

¹² I remain agnostic as to whether head movement is also feature-driven, and how exactly it is implemented. See Harley (2013) and references therein for discussion.

¹³ However widely held, this assumption has not been free of critiques. Chomsky (2000) already raised the possibility that maybe not all movement was feature-driven, mentioning stylistic fronting as a potential exception; see also Syed & Simpson (2024) for a concrete proposal.

This theoretical context makes it important to precisely define exactly how Agree works. In this dissertation I adopt the interaction-satisfaction theory of Agree (Deal 2015b, 2024a, *to appear*); see e.g. Clem (2019, 2022, 2023), Roversi (2020), Oxford (2024), Branan & Erlewine (2024), Scott (2023), Clem & Deal (2024), and Yuan (2024), a.o., for various applications. In this model, every probe comes with two specifications: its *interaction* set, and its *satisfaction* set. The interaction set specifies what feature(s) the probe “searches for”: upon finding a constituent with at least one of these features, the probe *interacts* with this constituent, and copies back its features¹⁴. The satisfaction set specifies what feature(s) halt the probe: upon finding a node in the tree with at least one of these features, the probe is *satisfied*, and stops its operations. Interaction and satisfaction are independent of each other: a probe may interact with a goal and not be satisfied, or it might be satisfied by a goal without interacting with it. This latter scenario would result in the probe halting with no features being copied (at least from the specific goal that satisfied it).

Three more parts of the Agree mechanism need to be discussed: movement, and goal flagging. As for movement: any feature in the interaction or satisfaction set may be further specified as triggering movement (notated with a diacritic M^{M}). If a probe finds a target carrying a feature F^{M} that is part of either its interaction or satisfaction set, that target is moved to the probe’s specifier. This could be informally thought of as an equivalent of an “EPP feature”. As for goal flagging, this is the name given in Deal (*to appear*) to the structural change that a probe causes on a goal it either interacted with or was satisfied by. This idea (that upon Agree, information is transferred both from the goal to the probe but also from the probe to the goal) is not new, and was already present in the theory since Chomsky (2001) and Pesetsky & Torrego (2001, 2007). Concretely, if a probe H interacts with a constituent XP, XP receives an “interaction flag feature” [i|H]; if a probe H is satisfied by a constituent XP, XP receives a “satisfaction flag feature” [s|H]; this notation is adopted from Deal (*to appear*)¹⁵.

Before proceeding to an example, some notational remarks. All agreement relations (successful or not) are notated in trees with a dashed line (solid arrow lines notate movement). For probes, Deal (2015b, 2024a, *to appear*) uses the notation [INT: α , SAT: β], but in the trees I shorten this to just [I: α , S: β] for typographical reasons¹⁶. Furthermore, I notate interaction and satisfaction independently on the dashed lines. If interaction takes place, this line ends in a full circle (X --- • Y). If there is no interaction, it ends in an open

¹⁴ I follow Grishin (2023) and Deal & Royer (2025) – though departing from some of the literature cited above – in assuming that when a probe interacts with a goal, *all* of the goal’s features are copied onto the probe, and not just those that triggered the interaction.

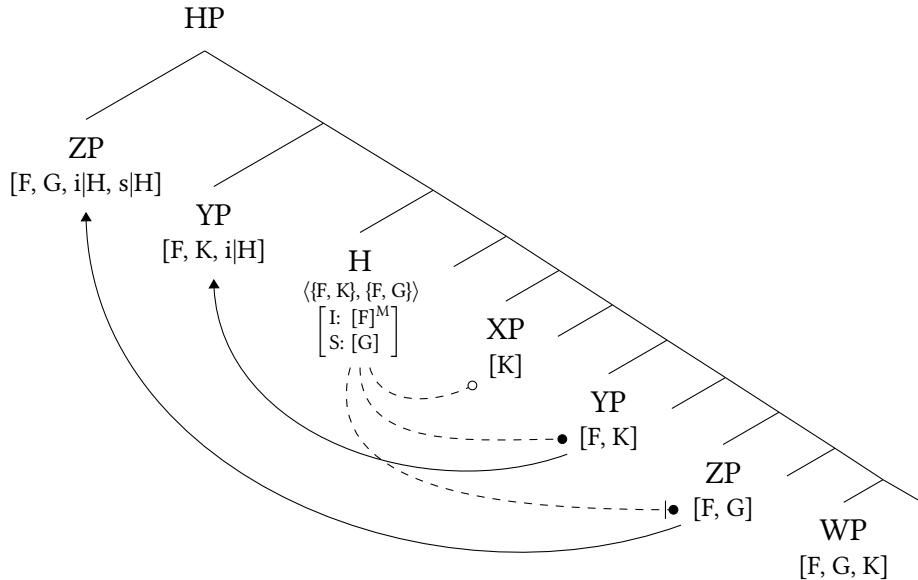
¹⁵ See Clem & Deal (2024) for further developments of this idea, where a goal can receive features via flagging that a goal had copied onto itself earlier from a different constituent. This enrichment is not necessary for the model of Äiwoo syntax I build, so I don’t include it. In general, Äiwoo syntax doesn’t seem to manipulate satisfaction flag features at all, so I will not include them in the trees.

¹⁶ For the same reason, when the two sets have the same featural specification, I will use the condensed notation [I+S: α]. Note that if the interaction and satisfaction specifications are identical *and* there is movement, [I: α^{M} , S: α] is empirically indistinguishable from [I: α , S: α^{M}]. I notate both as [I+S: α^{M}].

circle ($X \dashv\dashv Y$). If a probe is satisfied by a target, this is shown by adding a bar before the circle ($X \dashv\dashv \bullet Y$, $X \dashv\dashv \circ Y$; respectively with/without interaction).

Consider now how this Agree mechanism works with the following abstract example (15). The probe H is specified as having the feature [F] as its interaction feature, and the feature [G] as its satisfaction feature; furthermore, its interaction feature carries the movement diacritic M . Immediately after it is merged, H starts a search, examining each node in its c-command domain¹⁷. XP doesn't have either [F] nor [G], so it is not interacted with and it does not satisfy the probe; nothing happens, and the probe continues searching¹⁸. Further down, the probe finds YP; this constituent carries [F], the interaction feature of the probe. Three things happen: (i) every feature from YP is copied onto the probe ($\langle\{F, K\}\rangle$); (ii) YP receives the interaction flag feature [$i|H$]; (iii) because the interaction feature is specified with a movement instruction, YP moves to spec,HP. However, YP does not have the probe's satisfaction feature [G], so the probe still continues searching. Further down the probe finds ZP, which carries both [F] and [G]. Because of [F], the probe interacts with ZP, repeating the steps described above¹⁹. Finally, because of [G], the probe is satisfied, and it stops its search altogether. The lower potential goal WP is never reached. See also [Deal \(to appear\)](#) for a more formally described algorithm.

(15)



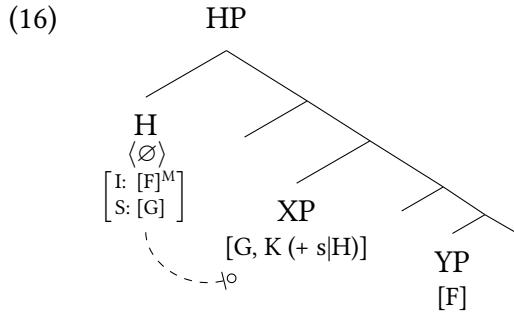
This tree shows three possible outcomes: no interaction/no satisfaction (H-XP), yes interaction/no satisfaction (H-YP), yes interaction/yes satisfaction (H-ZP). The fourth possibility is no interaction/yes satisfaction, shown in (16). Here, the probe H does not copy

¹⁷ See [Branan & Erlewine \(to appear\)](#) for a formal definition of the search procedure.

¹⁸ Strictly speaking, this is true for *every node in the tree* aside from YP and WP, including maximal projections, intermediate bar-level projections, etc. I only notate this for XP for simplicity.

¹⁹ Here I show ZP as moving to an outer specifier above YP, i.e. not tucking in; this is not important, and tucking in could also be assumed.

anything back from XP (because it doesn't have [F]), but it is satisfied by it (because it has [G]). Therefore, the probe stops at XP, and YP is never reached. (The satisfaction flag feature [s|H] is added onto XP after the Agree step).



In the trees throughout the dissertation, for simplicity, I will only notate the features that are relevant to the discussion on hand. For example, even though a probe copies all features from a goal upon interaction (e.g., $\langle\{\varphi, N, D, PL, FOC, \dots\}\rangle$), I will just write $\langle\varphi\rangle$ if this is the relevant feature under discussion. Similarly, I will only notate flag features when relevant, and ignore them otherwise.

One final theoretical remark is that in this theory of Agree there is no Activity Condition (Chomsky 2000, 2001). This means that multiple probes can agree with the same constituent without any issues, as long as the featural relations in place allow for it. I consider this an advantage, as the Activity Condition has been shown to face severe empirical challenges, such as the existence of hyperraising (Rodrigues 2004, Nevins 2004, Halpert 2019, Fong 2019, Zyman 2023, a.o.), of cases where multiple heads show φ -agreement with the same DP (Carstens 2001, 2010, 2011, Polinsky & Potsdam 2001, Bhatt 2005b, Carstens & Diercks 2013, Deal 2015a, a.o.), and cases where a single DP is assigned multiple cases (Bejar & Massam 1999, Richards 2013, Pesetsky 2013, a.o.). See also Deal (to appear) for a discussion of the Activity Condition.

1.6 OVERVIEW OF THE DISSERTATION

As presented above, the main empirical goal of this dissertation is to build a model of the syntax of Äiwoo clauses that accounts for both the attested word order alternation patterns (the “Word Order Puzzle”), and their partial correlation to the patterns of Ä-extractability (the “Extraction Puzzle”). The data at the base of this discussion is rather rich and complex, with several moving parts. This presents a problem for the exposition: in a sense, to understand any part of the model, one would need to know every part of the data. As a consequence, there will be several points throughout the dissertation where a particular analytical move may seem too complicated, unmotivated or unjustified given the data under discussion at that point, but it will ultimately be necessary to accommodate the rest of the complexity of the system (which has not been presented yet). This

will be pointed out whenever relevant throughout the discussion. Below, I give succinct summaries of the different chapters.

CHAPTER 2 — “THE ÄIWOO LANGUAGE: BACKGROUND” Here I present some background information about the Äiwoo language. This includes facts about its geography, its speaker population, and its phylogenetic position within the larger Austronesian language family. I also include a very simple description of its phonology and some salient phonological/morpho-phonological patterns. Finally, I present some of the morphosyntax of the nominal domain and the verbal domain; for the latter, this chapter covers certain aspects that are not discussed elsewhere in the dissertation.

CHAPTER 3 — “ÄIWOO CLAUSE STRUCTURE” This is the first of the four main contentful chapters, where we will actually develop answers to our main puzzles. The focus of this chapter is addressing the Word Order Puzzle, for the time being limiting ourselves to the “canonical clauses”, in Actor Voice and Undergoer Voice – that is, the first two rows of the table in (7). Part of the core questions this chapter answers are the classic ones that a model of the clausal syntax of any language must answer: where are the different arguments, how did they get there, and why? Moreover, specifically for Äiwoo, we must have an answer to why a verb can surface with different verb stems, and why φ -agreement seems to only be present in one case but not the other.

At a more descriptive level, I will argue for the following novel claims: (i) Äiwoo is a V2 language; (ii) the preverbal position for arguments is spec,CP; (iii) the position for arguments between the verb and the TAM material is spec,TP; (iv) the stem alternation is governed by a system of object agreement: if v agrees with the object, the verb stem will be spelled out in a particular form (“Undergoer Voice”), whereas if this does not happen, the verb stem will be spelled out in a default form (“Actor Voice”); (v) v agrees with the object if the latter carries \bar{A} -features.

At a more theoretical level, an important claim is that in Äiwoo, either the subject (in Actor Voice) or the object (in Undergoer Voice) are moved to spec,CP through potentially *non-local A-movement*. I propose that this is not an instance of “mixed A/ \bar{A} -movement”, in the sense that there is no \bar{A} -ingredient to this movement at all, other than the fact that it has a less strict locality profile than typical A-movement (C can raise the object to spec,CP, skipping the subject). As mentioned earlier (§1.3.2), I will argue that this kind of non-local A-movement is not an innovation, but that its existence is in fact already predicted by the union of two pre-existing parts of our theory, both independently motivated and needed: the notion of featurally relativized probes, and Relativized Minimality.

CHAPTER 4 — “THE \bar{A} -EXTRACTION RESTRICTION, AND THE LOGIC OF AN EXCEPTION” After addressing part of the Word Order Puzzle by establishing basic derivation for canonical AV and UV clauses, we move on to addressing the first part of the Extraction Puzzle. Here, I cover the top half of our overview table (7a–c): AV, UV_{plain}, and UV_{only} clauses. This chapter’s goal is to answer two questions: (i) the Austronesian \bar{A} -extraction restriction: why can only the subject be extracted from an AV clause, and only the object from

a UV clause? (ii) why is it exceptionally possible to extract the subject of a UV clause in the presence of certain particular verbs (“UV-only”)?

To briefly repeat what was presented in §§1.3.1–1.3.2, I will argue that the Äiwoo manifestation of the Austronesian Ā-extraction restriction is a case of Ā-intervention. In AV and UV_{plain} clauses, the highest argument (respectively the subject and the object) carries Ā-features, and these will intervene for the Ā-extraction of any lower argument. I argue that “UV-only” verbs idiosyncratically select for a different v^* head. This v^* is different from ordinary v in that it will *always* agree with the any object, regardless of Ā-features; this is why these verbs simply do not have a AV form. In this case, the entire derivation will proceed as for a canonical UV_{plain} clause, but in the end, the object in spec,CP will *not* carry Ā-features. Therefore, it will not pose an intervention problem, and the subject may thus be exceptionally extracted.

CHAPTER 5 — “THE φ -INDEXING SYSTEM” This is a descriptive detour from the main narrative, focusing on the two paradigms of φ -indexing affixes: the φ -prefixes found on AV verbs (and intransitives), and the φ -suffixes found on UV verbs. *Contra* the existing descriptive literature, I will argue that these morphemes’ similar morphophonological properties (they are all affixes, though on opposite sides) hide a fundamental syntactic difference. On one hand, the φ -prefixes are pure agreement markers. In contrast, the φ -suffixes are not agreement nor clitics, but they are a morphologically reduced spell-out of a pronoun occupying spec,TP (see §1.3.3 above). Establishing this fact is necessary to really understand the full empirical dimension of the Word Order Puzzle: without knowing the syntactic nature of these affixes, we cannot determine where the different arguments are in the different clause types.

CHAPTER 6 — “NON-CANONICAL UV CLAUSES” We now know enough to tackle the more complex part of the Word Order Puzzle, that is, the system of intricate word order alternations found in UV. The first part of the chapter is descriptive in character, going through the different clause types and clearly exposing their word order properties. I then move to the Ā-extraction aspect: these clauses all show exceptions to the classic Ā-extraction restriction. I will show that this is *not* caused by their special word order, but rather, it is a result of the object in these clauses always being a pronoun. This is supported by the existence of clauses (“UV_{inā}”) that have the same word order as UV_{plain} clauses, but without an extraction restriction.

To derive the word order, verbal morphology, and Ā-extraction properties of all of these clauses I will make minimal amendments to the probes posited for v and T in chapter 3. First, I propose that v agrees with QP objects *and pronominal objects*. In this respect, Äiwoo is brought closer to many languages where these two categories of objects are treated alike by some syntactic phenomena: for example, both Ā-marked objects and pronominal objects often shift to a higher position in the vP. Because a pronominal object is agreed with by v (thus triggering UV) whether or not it has Ā-features, we derive the same suspension of the Ā-extraction restriction that we see with UV-only verbs. Then, I revise the probe on T to account for the hierarchy effect we observe in the calculus determining

what moves to spec,TP. Like C, T also can trigger non-local A-movement, raising the object to spec,TP across the intervening subject if it has the right features that the probe on T is interested in. Finally, to recapitulate, I offer annotated step-by-step derivations of all clause types.

CHAPTER 7 — “CONCLUSION AND PROSPECTS” The title of this chapter is as self-explanatory as it could possibly be. I first summarize the main findings of the dissertation and their theoretical implications, and then present some loose threads that I hope further research will be able to shed more light on.

APPENDIX A — “NOTES ON CIRCUMSTANTIAL VOICE” In this appendix I offer some preliminary notes on a third “voice” construction in the language. I discuss how it could be integrated into the analysis proposed in this dissertation, and where the model breaks, making wrong predictions.

APPENDIX B — “A “CASE-AGREEMENT” ANALYSIS” In this second appendix I take inspiration from analyses of Tagalog like [Rackowski \(2002\)](#), [Rackowski & Richards \(2005\)](#), and [Hsieh \(2020\)](#), and I sketch what an analysis of the Äiwoo system in terms of “case agreement” would have to look like. Ultimately, I find this analysis needlessly more complex than the one I develop in chapter 3, to no clear empirical gain.

CHAPTER 2

THE ÄIWOO LANGUAGE: BACKGROUND

2.1 INTRODUCTION

This chapter contains an introduction to the Äiwoo language. Part of the goal is to try to cover the facts that are essential for the reader to follow the rest of the dissertation. Moreover, due to Äiwoo's under-researched status, I also attempt to include extra information and observations about the language that would otherwise not fit elsewhere in the dissertation. In a sense, parts of this chapter are also intended to serve as a (small) grammar sketch, since there is none published at the moment. I hope this will be useful and interesting to other linguists, both those specifically focusing on Oceanic languages and to a more general scholarly audience.

First (§2.2), I present some background about the geographic, linguistic, and phylogenetic situation of Äiwoo. Then (§2.3) I cover the small amount of published literature about this language. In §2.4 I offer a very simple description of the phonology of the language, and of some salient morphophonological phenomena. Finally, §§2.5–2.6 cover some morphosyntactic facts pertaining to the nominal and verbal domain respectively. For a reader who is only interested in what is strictly necessary to follow the rest of the dissertation, I would advise focusing on §2.5.1 and 2.6.

2.2 GEOGRAPHIC AND LINGUISTIC SITUATION

Äiwoo (ISO 639-3 code [nf1]) is an Oceanic language spoken in the Reef Islands, in the Temotu province of the Solomon Islands, in the southwest Pacific Ocean (see figures 2.1–2.2). There is also an Äiwoo-speaking diaspora community in Honiara, the country's cap-

ital (Boerger et al. 2012, Sauppe et al. 2023). Earlier literature also referred to this language as “Äiwo”, “Äiwoo”, or “Reefs”.

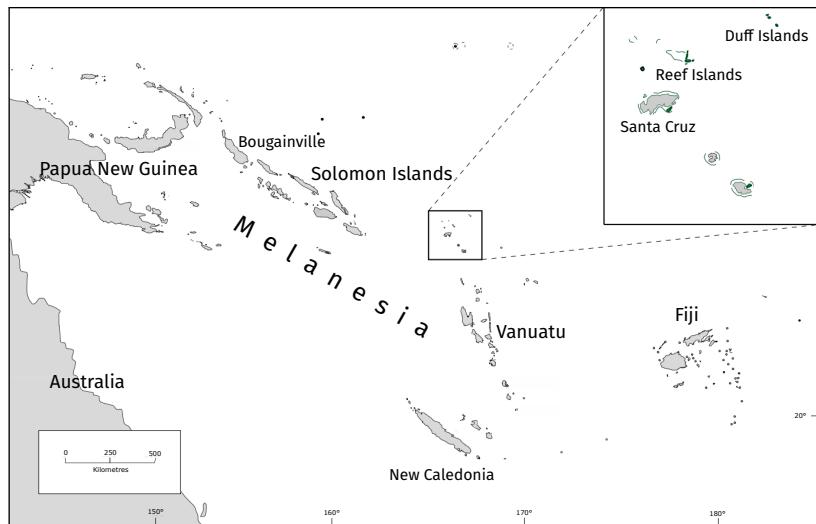


Figure 2.1: The Reef Islands in their geographical context, in the window in the north-east corner (map elaborated from Ross & Næss 2007: 457).

Figure 2.2 zooms in on the Reef Islands. This archipelago consists of a chain of coral islands arranged around a coral reef (*te akau loa* ‘the long reef’ in its Vaeakau-Taumako name; see below). The eastern part, the Main Reefs, consists of larger islands, and this is where Äiwoo is spoken. The Outer Reefs are smaller and more scattered low-lying atolls, and are poorer in natural resources.

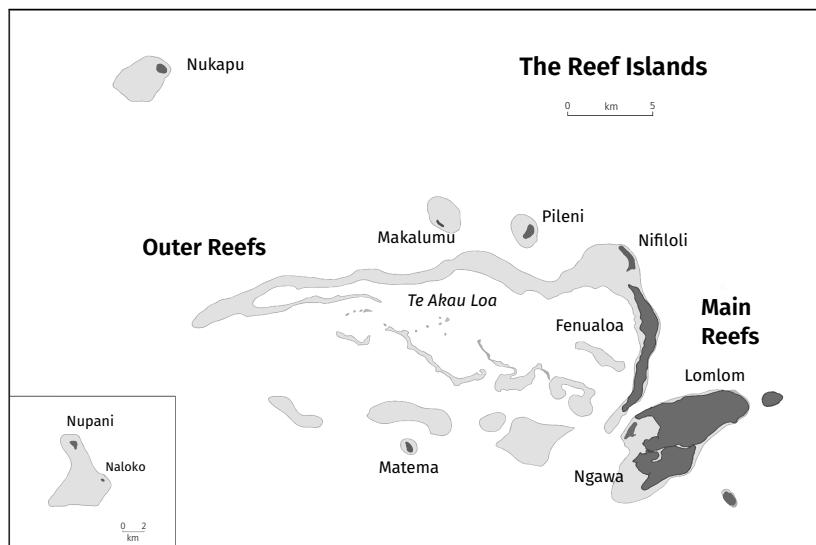


Figure 2.2: The Reef Islands (Næss & Hovdhaugen 2011: 2).

Five more Austronesian languages are spoken in this area, with various degree of linguistic contact with Äiwoo. The geographically closest neighbor is Vaeakau-Taumako [piv] (previously referred to as “Pileni”), a Polynesian outlier – i.e., also Oceanic/Austronesian, but only very distantly related to Äiwoo (see figure 2.4 below for the language family tree). Vaeakau-Taumako is spoken in the Outer Reefs and in the Duff Islands, about 100 km to the northeast of the Reef Islands (shown in figure 2.1). Äiwoo has a large number of Vaeakau-Taumako loanwords, indicating a long history of language contact (Næss & Jenny 2011)¹. On the island of Santa Cruz, about 70 km south of the Reef Islands, four languages are spoken: Natügu [ntu], Nalögo [n1z], Noipä [npx] and Engdewu [ngr]. The geographic distribution of these languages is shown in figure 2.3².

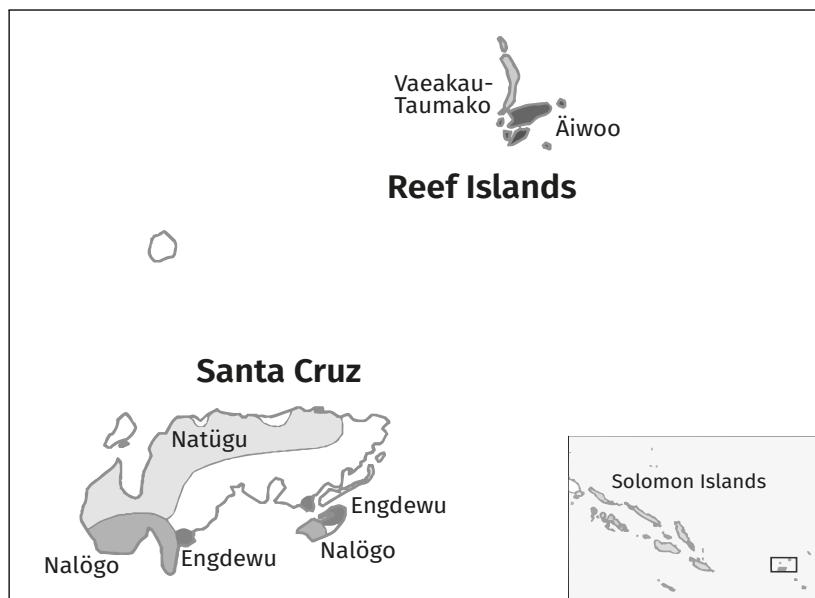


Figure 2.3: Languages spoken in the Reefs Island and Santa Cruz
(map elaborated from Boerger et al. 2012: 112)

The four Santa Cruz languages are the most closely genetically related to Äiwoo and show several similarities in their grammar, although they are not mutually intelligible with it. Natügu, Nalögo, and Noipä are somewhat closer to each other, forming a dialect continuum, but they are not mutually intelligible with each other; Engdewu is more distant from the other three. Finally, Pijin (Solomon Islands Pidgin) and to a lesser degree

1 The first archeological signs of Polynesian settlements in the area date to around 1 200 CE (Næss & Jenny 2011). In contrast, present-day Äiwoo speakers are assumed to descend from a group that arrived to the Reef Islands at least 3 200 years ago (the “Lapita cultural complex”), likely from the Bismarck Islands, the area where Proto-Oceanic has been argued to have been spoken around 3 500 years ago (Spriggs 1997).

2 This map does not include Noipä, as it was only identified in 2015 (Boerger 2017). According to Alfarano & Boerger (2025: fn. 3), Noipä is only spoken “near the coastal intersection of Natügu and Nalögo in a single village of fewer than fifty adult speakers”. In the map in Boerger et al. (2012), the name “Nagu” was used for the Engdewu language; this was updated here according to the preferences of the community (Vaa 2013).

English are also spoken by parts of the local population. See Boerger et al. (2012) for more details.

Äiwoo is the biggest language in its region in terms of number of speakers. The most recent census (from 2019) reports 9 632 speakers (Solomon Islands National Statistics Office 2023: 113). Earlier, the number of speakers was reported to be around 8 400 (Næss 2006, Ross & Næss 2007, et seq.), so the speaker population is increasing. Table 2.1 reports estimated numbers for the speaker populations of all the Austronesian languages spoken in this area (i.e., all languages mentioned above minus English and Pijin)³. These figures are based on the 2019 census for Äiwoo, Alfarano & Boerger (2025) for the four Santa Cruz languages, and Næss & Hovdhaugen (2011) for Vaeakau-Taumako.

Table 2.1: Approximate speaker populations of the Austronesian languages of the Reef Islands and Santa Cruz

Language	Number of speakers
Äiwoo	9 632
Natügu	4 000–5 000
Nalögo	1 600
Engdewu	200
Noipä	40
Vaeakau-Taumako	1 600

Being the largest language in the area, Äiwoo is “reportedly expanding at the expense of other local languages, and as such it appears to be in no immediate danger of extinction” (Boerger et al. 2012: 145). According to the same source, Äiwoo is consistently used at home and at village-level meetings and gatherings, and for announcements at church, although sermons and service are held in English and Pijin (a Bible translation to Äiwoo is in progress). The intergenerational transmission seems to be robust at the time of writing, with children in the Reef Islands growing up speaking Äiwoo (Åshild Næss, p.c.). There seems to be some degree of lexical replacement, with younger speakers using more Pijin loanwords than older speakers do. Other than at church, Pijin and English also dominate in education contexts. As a result, literacy in Äiwoo is rather rare, partly also due to the coexistence of competing orthographic standards developed at different times. Boerger et al. (2012) thus assess Äiwoo as belonging to level 6a – “vigorous” – of the EGIDS scale (Extended Graded Intergenerational Disruption Scale; Lewis & Simons 2010).

The phylogenetic affiliation of Äiwoo and its neighbors was a debated matter for around three decades, largely due to scarce documentation. In earlier work, Äiwoo and the Santa Cruz languages were argued to be either “Papuan” (a purely geographical term, not identifying an actual phylogenetic grouping but simply non-Austronesian), or at best

³ This figure for Noipä (approximately 40 speakers) is from Alfarano & Boerger (2025: 48). However, the official request for a new ISO language code claims “several hundred speakers” (Boerger 2017: 1). I choose to report the more conservative figure here as it is more updated.

of some sort of mixed Papuan-Austronesian origin (Codrington 1885, Wurm 1972, Lincoln 1978, Wurm 1978, 1981a,b, 1982, 1991). However, it was ultimately shown in Næss (2006), Ross & Næss (2007), and Næss & Boerger (2008) that Äiwoo and the Santa Cruz languages belong to a first-order subgroup of the Oceanic branch of Austronesian, labelled “Temotu”. The position of Äiwoo within the Austronesian language family is shown in figure 2.4 (elaborated from Ross & Næss 2007, Blust 2013, Ross et al. 2016, Lackey & Boerger 2021). For simplicity, the internal structure of all other (sub-)branches is severely simplified.

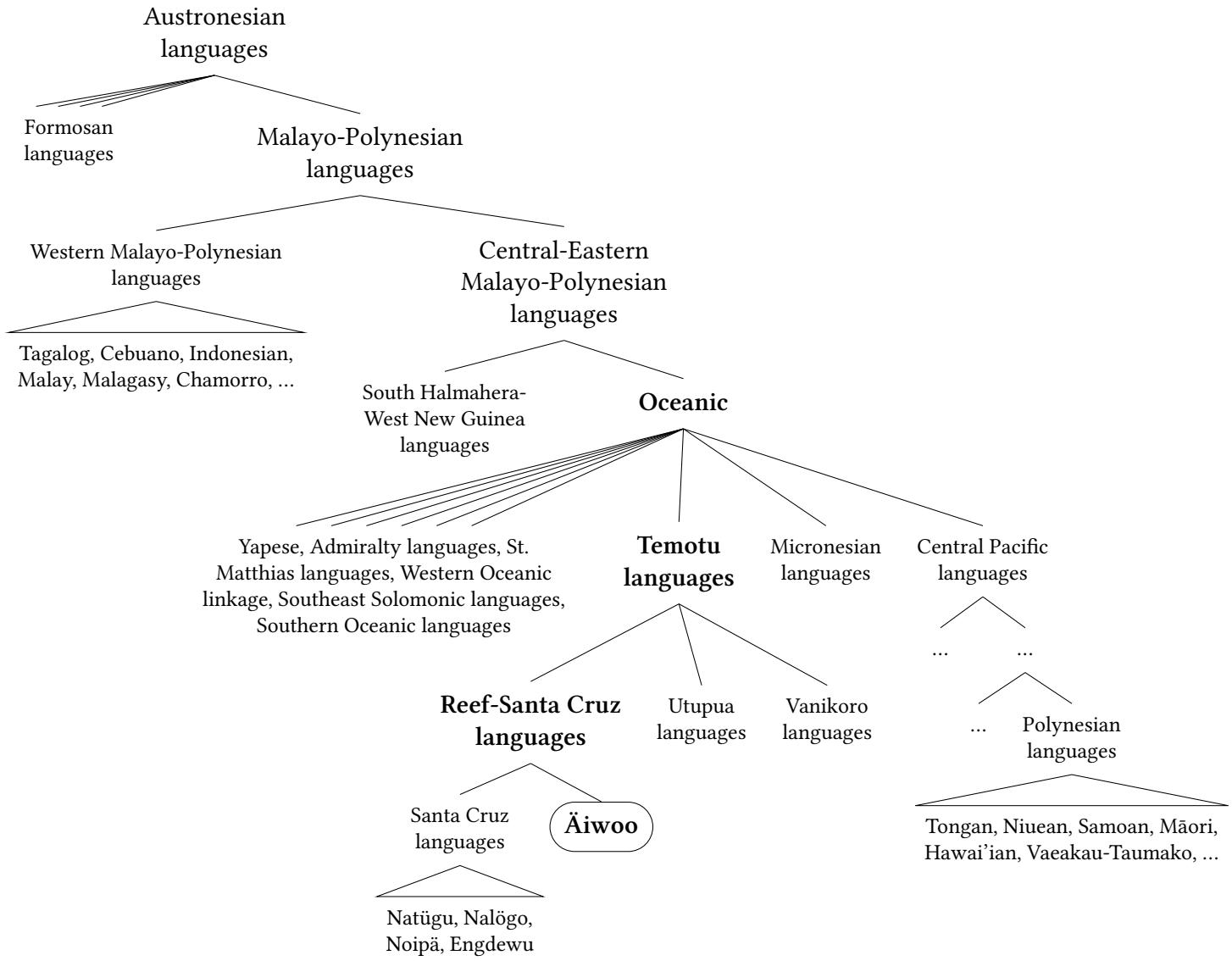


Figure 2.4: Phylogenetic affiliation of Äiwoo within the Austronesian language family

From a diachronic point of view, one of the most surprising aspects of Äiwoo being an Oceanic language is that it shows a symmetrical voice system – the syntax of which will

be the main empirical focus of this dissertation. This kind of system is reconstructed as going back to Proto-Austronesian, but it was only retained in the Formosan and Western-Malayo-Polynesian branches (Blust 2015, Blust & Chen 2017, V. Chen 2017a, Kroeger & Riesberg 2024, a.m.o.). The more notorious examples of such systems are indeed found in Tagalog, Indonesian, Malagasy, etc. In contrast, Proto-Oceanic has been argued to have lost this system completely (Lynch et al. 2002: 61–62, Evans 2003, M. Ross 2004b, Ross et al. 2016: 26–27). It remains therefore an open question whether what ought to be revised is the current reconstruction of the syntax of Proto-Oceanic, or the placement of the Temotu sub-group within the language family (Næss 2015b).

2.3 EARLIER LITERATURE

Äiwoo is a severely underdocumented language. The older (pre-2000) literature cited above was exclusively based on scarce wordlists and similar poor documentation, and has been entirely superseded by the more recent work. The available literature is largely centered around work by Åshild Næss and collaborators, carried out from a descriptive and typological/functional lens, and based on a corpus of transcribed natural speech collected by Næss over several field trips to the Reef Islands between 2004 and 2015.

Næss (2006), Ross & Næss (2007), and Næss & Boerger (2008), cited above, establish Äiwoo as an Oceanic language, based on morphological evidence from the “bound nouns” (which I analyze here as relativizers; see chapter 4, appendix 4.B), the pronominal paradigms, and verbal morphology. Næss (2012a) describes a particular kind of bi-eventive serial verb construction. Næss (2013) analyzes the alternation between certain clause types as a diachronically transitional stage between symmetrical voice systems (found in Western Malayo-Polynesian languages) and the systems characteristic of Oceanic languages, which morphologically overtly contrast between intransitive and transitive predicates and clauses. This idea was later revised in Næss (2015a) and especially Næss (2015b), the latter of which firmly establishes Äiwoo as a symmetrical voice language. Some more recent papers all describe a particular corner of Äiwoo grammar, respectively: the morphological status of bound nouns (Næss 2017b); certain kinds of plural morphology (Næss 2018a); negation (Roversi & Næss 2019); the encoding of spatial relations (Næss 2018b); some details of voice and valence-related morphology (Næss 2021a); comparatives (Næss 2021b); nominal compounds and some related constructions (Næss 2023a); a potential pluractional prefix and its interactions with the voice system (Næss 2023b). Most recently, Næss (2024) presents a comparison of Äiwoo’s symmetrical voice system to the transitivity opposition found in Engdewu, and Holmen & Næss (2025) examine the diachrony of the shift from symmetrical voice to transitivity opposition. There is no published reference grammar for Äiwoo, although one is currently in progress at the time of writing (Næss *in prep*). However, an Äiwoo-English dictionary is available (Næss 2017a). In addition, there exist a few master’s theses on Äiwoo (Frostad 2006, Vaa 2006, Roversi 2019, Holmen 2020, Viken 2024), and a psycholinguistic processing experiment (Sauppe et al. 2023).

From a formal/generative perspective, the only work done on Äiwoo is my own (with collaborators). [Roversi \(2020\)](#) describes the system of “object agreement” found on UV verbs (although this was based on a faulty empirical generalization due to scarcity of data, and is revised in chapters 5–6). [Wu et al. \(2023\)](#) contain a short analysis of the voice concord system described in chapter 3 (§3.3.1). [Roversi \(2024a\)](#) analyzes the interaction of Condition C and a selective anti-cataphora effect. [Roversi \(2024b\)](#) offers an analysis of Äiwoo clause structure and of UV-only verbs, which will be the topic of chapters 3–4. [Roversi \(2025a\)](#) describes a case of non-local A-movement which will be the topic of chapter 6, and supersedes [Roversi \(2020\)](#). Finally, [Roversi \(2025b\)](#) reanalyzes the grammar of possession in the language.

Beyond Äiwoo, the other languages spoken in this area are even less researched. There is a grammar of Vaeakau-Taumako ([Næss & Hovdhaugen 2011](#)) and a handful of descriptive articles about some parts of its grammar ([Næss 2000, 2002, 2004a,b, 2011a,b, 2012b](#)) and its linguistic contact with Äiwoo ([Næss & Hovdhaugen 2007, Næss & Jenny 2011](#)). Engdewu has been described in a PhD dissertation grammar ([Vaa 2013](#)). The same is true for Nalögo ([Alfarano 2021](#)), which also enjoys a couple more publications of descriptive and comparative/historical character ([Alfarano 2023, Alfarano & Boerger 2022, 2025](#)). Finally, there is some descriptive literature on Natügu ([Næss & Boerger 2008, van den Berg & Boerger 2011, Boerger 2019, 2022, Lackey & Boerger 2021](#)), and a wordlist with a request to the ISO to recognize Noipä with its own distinct language code ([Boerger 2017](#)).

2.4 PHONOLOGY AND MORPHOPHONOLOGY

This whole section is heavily based on [Næss \(in prep.\)](#).

2.4.1 SEGMENTAL INVENTORY

The phonemic inventory of Äiwoo is given in tables 2.2–2.3, elaborated from [Ross & Næss \(2007\)](#) and [Næss \(2017a, in prep.\)](#).

Table 2.2: Consonant phonemes of Äiwoo

	Bilabial	Labiodental	Coronal	Palatal	Velar
Voiceless stops	p ^(w)		t		k
Voiced stops	m _b ^(w)		n _d	n _{dʒ}	n _g
Nasal stops	m ^(w)		n	n̪	n̪
Fricatives			s		
Approximants	(w)	v			
Sonorants			l		

Table 2.3: Vowel phonemes of Äiwoo

i	u
e	o
æ~ɛ	a~ɒ~ɔ
a	

It is unclear whether the labio-velarized versions of the bilabial series are phonemically contrastive with respect to the plain versions (e.g., /p^w/ vs. /p/, etc.). The labio-velarized consonants only surface before low vowels (/æ, a, ɒ/). For many words, the labio-velarized and plain versions freely alternate. For example, my consultant accepts both [nuwop^wa~nuwopa] as equally possible pronunciations of ‘house’, [m^wana~mana] for ‘very’, [lop^wɒ~lopɒ] for ‘story’, etc., and both versions are often found in recordings and texts. However, not all words with a plain bilabial consonant can also freely have a labio-velarized one instead; for example, the negative particle *ba* is always [ʰmba] and never *[ʰmb^wa], *paveli* ‘garden’ is always [paveli] and not *[p^waveli], etc. The only minimal pair I am aware of is *bwää* [ʰmb^wæ:] ‘ocean, deep sea’ vs. *bää* [ʰmbæ:] ‘lean’ (Åshild Næss, p.c.). It is also unclear whether /w/ and /v/ are distinct phonemes, or allophones of the same underlying consonant. Note that all voiced stops are consistently pre-nasalized.

Vowel length is phonemically contrastive in the language. Minimal pairs for each vowel are given in (17). All these pairs feature monosyllabic words to avoid the potential confound of stress, as there are some poorly understood interactions between stress and vowel lengthening. Note that *ngågu* ‘to me’ and *ngåâgu* ‘bush, inland’ are monosyllabic due to the final /u/ being reduced; this process is covered below.

(17) Minimal pairs for vowel length (Næss in prep.):

Contrast	Minimal pair	
/i – i:/	<i>bi</i>	[ʰmbi]
/e – e:/	<i>te</i>	[te]
/æ – æ:/	<i>kä</i>	[kæ]
/a – a:/	<i>da</i>	[ʰnda]
/ɒ – ɒ:/	<i>ngågu</i>	[ŋpɔŋk ^w h]
/o – o:/	<i>do</i>	[ʰndo]
/u – u:/	<i>pu</i>	[pu]
	<i>bii</i>	[ʰmbi:]
	<i>tee</i>	[te:]
	<i>kää</i>	[kæ:]
	<i>daa</i>	[ʰnda:]
	<i>ngåâgu</i>	[ŋpɔ:ŋk ^w h]
	<i>doo</i>	[ʰndo:]
	<i>puu</i>	[pu:]

The spelling system I use in this dissertation is the one adopted in the dictionary (Næss 2017a) and in almost all other literature about Äiwoo from Næss (2006) and on. Most consonant and vowel letters have their IPA value, and vowel length is marked by doubling the vowel letter (as can be seen in (17)). The exceptions are listed in table 2.4. In

the phonetic transcription here I include morphophonological details that have not been discussed yet (stress and high vowel deletion)⁴.

Table 2.4: Correspondences between spelling and IPA values

Spelling	IPA	Example			
⟨b⟩	/ ^m b/	<i>bei</i>	/ ^m béi/	[^m béi]	'be sick'
⟨bw⟩	/ ^m b ^w /	<i>bwää</i>	/ ^m b ^w æ:/	[^m b ^w æ:]	'ocean, open sea'
⟨d⟩	/ ⁿ d/	<i>dâwââ</i>	/ ⁿ dawá:/	[ⁿ dawá:]	'tie.AV'
⟨g⟩	/ ⁿ g/	<i>gilaki</i>	/ ⁿ giláki/	[ⁿ glák ^{jh}]	'boy, male child'
⟨ny⟩	/ɲ/	<i>nyetââ</i>	/netá:/	[nerá:]	'mirror'
⟨ng⟩	/ŋ/	<i>ngege</i>	/ŋéŋge/	[ŋéŋge]	'immediately'
⟨j⟩	/ ⁿ dʒ/	<i>jelâ</i>	/ ⁿ dzéla/	[ⁿ dzéla]	'thing'
⟨v⟩	/v/	<i>vävaaviâ</i>	/vævá:via/	[vævá:vja]	'dress.UV'
⟨ä⟩	/æ~ε/	<i>kä</i>	/kä/	[kä]	'say, want, think'
⟨å⟩	/a~ø~ɔ/	<i>ngâgu</i>	/ŋáŋgu/	[ŋáŋk ^w h]	'to me'

2.4.2 ESSENTIAL PHONOLOGICAL PATTERNS

For the purposes of this dissertation, only a few phonological details will be important. I proceed to discuss a few of them below.

CONSONANT ALLOPHONY The voiceless coronal stop /t/ is often realized as a tap or trill /ɾ~r/ in intervocalic position (e.g. *butete* 'potato' /^mbutéte/ > [^mburéte]). Certain consonant contrasts are neutralized before /i/: /t/ and /s/ are neutralized to /s/, /d/ and /dʒ/ are neutralized to /dʒ/, and /n/ and /ŋ/ are neutralized to /ŋ/. For example, the verb 'carry (on one's head)' has the forms *gote* in Actor Voice and *gosi* in Undergoer Voice. The latter presumably contains a suffix *-i* at some underlying morphophonological level, which deletes the final /e/ and mutates the /t/ into /s/. The same is true for the adverbial modifier 'back, again', which is *ute* in Actor Voice and *usi* in Undergoer Voice.

VOWEL HARMONY Certain morphemes show a vowel harmony-like alternation. For example, the third person directional *-kä* can either surface as *-kä* /kæ/ or *-kâ* /kɒ/ (18), depending on whether what follows contains a front vowel or a back vowel respectively.

- | | |
|---------------------------|---|
| (18) a. <i>i-tu-kä-i</i> | b. <i>i-tu-kâ-mu</i> |
| ASP-bring.UV-DIR3-3AUG | ASP-bring.UV-DIR3-2MIN |
| 'They brought (it) there' | 'You brought (it) there' (* <i>itukäm̩u</i>) |

⁴ I depart from standard IPA in notating stress with an acute accent instead of the '/' diacritic. This is just for convenience, as the latter is often poorly legible when next to pre-nasalization diacritics, which are common: c.f. [^mbéi] vs [^mbei]. Secondary stress will be notated with a grave accent when relevant, e.g. /kièpavímu/.

This process is morpheme-specific, and does not apply to all forms containing /æ/ or /ɒ/. For example, the first person directional is always *-mä*, and never harmonizes (19). The same is true for the second person directional *-wâ* (20).

- | | |
|--|---|
| (19) a. <i>i-tu-mä-i</i> | b. <i>i-tu-mä-no</i> |
| ASP-bring.UV-DIR1-3AUG | ASP-bring.UV-DIR1-1MIN |
| ‘They brought (it) here’ | ‘I brought (it) here’ (* <i>itumâno</i>) |
| (20) a. <i>i-tu-wâ-i</i> | b. <i>i-tu-wâ-no</i> |
| ASP-bring.UV-DIR2-3AUG | ASP-bring.UV-DIR2-1MIN |
| ‘They brought (it) there [towards you]’ (* <i>ituwäi</i>) | ‘I brought (it) there [towards you]’ |

For the morphemes that do harmonize, this process is obligatorily triggered by suffixes, like *-no* 1MIN in (18b). However, it is only optionally triggered by enclitics like the TAM particles (see §2.6.3 below). For example, the perfect particle *=to* only optionally triggers vowel harmony on *-kä*; either forms are attested/acceptable (21)⁵.

- (21) *i-tou-{kä/kä}=to* (250717)
 ASP-bring.AV-DIR3=PRF
 ‘S/he has brought (something) there’

An even closer minimal pair is shown in (22). Äiwoo has both a suffix and an enclitic whose form is /^ŋgu/, respectively an object-marking suffix and a negative particle. Despite being segmentally identical, the suffix obligatorily triggers vowel harmony (22a), whereas the enclitic only optionally does so (22b). (The null -∅ⁿ 3MIN suffix might be a potential confound in (22b); see fn. 5.)

(22) **Suffixes obligatorily trigger vowel harmony, enclitics only optionally do so:**

- (250717)
- | | |
|--|--|
| a. <i>i-tu-{kä/*kä}-gu-∅^ŋ</i> | ⇒ /✓ituka ^ŋ gu, Xitukæ ^ŋ gu/ |
| ASP-bring.UV-DIR3-OBJ-1MIN | |
| ‘S/he brought me there’ | |
| b. <i>ba i-tu-{kä/kä}-∅ⁿ=gu</i> | ⇒ /✓ituka ^ŋ gu, ✓itukæ ^ŋ gu/ |
| NEG ASP-bring.UV-DIR3-3MIN=NEG | |
| ‘S/he didn’t bring (it) there’ | |

⁵ The back-harmonized form *i-tou-kä=to* was judged negatively in one elicitation session (2025-07-28), though similar forms are amply attested in the corpus. The fact that (21) is an Actor Voice form, as opposed to Undergoer Voice in (18b), is orthogonal to the issue. The same optionality arises in UV (i), although in this case there would also be a null suffix (-∅ⁿ 3MIN), which might potentially constitute an additional confound.

- (i) *i-tu-{kä/kä}-∅ⁿ=to* (250717)
 ASP-bring.UV-DIR3-3MIN=PRF
 ‘S/he has brought (it) there’

The following forms (both functional and lexical ones) are known to show this harmony pattern: *-kä~kâ* DIR3, *nä~nâ-* IRR, *wâ~vä-* CAUS, *kä~kâ* ‘say/think/want’, *wä~wâ* ‘go’, and possibly also *ngä~ngâ* ‘eat.UV’, though with this root the alternation seems (impressionistically) less frequent, with the front vowel form (*ngä*) predominating. Following the literature, I will consistently use the form with /æ/ as the citation form of these morphemes, as this is the one found when they are not followed by anything in the same phonological word (e.g. *itukä Luk* ‘Luke brought (it) there’).

Another harmony-like process affects the prefix *ki~ku-* ‘imperfective’ and the 3AUG agreement prefix *li~lu-*. Once again, the vowel depends on the presence of back vowels and/or labial consonants in the following syllable (23).

- | | |
|--------------------------|---------------------|
| (23) a. <i>ki-li-vei</i> | b. <i>ku-lu-woi</i> |
| IPFV-3AUG-weave.AV | IPFV-3AUG-plant.AV |
| ‘They are weaving’ | ‘They are planting’ |

Unlike in the case of /æ~ə/ vowel harmony discussed above, there seems to be some degree of optionality to this process. For example, the sequence IPFV-3AUG-bring.AV ‘they are bringing’ has been volunteered by my consultant both as *ki-li-tou* and *ku-lu-tou*.

OPTIONAL METATHESIS/COPYING OF /u/ When /u/ is in a post-stressed position, it can frequently (but optionally) undergo a phonological process that could be described in two ways. One could either say that /u/ metathesizes with the preceding consonant, or alternatively, copying of /u/, then followed by deletion of the original /u/ due to high vowel deletion (see below). This can in turn feed other phonological processes, like glide formation (/iu/ > [ju]). The examples in (24) are from Næss (in prep), with some annotations added; those in (25) are from my own data.

(24) Optional metathesis of /u/:

- a. *i-du* \implies [júⁿd^w] < /iⁿdu/; non-metathesized: [íⁿd^w]
ASP-finish
 - b. *i-tu* \implies [jút^{wh}] < /itu/; non-metathesized: [ít^{wh}]
ASP-bring.UV
 - c. *ba ku-lu-pu-mä-le=gu* \implies [kulupmæléú^ŋg^w] < /kulupumæle^ŋgu/
NEG IPFV-3AUG-go-DIR1-UA=NEG
 - d. *me-ku-wo-ute* \implies [mèukwoúte] < /mekuwoute/
1AUG-IPFV-go-again
 - e. *i-pulo-to=wâ* \implies [jùploróá] < /ipulotowa/
ASP-burn=PRF=DIST
- (25) a. *pesigiläi-du* \implies [pesi^ŋglæjúⁿd^w] < /pesi^ŋgilæjⁿdu/ (240721)
boys-all
- b. *i-tu-i* \implies [jutwí:] < /itui/
ASP-bring.UV (240805)

STRESS In general, stress in Äiwoo is trochaic. Seemingly, a trochee is counted as being formed by two morae; each vowel is a mora, so that a syllable with two vowels or a long vowel forms a trochee by itself. For example, the verb ‘fish with line’ has the forms *eta* in Actor Voice and *etai* in Undergoer Voice. Both forms have two syllables, but the latter has a heavy (bimoraic) final syllable, and as a result stress assignment is different (26).

- (26) a. /eta/ ‘fish with line.AV’
 $(\varphi e.ta) > [\acute{e}.ta]$
- b. /etai/ ‘fish with line.uv’
 $e.(\varphi tai) > [e.tái]$

Feet are right-aligned with the edge of the phonological word. The rightmost foot gets the primary stress, and every preceding foot gets a secondary stress⁶:

- (27) a. *eagovä* ‘disease’
 $/ea^{\text{H}}govæ/ > (\varphi ea)(\varphi ^{\text{H}}go.væ) > [\grave{e}a^{\text{H}}góvæ]$
- b. *ki-lolopâ-päko-mana* ‘s/he is speaking very well’
 IPFV-speak-good-very
 $/ki-lolopa-päko-mana/ > klo(\varphi lopa)(\varphi päko)(\varphi mana) > [klolòpapäkomána]$

Both suffixes and enclitics seem to be counted as part of the phonological word for the calculation of stress assignment, although there are unresolved questions as to exactly how this process works. The following facts are at least descriptively true. If there is one single monomoraic suffix/enclitic, this is ignored for the purposes of stress assignment, and ends up as extrametrical:

- (28) a. *i-epavi-no* ‘I cooked (it)’
 ASP-cook.uv-1MIN
 $/i-epavi-no/ > je(\varphi pavi)no > [jepávino]$
 NOT: $(\varphi jepa)(\varphi vino) > ^*[jèpavíno]$
- b. *i-epavi-∅ⁿ=to* ‘S/he has cooked (it)’
 ASP-cook.uv-3MIN=PRF
 $/i-epavi=to/ > je(\varphi pavi)to > [jepáviro]$
 NOT: $(\varphi jepa)(\varphi vito) > ^*[jèpavíro]$

However, if there is either a sequence of two monomoraic suffixes/enclitics, or one bimoraic suffix/enclitic, these form their own foot, and thus receive primary stress (since they are at the right edge of the word):

- (29) a. **Two monomoraic suffixes:**
i-epavi-kâ-no ‘I cooked (it) for them’
 ASP-cook.uv-DIR3-1MIN
 $/i-epavi-ka-no/ > je(\varphi pavi)(\varphi kano) > [jepàvikáno]$
 NOT: $(\varphi jepa)(\varphi vika)no > ^*[jèpavíkano]$

6 This is a simplification, but it will suffice for the purposes of this section. Morphological factors like root structure play a factor in stress assignment. More details can be found in Næss (in prep.).

- b. **One bimoraic suffix:**
i-epavi-ngopu ‘We are cooking (it)’
 ASP-cook.UV-1AUG
/i-epavi-ŋopu/ > je(φ pavi)(φ ŋopu) > [jepàviŋóp^{wh}]⁷
- (30) a. **Two monomoraic enclitics:**
i-epave=to=wâ ‘S/he has cooked (something)’
 NEG ASP-cook.AV=PRF=DIST
/i-epave=to=wâ/ > je(φ pave)(φ towa) > [jepàverówâ]
 NOT: (φ jepa)(φ vete)wâ > *[jèpavérowâ]
- b. **One bimoraic enclitic:**
i-epave=kaa
 ASP-cook.AV=FUT
/i-epave=ka:/ > je(φ pave)(φ ka:) > [jepàveká:]

If there are three monomoraic suffixes/enclitics, then the last one is extrametrical, and the first two form their own foot:

- (31) *i-epavi-kâ-no=to* ‘I have cooked (it) for them’
 ASP-cook.UV-DIR3-1MIN=PRF
/i-epavi-ka-no=to/ > je(φ pavi)(φ kano)to > [jepàvikánoro]
 NOT: (φ jepa)(φ vika)(φ noto) > *[jèpavíkanóro]

However, in a context with one monomoraic suffix and either two monomoraic enclitics or one bimoraic one, the enclitics form their own foot and the suffix is seemingly “skipped”, remaining thus extrametrical word-internally:

- (32) a. *i-epavi-no=to=wâ* ‘I have cooked (it)’
 ASP-cook.UV-1MIN=PRF=DIST
/i-epavi-no=to=wâ/ > je(φ pavi)no(φ towa) > [jepàvinorówâ]
 NOT: > (φ jepa)(φ vino)(φ towa) > *[jèpavinorówâ]
- b. *ki-epavi-no=ngaa* ‘I will cook (it)’
 IPFV-cook.UV-1MIN=FUT
/ki-epavi-no=ŋaa/ > kje(φ pavi)no(φ ŋaa) > [kjepàvinoŋá:]
 NOT: (φ kjepa)(φ vino)(φ ŋaa) > *[kjèpavinoŋá:]

HIGH VOWEL DELETION Finally, another prominent process – mentioned in passing above – is the reduction of high vowels /i, u/. First, when preceding a vowel, /i, u/ are reduced to a glide [j, w]; e.g. *nulie* [núlje] ‘pana’, *leluwo* [lélwo] ‘dance’. An underlying sequence of /u-i/ is realized with the /u/ undergoing glide formation and the /i/ being lengthened, e.g. *tu-i* ‘bring.UV-3AUG’ [twí:]. More strikingly, when they are unstressed, high vowels are either devoiced or fully deleted, often leaving a palatalized/labio-velarized coarticulation on the preceding consonant: *laki* ‘small’ /laki/ > [lák^{jh}], *nenu* ‘coconut’

⁷ With high vowel deletion; see below.

/nenu/ > [nén^W]. When the deleted high vowel follows a voiceless stop, this is articulated as aspirated; when it follows a voiced stop, this is devoiced and often aspirated when word-final, but it retains pre-nasalization. Compare *nuku* ‘my leg’ /nuku/ > [núk^{wh}] vs. *nugu* ‘POSS.TOOL.1MIN’ /nuŋgu/ > [núŋk^{wh}].

High vowel deletion is also the only source of surface consonant clusters and coda consonants in the language. The only allowed underlying syllable structures are CV, VV and V: (e.g. *bi* ‘bake.uv’, *ea* ‘bad’, *ii* ‘peel.uv’). However, high vowel deletion can give rise to both onset consonant clusters and coda consonants, e.g. *ginoji* ‘our son’ /ŋginoŋdʒi/ > [ŋknóŋtʃ]. This vowel deletion process is sometimes avoided in very slow and careful speech, with the vowel being pronounced as fully voiced, but this is rather exceptional. For example, my consultant would only pronounce these vowels fully sometimes when repeating a word back to me slowly, to help me transcribe it correctly. High vowel deletion is so pervasive that when Äiwoo speakers who are not trained in the standard orthography (that is, most Äiwoo speakers; cf. §2.2) use it in writing in informal contexts (e.g., on social media), they will omit the vowels elided by this process. For example, *mi=päko* [mpækə] ‘the good one’ will be spelled as ⟨mpako⟩⁸.

High vowel deletion interacts with stress in interesting ways. Descriptively, only non-word-initial unstressed high vowels are deleted. This would entail that stress assignment precedes high vowel deletion. And indeed, in most cases this seems to be true. Consider the dataset in (33). In (33a), first the bisyllabic word is parsed into one foot, stress is assigned to the leftmost mora, and as a result the final /u/ is stressless, so it deletes. In (33b), however, we’ve added a suffix *-mu*. Now, the foot is shifted to the right, so that the first /u/ is now stressed, and therefore does not delete. Adding one more suffix changes things again: now we have two whole feet (33c). As a consequence, the first and the third /u/ get deleted, but not the middle one, because it is stressed. The surface forms are thus correctly predicted by ordering stress assignment before vowel deletion.

(33)	a.	[ŋáŋk ^{wh}] <i>ngâgu</i> to.1MIN 'To me'	/ŋaŋgu/ (_φ ŋaŋgu) ŋáŋgu ŋáŋk ^{wh} ✓	(underlying form) (subdivision into feet) (stress assignment) (high vowel deletion)
	b.	[ŋaŋgum ^W] <i>ngâgu-mu</i> to-2MIN 'To you'	/ŋaŋgumu/ ŋa(_φ ŋgumu) ŋaŋgumu ŋaŋgum ^W ✓	(underlying form) (subdivision into feet) (stress assignment) (high vowel deletion)
	c.	[^m ba ŋàŋk ^W múŋk ^{wh}] <i>ba ngâgu-mu=gu</i> NEG to-2MIN=NEG 'Not to you'	/ŋaŋgumuŋgu/ (_φ ŋaŋgu)(_φ muŋgu) ŋàŋgumúŋgu ŋàŋk ^W múŋk ^{wh} ✓	(underlying form) (subdivision into feet) (stress assignment) (high vowel deletion)

⁸ In this kind of context, speakers will also stick to the symbols available on English keyboards and thus omit the diacritics on ⟨ä⟩ and ⟨â⟩.

However, the stress pattern of certain words seems to give rise to an ordering paradox, where vowel deletion must precede stress assignment in order to get the correct surface form. Consider (34). The surface form of *itogulo* 'S/he hit (it)' is [itóŋglo], with the underlying /u/ getting deleted. However, if metrification and stress assignment precede high vowel deletion, we would incorrectly predict *[itóŋgúlo] (34a). Instead, to get to the actual form we would need high vowel deletion to feed parsing into feet and stress assignment (34b), which contradicts the ordering established in (33).

- | | | | |
|---------|-----------------|------------------------------------|---------------------------------|
| (34) a. | [itóŋglo] | /itoŋgulo/ | (underlying form) |
| | <i>i-togulo</i> | (φ ito)(φ ŋgulo) | (subdivision into feet) |
| | ASP-hit.UV | itoŋgúlo | (stress assignment) |
| | 'S/he hit (it)' | itoŋgúlo ✗ | ([u] is stressed, can't delete) |
| b. | | /itoŋgulo/ | (underlying form) |
| | | itoŋglo | (high vowel deletion!) |
| | | i(φ toŋglo) | (subdivision into feet) |
| | | itoŋglo ✓ | (stress assignment) |

Another similar case is given in (35). Here again, ordering stress assignment before vowel deletion would predict the wrong surface stress pattern, *[inú^mbo] rather than the existing [ín^mbo]. This case, however, has an additional complication: the prenasalization component of the voiced stop has unclear syllabicity status.

- | | | | |
|---------|----------------------|----------------------------------|---------------------------------|
| (35) a. | [ín ^m bo] | /inu ^m bo/ | (underlying form) |
| | <i>i-nubo</i> | i(φ nu ^m bo) | (subdivision into feet) |
| | ASP-die | inú ^m bo | (stress assignment) |
| | 'S/he died' | inú ^m bo ✗ | ([u] is stressed, can't delete) |
| b. | | /inu ^m bo/ | (underlying form) |
| | | in ^m bo | (high vowel deletion!) |
| | | (φ in ^m bo) | (subdivision into feet) |
| | | ín ^m bo ✓ | (stress assignment) |

I leave the development of a full account of Äiwoo stress and vowel deletion as an interesting problem open for future research.

2.4.3 ESSENTIAL MORPHOPHONOLOGICAL PATTERNS

A few interactions at the morphology-phonology interface are worthy of mention. A first one concerns the 3AUG agreement prefix *li~lu-*. When this precedes forms beginning with /v/ or /w/, these can instead optionally begin with /p^(w)/ (remember that /v/ is spelled as ⟨v⟩ in the orthography). This holds both for lexical roots, like *vängä~pängä* 'eat.AV' in (36), and functional morphemes, like the causative prefix *wâ~pâ~pwâ-* in (37).

- (36) a. *i-ki-vängä*
1MIN-IPFV-eat.AV
'I am eating'
- b. *ki-li-{pängä/vängä}*
IPFV-3AUG-eat.AV
'They are eating'
- (37) a. *i-ku-wâ-nubo*
1MIN-IPFV-CAUS-die
'I am killing'
- b. *ku-lu-{p(w)â/wâ}-nubo*
IPFV-3AUG-CAUS-die
'They are killing'

Ross & Næss (2007) suggest a diachronic explanation for this. Proto-Oceanic *p consistently lenites to /v/ before vowels in Äiwoo (and deletes before /u/): Proto-Oceanic *panjan 'eat' > Äiwoo *vängä* 'eat.AV'; Proto-Oceanic *pa- 'causative' > Äiwoo *wâ-* 'causative'. Somehow, the presence of this particular agreement prefix would at least optionally trigger the appearance of the unlenited forms *pängä*, *pâ~pwâ-*. However, because the diachronic reconstruction of Äiwoo and Proto-Reef-Santa Cruz is still in progress, it's not clear that all modern Äiwoo forms that show a /{v/w}~p/ alternation actually go back to Proto-Oceanic forms with *p-. This alternation is also interesting on the synchronic side, as the choice of a particular stem allomorph (*pängä* rather than default *vängä*) seems to be triggered by a structurally higher affix (i.e., this is outward-sensitive allomorphy; Bobaljik 2000, 2012, a.m.o). I do not attempt to give a synchronic analysis of this alternation.

The next two phenomena I discuss concern some aspectual/modal prefixes. First, the aspectual prefix *i-* obligatorily disappears when it is not word-initial (38). In a verb with a 3MIN subject, *i-* will be word-initial, and therefore it must be pronounced (38a). However, if preceded by anything within the same phonological word, *i-* obligatorily deletes; (38b,c) show this with respectively a subject agreement prefix and a relativizer⁹. Note that there would be nothing phonologically ill-formed about **deibakisi*, **meibakisi* (cf. *mei* 'sleep.IMP'), so this must be a morphological constraint. As a partial exception, the 3AUG subject prefix *li-lu-* is consistently ordered to the right of the aspectual prefixes instead of to their left (38d); in this case, *i-* is curiously optional. Contrast this with the imperfective prefix *ki-*, which goes in the same morphological slot but is always realized faithfully (39).

- (38) ASP *i-* only surfaces when word-initial: (250717)
- | | |
|--|--|
| a. <i>*(i-)bakisi</i>
ASP-run
'S/he ran' (<i>i-</i> obligatory) | c. <i>me=(*i-)bakisi</i>
REL:person=ASP-run
'The person who ran' (<i>i-</i> impossible) |
| b. <i>de-(i-)bakisi</i>
12AUG-ASP-run
'We ran' (<i>i-</i> impossible) | d. <i>((i-)li-bakisi</i>
ASP-3AUG-run
'They ran' (<i>i-</i> optional) |
- (39) IPFV *ki-* never disappears: (250717)
- | | |
|---|---|
| a. <i>*(ki-)bakisi</i>
IPFV-run
'S/he is running' | b. <i>de-*(ki-)bakisi</i>
12AUG-IPFV-run
'We are running' |
|---|---|

⁹ For details about φ-agreement and relativizers, see chapter 5 and chapter 4, appendix 4.A respectively.

- c. *me=(*(ki-)bakisi*
 REL:person=IPFV-run
 'The person who is running'

d. *(* (ki-)li-bakisi*
 IPFV-3AUG-run
 'They are running'

The last morphophonological phenomenon is an interaction between the aspectual/modal prefixes *nä-* ‘irrealis’ and *de-* ‘apprehensive’, and the 1MIN subject agreement prefix *i-*. As we have seen in (38b)–(39b), the normal position of an agreement prefix is to the left of the aspectual/modal prefixes (with the only exception of 3AUG *li-*). As for the 1MIN prefix *i-*, when the verb bears imperfective aspect, indeed we see the standard order φ-aspect-verb (40a). However, something different happens with the prefixes *nä-* ‘irrealis’ or *de-* ‘apprehensive’ instead of the imperfective¹⁰. In combination with 1MIN *i-*, these two markers create portmanteaux forms where there is no overt *i-* prefix but the initial consonant of the modal prefix marker is palatalized (40b,c). As a contrast, (41b,c) show the non-fused realization of these two modal prefixes when combined with a different φ-agreement prefix, here *mu-* 2MIN.

- (40) 1MIN *i*- forms portmanteaux with IRR *nä-* and APPR *de-*: (25.07.17)

- a. *kâ-no=ngä* ***i-ki-*-basiki=kaa**
 KÄ-1MIN=CV 1MIN-IPFV-run=FUT
 'I think that I will run'

b. *kâ-no=ngä* ***nyä-*-basiki=kaa**
 KÄ-1MIN=CV 1MIN.IRR-run=FUT
 'I want to run' (lit. 'I want that I will run')

c. *kâ-no=ngä* ***je-*-basiki=io=waa**
 KÄ-1MIN=CV 1MIN.APPR-run=PROH=FUT
 'I don't want to run' (lit. 'I want that I won't run')

- (41) Other (non-1MIN) prefixes don't form any portmanteaux: (25.07.17)

- a. *kâ-no=ngä* ***mu-ki-****basiki=kaa*
 KÄ-1MIN=CV 2MIN-IPFV-run=FUT
 'I think that you will run'

b. *kâ-no=ngä* ***mu-nä-****basiki=kaa*
 KÄ-1MIN=CV 2MIN-IRR-run=FUT
 'I want you to run' (lit. 'I want that you will run')

c. *kâ-no=ngä* ***mu-de-****basiki=io=waa*
 KÄ-1MIN=CV 2MIN-APPR-run=PROH=FUT
 'I don't want you to run' (lit. 'I want that you won't run')

In a sense, it seems that 1MIN *i*- is being shifted rightward by a short distance: it infixes after (or metathesizes with) the first consonant of the modal prefix, triggering its palatalization and then disappearing (42). This is the regularly expected phonological outcome,

10 Although these markers can be found in matrix clauses, they are most common under the attitude predicate *kā~kā*. This verb can mean ‘think, say’ if the embedded clause has imperfective or general aspect (*i-*, mentioned above), and ‘want/not want’ if the embedded clause has irrealis or apprehensive respectively.

since /n/ and /ŋ/ are neutralized to /ŋ/ before /i/, and /d/ and /dʒ/ are neutralized to /dʒ/ in the same environment (see §2.4 above).

I assume that some kind of morphotactic constraint can be specified to model the idiosyncratic linearization of this particular φ -prefix, although I leave its precise formulation outside the scope of this work.

2.5 MORPHOSYNTAX IN THE NOMINAL DOMAIN

2.5.1 THE NUMBER SYSTEM

NUMBER ON PRONOUNS Typically for an Oceanic language, Äiwoo has a rich pronominal inventory, making four person contrasts and three number contrasts. The number system is a typologically unusual one, with the three categories minimal, augmented, and unit-augmented (Næss 2006, Ross & Næss 2007, et seq.). The full paradigm is shown in (43), with English translations and what the equivalent gloss would be in a singular-plural(-dual-trial) system; see chapter 5, §5.5 for a more detailed morphosyntactic analysis of these forms.

- (43) Paradigm of full pronouns:

	Form	Translation	Equivalent
1MIN	<i>iu</i>	'I'	1SG
12MIN	<i>iuji</i>	'You and I; we two.INCL'	1DU.INCL
2MIN	<i>iumu</i>	'You'	2SG
3MIN	<i>inâ/ine</i>	'He, she' (respectively DIST/PROX)	3SG
1AUG	<i>iungo(pu)</i>	'Me and others; we.EXCL (≥ 3)'	1PL.EXCL
12AUG	<i>iude</i>	'You, me, and others; we.INCL.PL (≥ 4)'	1PL.INCL
2AUG	<i>imi</i>	'Y'all (≥ 3)'	2PL
3AUG	<i>ijii</i>	'They (≥ 3)'	3PL
1UA	<i>iungole</i>	'Me and someone else; we two.EXCL'	1DU.EXCL
12UA	<i>iudele</i>	'You, me, and someone else; we three.INCL'	1TRI.INCL
2UA	<i>imile</i>	'You two'	2DU
3UA	<i>ijiile</i>	'They two'	3DU

An informal/intuitive way to describe such a system is to say that here, the first person inclusive has a “singular” form, meaning ‘you and I’ (12MIN *ijuji*). Of course, this is not singular in the strict sense, since its reference is not atomic but refers to two individuals;

hence, the terms used are ‘minimal’ and ‘augmented’ rather than ‘singular’ and ‘plural’. To this, Äiwoo also adds the category ‘unit-augmented’, whose reference is that of the corresponding minimal form “plus one”. These forms would thus correspond to duals for first exclusive, second, and third person, but to a trial for first person inclusive (12UA *iudele*), since this refers to three individuals. This category is not only unified by its semantics but also its morphology: the unit-augmented forms are consistently built on the augmented forms with the addition of a suffix *-le*. For more information about minimal–augmented–unit-augmented systems, see [Cysouw \(2003\)](#) and [Harbour \(2016\)](#), among others. See also [Thomas \(1955\)](#) and [McKay \(1978\)](#) for early descriptions of this paradigmatic structure.

NUMBER ON NOUNS The rich system of person and number distinctions made on pronouns contrasts with that found in the nominal system, which shows little to no number distinctions ([Næss 2018a](#)). At a general level, Äiwoo nouns are largely number-neutral, in the sense that the same form can express both atomic and non-atomic reference. However, nouns can be divided into three categories in terms of how they behave with respect to number, distinguished by animacy. Their differences are previewed in (44); by “number morphology” here I mean morphology on the noun itself.

(44) Behavior of different classes of nouns with respect to number:

	Number morphology	Verbal agreement
Inanimates	X	(X/??)
Non-human animates	X	✓ (obligatory)
Humans	✓ (optional)	✓ (obligatory)

First, inanimate nouns never take any number morphology, and they are also generally incompatible with 3AUG verbal agreement (45) (though sporadic exceptions are attested, cf. (88b) below). Here, the agreement prefix was rejected on the modifier *dâu* ‘many’ (note that this is an intransitive verb in a relative clause structure; lit. ‘[those books [that are many]]’), and the consultant expressed an intuition that the presence of agreement didn’t fit the inanimate noun. Impressionistically, nouns referring to small animals (e.g., ants) also pattern this way.

(45) Inanimates are incompatible with number agreement on verbs: (240805)

buk (**li-*)dâu eângâ ku-tu-kä mikilivaavee=kaa ngä skul
 book 3AUG-many that IPFV-bring.UV-DIR3 teachers=FUT to school
 ‘The teachers will bring all those books to school’

Native speaker’s comment: “*li-* always refers to people, human beings”

Nouns referring to non-human animates (at least those of a larger size, like dogs, pigs, etc.) are again number-neutral, but they obligatorily trigger verbal agreement depending on their reference. In both sentences in (46a), the noun *kuli* ‘dog(s)’ has the same form. However, when there is no 3AUG agreement on the verb the only available reading is atomic (46a); viceversa, when the verb has the 3AUG prefix *li-* the noun can only be read as non-atomic (46b).

- (46) **Animate nouns: number-neutral, obligatory verbal agreement** (250717)
- | | |
|--|--|
| a. <i>kuli ki-bakisi</i>
dog IPFV-run
✓SG: ‘The dog is running’
✗PL: ‘The dogs are running’ | b. <i>kuli ki-li-bakisi</i>
dog IPFV-3AUG-run
✗SG: ‘The dog is running’
✓PL: ‘The dogs are running’ |
|--|--|

This type of contrast, however, is contingent on the availability of agreement for the argument in question. In syntactic positions that don’t trigger agreement, we see full number-neutrality, so that the sentence is simply ambiguous. This is the case, for example, for subjects of Undergoer Voice verbs (47a), or objects of Actor Voice verbs (47b). See chapter 5 for when agreement is and is not possible.

- (47) **Nouns in non-agreeing positions are fully number-neutral:** (250717)
- | |
|--|
| a. <i>devalili i-mangi kuli</i>
child ASP-bite.UV dog
‘The dog(s) bit the child’ |
| b. <i>i-ku-wâpunâ-kä kuli</i>
1MIN-IPFV-feed.AV-DIR3 dog
‘I am feeding (a) dog(s)’ |

In other cases, the atomic and non-atomic readings can be disambiguated not by agreement, but by adding an optional 3AUG pronoun in the post-verbal position; this is possible for fronted objects of Undergoer Voice verbs (48)¹¹. This pronoun is optional in the sense that a non-atomic (plural) reading is possible even in its absence. In chapter 4 I suggest this can be analyzed as an optional realization of the object’s lower copy, which receives a reduced spell-out as a pronoun; see van Urk (2018) for a similar phenomenon in Dinka.

- (48) *poi i-dââ-no (ijii)* (240201)
- | |
|---|
| dog ASP-tie.UV-1MIN 3AUG |
| With <i>ijii</i> : ‘I tied the pigs/*pig’ |
| Without <i>ijii</i> : ‘I tied the pig(s)’ |

Finally, nouns referring to humans are similar to non-human animates in that they are number-neutral but trigger obligatory agreement – where syntactically available – if their reference is non-atomic (49). However, if agreement is not possible, both atomic and non-atomic readings are available (50).

¹¹ *Contra Næss (2018a)*, I don’t analyze the *ijii* found in a similar position in possessive constructions like (i) as constituting a form of number marking. In Roversi (2025b) I show that the structure of possessed DPs contain a relative clause: the possesum is the relativized object, POSS is a transitive verb, and the possessor is the embedded subject. More literally, (i) is thus “the dogs [that we have __]”. The pronoun *ijii* here is then just the standard realization of the object in a transitive sentence with this structure, cf. (ii).

- | | |
|----------------------------|------------------------------|
| (i) <i>kuli no-de ijii</i> | (ii) <i>ku-potaa-de ijii</i> |
| dog POSS.UV-12AUG 3AUG | IPFV-search.UV-12AUG 3AUG |
| ‘Our dogs’ | ‘We are looking for them’ |

- (49) If agreement is available, it tracks atomicity: (250717)

- a. *devalili ki-plei-lâoo ile ngä paveli enge*
child IPFV-play-always PROX in garden this
✓ SG: ‘The child is always playing in the garden’
✗ PL: ‘The children are always playing in the garden’
- b. *devalili ki-li-plei-lâoo ile ngä paveli enge*
child IPFV-3AUG-play-always PROX in garden this
✗ SG: ‘The child is always playing in the garden’
✓ PL: ‘The children are always playing in the garden’

- (50) If agreement is not available, the noun is number-neutral: (250717)

Pita i-tou-kä devalili ngä skul
Peter ASP-bring.AV-DIR3 child to school
'Peter brought (a) child(ren) to school'

However, differently from non-human animates, human nouns can optionally show “number morphology”. This consists of the marker *pe=*, which I analyze in chapter 4, appendix 4.A as a relativizer (“The people [who...]”). This marker is only compatible with human nouns, and a noun with this marker obligatorily triggers plural agreement (when available). However, it is optional: a noun can have non-atomic reference even without it. These properties are shown in (51)–(52) for nouns in both agreeing and non-agreeing positions.

- (51) A noun marked with *pe=* must trigger verbal agreement: (250717)

pe=devalili ku-(lu-)mâea*
REL:people=child IPFV-3AUG-laugh
'The children are laughing'

- (52) *Pe=* is optional: (240919)

- a. *i-ku-potaa nurse*
1MIN-IPFV-search.AV nurse
'I am looking for a nurse/nurses'
Comment: “It could be one nurse or many”
- b. *i-ku-potaa pe=nurse*
1MIN-IPFV-search.AV REL:people=nurse
'I am looking for nurses'
Comment: “[This only means] more than one nurse”

Nouns marked by *pe=* don’t always have strictly non-atomic reference, however. In at least some non-downward-entailing environments, they can have both atomic and non-atomic readings, like English plurals¹². Consider the question/answer pair in (53). The question contains the form *pedevalili* ‘children’. However, given the response pattern, this sentence clearly must be asking “do you have $n \geq 1$ children?” and not “do you have $n > 1$ children?”. Therefore, the form *pedevalili* has a so-called “inclusive plural” readings, since here it can refer to both atoms and non-atoms.

12 The environments this has been tested for are polar questions and under clausal negation.

- (53) Nouns with *pe=* have “inclusive plural” readings in (at least some) non-downward entailing environments: (240919)

- Q: *pe=devalili no-mu i-to?*
 REL:people=child POSS-2MIN ASP-exist
 ‘Do you have children?’ (lit. ‘Do children of yours exist?’)
- A: {#*ba* / ✓*ee*}, *nou nyigi*
 no yes POSS.1MIN one
 ‘#No/✓ Yes, I have one’
 Comment: “*ba, nou nyigi* [‘No, I have one’] could be a good answer if the question is ‘do you have many children?’”

Äiwoo thus constitutes an example of a language with number-neutral nouns and optional plural marking (at least for a subset of its nouns), whose plural forms nonetheless allow inclusive plural readings. This was assumed not to be possible (Rullmann & You 2006, Bale et al. 2011), and constitutes a problem for certain theories of the semantics of number (Sauerland et al. 2005, Farkas & de Swart 2010). However, in addition to Äiwoo, the same pattern has also been reported for Southern Tiwa (Dawson 2024), Buryat (Bylinina & Podobryaev 2020), and Balinese (Arka & Dalrymple 2021). I leave it to further research to investigate the semantics of number in Äiwoo.

The reason why above I put “plural morphology” in scare quotes when introducing *pe=* is that aside from its semantics, I don’t analyze *pe=* as a nominal prefix restricted to human nouns (*contra* Næss 2018a), because it can attach to clearly phrasal constituents. For example, it can attach to a PP describing a location (54a), or also to toponyms (54b). As such, *pe=* is part of a group of relativizers; see chapter 4, appendix 4.A.

- (54) a. *pe=[ngâ nuumä eângâ]* b. *pe=[Honîara]*
 REL:people=PREP village that REL:people=Honîara
 ‘People in/from that village’ ‘People from Honîara’

Another way of overtly marking non-atomic readings for human nouns is with another relativizing constructions, consisting of the generic relativizer *mi=* (see again 4.A). The “singular” counterpart of these expressions usually uses the relativizer *me=* instead. These forms are often used to express reference to e.g. professions (55)–(56), or other salient human groups, such as ethnic or religious groups (57).

- | | |
|---------------------------------------|-------------------------------------|
| (55) a. <i>me=ki-vaavee</i> | b. <i>mi=ki-li-vaavee</i> |
| REL:person=IPFV-show | REL=IPFV-3AUG-show |
| ‘Teacher’, lit. ‘Person who shows’ | ‘Teachers’, lit. ‘People who show’ |
| | |
| (56) a. <i>me=ki-tei</i> | b. <i>mi=ki-li-tei</i> |
| REL:person=IPFV-fish | REL=IPFV-3AUG-fish |
| ‘Fisherman’, lit. ‘Person who fishes’ | ‘Fishermen’, lit. ‘People who fish’ |
| | |
| (57) a. <i>mi=lu-wopa</i> | b. <i>mi=li-jiu</i> |
| REL=3AUG-white | REL=IPFV-Jew |
| ‘White people’ | ‘Jews, Jewish people’ |

Superficially, the “plural” forms with *mi*= have similar distributional properties to nouns marked with *pe*=, though this has not been investigated in detail. The two markers are also not in complementary distribution: for example, both *pe=nurse* and *mi=ki-li-nurse* are possible for ‘nurses’. It is not clear to me what the possible semantic difference(s) might be between these two forms.

2.5.2 STRUCTURE OF NOMINAL CONSTITUENTS

Nominal constituents in Äiwoo don’t have particularly rich morphology or structure. There are no case distinctions, unlike other Austronesian languages with similar voice systems (e.g. Tagalog; Schachter & Otanes 1972, a.o.). The noun is always leftmost in a nominal, and it may be followed by a relative clause, the demonstratives *enge/eângâ* (proximal/distal)¹³, and the deictic particles =Ce/Câ (proximal/distal) (58).

- (58) [DP *nuwopa mi=mâeâ enge=ke*] *nä-ve-no* (231019)
 house REL=new this=PROX IRR-buy.UV-1MIN
 ‘I would buy this new house/these new houses’

Sometimes, nouns can also be modified by the quantifier *dä* ‘some’ (59), although this more frequently appears cliticized in a position the immediate left of the TAM sequence (60). The distribution of *dä* is not well understood.

- (59) *Dä* ‘some’ modifying a noun:

- a. [*dä sigiwâu*] *lâ i-lää-kä-to dowâlili ngâgo-* \emptyset^n =*nâ*
 some young.man DIST ASP-give.AV-DIR3=PRF child to-3MIN=DIST
 ‘A young man had given her a child’ (Usaliki 275)
- b. [*numotäpi dä*] *lamaa i-luwa-kä-* \emptyset^n , ...
 betelnut some PRT ASP-take.UV-DIR3-3MIN
 ‘If he takes some betelnuts, ...’ (Naive 28)

- (60) *Dä* ‘some’ cliticized in the verb complex:

- a. *mikilivaavee ki-li-tou-mä=dä=naa nupwää ngä skul*
 teachers IPFV-3AUG-bring.AV-DIR1=some=FUT clothes to school
 ‘Some (of the) teachers will bring clothes to school’
- b. *nupwää eângâ ku-tu-mä mikilivaavee=dä=naa ngä skul*
 clothes that IPFV-bring.UV-DIR1 teachers=some=FUT to school
 ‘The teachers will bring some of those clothes to school’

Apart from *dä* ‘some’, the only elements that may precede the noun are the deictic markers *ile/ilâ* PROX/DIST (61a). These forms can stand by themselves, in which case they seem to convey either locational or temporal deixis, i.e., ‘here/there’ or ‘now/then’. However, these can also attach to both DPs (61a) and PPs (61b). In the latter case, they cannot intervene between the preposition and its complement noun phrase (61b).

13 These also have phonologically reduced forms *ee/eââ*.

(61) *Ile PROX* precedes either a DP or a PP:

- a. *ile nubole enge i-kili Mary bugulo* (230608)
PROX taro this ASP-dig.UV Mary yesterday
‘Mary harvested this taro yesterday’
- b. *i-ki-vängä-vesi sii ✓{ile} ngä *{ile} täpilo enge* (240215)
1MIN-IPFV-eat.AV-always fish **PROX** PREP **PROX** bowl this
‘I always eat fish in this bowl’

A variety of modifiers that in other languages are found on nominals, in Äiwoo must be expressed in the form of a relative clause modifying the noun instead. This applies to “adjectives” and numerals, both of which are – structurally – intransitive verbs. For adjectives, this was shown for *mâeâ* ‘new’ in (58), where to modify the noun *nuwopa* ‘house’ it had to be accompanied by the relativizer *mi=*; *nuwopa mimâeâ* ‘new house’ is thus, more literally, ‘(a/the) house that is new’. Often, however, this relativizer is optional. The same applies to numerals (62a) and the quantifier *dâu* ‘many’ (62b).

(62) Numerals and *dâu* ‘many’ are intransitive verbs:

- a. *sime (mi=)li-eve eângâ*
person REL=3AUG-three that
‘Those three men’
- b. *sime li-dâu*
person 3AUG-many
‘Many people’

Possession, as mentioned above, is also realized structurally with a relative clause. The so-called possessive classifiers are, really, Undergoer Voice transitive verbs, of which the possessorum is the relativized object, and the possessor is the (embedded) subject (63); see Roversi (2025b) for arguments.

(63) Possessives are also relative clauses:

(230601)

- poi_i [RC -i no Pita]*
pig POSS.UV Peter
‘Peter’s pig’; lit. ‘The pig that Peter has/that is Peter’s’

Finally, PPs also cannot be embedded into a noun phrase directly in Äiwoo (64). The intended meaning must instead be conveyed with a relative clause structure (65).

(64) PPs cannot be embedded inside nominals directly:

(250116)

- a. * *[DP penyibe [PP go nupo]] ku-wâ=naa bulaape*
man with net IPFV-go=FUT tomorrow
Intended: ‘The man with the net will leave tomorrow’
- b. * *nuwopa eângâ ki-ve [DP penyibe [PP go hat]]=kaa=kâ*
house that IPFV-buy.UV man with hat=FUT=DIST
Intended: ‘The man with the hat will buy that house’

(65) A relative clause must be used instead:

(250116)

- a. [DP *penyibe mi=[RC ki-gote hat]] ku-wâ=naa bulaape*
man REL= IPFV-carry.AV hat IPFV-go=FUT tomorrow
'The man wearing a hat will leave tomorrow'
- b. *nuwopa eângâ ki-ve* [DP *penyibe mi=[RC ki-gote hat]]=kaa=kâ*
house that IPFV-buy.UV man REL= IPFV-carry.AV hat=FUT=DIST
'The man wearing a hat will buy that house'

The respective order of multiple modifiers is shown in (66) (though remember that both "adjectives", "numerals" and "possessives" are, structurally, relative clauses).

(66) Order within the noun phrase: N-“Adj”-“Num”-Dem-“Poss”

- a. *nyidâbu elo nyigi eângâ nogo-i*
day big one that POSS-3AUG
'That one big day of theirs' (Reported to me by Åshild Næss, p.c., from an Äiwoo language workshop held in Honiara)
- b. *pesigiläi li-vili eââ nogo-i*
boys 3AUG-five that POSS-3AUG
'Those five sons of theirs' (Næss in prep)

2.5.3 SHORT NOTES ABOUT DEFINITENESS AND SPECIFICITY

As should be clear from the discussion above, Äiwoo does not have articles, neither definite nor indefinite. No in-depth study has been carried out to date about the semantic interpretation of bare nouns in Äiwoo. I offer here some rather preliminary notes, which will hopefully be helpful as a starting point for further research.

One aspect where Äiwoo seems to show similarities to other Austronesian languages is how the definiteness/specificity value of *objects* are tied to the contrast between AV and UV. In general, AV is more or less incompatible with definite and specific indefinite objects (where "specific" is intended as "wide scope indefinites"), and viceversa, UV is incompatible with non-specific indefinite objects. This contrast shows two different surface manifestations. First, consider the case where an object is only interpretable as definite/specific due to some overt morphology, or in virtue of having a (contextually) unique referent. For example, if the object is either a lexical DP carrying an overt demonstrative, a proper name, or a pronoun, AV is rejected (67), and UV is the only possibility (68)¹⁴.

(67) AV is incompatible with definite objects:

(250807)

- ?* *mikilitei ku-lu-tou-ute-mä=kaa {devalili eângâ / fishermen IPFV-3AUG-bring.AV-back.AV-DIR1=FUT child that Mary / iude}*
Mary 12AUG
- Intended: 'The fishermen will bring back {that child/Mary/us}'

¹⁴ See chapter 6 for why the word order in UV is different when the object is a pronoun (68b).

- (68) UV is required instead: (250807)

- a. {*devalili eângâ / Mary*} *ku-tu-usi-mä mikilitei=kaa*
child those Mary IPFV-**bring.uv-back.uv**-DIR1 fishermen=FUT
'The fishermen will bring back that child/Mary'
- b. (*iude*) *ku-tu-usi-mä-gu-de=ngaa mikilitei*
12AUG IPFV-**bring.uv-back.uv**-DIR1-OBJ-12AUG=FUT fishermen
'The fishermen will bring us back'

Objects that are in principle compatible with both specific and non-specific readings (i.e., bare noun objects) are grammatical in both voices, but their interpretation then crucially depends on the clause's voice. Note that bare nouns are possible in any argument position, both in Actor Voice and Undergoer Voice; many instances of both can be found throughout the examples above. In AV, a bare noun object can only be interpreted as a non-specific indefinite; in UV, only as either a definite or a specific indefinite. This is shown by the contrast below. In (69), the second part of the sentence forces a non-specific indefinite reading of the bare noun object *dokta* 'doctor'; in this context, only AV is possible, and UV is rejected¹⁵. Viceversa, in (70) the second part of the sentences forces a specific reading of the bare noun object, and now only UV is possible, and not AV.

- (69) Non-specific indefinite object: ✓ AV, ✗ UV (250325)

- a. *milinurse ku-lu-potaa-ute dokta, mo ba*
nurses IPFV-3AUG-**search.AV-again.AV** doctor but NEG
i-te-kä-i=dä=gu
ASP-see.UV-DIR3-3AUG=some=NEG
'The nurses are looking for [a doctor]_{non-spec} again, but they haven't found one yet'
- b. # *dokta ku-potaa-usi milinurse, mo ba*
doctor IPFV-**search.uv-again.uv** nurses but NEG
i-te-kä-i=dä=gu
ASP-see.UV-DIR3-3AUG=some=NEG
Intended: 'The nurses are looking for [a doctor]_{non-spec} again, but they haven't found one yet'

- (70) Specific object: ✓ UV, ✗ UV (250325)

- a. *dokta ku-potaa-usi milinurse, mo Ø_{3MIN} ba*
doctor IPFV-**search.uv-again.uv** nurses but NEG
ku-mo=gu ngâ nuwopaa nyibei elenge
IPFV-stay=NEG in house.of place.sick today
'The nurses are looking for a doctor_i again, but he_i is not at the hospital today'

15 See chapter 3, §3.3.3 for how we know whether the verb forms in these sentences are AV or UV.

- b. # *milinurse ku-lu-potaa-ute dokta, mo Ø_{3MIN} ba*
 nurses IPFV-3AUG-search.AV-again.AV doctor but NEG
ku-mo=gu ngâ nuwopaa nyibei elenge
 IPFV-stay=NEG in house.of place.sick today
 Intended: ‘The nurses are looking for a doctor_i again, but he_i is not at the hospital today’

This restricted connection between the specificity value of an object and a clause’s voice is summarized in (71). The general picture is consistent with what is known for some other Austronesian languages, e.g. Tagalog (Rackowski 2002, Aldridge 2004, Rackowski & Richards 2005, Latrouite 2011, Sabbagh 2016, J. N. Collins 2019).

(71) **Summary of the connection between specificity of objects and voice:**

	Actor Voice	Undergoer Voice
Overtly definite objects:	✗	✓
Bare noun objects:	only non-specific interpretation	only specific interpretation

Although the restriction I just presented holds as a general rule, the empirical facts necessitate further inquiry. For example, a few exceptions are attested in the corpus, such as (72), where we see the clearly definite object *ilâ poi eângâ* ‘that pig’ (whose referent is introduced in the preceding clause) in an Actor Voice clause.

(72) **An Actor Voice clause with a definite object** (Næss 2015b: 280):

- poi le ku-bo-kele=to ngä sâpulâu=ke. Sime=kâ li-välâ=to*
 pig PROX IPFV-?-carve-PRF in men’s.house=PROX person=DIST 3AUG-gather=PRF
ngä sâpulâu go ki-li-vängâ=kaa ilâ poi eângâ
 in men’s.house for IPFV-3AUG-eat.AV=FUT DIST pig that
 ‘Pigs would be carved up in the single men’s house. People would gather in the single men’s house to eat that pig.’

Consider also the contrast in (73). Here, my consultant judged both sentences as perfectly acceptable, but expressed an intuition that the AV object has a mass interpretation (intuitively more akin to “all this fish”), while the UV object has a count interpretation (i.e. “this one fish here”).

- (73) a. *mikilitei ki-li-tâbonge sii enge* (241015)
 fishermen IPFV-3AUG-cut.AV fish this
 ‘The fishermen are cutting this fish’
 Comment: “[This means] more than one fish, a pile of fish”
- b. *sii enge ki-tâbu mikilitei*
 fish this IPFV-cut.UV fishermen
 ‘The fishermen are cutting this fish’
 Comment: “Sounds like only one fish”

Moreover, this connection between specificity and voice only holds in mono-clausal contexts. As mentioned in the introduction chapter, Äiwoo has a restriction on Ā-extraction that may at times force either one voice or the other, depending on which argument is being extracted; see chapter 4. In the context of subject extraction, particularly, AV is generally obligatory¹⁶. In this case, the restriction against having definite objects in AV disappears. In an informal sense, the need of respecting the Ā-extraction restriction (imposing AV here) is more important than the need of having UV for a definite object. This same interaction between the definiteness/specification of objects, voice, and Ā-extraction is also observed in Tagalog (Rackowski & Richards 2005).

- (74) Subject extraction forces AV, even with a definite object: (250728)
- a. **sime** (*mi-*)_{[RC} *ku-tou-mä=kaa* *buk eângâ]*
person REL= IPFV-**bring.AV**-DIR1=FUT book that
‘The person who will bring that book (here)’
 - b. * **sime** (*mi-*)_{[RC} *buk eângâ ku-tu-mä-Øⁿ=naa*]
person REL= book that IPFV-**bring.UV**-DIR1-3MIN=FUT
Intended: ‘The person who will bring that book (here)’

2.5.4 A SHORT NOTE ABOUT NULL ARGUMENTS

Earlier literature described Äiwoo as a language with completely free argument drop, solely restricted by context: “any argument NP can be omitted if it is retrievable from context” (Næss 2015a: 83); “[t]here is, in fact, no constraint on which arguments may be omitted in Äiwoo, under coordination or otherwise, beyond a general notion of recoverability from the discourse context” (Næss 2015b: 288, fn. 11). However, I want to argue against this description. The amended generalization I propose instead is shown in (75).

- (75) Distribution of null arguments in Äiwoo:
- a. Any 3MIN argument can always be null, in any position.
 - b. A non-3MIN argument can only be null in the preverbal position, and must be overt otherwise.

Let me first demonstrate the first part of the generalization, about 3MIN arguments. For this specific type of nominal, Äiwoo does indeed show what essentially is free argument drop, compatibly with the earlier descriptions cited above. Examples of null 3MIN subjects and objects across AV and UV are shown in (76a–d)^{17,18}, and (76e) is an example of a null 3MIN argument in the complement of a preposition (though see fn. 18).

16 At least in canonical transitive clauses; see chapters 4 and 6 for exceptions.

17 The example in (76b) contains a subject relative clause to circumvent the restriction against definite objects in AV (see §2.5.3).

18 In (76c), the 3MIN subject is not actually null, since it is represented by a floating nasal feature; see §2.6.3.3.

(76) 3MIN arguments can be null anywhere:

- a. $\boxed{\emptyset_{3\text{MIN}}}$ *ki-vängä=kaa sii* (AV subject)
IPFV-eat.AV=FUT fish
'S/he will eat fish' (25 07 28)
- b. $[penyibe \quad [RC \quad i-veve \quad \boxed{\emptyset_{3\text{MIN}}}]]=kâ \quad mekivaavee$ (AV object)
man ASP-buy.AV =DIST teacher
'The man who bought it is a teacher' (23 06 22)
- c. $\boxed{\emptyset_{3\text{MIN}}}$ *ki-ngä[-Øⁿ]=naa* (UV object and subject)
IPFV-eat.UV-3MIN=FUT
'S/he will eat it' (25 07 28)
- d. $\emptyset_{2\text{MIN}} \quad ku-tu-kâ-gu-mu=waa \quad \boxed{\emptyset_{3\text{MIN}}}$ (UV_{gu} subject)
IPFV-bring.UV-DIR3-OBJ-2MIN=FUT
'S/he will bring you'
- e. *mekivaavee i-lää-kä buk ngâgo[-Øⁿ]* (Complement of P)
teacher ASP-give.AV-DIR3 book to-3MIN
'The teacher gave him/her a book'

Any argument that is not 3MIN, however, shows a very different pattern. As stated in (75b), these arguments can only ever be null in the preverbal position (77). In this case, the argument will most often be null, and it will only be pronounced overtly for particular information-structural effects (e.g. contrastive topic or focus).

(77) Non-3MIN arguments can be null in the preverbal position: (25 07 28)

- a. $\boxed{\emptyset_{12\text{AUG}}/iude} \quad de-ki-vängä=kaa \quad sii$ (AV subject)
12AUG 12AUG-IPFV-eat.AV=FUT fish
'We will eat fish'
- b. $\boxed{\emptyset_{12\text{AUG}}/iude} \quad ku-tu-mä-gu-de=ngaa \quad \boxed{\emptyset_{12\text{AUG}}} \quad \boxed{\emptyset_{12\text{AUG}}} \quad \boxed{\emptyset_{12\text{AUG}}}$ (UV_{gu} object)
12AUG IPFV-bring.UV-DIR1-OBJ-12AUG=FUT John
'John will bring us'
- c. $\boxed{\emptyset_{12\text{AUG}}/iude} \quad ku-tu-mä-de=ngaa \quad ijii \quad \boxed{\emptyset_{12\text{AUG}}} \quad \boxed{\emptyset_{12\text{AUG}}}$ (UV_{SVO} subject)
12AUG IPFV-bring.UV-DIR1-12AUG=FUT 3AUG
'We will bring them'

In any other position of the Äiwoo clause, however, non-3MIN arguments must be overt (78). This is true both for arguments in the position between the verb and the TAM particles (78a,b), for arguments after the TAM particles (78c), and for complements of prepositions (78d)¹⁹.

¹⁹ Due to independent factors, the three cases listed in (78) are the only relevant combinations of arguments and voice. For example, in AV there never is any argument in the position between the verb and the TAM particles, and pronominal objects are impossible (see §2.5.3).

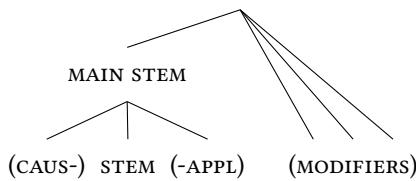
- (78) Non-3MIN arguments must be overt anywhere else than preverbally: (250728)
- sii ki-ŋä^{*(-de)}=ngaa* (UV subject)
fish IPFV-eat.UV-12AUG=FUT
'We will eat the fish' (bad without *-de*)
 - (iude) ku-tu-mä^{*(-gu-de)}=ngaa Jon* (UV_{gu} object)
12AUG IPFV-bring.UV-DIR1-OBJ-12AUG=FUT John
'John will bring us' (bad without *-gu-de*)
 - (ijii) ku-tu-mä^{*(-i)}=laa *^(iude)* (UV_{SVO} subject/object)
3AUG IPFV-bring.UV-DIR1-3AUG=FUT 12AUG
'They will bring us' (bad without *-i* or *iude*)
 - mekivaavee i-lää-kä buk ngågu^{-(de)}* (Complement of P)
teacher ASP-give.AV-DIR3 book to-12AUG
'The teacher gave him/her a book' (bad without *-de*)

In the earlier literature, the fact that the φ -suffixes in these sentences must be overt was not interpreted as counterevidence to the “free argument drop” analysis, because these were analyzed as agreement markers. Therefore, the putative corresponding argument was thought to be null. (It was not known at all that a postverbal pronoun like *iude* in (78c) had to be overt.) However, in chapter 5 I show that these suffixes are not agreement markers but just phonologically reduced pronouns. Therefore, their obligatory overtness is significative: we now know that an argument in this position must be overt, in contrast to preverbal arguments.

2.6 (SOME) MORPHOSYNTAX IN THE VERBAL DOMAIN

Contrasting with the relatively simple nominal domain, the verbal domain is where the greater part of grammatical complexity in Äiwoo lies. The schema in (79) represents an abstract general “map” of the verb complex. From left to right, we find (i) a prefixal slot for φ -agreement (only found for Actor Voice and intransitive verbs; see chapter 3); (ii) a slot for prefixes conveying aspect and mood semantics; (iii) the stem, which itself may be morphologically complex; (iv) a slot for directional suffixes; (v) a sequence of enclitic particles with polarity related to TAM and semantics; a nominal may in certain cases intervene between the verb and these particles. See also Næss & Boerger (2008) and Roversi (2019) for more details.

- (79) The Äiwoo verb complex:
(φ -) ASP/MOOD- STEM -DIR [DP]=TAM



The morphological structure of the stem is covered largely in chapter 3, and the complex facts about φ-agreement are discussed throughout chapters 3 and 5. In the rest of this section, I only cover those aspects of verbal morphosyntax that are not addressed in detail in the rest of the dissertation. This will be the aspectual/modal prefixes (§2.6.1), the directionals suffixes (§2.6.2), and the enclitic TAM complex (§2.6.3).

2.6.1 ASPECTUAL/MODAL PREFIXES

This morphological slot can contain one of four prefixes: *i-* ‘unmarked aspect’, *ki-* ‘imperfective’ (and its phonological variant *ku-*), *nä-* ‘irrealis’, and *de-* ‘apprehensive’. The first two are chiefly found in “realis” or non-modal contexts, as opposed to the latter two. No in-depth study of the aspectual/modal semantics of these prefixes has been conducted as yet, so what I report below is simply what is known at this stage. None of these prefixes seems to encode any information about tense; all four are in principle compatible with present, past, and future statements (though there are some interactions with the postverbal TAM particles; see below).

The imperfective prefix *ki-* is found in e.g. progressive (80a), habitual (80b), and generic statements (80c). Moreover, it seems often obligatory when the future marker =*Caa* is present in the postverbal enclitic complex (81), at least in non-modal contexts.

(80) Some areas of use of *ki-* IPFV:

- a. *nubole ki-epavi Mary* (230706)
taro IPFV-cook.UV Mary
'Mary is/was cooking the taro'
- b. *i-ki-epave-lâoo sii* (230525)
1MIN-IPFV-cook.AV-always fish
'I always cook fish'
- c. *i-ku-mo ngâ nuwopa i-lââ ibesi* (240411)
1MIN-IPFV-stay in house ASP-build.UV friend.1MIN
'I live in the house that my friend built'

(81) Future =*Caa* requires IPFV: (240411)

- nuwopa eângâ {*i- / √ki-}ve-∅ⁿ=naa*
house that ASP- IPFV-buy.UV-3MIN=FUT
'He will buy that house'

The “unmarked aspect” prefix *i-*, in contrast, seems to be more of a default marker; alternatively, we just don’t currently understand what its semantics are. A non-stative verb with *i-* is most commonly translated as past tense (82), but this prefix is also compatible with statives (83). As mentioned in §2.4.3, this prefix disappears when not word-initial (e.g., when preceded by an agreement prefix or a relativizer).

- (82) *Mary i-lâwâle-kâ-no* (230525)
Mary ASP-help.UV-DIR3-1MIN
'I helped Mary'

- (83) *lopwâ enge i-kää-päko-i Peluwoo*
 story this ASP-know.uv-good.uv Reef.Islanders
 'The people from the Reef Islands know this story well'

The two prefixes *nä-* 'irrealis' and *de-* 'apprehensive' have modal semantics, although their precise meaning is not known yet. The irrealis prefix *nä-* is, at least, used for deontic necessity (84), but not deontic weak necessity (85) nor epistemic necessity (86). These contexts are adapted from [Vander Klok \(2022\)](#).

- (84) **Deontic necessity: *nä-* 'irrealis'** (250401)
 [Context: the laws state that when you ride a motor bike, ...]
- a. *helmet nä-vitee-mu ngâ nuwotaa-mu*
 helmet IRR-put.on.uv-2MIN on head-2MIN
 'You must wear a helmet on your head'
 - b. # *helmet i-vitee-mu ngâ nuwotaa-mu*
 helmet ASP-put.on.uv-2MIN on head-2MIN
 Intended: 'You must wear a helmet on your head'
 Comment: "This sounds like past tense, 'you put on a helmet'"
 - c. # *helmet ki-vitee-mu ngâ nuwotaa-mu*
 helmet IPFV-put.on.uv-2MIN on head-2MIN
 Intended: 'You must wear a helmet on your head'
 Comment: "This sounds like 'you are wearing'. *Nä-* sounds like an order"
- (85) **Deontic weak necessity: *iki* 'fit, appropriate', not *nä-* 'irrealis'** (250401)
 [Context: Anna is not yet used to riding a motorbike, she just started learning to ride one month ago. Her friend suggests that/gives her advice to:]
- a. *Anna iki ku-wo-meloo*
 Anna fit IPFV-go-slow
 'Anna should drive slowly'
 - b. # *Anna nä-wo-meloo*
 Anna IRR-go-slow
 Intended: 'Anna should drive slowly'
 Comment: "[This means] 'Anna must go slow', not just an advice, it's an obligation/order²⁰"
- (86) **Epistemic necessity: unmarked?** (250401)
 [Context: Mary routinely has coffee at Lisa's house everyday. Even if she's sick, she doesn't miss a day! It's not obligatory for Mary; she just goes for coffee there all the time. It's coffee time now, so...]

²⁰ Sentence (85b) was judged acceptable in a context where, for example, Anna is driving past a school yard where children are playing, so the speed limit is lower/the laws state that she must drive slowly. This confirms its use for deontic (strong) necessity.

- a. # *ilâ=kâ Mary nâ-mo ngâ nuwopa tä Lisa*
DIST=DIST Mary IRR-stay in house POSS Lisa
Intended: ‘Mary must be at Lisa’s house’
- b. *ilâ=kâ Mary ku-mo ngâ nuwopa tä Lisa*
DIST=DIST Mary IPFV-stay in house POSS Lisa
‘Mary must be at Lisa’s house’

Aside from main clauses, the irrealis prefix *nä-* is also required in the complement clause of the attitude predicate *kä* when this means ‘want’ (87a), and in purpose clauses (87b).

- (87) a. **Complement of ‘want’:** (240530)
kä mekivaavee=kä [pedevalili nä-li-gâwââ-du(=kaa) buk]
 want teacher=cv children IRR-3AUG-read.AV-all(=FUT) book
 ‘The teacher wants all the children to read a book’
- b. **Purpose clause:**
pedevalili li-momalee-eke [go nä-li-kei-mä nubole]
 children 3AUG-wake.up-fast for IRR-3AUG-harvest.AV-DIR1 taro
 (250401)
 ‘The children woke up early to harvest taro (for me)’

Finally, the “apprehensive” prefix *de-* is found combined with the “prohibitive” enclitic =*eo~io* in negative imperatives (88a), and as the negative counterpart of *nä-* in negated desires, that is, under *kä* ‘want’ (88b). Interestingly, combining *nä-* ‘irrealis’ with the usual negation strategy *ba* VERB=*gu* (see below) seems to be impossible (88c).

- (88) a. ***de-lâbu-mu=io iumu!*** (250311)
APPR-cut.UV-2MIN=PROH 2MIN
 ‘Don’t cut yourself!’
- b. *kâ-no=ngä [nyenââ eângâ de-li-eoboli=io]* (240222)
 want-1MIN=CV tree that APPR-3AUG-fall=PROH
 ‘I don’t want those trees do fall’; lit. ‘I want that those trees don’t fall’
- c. * *kâ-no=ngä [nyenââ eângâ ba nä-li-eoboli=gu]* (240222)
 want-1MIN=CV tree that NEG IRR-3AUG-fall=NEG
 Intended: ‘I don’t want those trees do fall’

2.6.2 DIRECTIONALS

The three directional suffixes are *-mä* ‘towards speaker’, *-wâ* ‘towards addressee’, and *-kä~kâ* ‘away from speaker/addressee’²¹. These suffixes are always found at the very right

²¹ The 1st and 2nd person forms have common cognates across Oceanic and have been reconstructed as reflexes of the Proto-Oceanic verbs **mai* ‘towards deictic center’ and **uatu* ‘towards addressee’ (Ross & Næss 2007, M. Ross 2004a); the 3rd person form might be an innovation (Ross & Næss 2007). A fourth form *-ngo* ‘towards 1st person’ is only found in imperatives:

edge of the (possibly complex) verb stem. Often, they indicate the actual physical direction of motion. For example, consider the following minimal pairs. Both sentences in (89) convey the same truth-conditional meaning. However, the 2nd person directional *-wâ* in (89b) makes this sentence only appropriate in a context where the addressee is also in the same location as Mary/as where the basket is being brought. The same point is illustrated in (90), this time contrasting between the 3rd person and 1st person directionals.

- (89) 3rd vs. 2nd person directional: (231019)

- a. *nyibä i-tu-kâ-no* go Mary
basket ASP-bring.UV-DIR3-1MIN to Mary
'I brought the basket to Mary'
- b. *nyibä i-tu-wâ-no* go Mary
basket ASP-bring.UV-DIR2-1MIN to Mary
'I brought the basket to Mary [in a location where you were also present]'

- (90) 3rd vs. 1st person directional: (231019)

- a. *nyibä i-tu-kâ-mu* *ngâ nuwopa to*
basket ASP-bring.UV-DIR3-2MIN to house POSS.1MIN
'You brought the basket to my house'
Comment: "I'm somewhere else, not at home, but you brought it there"
- b. *nyibä i-tu-mä-mu* *ngâ nuwopa to*
basket ASP-bring.UV-DIR1-2MIN to house POSS.1MIN
'You brought the basket to my house'
Comment: "It means that I'm at home when you bring it"

Aside from uses that convey a more literal/physical direction of motion, the directional suffixes can also often indicate "direction" in a much more metaphorical sense. For example, they can indicate the presence of a recipient or benefactory role, as in (91).

- (91) *bulaape pedevalili ki-li-kei-mä=kaa nubole* (240530)
tomorrow children IPFV-3AUG-dig.AV-DIR1=FUT taro
'Tomorrow the children will harvest taro [for me, to my benefit, or my taro]'

Moreover, directional suffixes seem to be obligatory with certain verbs, such as verbs of transfer (e.g. 'give') and verbs of gaze ('see', 'look at'). In these cases, the directionals "correspond" to one of the actual syntactic arguments in the clause (the recipient of verbs of transfer, or the object of verbs of gaze), matching its person. However, due to their usage in examples like (89)–(90), I refrain from analyzing directionals as constituting genuine syntactic agreement.

- (92) *i-eâmoli*(-mä)-i iu ngâ nuwopa eângâ* (230706)
ASP-look.at.UV*(-DIR1)-3AUG 1MIN in house that
'They found me in that house' (bad without *-mä*)

(i) *po-ngo!*
go-DIR1
'Come here!' (Næss in prep)

Interestingly, when a verb that requires a directional is used in a reflexive construction, the directional suffix used is always the third person one. Compare, for example, the non-reflexive (93a) to the reflexive (93b). In the former, only the 1st person directional is possible, presumably due to the object being 1st person (inclusive). However, in the reflexive sentence (93b) the object is still 1st person inclusive, but now the directional suffix must be the 3rd person one. (See chapters 5–6 for a discussion of the other morphosyntactic differences between these two sentences).

- (93) a. Non-reflexive: DIR tracks the object (241015)
- $\emptyset_{12\text{AUG}} \ i\text{-te}\{-mä/*kä\}\text{-gu-de} \quad \text{Jon}$
 ASP-see.UV-{DIR1/*DIR3}-OBJ-12AUG John
 ‘John saw us’
- b. Reflexive: DIR must be 3rd person
- $\emptyset_{12\text{AUG}} \ i\text{-te}\{-kä/*mä\}\text{-de} \quad iude$
 ASP-see.UV-{DIR3/*DIR1}-12AUG 12AUG
 ‘We saw ourselves’

2.6.3 THE POST-VERBAL TAM COMPLEX

Outside of the verb complex proper lies a sequence of particles, which may phonologically encliticize to the verb itself (thus becoming part of the same phonological word) or to an intervening DP. With the exception of the “circumstantial voice” marker =Cä (see Appendix A), all of these have semantics connected to tense/aspect(/modality) and negation, although as for the aspect/mood prefixes, their precise semantic contribution is not known. This sequence consists of five “slots”, as schematized in (94).

- (94) The post-verbal TAM clitic sequence:

$$V \ (\text{DP}) = \left\{ \begin{array}{l} \text{to} \\ \text{PRF} \\ \text{jo} \\ ? \\ (\text{eo}) \\ (\text{PROH}) \end{array} \right\} = \left\{ \begin{array}{l} gu \\ \text{NEG} \\ (\text{eo}) \\ (\text{PROH}) \end{array} \right\} = \left\{ \begin{array}{l} Caa \\ \{\text{FUT}\} \end{array} \right\} = \left\{ \begin{array}{l} Cä \\ \{\text{CV}\} \end{array} \right\} = \left\{ \begin{array}{l} \text{DIST} \\ Ce \\ \text{PROX} \end{array} \right\}$$

Any sentence may contain one or more particles from (94), although only one per slot; in other words, particles that are assigned to the same “slot” in (94) are in complementary distribution. It is not currently known whether =eo ‘prohibitive’ can co-occur with either of =to/jo or =gu, hence its placement in parentheses. For completeness, in addition to the ones shown here, two more forms seem to belong to this sequence, although they are very scarcely attested in the corpus and have not been investigated in any detail. These are =ta and =ja (95), of unclear semantic contribution.

- (95) a. $ji\text{-nä}\text{-savele}\text{-kä=ta} \quad ngä \ nuwopa$
 12MIN-IRR-stroll-DIR3=TA to house
 ‘Let’s just go to the house’ (Moliki 355)

- b. *ile nâbu, ee, wagu-usi=ja ngâ nââu-de*
 PROX song HESIT tell.uv-again.uv=JA in language-12AUG
 ‘This song, uhm, say it again in our language’ (Dancing leluwo 194)

2.6.3.1 TENSE/ASPECT/POLARITY SEMANTICS

The three leftmost “slots” in the TAM sequence have more clearly to do with the semantic categories of tense, aspect, and polarity. A sentence showcasing all three is given in (96).

- (96) *nuwopa eângâ ba ki-ve John=to=gu=naa ngä taun* (250717)
 house that NEG IPFV-buy.uv John=PRF=NEG=FUT in town
 ‘John won’t already have bought that house in town’

The easiest one to present is the negative enclitic =gu. Negation in Äiwoo is bipartite, consisting of a preverbal particle *ba* and the marker =gu in the post-verbal TAM sequence (97). See Roversi & Næss (2019) for more details about negation, and for discussion of sporadic cases where either *ba* or =gu appear by themselves.

- (97) Examples of sentences with negation (*ba* ... =gu): (250807)
- a. *Jon ba i-mâea=gu*
 John NEG ASP-laugh=NEG
 ‘John did not laugh’
 - b. *sii ba ki-ngä Jon=gu=naa*
 fish NEG IPFV-eat.uv John=NEG=FUT
 ‘John will not eat the fish’

In the (linearly) first “slot” we find the marker =to, with semantics connected to the perfect/perfective aspect, and the meaning of ‘already’²². In the following examples, I show how =to is compatible with several of the typical functions of the English perfect and of ‘already’ (see e.g. Krajinović et al. 2023, and references therein):

- (98) =to is compatible with several functions of the English perfect: (240919)
- a. Resultative (perfect of result):
George i-wo-mä(=to)
 George ASP-go-DIR1=PRF
 ‘George has arrived (now)’; =to is optional
 - b. Experiential (existential perfect):
England i-leaa-kâ-no(=to)*
 England ASP-reach.uv-DIR3-1MIN=PRF
 ‘I have been to England’; =to is obligatory

²² I gloss =to as PRF ‘perfect’ mostly for expository purposes, and this should not be taken as a strong analytical commitment. More research will be needed to elucidate the precise semantic contribution of =to, and of the other particles in this slot.

c. **Perfect of anteriority (past):**

[Context: you and I were supposed to meet, but I had to leave earlier]

mu-wo-maa mo iu=nge i-wâ(=to)*
 2MIN-go-LOC.DIST but 1MIN=PROX 1MIN-go=PRF
 ‘You arrived but I (had) already left’; =*to* is obligatory

d. **Perfect of anteriority (future):**

[Context: you’re supposed to arrive tonight at 10pm, but I have to leave earlier than that]

mu-ku-wo-mä=kaa=kâ mo iu=nge i-wâ(=to)(=waa)*
 2MIN-IPFV-go-DIR1=FUT=DIST but 1MIN=PROX 1MIN-go=PRF=FUT
 ‘You will come, but I will already have left’; =*to* is obligatory (but =*waa* is optional)

- (99) =*to* has the same “earlier-than-expected” inference as *already*: (240919)

George i-wo-mä=to
 George ASP-go-DIR1=PRF
 ‘George has (already) arrived’

✓ **Earlier-than-expected context:** we expected George to arrive at 5pm, but he arrived at 1pm instead. (‘George has already arrived’)

✗ **Later-than-expected context:** we expected George to arrive at 1pm, but he arrived at 5pm instead. (can’t mean ‘George has arrived now/finally’)

In the same slot we find the marker =*jo* (100), which has been glossed in earlier literature as “progressive” (Næss & Boerger 2008), although it is not entirely clear to me that this is an accurate label, since e.g. (100b) does not indicate that the act of folding is ongoing. I leave investigating the semantics of =*jo* to future research.

- (100) Næss & Boerger (2008: 190–191; glosses adapted):

a. *i-lobâku-usi-∅ⁿ=to*

ASP-fold.uv-again.uv-3MIN=PRF
 ‘S/he had folded it again (the object was presented to me in a folded state)’

b. *i-lobâku-usi-∅ⁿ=jo*

ASP-fold.uv-again.uv-3MIN=JO
 ‘S/he folded it again (I saw the act of folding)’

Finally, the particle =*Caa* is glossed as ‘future’ because it is (in general) incompatible with past tense reference (101a). However, this is not completely true: in addition to conveying future tense it is also attested in contexts with non-future reference, in which case its usage seems to be connected to habituality (101b).

- (101) a. * *bugulo=kâ sii eângâ ki-epavi-no=ngaa* (250717)

yesterday=DIST fish that IPFV-cook.uv-1MIN=FUT

Intended: “*Yesterday I will cook that fish” (grammatical with *bulaape* ‘tomorrow’ instead of *bugulo* ‘yesterday’)

- b. *i-vevaale-kä=naa tumä pelivano i-ipolâ-mä*
 ASP-wait-DIR3=FUT husband ASP-step.out-DIR1
ä i-li-pängä-le=naa=kâ
 and ASP-3AUG-eat.AV-UA=FUT=DIST
 'She waited/would wait until her husband came back, and then they ate/would
 eat (habitually)' (Moliki 20-21)

When =Caa has actual future tense semantics, it is usually not compatible with the “unmarked aspect” prefix *i*-, but requires imperfective *ki*- (102) (or *nä*- in irrealis contexts, e.g. as the complement of ‘want’ etc.; see §2.6.1 above). However, the combination of *i*- and =Caa is possible if the perfect marker =to is present too, e.g. (98d) above, or when =Caa is used for habitual readings (101).

- (102) Future =Caa requires IPFV: (240411)
*nuwopa eângâ {*i- /^vki-}ve-∅ⁿ=naa*
 house that ASP- IPFV-buy.UV-3MIN=FUT
 'He will buy that house'

2.6.3.2 THE ALLOMORPHY OF CONSONANT-INITIAL ENCLITICS

The four enclitic particles =Caa ‘future’, =Cä ‘circumstantial voice’, =Câ ‘distal’ and =Ce ‘proximal’ share the same allomorphy pattern, where what varies is their initial consonant. For all of them, the default form is /k/-initial (i.e., =kaa, =kä, =kâ, =ke). However, the first consonant will change depending on their phonological host, that is, on the element that is immediately linearly adjacent to their left. In addition to the default k-form, there are four or five possibilities for what the first consonant may be (depending on one’s analysis): =ngV, =lV, =nV, =wV, and possibly =V with no consonant²³. I show each of these in (103), using the future particle =Caa as an example.

- | | |
|--|-------------------------------------|
| (103) a. <i>ki-epavi-no</i> =ngaa | d. <i>ki-epavi-mu</i> =waa |
| IPFV-cook.UV-1MIN=FUT | IPFV-cook.UV-2MIN=FUT |
| 'I will cook (it)' | 'You will cook (it)' |
| b. <i>ki-epavi-i</i> =laa | e. <i>ki-epavi-mi</i> =aa |
| IPFV-cook.UV-3AUG=FUT | IPFV-cook.UV-2AUG=FUT |
| 'They will cook (it)' | 'Y'all will cook (it)' |
| c. <i>ki-epavi-∅ⁿ</i> =naa | f. <i>ki-epavi Mary</i> =kaa |
| IPFV-cook.UV-3MIN=FUT | IPFV-cook.UV Mary=FUT |
| 'S/he will cook (it)' | 'Mary will cook (it)' |

The examples in (103), chosen to create simple minimal comparisons, might give the impression that the initial consonant of these clitics depends on the person/number features

²³ It is possible that the =wV form in (103d) is underlyingly really just =V (cf. (103e), and the /w/ is inserted for hiatus resolution. In contrast to the other variants, whose distribution is not phonologically coherent, =wV forms are only found attached to morphemes ending in back vowels (/u, o/).

of their host (e.g., *=ngV* after 1st person, *=lV* after 3AUG, etc.). However, this is not the case. The distribution of the various alternants is rather idiosyncratic, and cannot be reduced to either phonological or semantic principles. For example, the *=lV* form is found after a 3AUG suffix but also after the two question words *doo* ‘what’ and *iie* ‘who’ (but not other question words). The *=nV* form, in addition to surfacing after the 3MIN-Øⁿ (see below for this notation), is also found after e.g. the unit-augmented suffix *-le*, the negative particle *=gu*, and the specific lexical roots *wä* ‘go’ and *ngä* ‘still, yet’. For more exhaustive lists of which forms are attested in what contexts, see Roversi (2019: 24–25).

Moreover, note that *linear* adjacency is the determining factor for what consonant a particle will take, and not any form of syntactic/structural relationship. For example, in (104) the distal particle =Câ follows the entire DP *mitoguloi iu* ‘the people who hit me’, which contains a relative clause whose rightmost word is the embedded object *iu* ‘me’. As a consequence, the particle surfaces in its ng-form, and not e.g. in the l-form that one would expect from a 3AUG host (103b).

2.6.3.3 THE NULL SUFFIXES -Øⁿ AND -Ø^y

The pattern of allomorphy of these consonant-initial enclitics reveals the existence of two particular suffixes, which despite being segmentally null themselves, cause a particular allomorph of these enclitics to surface. I notate these as $-\emptyset^n$ (3MIN subjects) and $-\emptyset^1$ (1MIN objects). As should hopefully be clear from my notation, the 3MIN suffix $-\emptyset^n$ selects the n-initial form of a following consonant-alternating enclitic (105a), and the 1MIN suffix $-\emptyset^1$ selects the ng-initial form (105b); the default form =*kaa* is given for comparison (105c).

- (105) (250717)

 - a. 3MIN -Øⁿ selects the n-form:
sii ku-tu-kä-Øⁿ=naa
fish IPFV-bring.UV-DIR3-3MIN=FUT
'S/he will bring the fish'
 - b. 1MIN -Ø^ŋ selects the ng-form:
(iu) ku-tu-kâ-gu-Ø^ŋ=ngaa Mary
1MIN IPFV-bring.UV-DIR3-OBJ-1MIN=FUT Mary
'Mary will bring me'
 - c. Comparison baseline: default =kaa
sii ku-tu-kä Mary=kaa
fish IPFV-bring.UV-DIR3 Mary=FUT
'Mary will bring the fish'

One could analyze these two suffixes as solely consisting of a floating/unassociated feature or bundle of features ([nasal] for $-\emptyset^n$; [nasal, velar] for $-\emptyset^{\eta}$), but no segmental content.

When followed by an enclitic whose first consonant is under-specified, this feature would then get associated to that consonantal slot, giving the correct realization. Of course, if these suffixes are *not* followed by one of the consonant-alternating enclitics, then the unassociated features remain floating, and the suffixes' presence is just completely obscured (106). See [Roversi \(2020\)](#) for further discussion.

- (106) If followed by anything else, $-\emptyset^n$ and $-\emptyset^y$ have no visible effect: (25.07.17)

- a. *sii i-tu-kä-∅ⁿ=jo*
fish ASP-bring.UV-DIR3-3MIN=TAM
'S/he has brought the fish'
- b. *(iu) i-tu-kä-gu-∅^y=jo* $\emptyset_{3\text{MIN}}$
1MIN ASP-bring.UV-DIR3-OBJ-1MIN=TAM Mary
'S/he has brought me'

3

CHAPTER

ÄIWOO CLAUSE STRUCTURE

3.1 INTRODUCTION AND EMPIRICAL DOMAIN

The focus of this chapter is the “canonical clauses” of Äiwoo, that is, ordinary AV and UV transitive clauses. These are the first two (unshaded) rows in our overview of different clause types (107a,b), repeated from chapter 1.

(107) Overview of clausal patterns:

	Clause type:	Word order:			
a.	AV:	S ✓	φ _S -V. AV	=TAM	O ✗
b.	UV _{plain} :	O ✓	V.uv	S ✗	=TAM
c.	UV _{only} :	O ✓	V.uv	S ✓	=TAM
d.	UV _{inā} :	O ^{NA}	V.uv	S ✓	=TAM
e.	UV _{gu} :	O ^{NA}	V.uv	-π _O =TAM	S ✓
f.	UV _{SVO} :	S ^{NA}	V.uv	-π _S =TAM	O ^{NA}

This chapter focuses on the “Word Order Puzzle” outlined in chapter 1, for now limiting the domain of discussion to these two clause types. The aim is to build a model of these clauses, deriving their **word order properties**, and the alternation in **verbal morphology**.

Of course, for this model to be of any value, it needs to be “future-proof” with respect to the rest of the analysis, so to speak. Therefore, our model will also need to (i) lay the groundwork for later correctly deriving the Ä-extraction properties of these clauses (chapter 4), and (ii) be able to accommodate an expansion to account for the alternative word orders (chapter 6). This means that at different points through this chapter, sometimes I will choose a seemingly more complicated alternative (in terms of analysis or implementation) over a simpler one, because the simpler one would later end up being incompatible

with other aspects of the language that have not been introduced yet. This will be flagged and justified at the relevant junctures.

The rest of this chapter follows this outline. The first two sections (§§3.2–3.3) are descriptive, examining respectively word order facts (the V2 effect) and verbal voice morphology. After we have a surface description of the clauses we are dealing with, in §3.4 I take a temporary step back, and situate our discussion of voice in Äiwoo into a broader landscape of theories of Austronesian voice. With this foundation, §3.5 develops a full model of canonical Äiwoo clauses in AV and UV: how and when is voice established, when and where and why do arguments move, etc. Because the model is relatively complex with quite a few moving parts, §3.5.4 simply presents full annotated derivations, with no prose around, summarizing and illustrating how the system works. As a final note, §3.6 discusses how intransitive clauses can be captured in this system. In deriving the main clausal structure, we will observe a first instance of *non-local A-movement* (i.e., A-movement of a lower nominal across a higher one, seemingly violating the typical strict locality of A-movement), and we will see that our theory is already equipped to derive this without adding any new mechanisms.

3.2 BASIC WORD ORDER: ÄIWOON AS A V2 LANGUAGE

The goal of this descriptive section is to establish Äiwoo as a V2 language, as anticipated in chapter 1. This aspect of the language’s syntax has gone unrecognized in the descriptive literature so far, because the V2 effect is often obscured on the surface by independent confounds. Establishing V2 as a core property of Äiwoo syntax will have important consequences down the line for our analysis of the language, informing us about the position of the different constituents.

In every clause – both matrix and embedded ones – one nominal precedes the verb. In (almost) all cases, this is what I purely descriptively label the “Voice-Indexed Argument” (VIA): the subject in AV, and the object in UV^{1,2}. This means that a clause’s word order will be different depending on its voice. In this respect, Äiwoo is similar to many Indonesian-type languages (Arka 2002, Himmelmann 2002, 2005). Moreover, this specific combination of V2 word order and Austronesian voice system is also found in the Nilo-Saharan languages Dinka (van Urk 2015) and Shilluk (Remijser & Ayoker 2018). On the other hand, this sets Äiwoo apart from many other (Western) Austronesian languages like Tagalog and some Formosan languages, which are largely predicate-initial and often show relatively free word order amongst the nominal arguments following the predicate (although some of these have VIA/pivot-last order, like Malagasy, Atayal, and Seediq; see Blust 2013: §7.3).

¹ This label is inspired by Næss (2015b), which calls this the “Voice-Selected Argument”. The word “selected” would be misleading given the model I propose for the voice alternation – hence the change. The term “pivot”, often used in the Austronesian literature, will receive later a narrower technical definition (§3.5.1).

² The only exception is one of the aforementioned non-canonical UV clause types, discussed in chapter 6.

The general word order is schematized in (108). As we can see, we have three linearly defined positions where arguments can be. In the preverbal slot we find the VIA. Then, in the slot between the verb and the TAM particles we find non-VIA subjects. Finally, in the slot after the TAM particles we find non-VIA objects.

(108) Basic word orders:

- AV: **S** V =TAM **O** (... PPs and adjuncts ...)
 UV: **O** V **S** =TAM (... PPs and adjuncts ...)

Concrete examples of both word orders are given in (109). These sentences have very similar truth-conditional content, with the main difference being the information-structural status of the arguments, and the specificity of the object (narrow-scope/non-specific indefinite in AV, wide-scope/specific indefinite or definite in UV); see chapter 2, §2.5.3. Aside from word order, the other main difference is the verb stem: ‘eat’ is realized as *vängä* in AV (109a), but as *ngä* in UV (109b).

(109) VIA V (S) =TAM (O) (adjuncts) (23.07.06)

a. *Anna* *ki-vängä* =kaa *sii* *ngä* *täpilo* *enge*
Anna IPFV-eat.AV =FUT fish in bowl this
 ‘Anna will eat fish in this bowl’

b. *sii* *ki-ngä* *Anna=kaa* *ngä* *täpilo* *enge*
fish IPFV-eat.UV Anna=FUT in bowl this
 ‘Anna will eat the fish in this bowl’

Consistently, the verb immediately follows the first nominal constituent (the VIA). Only few things can intervene between the VIA and the verb: the negation particle *ba*, and a few adverbials with TAM-related meaning. These are shown for both voices in (110)-(111) respectively³. Negation is bipartite, consisting of the preverbal particle *ba* and of another morpheme =*gu* in the post-verbal =TAM series (Roversi & Næss 2019).

(110) The negation particle *ba* intervenes between the VIA and the verb:

- a. *John* ***ba*** *ki-veve=gu=naa* *nuwopa* (AV)
 John NEG IPFV-buy.AV=NEG=FUT house
 'John will not buy a house'

b. *nuwopa* *enge* ***ba*** *ki-ve* *John=gu=naa* (UV)
 house this NEG IPFV-buy.UV John=NEG=FUT
 'John will not buy this house'

³ The English translation in (111) uses ‘just’ in the temporal sense of “just now”, not as “merely, only”. Adverbials like *lewâu* ‘just’ in (111) are often built on the deictic particles *le/lâ* ‘PROX/DIST’ (*le-wâu* PROX-first ≈ ‘just’). These simplex particles can also be used in this position between the VIA and the verb, and they are highly frequent in natural speech. Their exact contribution is poorly understood.

- (111) Adverbials intervening between the VIA and the verb: (240523)
- a. *Mary [lewâu] i-epave sii(=ke)* (AV)
Mary just ASP-cook.AV fish=PROX
'Mary just cooked fish'
 - b. *sii eângâ [lewâu] i-epavi Mary(=ke)* (UV)
fish that just ASP-cook.UV Mary=PROX
'Mary just cooked that fish'

Importantly, I intend "V2" here as a *structural* notion, and not one that will necessarily (or even frequently) be apparent on the surface string. Two factors conspire to often hide the V2 effect on the surface: null arguments in the preverbal position, and topicalization.

APPARENT VIOLATION OF V2: PREVERBAL NULL ARGUMENTS In both of the clauses in (109), the preverbal argument – the subject in AV, and the object in UV – can be null (112). The resulting strings are thus verb-initial on the surface. (See also chapter 2, §2.5.4.)

- (112) Preverbal arguments can be null: (250717)
- a. *∅_{3MIN} ki-vängä=kaa sii ngä täpilo enge*
IPFV-eat.AV=FUT fish in bowl this
'S/he will eat fish in this bowl'
 - b. *∅_{3MIN} ki-ngä Anna=kaa ngä täpilo enge*
IPFV-eat.UV Anna=FUT in bowl this
'Anna will eat it in this bowl'

Defending the assumption that there is a null argument filling the preverbal position in (112) would take us too far afield, and require a lot more knowledge about different aspects of Äiwoo syntax than we have now. Therefore, I defer this discussion to chapter 5 (§5.3.2).

APPARENT VIOLATION OF V2: LEFT-PERIPHERAL TOPICS The other phenomenon that often obscures the V2 effect in Äiwoo is frequent topicalization in the left periphery. Unlike in Germanic V2 languages, in Äiwoo the preverbal VIA slot *can* be preceded by certain adverbials and (potentially multiple) topicalized nominals. All of these "don't count" for the V2 effect. Hence, in many clauses the verb won't necessarily be exactly in the second position on the surface string.

Topicalized constituents are separated from the main clause by prosodic breaks and/or the particles =Câ/=Ce (glossed as 'DIST/PROX'), which have a rather complex and not well-understood distribution. Sentence (113), for example, contains two topicalized nominals. When a constituent that would otherwise correspond to the VIA is topicalized, as above, I assume that the VIA position is occupied by a null pronoun (∅_{3MIN} here).

- (113) Multiple topicalized constituents can precede the VIA: (231019)
- [*pedevalili eângâ*]_{TOP}=kâ [*nubotage*]_{TOP}=kâ ∅_{3MIN} *i-kää-päko-i-i*
children that=DIST path=DIST ASP-know.UV-good-UV-3AUG
'Those children, the road, they know it very well'

Going forward, it will be important for building our model to be able to determine whether a preverbal nominal is in the actual VIA position, or if it is a left-peripheral topic. Certain adverbials can reliably be used to diagnose this. Expressions like ‘tomorrow’, ‘yesterday’, ‘every day’, etc. can be topicalized in the left periphery. They can be freely ordered with other topics, but they must *precede* the VIA, so that they cannot intervene between the VIA and the verb. In other words, if a nominal precedes one of those adverbials, then it must be a topic.

To illustrate how this diagnostic works, consider the sentences in (114). These are all UV clauses with ‘John’, the object, as the VIA. When the adverbial *dâbu dâuwângâ* ‘every day’ precedes ‘John’ (114a), then the object is the VIA. If ‘John’ is also a topic, then it will be marked as such by a prosodic break and/or the =DIST marker =Câ, as in (114b). Crucially, however, if the object *precedes* the adverbial (114c,d), then we know that the nominal must be topicalized, and not in the VIA position. If ‘John’ is not appropriately marked as a topic, the sentence is rejected (114d). (In all these sentences, the temporal adverbial can optionally also be marked with =kâ, and the same judgments replicate.)

- (114) Adverbials cannot intervene between the VSA and the verb: (230727)

- a. [dâbu dâuwângâ]_{TOP} [John]_{VIA} ki-te-kâ-no
day every John IPFV-see.UV-DIR3-1MIN
'Every day I see John'
- b. [dâbu dâuwângâ]_{TOP} [John]_{TOP}=kâ Ø_{3MIN} ki-te-kâ-no
day every John=DIST IPFV-see.UV-DIR3-1MIN
'Every day, John, I see him'
- c. [John]_{TOP}=kâ [dâbu dâuwângâ]_{TOP} Ø_{3MIN} ki-te-kâ-no
John=DIST day every IPFV-see.UV-DIR3-1MIN
'John, I see him every day'
- d. * [John]_{VIA} [dâbu dâuwângâ]_{TOP} ki-te-kâ-no
John day every IPFV-see.UV-DIR3-1MIN
Comment: "if you don't say John kâ you need a comma after 'John', a break"

In the following chapters, this kind of ordering test will come in hand to better understand the non-canonical word orders.

3.3 MORPHOSYNTACTIC CORRELATES OF VOICE

In the previous section, we saw how word order is determined by voice. In this section I will introduce two more morphosyntactic correlates of voice: verbal stem morphology and voice concord, and the presence of φ-agreement prefixes on the verb. These three factors always reliably pattern together⁴, giving us reliable indicators of what voice any given clause is in.

⁴ Again, with the sole exception of certain non-canonical UV clauses; see chapter 6.

3.3.1 VOICE MORPHOLOGY

Voice morphology manifests itself on verb forms in two different ways. The first and most evident one is stem allomorphy. The second one is a pattern of voice concord on verbal modifiers. As we will see, stem allomorphy is often uninformative on its own, whereas the concord pattern will more reliably help us to disambiguate between the two voices.

STEM ALLOMORPHY IS SUPPLETIVE In better-studied Austronesian languages, voice is morphologically realized by more or less neatly segmentable affixes⁵, although their distribution can be rather complex. In Tagalog, for example, different voices will be marked with prefixes, suffixes, or infixes (Schachter & Otanes 1972, a.o.). A sample paradigm from Tagalog is given in (115). Here, we can see that Actor Voice is marked with the infix *<um>*, (115a), Undergoer Voice is marked by a null suffix (115b)⁶, Locative Voice uses a suffix *-an* (115c), and Circumstantial Voice with the prefix *i-* (115d). Similar paradigms can also be found for e.g. Formosan languages and Indonesian-type languages (Levin & Polinsky 2019), languages of Sulawesi like Mandar (Brodkin 2022), etc.

- (115) Voice morphology in Tagalog (Rackowski & Richards 2005: 566; glosses adapted from Hsieh 2019: 528 and Nie & Hsieh 2024)

- a. *b(<um>ili ang bata ng tela sa palengke para sa nanay*
<AV.PFV>buy NOM child GEN cloth OBL market for OBL mother
'The child bought cloth at the market for Mother'
- b. *b(in)ili-Ø ng bata ang tela sa palengke para sa nanay*
<PFV>buy-UV GEN child NOM cloth OBL market for OBL mother
'The child bought the cloth at the market for Mother'
- c. *b(in)ilh-an ng bata ng tela ang palengke para sa nanay*
<PFV>buy-LV GEN child GEN cloth NOM market for OBL mother
'The child bought cloth at the market for Mother'
- d. *i-b(in)ili ng bata ng tela sa palengke ang nanay*
CV-<PFV>buy GEN child GEN cloth OBL market NOM mother
'The child bought cloth at the market for Mother'

In Äiwoo, however, the morphological landscape is much less regular. Here, voice morphology is strongly idiosyncratic, often realized via stem suppletion. Essentially, one can describe (almost) every verb as having two stems, one for AV and one for UV⁷. A sample of alternating verb forms is shown in (116). This set is not exhaustive, but it should suffice in

5 This is admittedly more evidently the case for a language like Tagalog than e.g. for Malagasy, where voice morphology shows rather intricate interactions with TAM morphology and verb stems; see Pearson (2001).

6 The cited literature on Tagalog uses the term 'Patient Voice'; here I am replacing it with 'Undergoer Voice' for ease of comparability to Äiwoo. This is a purely terminological choice, of no analytical consequence.

7 In the first work recognizing a symmetrical voice system in Äiwoo, Næss (2015b) treats these as lexical doublets, and labels these stems as "A-verbs" and "O-verbs", a convention followed by the dictionary (Næss 2017b). In later literature (Roversi 2019, Næss 2021b, 2023b, et seq.), these language-specific labels were abandoned, and the alternation was reanalyzed as stem allomorphy.

showing that the stem alternations are mostly irregular, in the sense that there is no predictable morphophonological way to derive one form from the other. As a consequence, a verb stem alone is often uninformative as to its voice properties: upon encountering a new verb by itself, we can't really know whether we are looking at an AV or a UV form.

(116) Voice-based stem alternations in Äiwoo:

- | | | | | | | | |
|----|---------------|--------------|---------------|----|-------------|----------------|---------------|
| a. | <i>epavi</i> | <i>epave</i> | 'cook.UV/AV' | f. | <i>lâbu</i> | <i>lâbonge</i> | 'cut.UV/AV' |
| b. | <i>lââ</i> | <i>lâwââ</i> | 'build.UV/AV' | g. | <i>kili</i> | <i>kei</i> | 'dig.UV/AV' |
| c. | <i>tu</i> | <i>tou</i> | 'bring.UV/AV' | h. | <i>pââ</i> | <i>pä</i> | 'steal.UV/AV' |
| d. | <i>togulo</i> | <i>togo</i> | 'hit.UV/AV' | i. | <i>ve</i> | <i>veve</i> | 'buy.UV/AV' |
| e. | <i>ngä</i> | <i>vängä</i> | 'eat.UV/AV' | j. | <i>kali</i> | <i>ekäi</i> | 'sing.UV/AV' |
| k. | <i>la</i> | <i>lää</i> | 'give.UV/AV' | l. | <i>nu</i> | <i>nu</i> | 'drink.UV/AV' |

Some of these alternations are more frequent than others. A considerable number of verbs follow the pattern in (116a), ending in /i/ in their UV form and in a different vowel (often /e/) in their AV form. Another (smaller) class of verbs follows a pattern like (116b,c), showing what looks like an infix $\langle \hat{a}w\sim o \rangle$ after the first consonant in their AV form (possibly a reflex of Proto-Malayo-Polynesian/Proto-Austronesian *⟨um⟩, also seen in the Tagalog AV example above (115a); Næss 2013). However, a considerable number of verbs simply show idiosyncratic stem suppletion. Some verbs also show an identical stem for both voices, such as *nu* ‘drink’ (116l)⁸. For a more exhaustive treatment, the reader is referred to Næss (2015b, 2021b), and Roversi (2019: §3.2.2). Throughout the dissertation, I will gloss voice as fused to the stem.

VOICE CONCORD ON VERBAL MODIFIERS Fortunately, another morphological correlate of voice can help us to reliably tell the two voices apart. This is a pattern of concord on verbal modifiers, described in Roversi (2019), Næss (2021b), and Wu et al. (2023) (see also an earlier description, although in different terms, in Næss & Boerger 2008).

When a modifier is attached to a verbal stem, its morphology will be dependent on the voice properties of the stem it is attached to. In the examples below, I box the entire complex stem, consisting of the main stem (leftmost) and its modifiers. When AV (or intransitive) stems take modifiers, nothing special happens (117a). However, when UV stems take modifiers, every single one of them must take a suffix *-i* (118a). The mismatched alternatives (*-i* suffixes in AV, and their absence in UV) are ungrammatical (117b)-(118b).

(117) AV: no voice concord

(240425)

- a. *i-ki-[lāwââ-päko-mana]=kaa nuwopa*
1MIN-IPFV-build.AV-good-very=FUT house
'I will build a house/houses very well'

b. * *i-ki-[lāwââ-päko-i-mana-i]=kaa nuwopa*
1MIN-IPFV-build.AV-good-UV-very-UV=FUT house

⁸ This is importantly different from verbs that only have UV; see chapter 4.

(118) UV: obligatory voice concord

(240425)

- a. *nuwopa eângâ ki-[lââ-päko-i-mana-i]-no=ngaa*
house that IPFV-build.UV-good-UV-very-UV-1MIN=FUT
'I will build that house/those houses very well'
- b. * *nuwopa eângâ ki-[lââ-päko-mana]-no=ngaa*
house that IPFV-build.UV-good-very-1MIN=FUT

In Roversi (2019) and Wu et al. (2023) this pattern was analyzed as voice concord: all modifiers have to "match" the main stem's voice (see §3.5.1.2 for an implementation). This is a very robust phenomenon; however, a couple notes are in order for completeness. The *-i* suffix has an allomorph *-nyi/nyii* consistently selected by certain modifiers, like *ngege* 'immediately, straight away' (119a). Other modifiers yet never take any concord, like *eopu* 'also' (119b). It's not currently clear what controls either of these facts. See Næss (2021b), Roversi (2019: §3.3.1) for lists of which modifiers show these alternative patterns.

(119) a. Voice concord as *-nyii*:

(250717)

- Anna i-[weevä-ngege-nyii]-kâ-no*
Anna ASP-visit.UV-immediately-UV-DIR3-1MIN
'I visited Anna straight away'

b. No voice concord:

- Anna i-[weevä-eopu]-kâ-no*
Anna ASP-visit.UV-also-DIR3-1MIN
'I also visited Anna'

3.3.2 PRESENCE OF PREFIXAL φ-AGREEMENT SIGNALS AV

The final reliable correlate of voice is the pattern of φ-indexing on verbs. Verbs in Actor Voice show an obligatory agreement prefix indexing the subject's φ-features, *li-* 3AUG in (120a). In Undergoer Voice, this is impossible (120b); a form like **ki-li-nga* is ill-formed⁹.

(120) a. AV: prefixal φ-agreement

(250717)

- pedevalili ki-[li-vängä=kaa sii*
children IPFV-3AUG-eat.AV=FUT fish
'The children will eat fish'

b. UV: no φ-agreement

- sii enge ki-nga pedevalili=kaa*
fish this IPFV-eat.UV children=FUT
'The children will eat this fish'

In all earlier work on Äiwoo (Næss 2006 et seq.), UV verbs were described as carrying a φ-agreement suffix instead of a prefix, based on data like (121). Here, we see no prefixal marker, as expected, but we also see the suffixal marker *-de* 12AUG indexing the subject's

⁹ There exists a prefix *li-*, homophonous with the 3AUG agreement prefix *li-*, that is used for generic agents. Unlike 3AUG agreement *li-*, generic agent *li-* is compatible with UV verbs (Næss 2015b: fn. 10).

φ -features. Incidentally, this sentence also shows that UV verbs don't carry agreement with the preverbal object: *pedevalili* 'children' is plural, but there is no *li-* 3AUG prefix¹⁰.

- (121) *pedevalili ku-tu-kä[-de]=ngaa ngä skul* (250717)
 children IPFV-**bring.UV**-DIR3-12AUG=FUT to school
 'We will bring the children to school'

However, in chapter 5 I show that this kind of suffixal markers and the prefical ones in AV are of different syntactic nature. The AV prefixes are actual φ -agreement with the subject. The suffixes found in UV, contrarily, are not agreement, but phonologically reduced pronouns in an argument position, i.e., the same structural position where *pedevalili* 'children' is in (120b). I refer the reader to chapter 5 for the arguments. To summarize, I argue that the difference between φ -marking in AV and UV should not be characterized as in terms of prefixes vs. suffixes, *contra Næss (2006, 2015b, 2021b)* and *Roversi (2019, 2020, 2025b)* a.o., but in terms of φ -agreement prefixes in AV vs. no agreement in UV.

3.3.3 INTERIM SUMMARY

In this section I have shown three reliable morphosyntactic correlates of voice in Äiwoo, repeated in (122).

- (122) **Morphosyntactic correlates of voice:**
- Word order
 - Verbal stem morphology and voice concord
 - Presence of prefical φ -agreement

I illustrate all three in the minimal pair below. In (123a), we see SVO order, the verb 'bring' in its AV stem *tou* and no morphology on the modifier *eke* 'quick(ly)', and the prefical 3AUG marker *lu-*. In (123b), conversely, we see OVS order, the UV stem *tu* and the UV concord suffix *-nyii* on the modifier, and no prefical agreement.

- (123) a. **AV: SVO order, no voice concord, φ -agreement** (250717)
pedevalili ku-lu-tou-eke-mä=kaa dekilingä ngä nuwopa
 children IPFV-3AUG-**bring.AV**-quick-DIR1=FUT food to house
 'The children will bring food to the house quickly'
- b. **UV: OVS order, voice concord, no φ -agreement**
dekilingä ku-tu-eke-nyii-mä pedevalili=kaa ngä nuwopa
 food IPFV-**bring.UV**-quick-UV-DIR1 **children=FUT** to house
 'The children will bring the food to the house quickly'

¹⁰ In this respect Äiwoo is different from Dinka, where prefical agreement on verbs in every voice always tracks the preverbal argument, regardless of grammatical relations (*van Urk 2015*).

3.4 META-THEORY OF AUSTRONESIAN VOICE: CAUSE OR EFFECT

We now have a descriptive lay of the land for the sentences under discussion: Actor Voice clauses look like (123a), and Undergoer Voice clauses look like (123b). Before moving on to deriving the syntax of these clauses, it will be useful to take a step back and reflect on what kind of systems these notions (Actor Voice, Undergoer Voice) belong to. Within the literature about Austronesian languages, indeed, a lot has been said about what Austronesian voice *is*.

Boiling a vast array of nuanced complications down to its very core traits, a crucial desideratum is to capture the correlation abstractly illustrated in (124). In every sentence, the verb will surface with some particular morphology (represented by the abstract affixes $-\alpha$, $-\beta$, $-\gamma$). This verbal morphology will then consistently correlate with one specific DP being “special” in some way, represented here as boxed (concretely, this might be a particular position in the clause, a particular case marking, particular syntactic privileges, etc.). For now, I deliberately leave it very vague exactly what “special” means, as this depends on the specific proposal and the specific language in question.

- (124) **Austronesian voice systems, abstractly:**

$V-\alpha \Leftrightarrow$	$\boxed{DP_1}$	DP_2	DP_3	\dots
$V-\beta \Leftrightarrow$	DP_1	$\boxed{DP_2}$	DP_3	\dots
$V-\gamma \Leftrightarrow$	DP_1	DP_2	$\boxed{DP_3}$	\dots

Two broader families of approaches to Austronesian voice can be identified, differing in the direction of the posited cause-effect relation between the sides of this two-ways correlation. On one hand, we can imagine that the choice of one specific set of verbal morphology is what causes one particular DP to be “special”. On the other hand, we could look at this the other way around, and think that the choice to make a given DP “special” is what results in a particular morphological outcome on the verb. Let us now spell this out more concretely.

For the first kind of approaches, voice morphology reflects an argument structure alternation (Chen & McDonnell 2019, V. Chen 2025): voice is the *cause* of the various syntactic properties of each kind of clause. Under this view, these languages have a series of lexically distinct flavors of transitive v heads (v_{AV} , v_{UV} , etc.), each with its own different syntactic properties and its own morphological realization. A speaker of such a language simply decides to pick one of these heads for the numeration of a sentence, and the rest of the morphosyntactic properties of the sentence follow from this choice. Crucially, the argument structure of the sentence is altered in specific ways depending on what v head was chosen, resulting in one particular DP being “special”.

For the other family of approaches, however, voice morphology reflects the *effect* of certain syntactic events that take place during the derivation. Distinctly from the previous kind of proposals, importantly, there is no argument structure alternation: there is only one transitive v head. Therefore, v itself cannot be what makes one of the DPs special, since v doesn’t vary in any way. Rather, in every sentence one DP is born with special

properties (at the choice of the speaker), and this sets in motion a chain of syntactic events that will result in an overt morphological reflex on the verb of the identity of this DP. I summarize the differences in (125).

(125) Voice as cause:	Voice as effect:
Argument structure alternation	No argument structure alternation
Several flavors of transitive v heads	Only one transitive v head
Numeration: speaker chooses which v head to use	Numeration: speaker chooses which DP is the special one
Choice of v results in one particular DP being special	Choice of special DP results in particular voice morphology (and syntax)
Selected references: Payne (1982), De Guzman (1988), Gerdts (1988), Guilfoyle et al. (1992), Mithun (1994), Liao (2004), Aldridge (2004, 2008, 2017), H. Y. Chang (2011), Legate (2012, 2014), Erlewine (2018), and Erlewine & Sommerlot (2023a,b)	Selected references: Chung (1994), Richards (2000), Pearson (2001, 2005), Rackowski (2002), Rackowski & Richards (2005), V. Chen (2017a, 2023, 2025), van Urk (2015), van Urk & Richards (2015), Erlewine et al. (2017), and Hsieh (2020, 2025)

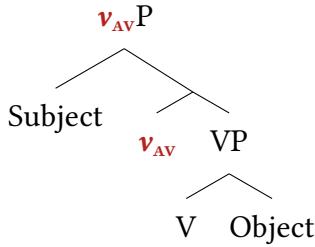
To give a clearer illustration of the difference between these two approaches, I will now compare two very simplified sketches of influential proposals, one of each type. For both, I will abstract away from a lot of the complexity and fine nuances of the specific analyses, and will deviate from their letter, but will preserve and zoom in on the crucial cause-effect relationship.

A typical voice-as-cause proposal is Aldridge (2004, 2008). Under this analysis, the speaker chooses whether to merge v_{AV} or v_{UV} . Each of these will be spelled out differently, as they are lexically distinct heads. If the speaker chooses to merge v_{AV} (126a), nothing particularly interesting happens. If, on the other hand, the speaker chooses to merge v_{UV} (126b), this will have the effect of moving the object past the agent, to an outer specifier¹¹. After this step, the object is now the highest DP in the clause, and this will have various kinds of syntactic repercussions, since it's effectively an argument structure alternation. This is often a first step in the so-called "standard theory of syntactic ergativity" (Deal 2016b), where the A-movement of the object across the subject ultimately ends up blocking Ä-extraction of the latter. See §1.3.2, and §4.3.2.

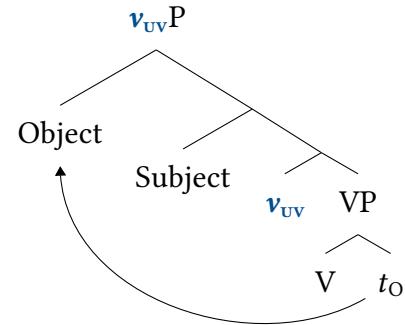
¹¹ Aldridge formalizes this with an EPP feature present on v_{UV} but absent from v_{AV} , but several different implementations could achieve the same result.

- (126) A “voice-as-cause” proposal (Aldridge 2004, 2008):

a. Actor Voice:



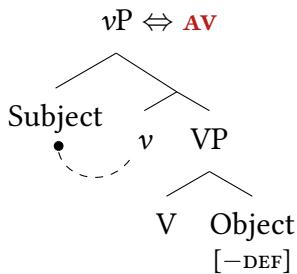
b. Undergoer Voice:



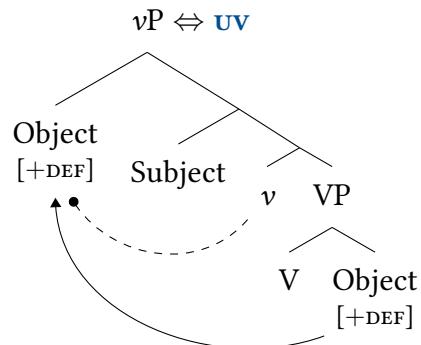
Compare this now to a voice-as-effect approach, using [Rackowski & Richards \(2005\)](#) as an example (again, in a rather simplified illustration). As mentioned earlier, here the choice point in the hands of the speaker is not the lexical identity of which v head to merge: there is only one transitive v head in the lexicon. Rather, an independently existing process of object shift will move a definite/specific object past the subject, to an outer specifier (127b), whereas indefinite/non-specific ones stay low (127a). The morphological spell-out of v is then dictated by *case agreement* between v and the argument in its outermost specifier.

- (127) A “voice-as-effect” approach ([Rackowski & Richards 2005](#)):

a. Actor Voice:



b. Undergoer Voice:

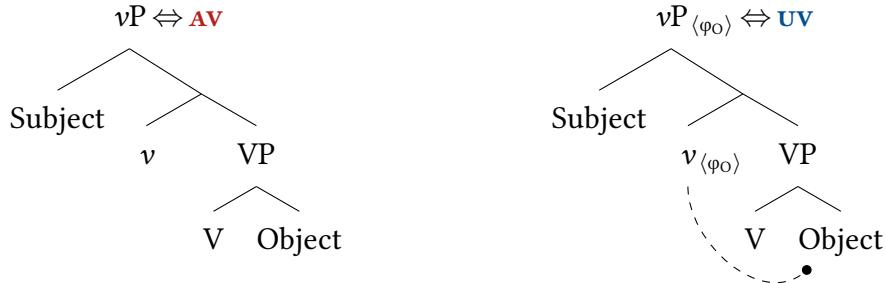


Note that one aspect these two kinds of analyses have in common is that voice is determined *early* in the derivation, whether by a lexical choice (merging v_{AV} or v_{UV}) or by a step of object shift/agreement in the vP domain. In other voice-as-effect approaches, instead, voice is determined *late* in the derivation, in the CP domain ([V. Chen 2023](#)).

In this dissertation, I will defend a type of voice-as-effect analysis of Äiwoo, adopting ideas from [Rackowski & Richards \(2005\)](#), [V. Chen \(2017a, 2023\)](#), and [Hsieh \(2020, 2025\)](#). I will argue that, essentially, UV morphology represents object agreement, and AV morphology is the default/elsewhere case. More concretely, v agrees with certain classes of direct objects (to be defined), but not with others. This step of agreement – or rather, the object’s features copied back onto v – is then spelled out as “UV morphology”. If this does not happen, then “AV morphology” is inserted instead. Effectively, AV is a morphosyntactic default.

(128) Preview of the analysis of Äiwoo:

- a. Actor Voice: no object agreement b. Undergoer Voice: object agreement



3.5 DERIVING CANONICAL CLAUSES

We are now ready to begin to address the “Word Order Puzzle” (how word order and verbal voice morphology are derived), for now in canonical AV and UV clauses. In this section I develop an analysis of these Äiwoo clauses based on standard Minimalist assumptions (see chapter 1, §1.5). Such an analysis must minimally answer the following questions:

- (129)
- a. What is voice morphology (a spell-out of), and how does it come to be?
 - b. How is word order determined? More specifically:
 - i. How, when, and why do the arguments move to their surface position?
 - ii. How does the VIA-first V2 word order arise?
 - iii. How do the properties of these movements fit within the A/Ā-distinction?
 - c. Are argument movement and voice morphology two separate processes, or just one? How are they related?

For ease of reference, from now on I will name the process by which an argument moves past another “(syntactic) inversion”. Concretely, in UV we observe *inversion* since the object moves from its base-generated position c-commanded by the subject (by standard UTAH assumptions; M. C. Baker 1988) to a higher position where it c-commands the subject.

As pointed out in this chapter’s introduction, a model of the Äiwoo clause is only good if beyond getting the word order facts right, it also makes correct predictions with respect to other aspects of the syntax of the language. Based on word order facts and on evidence from patterns of Ā-extraction (which will be the focus of chapter 4), I will develop and defend an analysis of the syntax of the Äiwoo clause with the following core features:

(130) Core aspects of the proposal:

- a. Voice-as-effect: voice morphology is the spell-out of object agreement by *v*, and this happens low/early
- b. The inversion step happens high/late: the object undergoes *non-local A-movement* to spec,CP

- c. The V2 order arises from the verb raising to C by (long) head movement

To give a more concrete preview of where we are heading, the structure I will propose for AV and UV clauses is schematically represented in (131). In both, the verb first head-moves into v and then undergoes long head-movement to C, skipping the TAM particles in T. In AV (131a), there is no agreement between v and the object; this will result in the verb being spelled out with default (= AV) morphology. The subject raises first to spec,TP and then to spec,CP. In UV (131b), v agrees with the object; this is what will be spelled out as UV morphology on the verb. Then, the subject moves to spec,TP, just like in AV. However, this time it is the object that moves to spec,CP, across the subject.

(131) General structure of Äiwoo clauses:

a. Actor Voice:



b. Undergoer Voice:



From this sketch, we can already observe the core aspects of the proposal outlined in (130). Voice is determined *early*, in the vP domain: UV if there is object agreement, AV otherwise. Then, inversion happens *late*: in UV, the object does not raise past the subject until the CP domain. Finally, the V2 effect is derived by head-movement of the verb into C. This analysis will show some important similarities to the one developed in Pearson (2001, 2005) for Malagasy and especially in van Urk (2015) for Dinka, particularly in the derivation of the V2 effect and the resulting combination of A/Ā-properties of argument fronting to spec,CP. This will be shown to be essentially pure A-movement but with less strict locality conditions than usual, since it can skip past an intervening argument. In other words, this will be an instance of *non-local A-movement* (§3.7).

I will now discuss my analysis of the syntax of the Äiwoo clause. I will proceed bottom-up, examining first the lower vP domain (§3.5.1), then the middle portion of the clause (§ 3.5.2), and finally the higher domain (§3.5.3). For clarity, in §3.5.4 I give full annotated step-by-step derivations representing the entire system developed here. Finally, in §3.5.5 I discuss the pattern of φ -agreement.

3.5.1 THE vP DOMAIN: VOICE IS DETERMINED LOW

3.5.1.1 THE POSITION OF VOICE MORPHOLOGY AND THE MIRROR PRINCIPLE

If we pursue an analysis where voice is something that happens as an effect of the combination of various syntactic factors, we then need to determine *when* exactly it happens throughout the course of the derivation. The Mirror Principle (M. Baker 1985, M. C. Baker 1988) has been invoked in V. Chen (2023) as a clue. In Tagalog and the Formosan languages, voice morphology surfaces as rather *external*, or far away from the verb stem. For example, in Puyuma, Paiwan, and Tagalog, voice morphology surfaces outside Aspect

(132), being either infix or prefixed to progressive, habitual, and future morphology respectively. Moreover, also in Puyuma voice shows allomorphy conditioned by Mood (133): the Locative Voice suffix is *-ay* in the indicative (133a), but *-i* in the imperative (133b).

(132) **Voice morphology is outside Aspect:**

- a. *d(em)a-deru i atrung dra patraka* (Puyuma)
 $\langle \text{AV} \rangle \text{PROG-cook PN.PIV Atrung INDEF.ACC meat}$
 ‘Atrung is cooking meat’ (A. H.-c. Chang 2006: 54, as cited in V. Chen 2023: 10)
- b. *s(em)iu-siup ti zepul nu s(em)iaw* (Paiwan)
 $\langle \text{AV} \rangle \text{HAB-suck PN.PIV Zepul IRR.TEMP} \langle \text{AV} \rangle \text{soup}$
 ‘Zepul sucks (it) when she eats soup’ (A. H.-c. Chang 2006: 54, as cited in V. Chen 2023: 10)
- c. *i-pa~pa-bili ko kay Crispin ang tsokolate* (Tagalog)
 CV-FUT~CAUS-buy 1SG.GEN OBL.P Crispin NOM chocolate
 ‘I will make Crispin buy the chocolate’ (Hsieh 2020: 35)

(133) **Voice inflects for Mood:** (V. Chen 2023: 10)

(Puyuma)

- a. *ku-beray-ay i senten dra paysu*
 1SG.NOM-give-LV.IND PN.PIV Senten INDEF.ACC money
 ‘I gave Senten money’
- b. *beray-i i senten dra paysu!*
 give-LV.IMP PN.PIV Senten INDEF.ACC money
 ‘Give Senten money!’

V. Chen (2023) takes this to signify that what is spelled out as voice morphology is something that happens relatively *late* in the derivation¹².

However, in Äiwoo the situation looks quite different. As we saw in §3.3.1, voice is mostly reflected in Äiwoo by a system of *stem alternations*: (almost) every verb has two stems, one per voice, and the relationship between the two forms is largely idiosyncratic/suppletive. Consider again the various alternations in (134), repeated from above.

(134) **Voice-based stem alternations in Äiwoo:**

- | | |
|------------------------------------|------------------------------------|
| a. <i>epavi epave</i> ‘cook.UV/AV’ | f. <i>lâbu lâbonge</i> ‘cut.UV/AV’ |
| b. <i>lââ lâwââ</i> ‘build.UV/AV’ | g. <i>kili kei</i> ‘dig.UV/AV’ |
| c. <i>tu tou</i> ‘bring.UV/AV’ | h. <i>pââ pâ</i> ‘steal.UV/AV’ |
| d. <i>togulo togo</i> ‘hit.UV/AV’ | i. <i>ve veve</i> ‘buy.UV/AV’ |
| e. <i>ngä vängä</i> ‘eat.UV/AV’ | j. <i>kali ekäi</i> ‘sing.UV/AV’ |
| k. <i>la lää</i> ‘give.UV/AV’ | l. <i>nu nu</i> ‘drink.UV/AV’ |

By the same Mirror Principle logic, this morphological fact would teach us that voice in Äiwoo is determined *early* in the derivation, not late, as it’s very close to the verb stem.

¹² Although see Wu (2024) for arguments against Chen’s analysis, and a proposal for Seediq (Formosan) where voice is low. In this proposal, voice is above *inner* aspect (Travis 2010), but crucially lower than other Infl-region aspectual heads.

In fact, it's internal to the stem, and most importantly on the inside of any other inflectional category (e.g., aspect and agreement). Two influential analyses of Tagalog propose that voice morphology is established early in the derivation, and for both analyses, voice morphology reflects case agreement between v (or Voice) and one DP per sentence. For [Rackowski & Richards \(2005\)](#), exactly which DP v agrees with depends on an independent process of object shift, determined by definiteness/specificity. For [Hsieh \(2020, 2025\)](#), this is instead determined by v agreeing with different arguments based on the distribution of Ā-features¹³. Here, what I propose is a variant of [Hsieh](#)'s model.

3.5.1.2 UV MORPHOLOGY IS OBJECT AGREEMENT; AV IS DEFAULT

SETTING THE STAGE Following [Hsieh \(2020, 2025\)](#), I assume that DPs in a sentence can be base-generated with an Ā-feature [PIV(OT)] (see also [Kroeger 1993](#): chap. 3, [Richards 2000](#), [V. Chen 2017a](#): chap. 4). I will consistently call the argument carrying [PIV] the *pivot*. In the canonical clauses under discussion here, the pivot will always coincide with the VIA; these two notions will importantly come apart in the next chapters, when we turn to non-canonical clauses and cases of non-VIA extraction. This [PIV] feature has somewhat vague information-structural correlates¹⁴, and is essentially syntactically free, in the sense that the speaker freely chooses to place it on one nominal per sentence. In keeping with the idea that [PIV] is syntactically free, I posit no restriction on how many nominals per clause may or may not carry [PIV]: there may be one, or zero, or several¹⁵.

A piece of evidence that [PIV] is a information-structure-related Ā-feature comes from acceptability patterns in question/answer pairs. To a subject question, only a UV answer is acceptable (135a); viceversa, to an object question, only an AV answer is acceptable (136a).

- | | |
|---|---|
| (135) Subject question: ✓ UV, ✗ AV | (136) Object question: ✓ AV, ✗ UV |
| Q: "Who ate (the) mango?" (240909) | Q: "What did Anna eat?" (240909) |
| a. <i>mango_{PIV} i-ngä Anna</i>
mango ASP-eat.UV Anna
'Anna ate the mango' | a. <i>Anna_{PIV} i-vängä mango</i>
Anna ASP-eat.AV mango
'Anna ate (a) mango' |
| b. # <i>Anna_{PIV} i-vängä mango</i>
Anna ASP-eat.AV mango | b. # <i>mango_{PIV} i-ngä Anna</i>
mango ASP-eat.UV Anna |

At the very least, this reveals that our stipulated Ā-feature [PIV] has at least one trait in common with a bona fide Ā-feature like [TOP(IC)]: both are incompatible with the kind

¹³ The proposal in [V. Chen \(2017b, 2023\)](#) is similar to [Hsieh](#)'s (2020) in that verbal voice is determined on the basis of Ā-features, but it differs from his proposal on the timing of this. For [Hsieh](#), this happens early (in the vP domain); for [V. Chen](#), this happens later in the derivation (at the CP level, approximately).

¹⁴ The mechanisms and motives behind voice choice in Äiwoo are not well understood. The reader is referred to [Holmen \(2020\)](#) and [Holmen & Næss \(2025\)](#) for corpus studies trying to elucidate which factors are or are not important to determine what voice will be chosen by a speaker for any given sentence.

¹⁵ This eliminates a stipulation made in [Hsieh \(2020, 2025\)](#), where *one and only one* nominal per clause must carry [PIV]. We will see that the system will still predict the correct results even without this stipulation.

of focus that is involved in answering questions. In English, for example, topicalizing the constituent that would answer the question is similarly infelicitous¹⁶:

- (137) a. Q: “Who ate the mango?”
 # A: *(As for) Anna, she ate the mango*
 b. Q: “What did Anna eat?”
 # A: *(As for) the mango, Anna ate it*

However, [PIV] cannot have the exact same semantic/pragmatic import as [TOP]. For example, certain kinds of non-referential nominals (e.g. quantified expressions) cannot be topicalized in many languages, for example Italian (138a) (Rizzi 1986 et seq.), whereas they can be pivots in Äiwoo (138b). Whatever it is that makes [TOP] incompatible with a quantified expression in Italian (see Chierchia 2025 for a discussion), [PIV] must not share this property.

- (138) a. **Italian: a quantified expression cannot be a topic**
 * *[tutti gli studenti]_{TOP}, li ho portati al concerto*
 all the students them have.1SG brought.PL to.the concert
 Intended: ‘(As for) every student/all students, I brought them to the concert’
 b. **Äiwoo: a quantified expression can be the pivot** (250717)
 [pedevalili dâuwângâ]_{PIV} i-tu-du-kâ-no ngä skul
 children all ASP-bring.UV-all-DIR3-1MIN to school
 ‘I brought every child/all children to school’

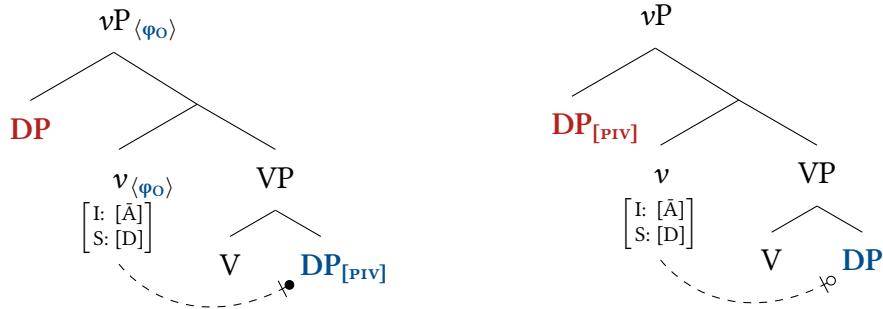
For the purposes of this dissertation, I follow Hsieh (2020, 2025) in only stipulating that there exists a syntactic Ä-feature [PIV], with a semantic/pragmatic contribution similar to [TOP] (yet not identical), and with completely free syntactic distribution (*contra* Hsieh 2020, 2025). I leave it to further research to shed more light on what exactly the interpretive import of [PIV] is, and what the constraints on its distribution are (if any).

IMPLEMENTING THE SYSTEM At this point, we have spelled out concretely what it means for an argument to be “the pivot”: a pivot argument is a nominal that carries the Ä-feature [PIV]. Now, we need to make sure that verbal morphology will be sensitive to the presence vs. absence of this feature, to capture the contrast between AV and UV. I propose that when the object carries Ä-features, *v* agrees with it, and copies back its features; this is then spelled out as UV morphology. Let us now go through the derivation to see how exactly this happens.

16 For what it’s worth, the same judgments also hold for at least Italian and Norwegian, two languages where topicalization is impressionistically more productive/frequent than in English.

I propose that the v head carries a probe with the specification [INT: \bar{A} ; SAT: D]^{17,18}. If the object has \bar{A} -features (139a), v will agree with it, and thus copy back its features (the subscripted $\langle \varphi_O \rangle$). If, on the other hand, the object is just a normal (\bar{A} -featureless) DP (139b), v will *not* copy back any features (because the interaction condition, [\bar{A}], is not met), but it will stop probing (because the satisfaction condition, [D], is met)¹⁹. For comparison's sake, I have represented this case as one where [PIV] is on the subject. This is not important, as the subject does not get agreed with by v ; the same result would obtain if neither argument carried [PIV].

- (139) a. DP_[PIV] object: object agreement b. DP object: no object agreement



I assume that the verb head-moves into v (not represented in these trees for simplicity), and the thus formed complex head is then mapped onto the correct stem for each verb. Simply put, the stem alternation is conditioned allomorphy. If a root is in the context of a v with φ -features on it, the UV exponent will be inserted; else, the AV exponent will, as a default form. Some sample Vocabulary Insertion rules are given in (140).

17 Why the satisfaction condition is set as [D] will become clear in chapter 6, where I discuss non-canonical UV clauses with pronominal objects. The probe specification as described here will also be partially revised to account for the particular interactions between pronominal objects and \bar{A} -extractability patterns. For now, this is sufficient.

18 The idea of “ \bar{A} -agreement” is not new. Aside from the context of Austronesian voice, this has been proposed for several languages, though it is often labelled “*wh*-agreement” (since it’s often analyzed in the context of *wh*-questions). Some examples are Chamorro (Austronesian; Chung 1994), Abaza (Northwest Caucasian; O’Herin 1993, 2002, Arkadiev & Caponigro 2021), Kinande (Bantu; M. C. Baker 2003), San Martín Peras Mixtec (Oto-Manguean; Ostrove 2018), Khanty (Uralic; Colley & Privoznov 2020), Ripano (Italo-Romance; D’Alessandro 2020), Tibetan (Sino-Tibetan; Erlewine 2020), Kawahíva (Tupi-Guaraní; dos Santos 2023), and Tira (Niger-Congo; Jenks 2023).

19 The system described here only applies to transitive verbs. For completeness, intransitives are treated separately, in §3.6, where a minor amendment is made to the system.

(140) Some Vocabulary Insertion rules for voice-conditioned stem allomorphy:

- | | |
|--|---|
| a. $\sqrt{\text{COOK}} \Leftrightarrow \text{epavi} / -v_{\langle\varphi\rangle}$
$\sqrt{\text{COOK}} \Leftrightarrow \text{epave}$ (elsewhere) | c. $\sqrt{\text{BRING}} \Leftrightarrow \text{tu} / -v_{\langle\varphi\rangle}$
$\sqrt{\text{BRING}} \Leftrightarrow \text{tou}$ (elsewhere) |
| b. $\sqrt{\text{HIT}} \Leftrightarrow \text{togulo} / -v_{\langle\varphi\rangle}$
$\sqrt{\text{HIT}} \Leftrightarrow \text{togo}$ (elsewhere) | d. $\sqrt{\text{EAT}} \Leftrightarrow \text{ngä} / -v_{\langle\varphi\rangle}$
$\sqrt{\text{EAT}} \Leftrightarrow \text{vängä}$ (elsewhere) |

This system can easily be extended to capture the pattern of voice concord described in §3.3.1. As a reminder: adverbial modifiers suffixed to UV stems must take an additional suffix *-i/-nyii*, depending on the specific lexical item (141a). This never happens when the same adverbial modifiers are suffixed to AV stems (141b).

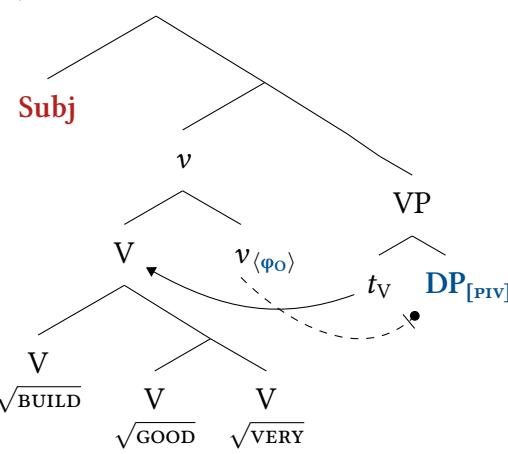
(141) Voice concord in UV:

(240425)

- a. *nuwopa eāngā ki-[lāā-päko-i-mana-i]-no=ngaa*
 house that IPFV-build.UV-good-UV-very-UV-1MIN=FUT
 'I will build that house/those houses very well'
- b. *i-ki-[lāwāā-päko-mana]=kaa nuwopa*
 1MIN-IPFV-build.AV-good-very=FUT house
 'I will build a house/houses very well'

For concreteness, I assume that these structures instantiate V-V (or root-root) compounding. The complex V head might be merged as such in-situ, as sketched in (142), or created through successive-cyclic V-to-V head movement; the difference between these options is immaterial²⁰. All three stems in this complex form then undergo the same kind of positional allomorphy in the context of $v_{\langle\varphi\rangle}$ (143)²¹.

(142) vP

(143) a. $\sqrt{\text{BUILD}} \Leftrightarrow \text{lāā} / -v_{\langle\varphi\rangle}$ $\sqrt{\text{BUILD}} \Leftrightarrow \text{lāwāā}$ (elsewhere)

- b. $\sqrt{\text{GOOD}} \Leftrightarrow \text{päko-i} / -v_{\langle\varphi\rangle}$
 $\sqrt{\text{GOOD}} \Leftrightarrow \text{päko}$ (elsewhere)

- c. $\sqrt{\text{VERY}} \Leftrightarrow \text{mana-i} / -v_{\langle\varphi\rangle}$
 $\sqrt{\text{VERY}} \Leftrightarrow \text{mana}$ (elsewhere)

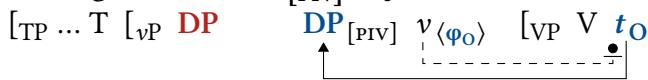
²⁰ I don't take the fact that [very well] forms a complex modifier of [build] to signify that these structures are formed by phrasal (VP) movement, *contra* Hedding & Yuan (2023).

²¹ This is a relatively rough sketch. A more well-developed morphological analysis should hopefully offer a principled explanation for the fact that whereas many transitive stems show (near-)suppletion for voice or other idiosyncratic allomorphy patterns, adverbial modifiers like *päko* 'good' and *mana* 'very' just take a consistent suffix *-i*, with no suppletion (see Wu et al. 2023 for an argument that *-i* might be the default morphological realization of "UV", although with different syntactic assumptions as to what "Undergoer Voice" is than what I propose here). For the purposes of this dissertation, however, this suffices, and I leave the development of a more sophisticated morphological analysis to future work.

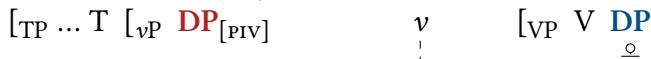
CONCEPTUAL PARALLELS The “UV as object agreement” system just outlined bears a resemblance to the *case agreement* mechanism proposed in Hsieh (2020, 2025), and also to earlier case agreement proposals like Rackowski & Richards (2005). In Hsieh’s (2020) analysis, v agrees with whichever nominals carries the [PIV] feature, and copies back its case feature (NOM or ACC); this is then spelled out as either AV or UV morphology. This analysis is based on Tagalog, a language with overt case marking, so it’s somewhat natural to posit that voice morphology is an overt reflex of agreement between v and the case features of the pivot. However, Äiwoo doesn’t have any case morphology, so the direct evidence behind such an analysis would be weaker. More problematically, this step of agreement by v happens rather early in the derivation – as soon as v is merged, even before the external argument is present. Therefore, it would not be obvious how to model first case assignment and then further copying of case features back to a probe at this early stage of the derivation²².

As a side note, one could also imagine that when v agrees with the object (139a), the object is additionally shifted to an inner specifier of vP , below the subject; not-agreed-with AV objects (139b) remain in situ (in a manner reminiscent of Rackowski & Richards 2005). This step of movement would crucially have to *not* bring the object above the subject, for reasons that will become clear in §3.5.2²³:

- (144) a. **Undergoer Voice: DP_[PIV] objects shift**



- b. **Actor Voice: DP objects remain in situ**



This object shift idea would be theoretically attractive, as it would bring Äiwoo closer to what we know about movement of objects to the phase edge in many languages. Ä-marked objects (henceforth, “DP_Ä”) are among the typical classes of nominals that could be described as undergoing object shift, since they often move successive-cyclically to the vP phase edge on their way to further movement to spec,CP (see e.g. van Urk 2020, Keine & Zeijlstra 2025 for recent overviews with focus on the clause-internal vP phase)²⁴.

22 An analysis of Äiwoo that is closer to the case-agreement models cited above *can* be developed, but in order to correctly model the complexity of the whole system, one needs to make additional assumptions about the inner workings of agreement. For concreteness, what such a system would have to look like is laid out in Appendix B, but I do not assume this here as I consider the current analysis more parsimonious since it necessitates fewer assumptions.

23 Formally, this could either be done by Tucking In (Richards 1997), or by ordering the step of Internal Merge of the object before the External Merge of the subject.

24 The other typical class of objects that shift are pronouns (e.g. in Scandinavian languages; see Vikner 2017 and references therein). Indeed, we will see in chapter 6 that pronominal objects in Äiwoo are treated by v just like Ä-carrying objects, and they are always agreed with regardless of Ä-features. All in all, the class of objects that v agrees with in Äiwoo (thus triggering UV morphology) is precisely the union of two classes of objects that in many languages are shifted to the vP phase edge.

However, because all PPs and adjuncts are linearized to the right in Äiwoo, this step of object shift would be string-vacuous, and it has therefore proven quite hard to find any independent evidence of it. Therefore, I don't incorporate object shift into my analysis. In a sense, given the framework adopted here where agreement is a necessary precondition for movement, my analysis involves the first step of "object shift" (v agreeing with the direct object), but not the second (the object actually moving). Notably, even if it is indeed discovered that string-vacuous object shift does take place in Äiwoo as described here, nothing would have to change in the system of probing and agreement described in this dissertation.

In the "UV as object agreement" approach outlined here, the two voices are not on equal standing (like they are in Hsieh's 2020 proposal). Rather, UV is morphologically marked, whereas AV is really a default/elsewhere spell-out. This is in line with a number of analyses of other Austronesian languages, where it has been argued that Actor Voice is the a morphosyntactic "default", or "lack of voice" (T. Chen 2010, Levin 2015, Wurmbrand 2016, Wurmbrand & Shimamura 2017, H. Y. Chang 2017, Wu et al. 2023). Moreover, my analysis essentially makes "Undergoer Voice" a sort of head-marking counterpart of Differential Object Marking (DOM; Bossong 1991, Aissen 2003, et seq.). In canonical (dependent-marking) DOM patterns, certain types of "special" objects are singled out and carry special morphology. In this version, the special marking takes place on the verb taking said special objects as its complements, in the form of UV morphology.

So far, we have captured the correlation between voice morphology and pivothood by following Hsieh (2020, 2025) in assuming that it's grounded in agreement between v and a nominal carrying Ā-features, but implementing in it a slightly different way. In my analysis, only UV is a marked category, spelling out agreement between v and a DP_[PIV] object; AV is the morphology that surfaces when v doesn't agree with anything (rather than when it agrees with the subject, as in Hsieh's model). This difference in implementation will become crucial throughout the next chapters in addressing both the Word Order Puzzle and the Extraction Puzzle.

My analysis diverges from both Hsieh (2020, 2025) and earlier case-agreement-based proposals like Rackowski & Richards (2005) in what happens immediately after this agreement step. In those proposals, whichever argument v agrees with always ends up as the highest argument in the vP phase. In the case of AV, the subject is already the highest argument, so nothing special happens. In the case of UV, the object gets moved to a position above the subject, something that would be crucial to the rest of the derivation proposed in those models. For Äiwoo, instead, I propose that *there is no syntactic inversion at this stage*. In other words, the object does not raise across the subject. Even if we incorporate object shift into our analysis, as discussed above, this posited movement step would bring the object to an *inner* specifier of vP, still below the subject. The only aspect that gets established at this point of the derivation is the morphological spell-out of the verb. The main argument for not positing inversion this early comes from what goes on in the TAM region of the clausal spine, which will be the topic of the next section.

3.5.2 THE TP DOMAIN

Let us remind ourselves of the word order facts we're trying to model. Every clause is VIA-initial, and the VIA immediately precedes the verb. However, the non-VIA arguments (objects in AV, subjects in UV) are not in the same linear position. AV objects are to the right of the series of TAM particles (145a). In contrast, UV subjects are *between the verb and the TAM particles* (145b).

- (145) VIA V (S) =TAM (O) (adjuncts) (230706)
- a. *Anna ki-vängä* =kaa sii ngä täpilo enge
Anna IPFV-eat.AV =FUT fish in bowl this
 ‘Anna will eat fish in this bowl’
 - b. *sii ki-ngä* Anna=kaa ngä täpilo enge
fish IPFV-eat.UV Anna =FUT in bowl this
 ‘Anna will eat the fish in this bowl’

In this section, I show that the position where UV subjects are – ‘Anna’ in (145b) – is a derived position that the subject moves to. I will argue that this is a specifier position in the T/Infl region of the clause, which I identify with spec,TP for simplicity. (This labeling choice, i.e. this position being exactly spec,TP, is not particularly crucial; it is only important to me that this is a specifier position of a projection higher than the vP domain and below the CP domain.) The two main pieces of evidence will be (i) the TAM-related semantics of the particles in this position; (ii) the existence of a lower position where subjects can sometimes surface.

3.5.2.1 THE POSITION BETWEEN V AND TAM IS SPEC,TP

The first argument for this position being spec,TP is once again based on Mirror Principle considerations. The set of particles that appear in this region consists of tense/aspect particles, negation, and the CV marker (chapter 2, §2.6.3; see also Roversi 2019: §2.3.2). Setting this last one aside, as it appears to have a different function than the others, (146) is a sentence featuring the three main “slots” in the series, here illustrated by =to PRF, =gu NEG and =Caa FUT.

- (146) *nuwopa eängä ba ki-ve Pita=to=gu=naa ngä taun* (250717)
 house that NEG IPFV-buy.UV Peter=PRF=NEG=FUT in town
 ‘Peter won’t already have bought that house in town’

Some descriptive facts about the semantics of =to PRF and =Caa were described in chapter 2, §2.6.3. Because the semantics conveyed by the particles in this region are related to tense and aspect (and polarity), it is reasonable to hold as a null hypothesis that they must be in the general T/Infl-region, above the θ-domain (Ramchand & Svenonius 2014, a.m.o.). If the subject – or any nominal, for that matter – surfaces to the left of these particles in the T/Infl domain, then it would be hard to maintain that it’s still in its base-generated position in spec,vP.

First, we must make sure that the position between the verb and the TAM particles is a *syntactically* defined position. In other words, despite these particles being morphophonological clitics, they are not linearized according to phonological principles. If we manipulate the phonological size of the nominal constituent filling this position, we observe that this has no influence whatsoever on where the TAM particles are. The nominal in this slot between the verb and the TAM particles can be as phonologically small as segmentally null, only consisting of a floating [nasal] feature (147a). This nominal can also be very large, containing an entire relative clause with its own arguments and adjuncts (222b,c). Heavy DPs of this size in this position are somewhat uncommon, but they are not an artifact of elicitation: sentence (147c) is attested in our natural speech corpus.

(147) **The nominal between V and TAM can be of arbitrary phonological size:** (240215)

- a. *nuwopa enge ba ki-ve*[-Øⁿ]=*gu=naa*
house this NEG IPFV-buy.UV-3MIN=NEG=FUT
'S/he will not buy this house'
- b. *gino-mu ba ku-mangi [kuli (mi=)[ki-ngoduwâ-lâoo ngä paveli eângâ]]*=*gu=naa*
son-2MIN NEG IPFV-bite.UV dog REL=IPFV-shout-always in garden
that=NEG=FUT
'The dog that's always barking in that garden won't bite your son'
- c. *ngamaa lâ ba i-kää [me=[ki-tokoli-woli-mä ngä botu]]*=*gu=nâ*
PRT DIST NEG ASP-know.UV REL:person=IPFV-sit-down-DIR1 in
boat=NEG=DIST
'If the person sitting in the boat doesn't know (it), ...' (Nyel. toponu 141)

Having established that the position between V and =TAM is a syntactically defined one, we can now show that it is not the *in-situ*/base-generated position of the subject, but a derived one. The most conclusive evidence to support this comes from a type of UV clause whose properties will not be discussed until chapter 6. For now, I will use the sheer fact that these clauses exist as an argument, and I ask the speaker to wait until chapter 6 to see how they will fit into our model.

In this type of UV clause, the position between the verb and the TAM particles is occupied by the *object*, instead of the subject. Crucially, when the object is in this position, the subject must exceptionally surface in a lower position, to the *right* of the TAM particles. In (148a), we see the pronominal marker -*gu-de* OBJ-12AUG occupying the position between the verb and the TAM particles (and doubling the preverbal object pronoun *iude* 'us.INCL'). Consequently, the subject 'John' comes *after* the negation and future particles. Putting the subject in the canonical position between the verb and the TAM particles in this context is ungrammatical (148b).

- (148) Evidence for a lower subject position:

(240307)

- a. (*iude*) *ba ku-tu-kä-gu-de=gu=naa* John ngä skul
12AUG NEG IPFV-bring.UV-DIR3-OBJ-12AUG=NEG=FUT John to school
'John won't bring us to school'
- b. * (*iude*) *ba ku-tu-kä-gu-de* John=gu=naa ngä skul
12AUG NEG IPFV-bring.UV-DIR3-OBJ-12AUG John=NEG=FUT to school

I assume that this lower position of the subject is its original base-generated one, in spec,vP. Therefore, I argue that the structural position that linearly corresponds to the slot between the verb and the TAM material is spec,TP.

3.5.2.2 MOVING NOMINALS TO SPEC,TP (A FIRST PASS)

Having established the nature of this position as spec,TP, this has important consequences for our general analysis of the syntax of Äiwoo clauses. The most straight-forward one is that in a very familiar way, Äiwoo subjects move to spec,TP. For a concrete implementation, I propose that T hosts a probe that simply raises the first/highest nominal it finds, regardless of what v has agreed with²⁵.

The existence of this step of subject movement is instructive with the respect to the timing of the syntactic inversion between the object and the subject, which results in OVS order in UV. If subject movement to spec,TP is local, this means that at this point of the derivation the subject is still the highest argument. This entails that despite voice morphology being established early in the derivation, *inversion happens late*.

Consider what an early-inversion approach would predict instead. In such a model, adopted in several other influential analyses (Rackowski 2002, Aldridge 2004, 2008, Rackowski & Richards 2005, Erlewine 2018, Hsieh 2020, 2025, a.o.), v not only (case-)agrees with the pivot/VIA but it also moves it to its outermost specifier, making it the highest nominal in the θ-domain²⁶. Specifically, in UV, the object moves past the subject:

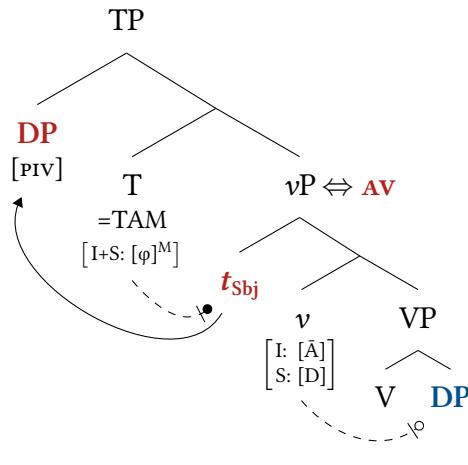
- (149) ... [T [_{vP} **Obj** [_{vP} **Subj** $v \xleftrightarrow{UV}$ [_{VP} V **t_{Obj}**]]]]]
-

²⁵ As stated, in this chapter I am exclusively concerned with deriving what I call canonical clauses. As we observe from (148a), there are indeed sentences where I will argue that the object moves to spec,TP instead of the subject. These are treated in chapter 6, where I will develop a more sophisticated model of what kind of constituents move to spec,TP and how this movement is derived. Crucially, that will not affect the argument being made here. For expository reasons, therefore, I will develop the argument here ignoring those kinds of sentences, and I ask the reader to trust that the system will still hold once we incorporate that added complexity into our model. Ultimately, we will end up with a model where movement to spec,TP is *mostly* local, with exactly one kind of well-motivated exception that we can capture with a neat generalization. This is preferable to the opposite, that is, a model where movement to spec,TP is mostly *non-local*, and where we are not able to draw a generalization about the natural class of nominals that move to spec,TP. See chapter 6 for details.

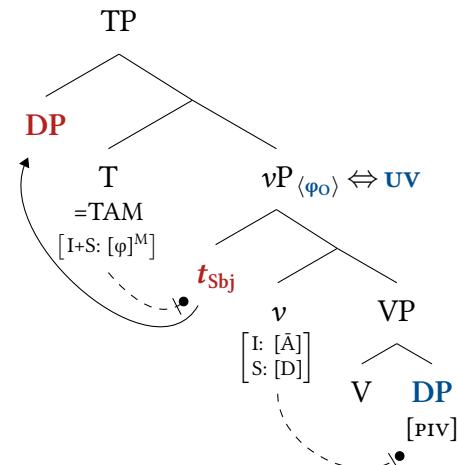
²⁶ Here I abstract away from the difference between voice-as-cause approaches, like Aldridge (2004), and voice-as-effect ones, like Rackowski (2002). What matters for now is that in both, syntactic inversion happens early (at the vP/VoiceP level) rather than later.

Of course, the obvious problem now for Äiwoo is how to model the movement of the subject to spec,TP, which in this case would be irredeemably non-local²⁷. I propose that (in the ordinary clauses under discussion) T instead acts very simply, and simply moves the highest nominal it finds, which in both cases is the subject. This entails that syntactic inversion happens late. Formally, the probe specification on T is [INT: φ^M ; SAT: φ]. In prose: it agrees with and moves the first φ -bearing constituents it finds, and immediately stops. The steps of agreement and movement modeled so far are summarized in (150) for both AV and UV²⁸.

(150) a. Actor Voice:



b. Undergoer Voice:



3.5.3 THE CP DOMAIN: VIA FRONTING

In the previous section I have argued that subject movement to spec,TP happens locally, and that therefore, at that point of the derivation – in either voice construction – the subject is still the structurally highest DP. The question is now how to model the syntactic inversion process which results in OVS word order in UV. Necessarily, there will have to be a step of *non-local movement*, with the object being raised across the subject. We ought to ask two questions:

²⁷ One possible approach would be to posit that the probe on T is case-discriminating (see e.g. Otsuka 2006, 2010, Bobaljik 2008, Legate 2012, Deal 2016b, Drummond 2023, Akkuş et al. 2025, Deal et al. 2024, a.o.). If our aim is for this probe to skip the higher object and move the subject non-locally, we could posit that it only specifically targets nominative arguments, and not case-marked/accusative ones. However, this will make wrong predictions for those non-canonical clauses where T visibly raises the *object*, and leaves the subject in situ (148a). Therefore, we cannot adopt case discrimination as a way for the probe on T to trigger non-local movement.

²⁸ This proposal would also not change in any meaningful way if we incorporated object shift into the analysis as described in §3.5.1.2. The putative step of object shift discussed above would bring the object to an inner spec,vP, below the subject. Therefore, even with object shift the subject would still be the closest argument to T, and the derivation would proceed as illustrated here.

- (151) a. **Question 1:** how does this non-local movement happen, mechanically?
 b. **Question 2:** what kind of movement is it exactly (A, \bar{A} , mixed)?

In the rest of this section, I will answer question 1, and thus build a complete model for deriving AV and UV clauses. Question 2 is taken up in §3.7, where I show that the mechanics I posit here correctly predict the properties of this movement. We will see that the process of VIA fronting will show properties of A-movement, despite being non-local (van Urk 2015, et seq.). This specific combination of properties will be shown to be motivated by the featural specification of the probe driving this movement.

Before that, a note is in order concerning the landing site of this movement. For concreteness and ease of exposition, following the spirit of the idea of Äiwoo as a V2 language, I have been labelling this position as spec,CP, so that VIA fronting is triggered by a probe on C. However, it is not crucial to the analysis that this head be identified specifically with C. Another equally plausible option, for example, would be to label what I call here T and C as two heads in an extended Infl-region of the spine, e.g. Infl1P (= TP here) and Infl2P (= CP here). This idea might in fact have some merit. For example, it would explain the fact that in embedded clauses containing a complementizer we can still see the same V2 word order we see in main clauses (like Dinka according to van Urk 2015, but unlike Germanic V2 languages, where embedded V2 is often highly restricted to certain specific kinds of embedded clauses; see e.g. Julien 2007a, 2015, Bentzen et al. 2007, Heycock et al. 2010, Bentzen 2014, a.o.). In (152), we can see that in the UV embedded clause, the fronted VIA object *buk* ‘book’ follows the complementizer *go*. Depending on exactly what functional head *go* spells out, this might indicate that the landing site of VIA fronting is not spec,CP but a slightly lower projection.

- (152) *mekivaavee ki-giââ [CP go buk i-gââ-du Jen]* (240530)
 teacher IPFV-happy because book ASP-read.uv-all Jane
 ‘The teacher is happy because Jane read the whole book’

Here, I keep the labels TP and CP for simplicity, with the promissory note that this will have to be made more precise in future research.

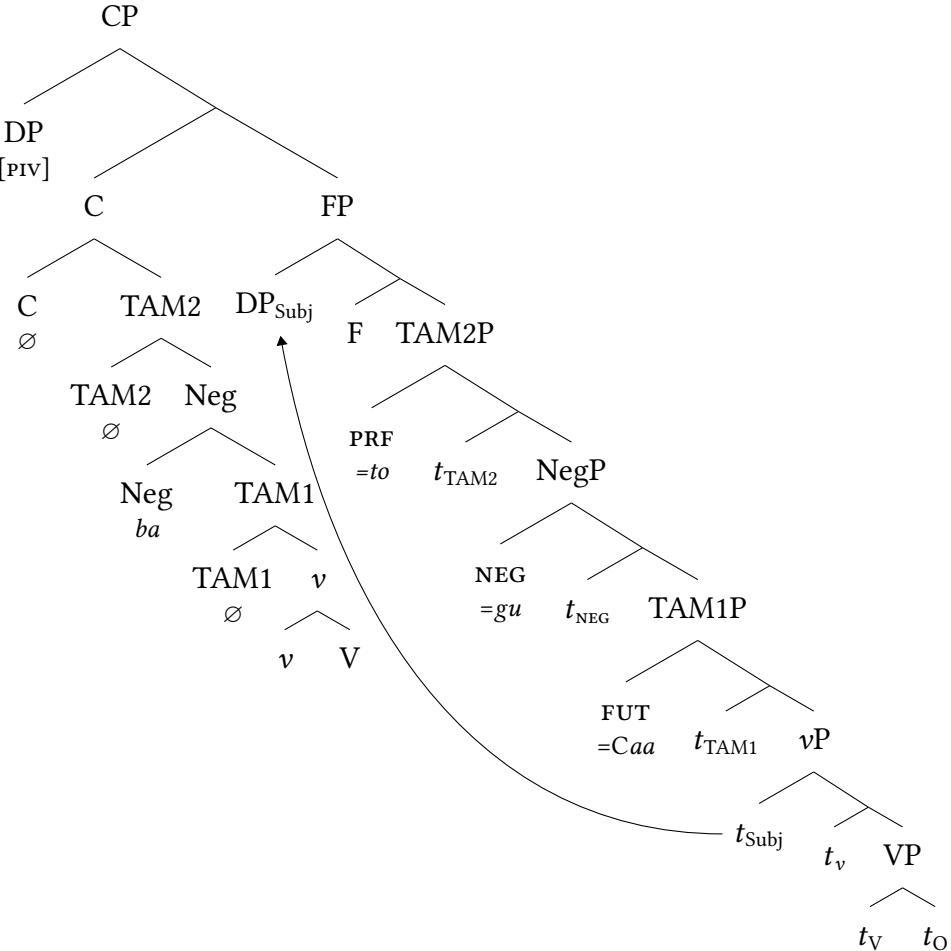
Consistently, I assume that the verb undergoes head movement to C. This will have to be *long head movement* (Roberts 1994, 2010, Embick & Izvorski 1997, Rezac 2008, Harizanov 2019, Harizanov & Gribanova 2019, Lee 2022, 2024), since it violates the Head Movement Constraint (Travis 1984) by skipping the TAM material in the T/Infl region (boxed):

- (153) $[_{\text{CP}} \text{FP}_{[\text{PIV}]} \text{ } \underset{\uparrow}{\text{V+}\nu+\text{C}} \text{ } [_{\text{TP}} \dots \text{ } \boxed{= \text{TAM}} \text{ } [_{\text{VP}} \dots \text{ } t_{\text{V+}\nu} \text{ } [_{\text{VP}} t_{\text{V}} \text{ } \dots]]]]$

An alternative analysis without non-local head movement is possible, if we assume that the post-verbal TAM particles are not heads of functional projections, but specifiers of null heads (akin to sentential adverbials in Cinque 1999, et seq.). In that case, the verb could undergo strictly local head movement through each head, and the TAM particles would still correctly be predicted to appear in the attested position (154). (In this tree, both the

specific labels and the left/right distribution of heads in the complex head under C are purely for exposition, and not a specific analytical commitment.)

(154) Alternative analysis without long head-movement:



Of course, assuming (154) instead of (153) would make several predictions concerning the relative structural positions and semantic scope of the TAM and negation material, as well as the landing site of the external argument. Throughout the rest of this dissertation, I assume the long head movement-option for ease of exposition, with the note that this is not a non-negotiable ingredient of the analysis.

3.5.3.1 C AGREES WITH WHAT v HAS AGREED WITH (BUT IT HAS A PLAN B)

To address our Word Order Puzzle, the first obvious desideratum is to capture the VIA-first word order (OVS in UV; SVO in AV). This fact that can be restated as the following extensionally equivalent correlation:

- (155) a. When v has agreed with an argument (the object, in UV clauses), C will front that argument;
- b. Else, C will front the highest argument it finds (the subject).

Let us first discuss the first sub-case, where C fronts a UV object. Later, we will extend the discussion to what C does when it cannot find its first preferred target.

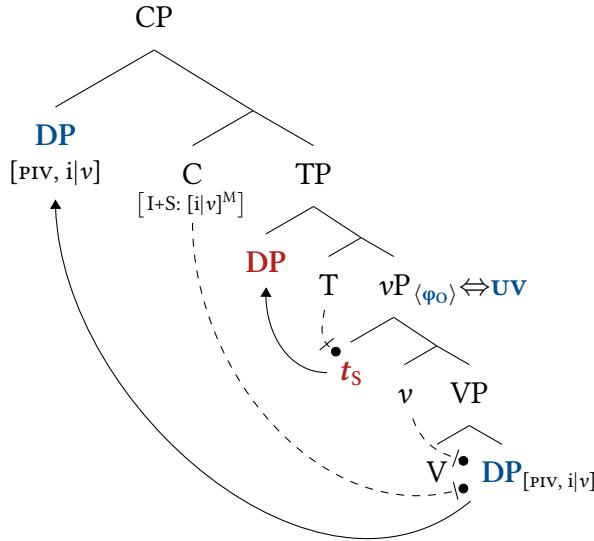
PLAN A: FRONT THE SAME ARGUMENT THAT v AGREED WITH Consider first the sub-generalization in (155a). We can informally say that v and C “go together”: if v has agreed with an argument, C wants that same argument too. Logically speaking, given the architecture of agreement, this can be done in two ways: either both v and C search for the same feature(s), or C searches for whatever v happens to have agreed with. This latter option might seem less obviously possible, but it can be implemented with the mechanism of goal flagging ([Deal to appear](#); see chapter 1, §1.5). Whatever constituent v agrees with will receive the interaction feature $[i|v]$ ²⁹. Then, we need a probe on C that is specified as [INT: $i|v^M$; SAT: $i|v$]. Now, C will agree with and move the same constituent that was agreed with by v ³⁰. This is, finally, the syntactic inversion step, where the object is raised across the subject.

At this point, this goal flagging approach might seem unnecessarily cumbersome. A simpler analysis, for example, would maintain that the probes on v and C go together because they are searching for the same feature (i.e., $[\bar{A}]$, or even more specifically [PIV]); this would at first glance get us the same effect. However, we will see in the following chapters that adopting the goal flagging mechanism will be crucial to address the Extraction Puzzle, when we try to account for the \bar{A} -extraction properties of different kinds of Äiwoo clauses. For now, I ask the reader to temporarily trust that positing a probe on C searching for $[\bar{A}]$ or [PIV] would make incorrect predictions about the \bar{A} -extraction patterns found in Äiwoo.

Here is how the goal flagging approach works, concretely. Consider the derivation of a UV sentence, shown in the example below (156). First, v agrees with the DP_[PIV] object, copying its φ -features, and this is what will ultimately be spelled out as UV morphology on the verb stem. As a consequence of this agreement step, the object now carries the interaction flag feature $[i|v]$. Then, independently, T raises the subject to spec,TP. Finally, C probes for an argument with the $[i|v]$ feature. The closest such argument is the object, and therefore C fronts the object across the subject. Note that this movement is non-local, since C raises the object instead of the closer subject, but it is made possible by Relativized Minimality (C wants a feature that the subject does not have, so the subject does not intervene). We will see below that the goal flagging approach also correctly predicts the cluster of properties of this movement to spec,CP. (For simplicity, again, I don't represent the head-movement of the verb, V-to- v -to-C.)

²⁹ I leave open for now the question of exactly what kind of feature $[i|v]$ may be. See §3.7.2 for a discussion.

³⁰ If, for any reason, there happened to be more than one constituents with the $[i|v]$ flag feature, C would move the highest of them. This possibility will come in hand in chapter 6.

(156) C raises the argument v agreed with (to be slightly revised): UV derivation

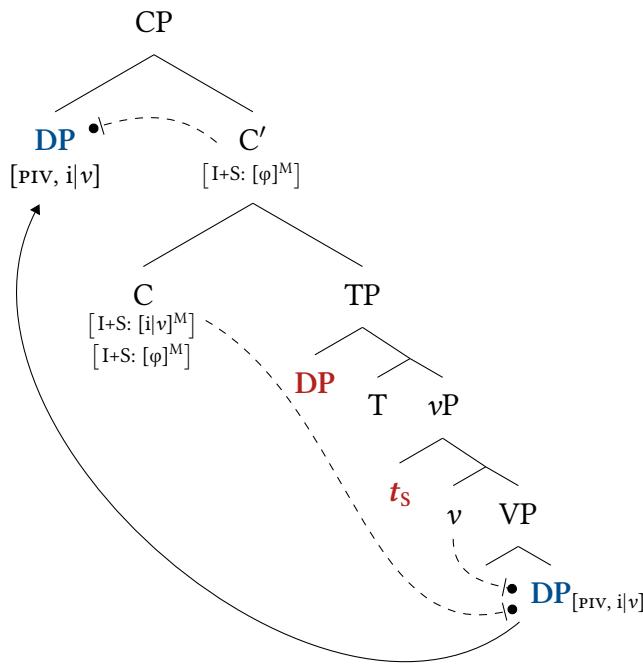
I take no stance here as to whether vP constitutes a phase in Äiwoo, and if so, whether an object fronted to spec, CP moves successive-cyclically through an inner spec, vP (below the subject). As discussed in §3.5.1.2, this step of “object shift” would be theoretically appealing, but there is no clear independent evidence for it, so I represent the movement to spec, CP as happening in one fell swoop. Not much hinges on this, and an intermediate landing site could be easily incorporated without any changes to the analysis.

PLAN B: JUST MOVE THE HIGHEST NOMINAL In AV clauses, we know that C fronts the subject. These are also precisely the type of clauses where, by hypothesis, v didn’t agree with anything (§3.5.1.2). Considering this together with the previous case, we want a system where a probe on C will have a “primary target”, but if it can’t find that, it will fall back to a less specific kind of target. In other words: if C can find a nominal flagged with $[i|v]$, it will raise that; if not, any nominal will do. As a result, the closest/highest one will automatically be targeted – that is, the subject. To do so, we will only marginally revise the system described in the previous section to incorporate this “plan B” logic. To this purpose, I adopt an implementation developed in Scott (2021). The mechanism she proposes is based on the idea of *Multitasking* (van Urk & Richards 2015, Bossi & Diercks 2019) and achieves the same results, but without the need of positing additional mechanisms/operations in the grammar of Agree(ment).

The system works as follows. We assume that C has two ordered probes: the “primary” probe described earlier, specified as $[\text{INT}: i|v^M; \text{SAT}: i|v]$, and a “secondary” probe with a much more general featural specification $[\text{INT}: \varphi^M; \text{SAT}: \varphi]$ (assuming that $[\varphi]$ is present on all nominals). In prose: the primary probe aims to move the highest constituent that has been agreed with by v ; the secondary probe just aims to move the highest nominal, whatever that is. The primary probe acts first, and the secondary one acts later.

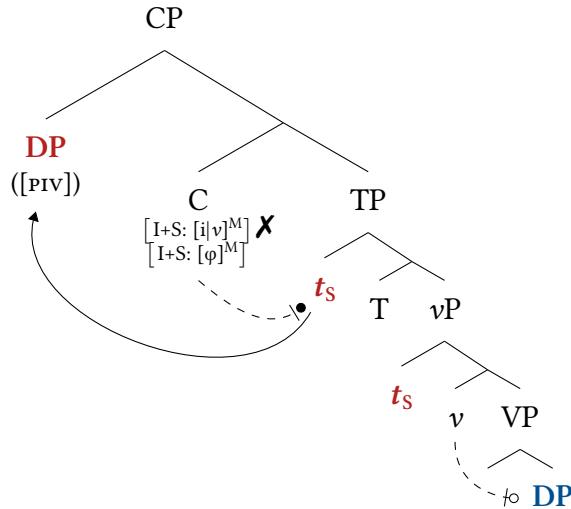
Now we can see how the two probes will operate together. First, let's consider again the case of a UV derivation (157), where v has agreed with the object and flagged it with $[i|v]$. Now, the primary probe on C will find this viable goal with $[i|v]$, and move it to its specifier. So far, this is exactly as described in the previous example. Consider now how adding the secondary, less specific probe won't change the derivation (which is a good thing, since it already got the word order fact rights). Following the assumptions of Cyclic Agree (Béjar & Rezac 2009), which ultimately just boil down to assuming bare phrase structure (Chomsky 1995, 2000), the as-yet unsatisfied secondary probe reprojects to the bar level. From here, the closest target it examines in its c-command domain is the argument in the specifier position, that is, the one just raised by the primary probe. Because the features sought by the secondary probe are a proper superset of those sought by the first probe, this raised argument will always automatically also satisfy the second probe, and nothing else will be moved. In other words, as long as there is an argument with $[i|v]$ that the main probe can raise, the secondary probe has no effect whatsoever.

- (157) The secondary probe on C is satisfied by what the primary probe moved (UV):



Consider now what happens instead if the primary probe can't find a viable goal, that is, if earlier in the derivation v didn't agree with anything (and therefore, nothing carries the $[i|v]$ flag). This will be the case of AV clauses (158). The primary probe will find no suitable goal, so it will just not agree with nor move anything (represented by the crossmark). Now, the secondary probe has its time to shine. Because of its very general featural specification, it will simply move the highest nominal it can find: the subject. (Again, I'm representing the subject here as carrying $[PIV]$, but this is not crucial, hence the parentheses. What matters is that the object does *not* carry $[PIV]$.)

- (158) The secondary probe on C only moves something if the primary one couldn't find anything: AV derivation



To summarize, adding the secondary probe, and considering the exact mechanics of how the two probes interact with each other, has the correct consequences. In a UV clause, only the main probe will kick in, and raise the *v*-flagged argument (the object), despite it being non-local to C. In a AV clause, where no argument carries [i|v], the “plan B” probe kicks in instead, and the highest argument (the subject) is raised to spec,CP.

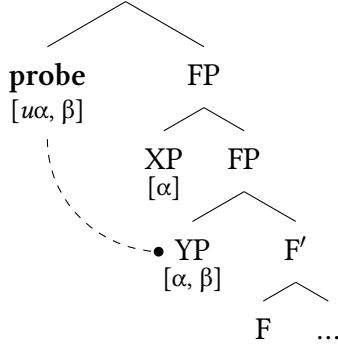
3.5.3.2 THE PLAN A/PLAN B LOGIC, MULTITASKING, AND THEORETICAL PARSIMONY

The mechanism outlined here, originally developed in Scott (2021), derives this “Plan A/Plan B” kind of system, where C in a sense has a preference list: if it can, it will target a goal of type X, but if it cannot, a goal of type Y will suffice (with Y being a proper superset of X). A skeptical reader might object that the complex system of multiple interacting probes described above amounts to not more than a restatement of the facts, and that a simpler solution would thus be preferable. However, I want to argue that Scott’s (2021) system is superior to other alternatives on the grounds of theoretical parsimony.

Such an alternative proposed in earlier literature is van Urk & Richards’s (2015) notion of Multitasking, illustrated in (159)³¹. Given a probe searching for features $[\alpha, \beta]$, and two equidistant goals XP and YP (in multiple specifiers of the same projection FP), the probe will agree with the goal that will check off most features, in this case YP. If YP had not been there, then the probe would have agreed with XP, as this goal would at least have checked off one of the features sought by the probe.

³¹ A conceptually similar proposal, formulated in terms of “Best Match”, was made in Coon & Bale (2014). The technical details, however, differ from Multitasking.

(159)



This notion of “Multitasking” derives the same result as the two-probe system I adopted from Scott (2021) for Äiwoo, and it does so with a single probe. However, this requires the addition of several mechanisms to our theory of Agree(ment): (i) a notion of equidistance; (ii) the ability for a probe to evaluate and *compare* several goals, and choose the best matching one. This does result in a “simpler tree”, with fewer probes and less reprojection and search steps, but at the cost of a more complex theory. Scott’s (2021) proposal, on the other hand, achieves the same descriptive power but only with pre-existing ingredients, that our theory of Agree(ment) independently already needs (probe ordering, Bossi & Diercks 2019; Cyclic Agree, Béjar & Rezac 2009); therefore, the additional mechanism required by Multitasking are not needed. In this case, we have a “more complex tree”, but the theoretical apparatus is kept simpler.

3.5.4 PUTTING IT ALL TOGETHER: STEP-BY-STEP DERIVATIONS FOR AV AND UV CLAUSES

This is a good point to pause the introduction of new moving parts, and summarize what we have so far. In this section, I just give annotated step-by-step derivations for entire AV and UV clauses, combining everything that I presented above. In the trees below, I also include an AspP projection between vP and TP, to which the verb head moves, to represent the aspectual prefixes on the verb. In the discussion above throughout the chapter I excluded this to avoid unnecessary clutter in the trees, as it was not relevant; I include it here for completeness. The only part I do not cover here is the presence of prefixal φ-agreement on the verb in AV but not in UV, which is discussed in §3.5.5.

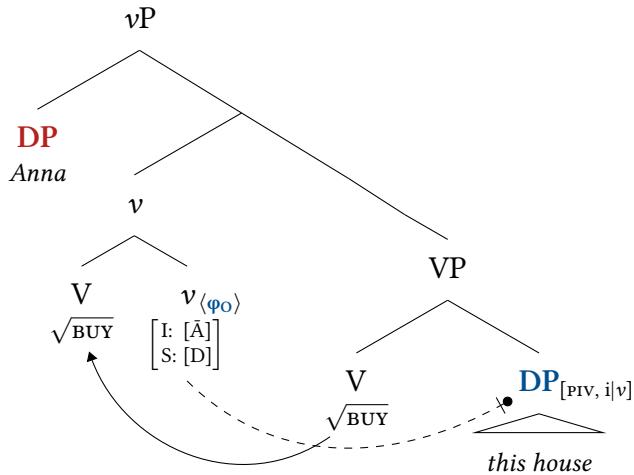
3.5.4.1 UV DERIVATION

EXAMPLE SENTENCE:

- (160) *nuwopa enge ki-ve Anna=kaa t_S t_O*
 house this IPFV-buy.UV Anna=FUT
 ‘Anna will buy this house’

WITHIN THE *vP* DOMAIN:

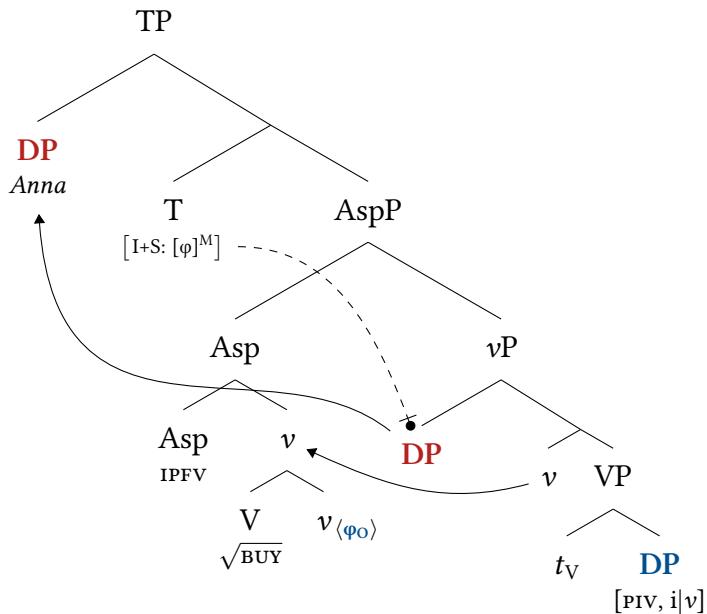
(161)



- a. *v* agrees with the Ā-marked object, copies back its φ-features, and is satisfied; the object DP is flagged with *[i|v]*; no arguments move at this point.
- b. The verb head-moves into *v*.

TP DOMAIN:

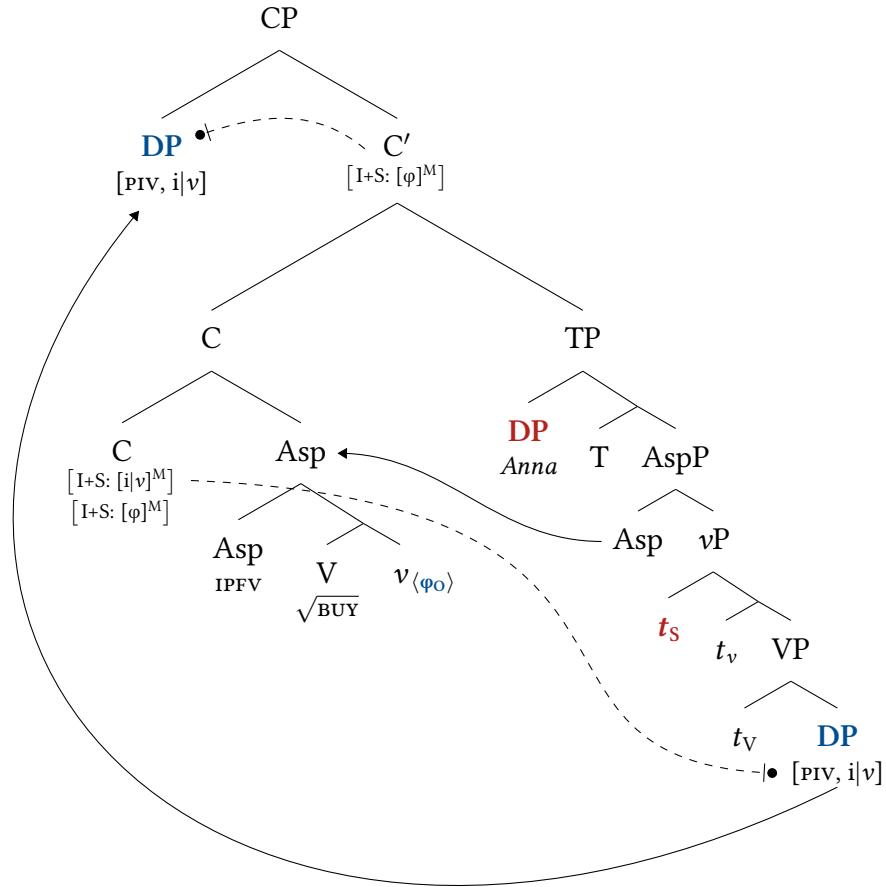
(162)



- a. *v* head-moves into *Asp* (but not further up to *T*);
- b. *T* raises the closest nominal it can find, i.e., the subject.

CP DOMAIN:

(163)



- Long head movement: Asp head-moves into C, skipping T.
- The primary probe on C initiates a search, and finds the closest goal with $[i|v]$, i.e., the $DP_{[PIV]}$ object; the object is moved to spec, CP .
- The secondary probe on C reprojects to the bar level, and initiates a search; the closest viable argument is the just-moved DP in spec, CP , so the secondary probe is satisfied as well.

SPELL-OUT OF THE VERB STEM:

(164) Stem allomorphy: UV

$$\begin{aligned} \sqrt{\text{BUY}} &\Leftrightarrow \text{ve} / -v\langle\varphi\rangle \\ \sqrt{\text{BUY}} &\Leftrightarrow \text{veve} \text{ (elsewhere)} \end{aligned}$$

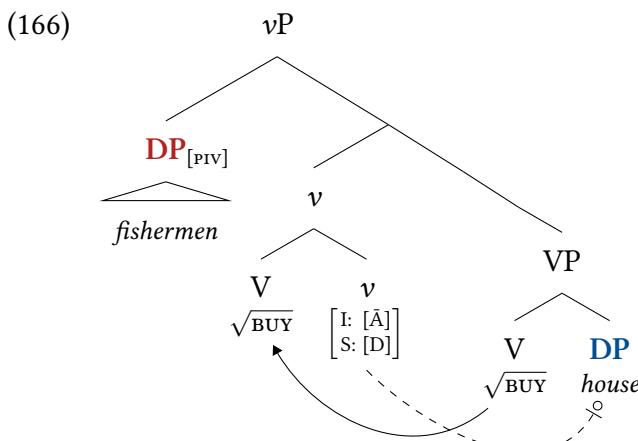
3.5.4.2 AV DERIVATION

For concreteness, in the trees I represent the subject as carrying [PIV]. Nothing in this derivation would change if the subject was a plain DP with no Ä-features, as long as the object also does not carry [PIV].

EXAMPLE SENTENCE

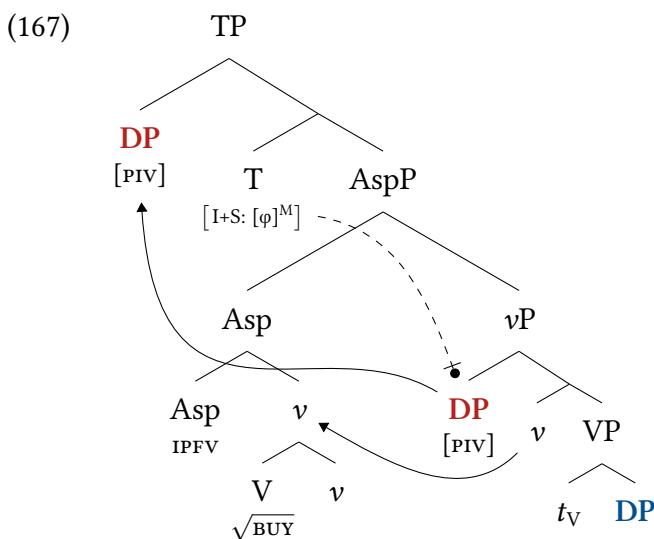
- (165) *mikilitei ki-li-veve t_S=kaa t_S nuwopa*
fishermen IPFV-3AUG-buy.AV =FUT **house**
 ‘The fishermen will buy a house’

WITHIN THE vP DOMAIN:



- a. The probe on *v* does not interact with the object (because it doesn't have [PIV] or any other Ä-features), but it's satisfied (because it has [D]). No features are copied, and probing halts.
- b. The verb head moves into *v*.

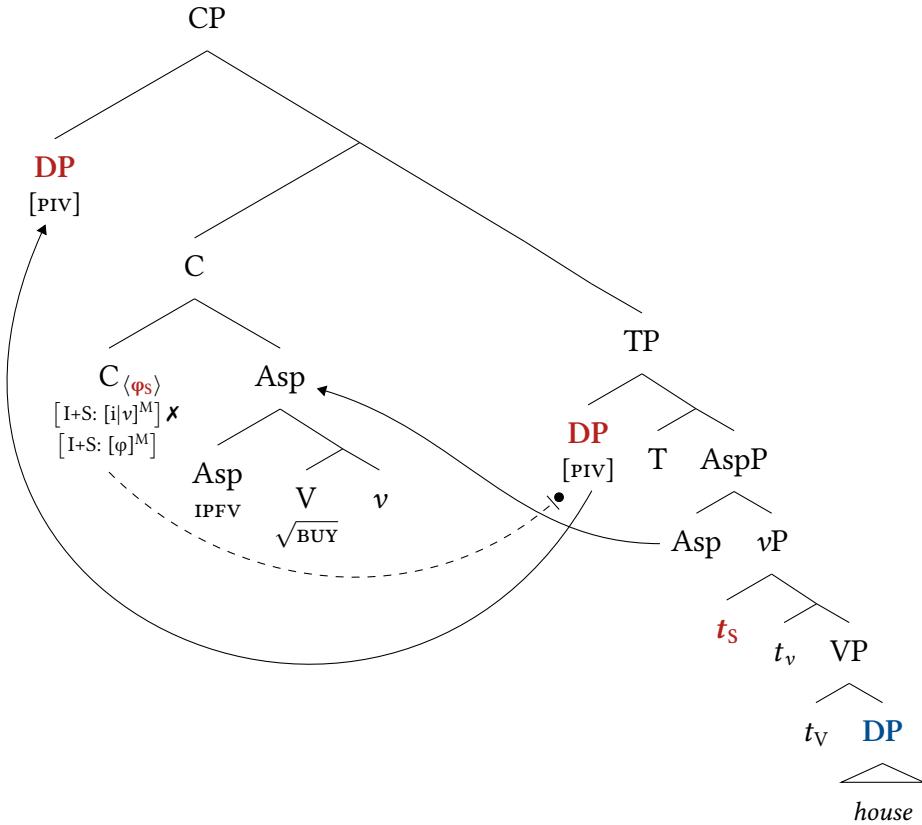
TP DOMAIN:



- a. v head-moves into Asp;
- b. T agrees with the closest nominal it can find (i.e., the subject), and raises it.

CP DOMAIN:

(168)



- a. Asp long-head-moves into C, skipping T;
- b. The primary probe on C cannot find any goal carrying $[i|v]$, so it doesn't agree with or move anything;
- c. The secondary probe on C kicks in, and it agrees with and moves the closest nominal, i.e., the subject; the subject's features are copied onto C.

SPELL-OUT OF THE VERB STEM:

(169) Stem allomorphy: AV

$$\begin{aligned} \sqrt{\text{BUY}} &\Leftrightarrow \text{ve} / -v\langle\varphi\rangle \\ &\Leftrightarrow \sqrt{\text{BUY}} \Leftrightarrow \text{veve} \text{ (elsewhere)} \end{aligned}$$

3.5.5 PREFIXAL φ-AGREEMENT IS IN C, AND GETS IMPOVERISHED IN UV

Let us briefly take stock on how we are doing in addressing our Word Order Puzzle. At this point, our model accounts for (i) why (canonical) AV and UV clauses show their particular

word order patterns, and (ii) how this is correlated with the choice of a particular verbal stem in either case. These are two of the three reliable morphosyntactic correlates of voice presented in §3.3. The third and last one on our agenda is the presence of prefixal φ-agreement in AV but not in UV, to which I turn now.

The phenomenon is concretely illustrated below. In AV (170), the verb must carry a subject agreement prefix. The 3AUG prefix *li~lu-* is special in being positioned between the aspect prefix and the stem (170a); every other φ-prefix goes before aspect (170b)³². In UV, on the other hand, an agreeing prefix is completely impossible (171)³³. To be sure, we can also confirm that a UV verb carries no prefixal agreement with the argument in spec,CP, even though it is the object: even when the object is plural (172), a prefix is still impossible (remember that the alternation between *ki-li-* and *ku-lu-* is purely phonological; §2.4).

- (170) AV: obligatory prefixal φ-agreement with the subject (250728)

- a. mikilitei ku-**(*lu-)****tou**-mä=kaa sii
fishermen IPFV-3AUG-**bring.AV**-DIR1=FUT fish
'The fishermen will bring fish (here)'
- b. (iude) **(*de-)****ki-vängä**=kaa sii
12AUG 12AUG-IPFV-**eat.AV**=FUT fish
'We will eat fish'

- (171) UV: no prefixal φ-agreement with the subject (250807)

- a. sii **ki-(*****li-**)**ngä** pedevalili=kaa
fish IPFV-(*3AUG-)eat.UV children=FUT
'The children will eat the fish'
- b. sii **(*de-)****ki-**ngä**-de=ngaa**
fish (*12AUG-)IPFV-**eat.UV**-12AUG=FUT
'We will eat the fish'

- (172) UV: no prefixal φ-agreement with the object either (250807)

- pedevalili ku-(*lu-)***tu**-mä-no=ngaa
children IPFV-(*3AUG-)bring.UV-DIR1-1MIN=FUT
'I will bring the children back (here)'

Let us now consider what kind of analysis our model commits us to. We empirically know that C always raises *some* argument, either the subject or the object. By assumption, if an XP is moved anywhere, some probe has agreed with that XP, and also by assumption,

32 3MIN has no overt prefix. It's therefore impossible to know whether a putative 3MIN prefix would be in the same position as the 3AUG prefix, or the same as all the other ones. One could thus talk about this position difference as drawing the cut between 3AUG vs. everything else, or alternatively, as between 3rd person vs. 1st/2nd person. The difference is immaterial here.

33 As was pointed out earlier, in earlier literature UV was described as involving an agreement *suffix*, e.g. -*de* 12AUG in (171b). However, in chapter 5 I show that this is not an agreement suffix, but the actual subject pronoun in spec,TP, spelled out in a phonologically reduced form. Therefore, the only difference in terms of agreement between AV and UV is that the former involves an agreement prefix, and the latter involves no agreement.

having agreed with an XP means all of XP's features have been copied onto the probe (chapter 1, §1.5). We are thus forced to posit that the fronted argument's φ -features are always copied onto C (the probe driving the fronting). Concretely: in AV, C has copied the features of the subject; in UV, those of the object. The question is now why these features are only overtly spelled out in AV, and not in UV.

I propose the following analysis, where the difference in presence vs. absence of agreement is morphological, not syntactic. In AV, the φ -features of the subject copied on C are spelled out faithfully; this is the agreement prefix. As we just said, this agreement step takes place in UV as well (between C and the object). However, in this case, the φ -features copied on C undergo Impoverishment (Halle & Marantz 1993). Because this Impoverishment rule applies only in UV, this can be cast a pattern that has been referred to as Kinyalolo's Constraint (Kinyalolo 1991, Carstens 2003, 2005, M. C. Baker 2010, Tyler & Kastner 2022): two heads have agreed with the same argument, and one of them does not get spelled out. In our concrete UV case, both v and C have agreed with the object/have φ -features on them, so C does not get spelled out (173)^{34,35}.

(173) **Impoverishment rule for C:**

$$C_{\langle \varphi \rangle} \Leftrightarrow \emptyset / -v_{\langle \varphi \rangle}$$

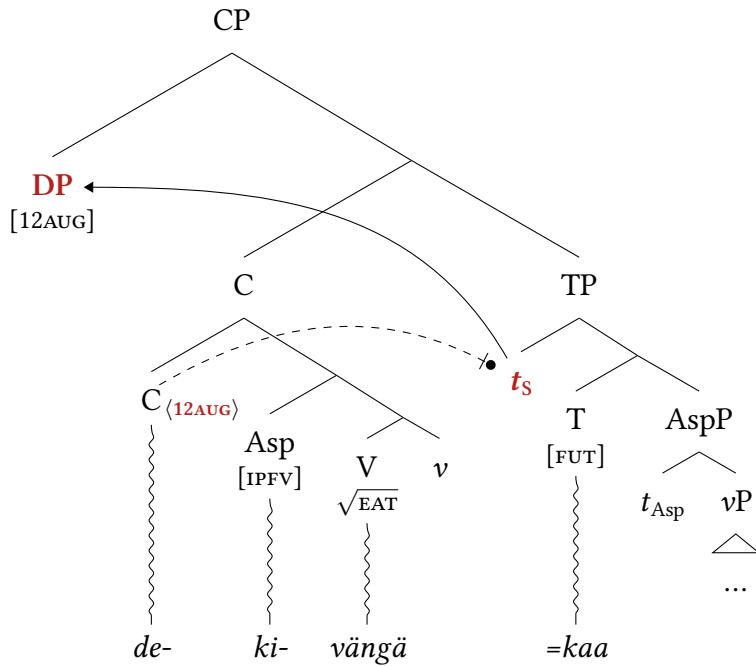
Concretely, I propose that the complex verb head is mapped onto its surface morphological form as illustrated in the trees below (where squiggly lines indicate exponent insertion). I include here again the AspP projection between TP and vP, as in the step-by-step derivations above.

In an AV context (174), v has not copied any φ -features onto itself, so the AV stem allomorph of the verb is inserted as the elsewhere case (174a). Again because v does not carry any φ -features, C is not impoverished (174b). When the subject is any other φ -category than 3AUG (e.g., 12AUG here), the φ -features copied onto C are spelled out to the left of aspect, faithfully to the underlying structure (174c).

³⁴ I assume that the domain within which morphological rules can be triggered is the complex head, even though the two relevant (sub-)heads are not structurally or linearly adjacent (Embick 2010, Bobaljik 2000, 2012, Svenonius 2012, Moskal 2015, Merchant 2015, Choi & Harley 2019, a.m.o.). The reason for this will be apparent considering the trees in (174)–(176).

³⁵ It might be the case that the entire C head gets deleted morphologically, as written in (173), or that only the φ -features on C get deleted (formally: $C_{\langle \varphi \rangle} \Leftrightarrow C_{\langle \emptyset \rangle} / -v_{\langle \varphi \rangle}$), and C itself is just always phonologically null. As far as I can tell, these two options are empirically indistinguishable.

- (174) AV form, 12AUG subject: *de-ki-vängä=kaa*
 12AUG-IPFV-eat.AV=FUT

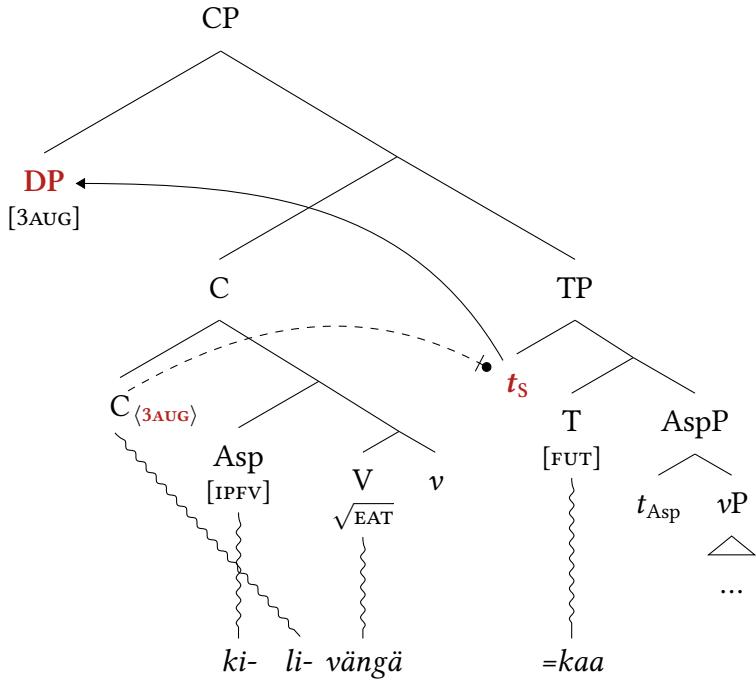


- a. Stem (voice allomorphy):
 $\sqrt{\text{EAT}} \Leftrightarrow \text{ngä} / -\nu_{(\varphi)}$
 $\nwarrow \sqrt{\text{EAT}} \Leftrightarrow \text{vängä}$ (elsewhere)
- b. C impoverishment: doesn't apply
 $\times C_{(\varphi)} \Leftrightarrow \emptyset / -\nu_{(\varphi)}$
- c. VI rule for C-agreement:
 $C_{(12AUG)} \Leftrightarrow de-$

The 3AUG prefix *li-* is unique in its placement to the right of aspect instead of to its left. I assume this is a shallow, purely morphological fact. The underlying syntax is identical to the 12AUG subject case above, but the 3AUG prefix idiosyncratically undergoes a step of local dislocation, swapping place with the aspect prefix, as shown below. Several implementations are possible for this step of morphological displacement; here I merely describe the empirical facts, without taking too much of a stance (175c)³⁶.

³⁶ A similar displacement rule is needed for the cases where the 1MIN prefix *i-* metathesizes into the irrealis and apprehensive prefixes *nä-* and *de-*, palatalizing the first consonant and resulting in *nyä-* and *je-*; see chapter 2, §2.4.

- (175) AV form, 3AUG subject: *ki-li-vängä=kaa*
IPFV-3AUG-eat.AV=FUT



a. Stem (voice allomorphy):

$$\begin{aligned} \sqrt{\text{EAT}} &\Leftrightarrow \text{ngä} / -v_{\langle \varphi \rangle} \\ &\Leftrightarrow \sqrt{\text{EAT}} \Leftrightarrow \text{vängä} \text{ (elsewhere)} \end{aligned}$$

b. C impoverishment: doesn't apply

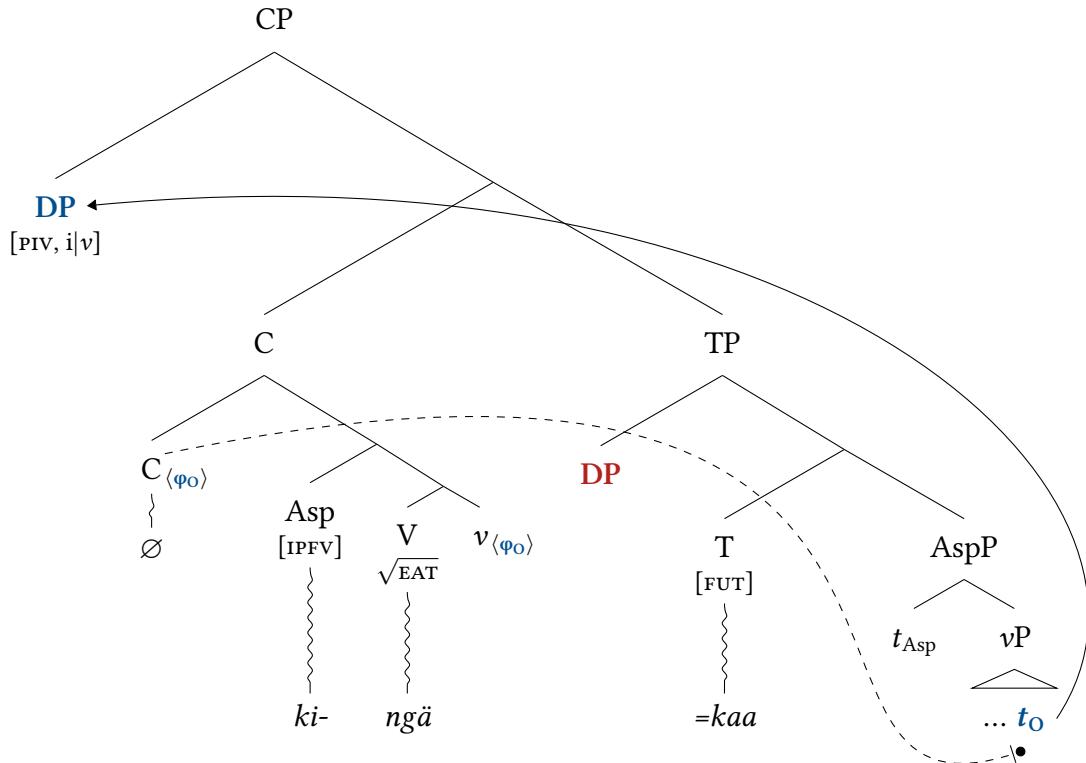
$$\cancel{C}_{\langle \varphi \rangle} \Leftrightarrow \emptyset / -v_{\langle \varphi \rangle}$$

c. Morphological displacement and VI rule for C-agreement:

$$\begin{aligned} C_{\langle 3\text{AUG} \rangle} \sim \text{Asp} &\Rightarrow \text{Asp} \sim C_{\langle 3\text{AUG} \rangle} \\ C_{\langle 3\text{AUG} \rangle} &\Leftrightarrow li- \end{aligned}$$

As for the UV forms, the facts are similar, but with two crucial morphological differences. Both have the same conditioning trigger, that is, the presence of φ -features on v . First, the stem insertion rule is sensitive to this, and will thus insert the UV stem exponent rather than the default AV one (176a). Second, (the φ -features on) C will be impoverished in this same context (176b).

- (176) UV form (any subject/object): *ki-ŋä* [DP]=*kaa*
 IPFV-eat.UV =FUT



a. Stem (voice allomorphy):

☞ $\sqrt{\text{EAT}} \Leftrightarrow \text{ngä} / -v_{\langle \varphi \rangle}$
 $\sqrt{\text{EAT}} \Leftrightarrow \text{vängä}$ (elsewhere)

b. C impoverishment: applies

☞ $C_{\langle \varphi \rangle} \Leftrightarrow \emptyset / -v_{\langle \varphi \rangle}$

There could potentially be a few imaginable alternatives to the “C-agreement plus impoverishment” approach drawn here, but they all have some important shortcomings. First, we can’t blame the asymmetry in the presence of agreement between AV and UV to the size/category of the moving nominal, since in both cases, what fronts is a DP (with or without [PIV]). We also can’t hypothesize that the probe that fronts the subject in AV copies φ -features, whereas the one that fronts the object in UV does not, since by assumption, all movement involves agreement, and feature copying is *coarse* (see Deal & Royer 2025 for this notion in an interaction/satisfaction architecture): any agreement involves the copying of *all* features from the agreed-with constituent onto the probe. Finally, we could try to capitalize on the facts that under my analysis, C has two probes: an [i|v] probe and a [φ] probe. In UV, the object is fronted by the [i|v] probe; in AV, the subject is ultimately fronted by the [φ] probe (after the [i|v] was unable to find a viable target to move). We could imagine then positing that only the [φ] probe has an overt morphological spell-out, but not the [i|v] probe. The problem with this approach is that, in UV, the [φ] probe *also*

agrees with the fronted object (see the derivations above). This would wrongly predict overt agreement – unless we posit another rule of Kinyalolo-type impoverishment when both probes have agreed with the same argument, which would then be globally just as complex as the system presented here.

3.6 A NOTE ABOUT INTRANSITIVES

Before concluding the more empirical part of this chapter, a minor amendment/addition must be made to the model to correctly account for the behavior of intransitive clauses. Intransitive verbs effectively look just like AV verbs but without an internal argument (177). Specifically, they carry obligatory agreement prefixes (*li-* 3AUG), and adverbial modifiers take no voice concord (in this case, showing the default/AV form *ute* ‘again’ rather than the UV form *usi*). I have not been able to devise any diagnostics for unaccusativity, but this description applies to verbs that one could assume would fall in both classes.

- (177) Intransitives must have prefixal agreement, and cannot have voice concord:

- a. (Putative) unergative: (241219)
kuli eângâ i-li-ngoduwâ-{ute/ usi}*
 dog that ASP-3AUG-shout-again.{AV/*UV}
 ‘Those dogs barked again’
- b. (Putative) unaccusative:
kuli eângâ i-li-obu-{ute/ usi}*
 dog that ASP-3AUG-fall-again.{AV/*UV}
 ‘Those dogs fell again’

This morphological similarity between intransitive verbs and AV ones is very common within Austronesian. In fact, in languages where voice morphology is segmentable, like Tagalog, intransitives – unergatives and unaccusatives alike – often carry visible AV morphology, and are incompatible with UV morphology (178).

- (178) Tagalog intransitives: ✓ AV, ✗ UV (adapted from V. Chen 2025: 6³⁷)

- a. Unergatives:
 $\{\checkmark k\langle \text{um} \rangle \text{anta} / *k\langle \text{in} \rangle \text{anta}-\emptyset\} \text{ si } \text{ Aya}$
 ⟨AV.PFV⟩sing ⟨PFV⟩sing-UV PN.NOM Aya
 ‘Aya sang’
- b. Unaccusatives:
 $\{\checkmark d\langle \text{um} \rangle \text{ating} / *d\langle \text{in} \rangle \text{ating}-\emptyset\} \text{ si } \text{ Aya}$
 ⟨AV.PFV⟩arrive ⟨PFV⟩arrive-UV PN.NOM Aya
 ‘Aya arrived’

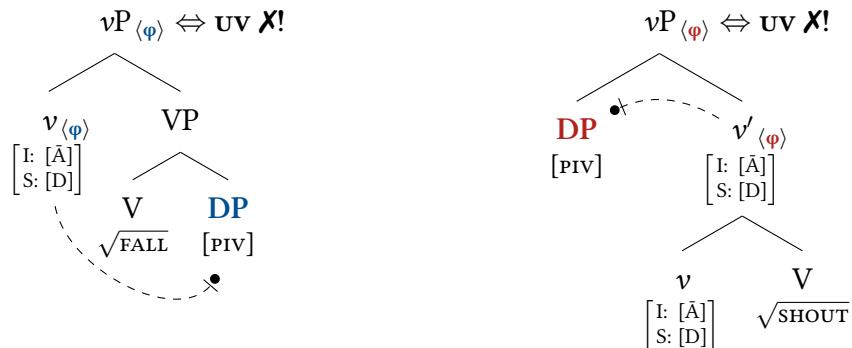
³⁷ V. Chen (2025) only reported judgments for AV on unergatives, and AV/UV on unaccusatives. For the ungrammaticality judgment about UV on an unergative (**kinanta*), I thank Dave Kenneth Tayao Cayado (p.c.).

This fits well with proposals of the type being made here for Äiwoo, where AV is not an equally-marked option as UV but a morphosyntactic default (T. Chen 2010, Levin 2015, Wurmbrand 2016, Wurmbrand & Shimamura 2017, H. Y. Chang 2017, Wu et al. 2023). Under this view, intransitives, since they only have one argument, “don’t play the voice game”, and they therefore surface with default morphology – that is, AV morphology.

As things stand, however, the model I have described throughout this chapter makes incorrect predictions for intransitives. Specifically, it wrongly predicts that they should look like UV verbs, rather than AV verbs. Let us see why, considering the probe on v that I have proposed in §3.5.1.2.

We have assumed that the distribution of [PIV] is syntactically completely free. Therefore, in an intransitive clause, the sole argument will not always necessarily carry [PIV], but it definitely *can*, so we need to account for that. For unaccusatives, in a context where the internal argument carries [PIV], the probe on v would agree with the object (179a). This would result in UV-style morphology (at least on the adverbial modifiers, even if the main root $\sqrt{\text{FALL}}$ itself doesn’t have a distinct UV allomorph), and in the disappearance of prefixal φ -agreement in C. For unergatives (179b), the same problem would arise, although here the relevant agreement step would take place from the bar level instead³⁸.

- (179) a. Unaccusatives: predicted UV \times b. Unergatives: predicted UV \times

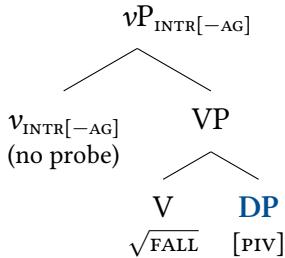


The simplest solution is to assume that intransitive roots select for a different v head (Harley 1995, Marantz 1997, a.m.o.). This special v_{INTR} head has no probe on it at all, and therefore will never agree with any argument. The v_{INTR} head may then select for not merging any external argument (180a) or for merging an external argument (180b), deriving the difference between unaccusatives and unergatives³⁹.

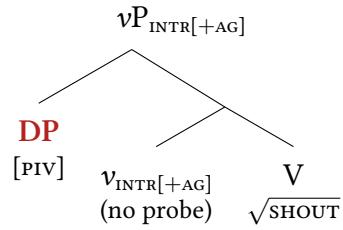
38 This issue is already highlighted for Tagalog in Rackowski (2002), and forms part of her argument for why voice reflects “case agreement” rather than “theta-role agreement” (*contra* Schachter & Otanes 1972, Kroeger 1993, a.o.). I thank Norvin Richards for bringing this to my attention.

39 Alternatively, one could imagine that Äiwoo is a language without real unergatives, as has been argued to be the case for Ch’ol (Coon 2019). In this case, the inventory of v heads would contain not three different items but two: the ordinary, subject-introducing v , which carries the Ā-probe, and the intransitive, unaccusative v , which does not introduce an argument and does not carry a probe.

(180) a. Unaccusatives:



b. Unergatives:



One possible argument for the presence of a lexically distinct, intransitive *v* head is the behavior of morphological causatives. In Āiwoo, causatives are built with the prefix *wâ-*. The sequence *wâ-*- $\sqrt{\text{STEM}}$ constitutes the AV version of the resulting causativized predicate (181b). The UV version is consistently built by adding a suffix *-eâ~wâ* (181c)⁴⁰. We can confirm that these formations are respectively the AV and UV version of a causativized predicate by observing the mutually exclusive presence/absence of prefixal φ -agreement and voice concord. See also Næss & Boerger (2008), Næss (2015b), and Roversi (2019) for a similar description. For a causativized predicate, whether in AV or UV, the added causer is treated as the external argument/subject, and the original causee argument is treated as the internal argument/object – regardless of whether the intransitive predicate was unaccusative or unergative.

(181) a. Baseline intransitive:

- sii ku-nubo=kaa
 fish IPFV-die=FUT
 ‘The fish will die’
- (250807)

b. Causativized verb, AV form:

- pedevalili ku-lu-wâ-nubo-ngege=kaa sii
 children IPFV-3AUG-CAUS-die-immediately=FUT fish
 ‘The children will kill fish straight away’

c. Causativized verb, UV form:

- sii enge ku-wâ-nubo-wâ-ngege-nyi pedevalili=kaa
 fish this IPFV-CAUS-die-UV-immediately-uv children=FUT
 ‘The children will kill this/these fish straight away’

The relevance of morphological causatives is that the prefix *wâ-* specifically selects for *intransitive predicates*. On the one hand, it is perfectly compatible with both (putative) unaccusatives and unergatives (182a,b). However, importantly, this prefix completely rejects transitive predicates (182c). (In these examples, i use the UV version of the resulting causativized predicates, but the same is true for the AV version).

⁴⁰ These are just phonological variants of each other. A few verb stems optionally select for an allomorph *-nâ*, seemingly just lexically/idiiosyncratically.

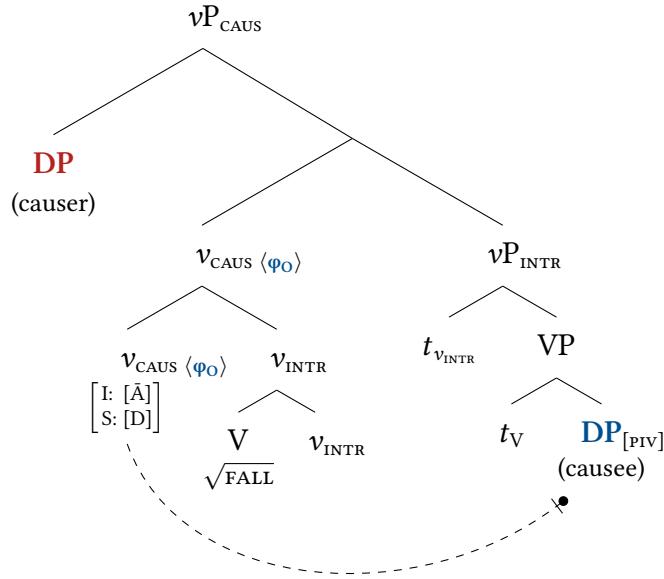
(182) Causative *wâ-* is only compatible with intransitives, not with transitives:

- a. CAUS + unaccusative: ✓ (250807)
Mak ku-wâ-eobu-wâ-no=ngaa
 Mark IPFV-CAUS-fall-UV-1MIN=FUT
 'I will make Mark fall'
- b. CAUS + unergative: ✓ (241015)
Mak ku-wâ-basiki-eâ-no=ngaa
 Mark IPFV-CAUS-run-UV-1MIN=FUT
 'I will make Mark run'
- c. CAUS + transitive: ✗ (240411)
 * *Mak ku-wâ-{vängä/ngä}-eâ-no=ngaa sii*
 Mark IPFV-CAUS-{eat.AV/UV}-UV-1MIN=CV fish
 Intended: 'I will make Mark eat fish'

To account for this restriction, one could imagine the following approach. The causative prefix *wâ-* is the spell-out of a particular *v* head whose external argument is semantically interpreted as a causer. This *v_{CAUS}* head lexically selects for a *vP_{INTR}* complement, whether it be unergative or unaccusative (183a,b). However, it cannot be merged on top of a regular (transitive) *vP* complement (184), because this would violate its selectional requirement⁴¹.

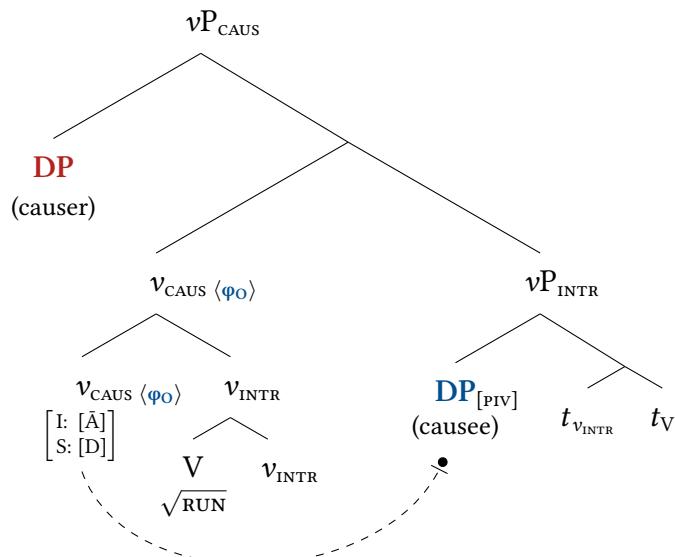
⁴¹ A potential alternative that does not rest on having a special *v_{INTR}* in the lexicon is possible if we follow Neu (2023, to appear) in assuming that “causatives of unergatives” are, in a sense, an illusion. Under this analysis, *v_{CAUS}* consistently selects for a VP complement with an internal argument, even for those verb roots which typically have an external argument (that is, unergatives). In other words, the only argument of typically unergative roots would be exceptionally merged in the internal argument position in the context of these causativized constructions. Neu (2023, to appear) argues that in Hindi, Turkish, and Sason Arabic, the interpretation of the causee in these causatives of unergatives is indeed more similar to that of an internal argument (non-volitional, less agentive, etc.). If we pursue this approach, then we would account for the intransitive-only selectional requirement of the Äiwoo causative without needing a special *v_{INTR}* head, thus rendering this argument moot.

- (183) a. Causative of unaccusative (UV): *wâ-obu-wâ*
CAUS-fall-UV

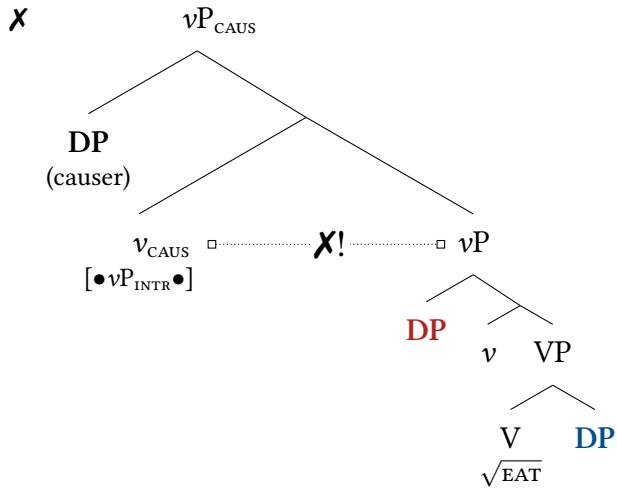


- i. $v_{CAUS} \Leftrightarrow wâ-$
- ii. $\sqrt{FALL} \Leftrightarrow obu$
- iii. $\cancel{\varphi} v_{INTR} \Leftrightarrow -e\hat{a}\sim w\hat{a} / v_{CAUS} \langle \varphi \rangle -$
 $v_{INTR} \Leftrightarrow \emptyset$ (elsewhere)

- b. Causative of unergative (UV):



(184) Causative of transitive: violation of c-selection



3.7 THE A/Ā-PROPERTIES OF FRONTING TO SPEC,CP

We have now developed an answer to (a sub-part of) the Word Order Puzzle, deriving the word order and voice morphology properties of canonical AV and UV clauses. I will now devote some time to examining the properties of the movement step of the VIA argument to spec,CP, exploring where this fits along the canonical A/Ā-distinction. We will see that empirically, Äiwoo is again strikingly reminiscent of Dinka as analyzed in [van Urk \(2015\)](#). VIA fronting to spec,CP will be shown to have almost all properties of typical A-movement, with the sole exception of its more relaxed locality profile (since it can skip intervening nominals). For this, I will use the moniker “non-local A-movement” as a purely descriptive label (see also the discussion about “leapfrogging” in chapter 1, §1.3.2). I will argue that this kind of movement should not be thought of as an innovation, but that its existence is in fact already predicted by the conjunction of pre-existing, independently needed ingredients in our theory, specifically (i) featural Relativized Minimality ([Rizzi 1990](#)), and (ii) featurally relativized probes ([Béjar 2003 et seq.](#)).

First, in §3.7.1 I cover the empirical facts, showing that CP-fronting displays every property of classic A-movement with the sole exception of strict locality. Then, in §3.7.2 I discuss how our theory already predicts this to be possible, without the need for additional mechanisms or amendments. Finally, §3.7.3 discusses some potential cross-linguistic parallels.

3.7.1 VIA FRONTING TO SPEC,CP IS NON-LOCAL A-MOVEMENT

A list of the differences between (canonical) A- and Ā-movement is given in (185)–(186) ([Postal 1971](#), [Chomsky 1977](#), [1981](#), a.m.o.; this specific list is adapted from [van Urk 2015: 23](#) and [Richards 2014: 167–169](#)). I have added a checkmark next to the properties that Äiwoo

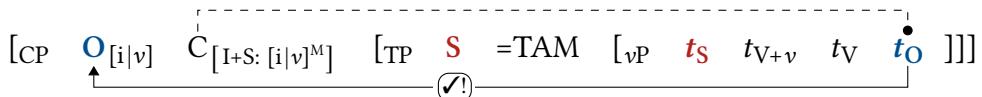
CP-fronting showcases: (186a), and (185b–f). Φ-agreement (185b) is more complex and was treated separately in the previous section, so I don't rehash the discussion here. Finally, I will not talk about parasitic gaps (185g)–(186g), as we don't know how this phenomenon works in Äiwoo or whether it exists in the first place.

- | | |
|------------------------------------|--|
| (185) A-properties: | (186) \bar{A} -properties: |
| a. Local | a. ✓ Not strictly local |
| b. (✓) Feeds φ -agreement | b. Does not feed φ -agreements |
| c. ✓ Restricted to nominals | c. Not restricted to nominals |
| d. ✓ No Condition C reconstruction | d. Reconstruction for Condition C |
| e. ✓ No Weak Crossover | e. Weak Crossover |
| f. ✓ New binding antecedents | f. No new binding antecedents |
| g. No parasitic gaps licensing | g. Parasitic gap licensing |

Descriptively then, VIA fronting is “non-local A-movement”: it has all the categorial and binding-theoretical properties of A-movement, but it can skip intervening nominals.

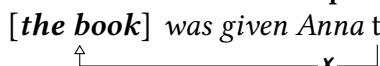
LOCALITY As we established in §3.5.3, VIA fronting can clearly be non-local: in UV, C agrees with the object and raises it (187). Crucially, the subject is skipped, despite being closer to C.

- (187) Fronting of the object to spec,CP in UV skips the intervening subject:



This contrasts with canonical A-movement, which is typically strictly local, and cannot cross any intervening nominal:

- (188) A-movement cannot skip intermediate nominals:



CATEGORY RESTRICTION: ONLY NOMINALS In Äiwoo, the preverbal VIA position is reserved for nominal constituents (189a), and constituents of other categories cannot be in this position (189b,b). Äiwoo's V2 effect is therefore different from that of Germanic V2 languages, and it is once again more similar to Dinka (van Urk 2015).

- (189) Äiwoo pre-verbal position: ✓ DP, ✗ PPs, ✗ AdvPs (240418)

 - a. [George]DP *ki-te-vesi-i-kâ-no* *ngä taun dâbu dâuwângâ*
George IPFV-see.UV-keep-UV-DIR3-1MIN in town day every
'I see George in town every day'
 - b. * [*ngä taun*]PP *ki-te-vesi-i-kâ-no* *George dâbu dâuwângâ*
in town IPFV-see.UV-keep-UV-DIR3-1MIN George day every

- c. * [dâbu dâuwângâ]AdvP ki-te-vesi-i-kâ-no George ngä taun
day every IPFV-see.UV-keep-UV-DIR3-1MIN George in town

In Germanic V2 languages, instead, fronting to spec,CP is pure Ā-movement (den Besten 1981, 1983, et seq.), and therefore we don't see this restriction (190); any kind of constituent can be fronted. I use Norwegian here as an example.

(190) Norwegian pre-verbal position: ✓ DPs, ✓ PPs, ✓ AdvPs

- a. [Ana]DP ser jeg i by-en hver dag
Ana see I in city-DEF every day
'I see Ana in town every day'
- b. [i by-en]PP ser jeg Ana hver dag
in city-DEF see I Ana every day
- c. [hver dag]AdvP ser jeg Ana i by-en
every day see I Ana in city-DEF

CONDITION C RECONSTRUCTION For this test to be relevant at all, we need to first make sure that Condition C is active in Äiwoo (191). Both these sentences are in AV, with the subject in spec,CP. In (191a), the subject pronoun c-commands 'Mark', and the two cannot co-refer. In (191b), however, the pronoun embedded within the subject ('his daughter'⁴²) does not c-command 'Mark', and co-reference is possible. This is a canonical Condition C effect.

(191) Condition C is active in Äiwoo (AV):

(230615)

- a. [*inâ/Ø_{3MIN}*]S ku-woi=kaa t_S [*nubole na Mak*]O ngä paveli
3MIN IPFV-plant.AV=FUT taro POSS Mark in garden
'S/he_{j/*i} will plant Mark_i's taro in the garden'
- b. [*sipe-Øⁿ*]S ku-woi=kaa t_S [*nubole na Mak*]O ngä paveli
daughter-3MIN IPFV-plant.AV=FUT taro POSS Mark in garden
'His_i daughter will plant Mark_i's taro in the garden'

Now, we can observe that when an object fronts to spec,CP across the subject, it does not reconstruct for Condition C (192). The R-expression *Pita* 'Peter' in the fronted object can readily co-refer with the subject pronoun (cf. the literal translation, which is a Condition C violation in English), although the subject c-commands the base-generated position of the object (both from the subject's original position and its derived one in spec,TP)⁴³. This datapoint also shows that CP-fronting in Äiwoo does not trigger Strong Crossover, which

42 See Roversi (2025b) for arguments that there is a null possessor pronoun here, and for the general syntax of possessed DPs.

43 In addition to not showing Condition C reconstruction effects, VIA fronting of non-agents in Äiwoo shows a puzzling yet very robust anti-cataphora effect, reminiscent of (though not identical to) the ones discussed for Mayan languages in Royer (2025). The pattern can be described as follows. For any nominal fronted to spec,CP in a non-AV clause, a pronoun contained within that nominal cannot co-refer with anything to its right, regardless of the original c-command relations. An illustrative example (in UV) is given below.

indeed has been argued to be related to Condition C (see e.g. Keine & Bhattacharya to appear for a recent argument).

- (192) Äiwoo VIA-fronting: no Condition C reconstruction (230601)

<i>[poi no</i>	<i>Pita]</i>	<i>]_O ki-dââ[-Øⁿ]=naa</i>	<i>t_S t_O</i>
<i>pig</i>	<i>POSS</i>	<i>Peter</i>	<i>IPFV-tie.UV-3MIN=FUT</i>
'Peter _i will tie his _i pig'; lit. 'He _i will tie Peter _i 's pig'			

This behavior clearly contrasts with V2 fronting in Norwegian, which is Ā-movement and therefore shows Condition C reconstruction effects.

- (193) Norwegian V2-fronting: reconstruction for Condition C

<i>[hus-et</i>	<i>til</i>	<i>Petter]</i>	<i>_O kjøpte han</i>	<i>t_S t_O for to år siden</i>
<i>house-DEF</i>	<i>to</i>	<i>Petter</i>	<i>bought he</i>	<i>for two years ago</i>
'He _{j/*i} bought Petter _i 's house two years ago'				

There is a potential confound with this Condition C data, however, that might make it uninformative. In Roversi (2025b) I show that possessed DPs in Äiwoo always contain a relative clause, where the possessee is the extracted argument (object), POSS is a UV verb and 'Peter' is the embedded subject. The constituent *poi no Pita* in (192), more literally, would roughly correspond to "[the pig_i [RC that Peter has _i]]". The sub-constituent containing 'Peter', therefore, is an adjunct (a relative clause contained within the larger nominal). Therefore, the reason why we see no Condition C reconstruction effects might be that the whole adjunct is late-merged at the landing site (Lebeaux 1988, 1991, Fox 2002, S. Takahashi 2006, Takahashi & Hulsey 2009). If it is so, the subject pronoun never effectively c-commands 'Peter', thus rendering our argument moot. Unfortunately, I have not been able to find a way to avoid this confound, as I don't know of any way to embed an R-expression inside a nominal in Äiwoo without making it part of an adjunct⁴⁴.

WEAK CROSSOVER In Äiwoo, VIA fronting to spec,CP does not trigger a WCO violation. In (194), the object *iie* 'who' is fronted to spec,CP, and it can still be bound by the pronominal possessor embedded within the subject. Note that this is not *wh*-movement, but just regular VIA fronting of the object in UV; in other words, this is a *wh*-in situ clause.

- (i) *[poi no*
- | | | | |
|------------------------|------------------|-------------------|------------------------------------|
| <i>-Øⁿ]</i> | <i>]_O i-dââ</i> | <i>Pita</i> | <i>t_S t_O</i> |
| <i>pig</i> | <i>POSS-3MIN</i> | <i>ASP-tie.UV</i> | <i>Peter</i> |
- 'Peter_i tied his/her_{j/*i} pig' (only disjoint reading)
Comment: "No, that's not Peter's pig, that's *poi no* somebody else"

The facts are rather complex, and not immediately relevant to the canonical Condition C effects under discussion here. The interested reader is referred to Roversi (2024a).

44 For example, PPs cannot be attached directly inside DPs, and a relative clause must be used instead (see chapter 2, §2.5). This just recreates the same problem of potential late merge.

- (194) Äiwoo VIA fronting: no Weak Crossover violation (240215)
- iie** *ku-tu-mä* **tumwä** *-Øⁿ*=*naa?* **t_S** **to**
who IPFV-bring.UV-DIR1 **father-3MIN=FUT**
 ‘Who are the individuals *x* such that *x*’s father will bring *x*?
 Lit. ‘Who_i will his/her_i father bring?’

For this phenomenon, the parallel with Germanic V2 fronting is somewhat imperfect. In Germanic languages, V2 fronting has discourse effects similar to topicalization, and the class of relevant expressions for WCO violations (quantified expressions, *wh*-phrases, etc.) are not really topicalizable in the first place (Rizzi 1986 et seq.). However, at the very least we can see that fronting a *wh*-word does indeed trigger a WCO violation, thus making the bound reading impossible (195).

- (195) Norwegian *wh*-fronting: Weak Crossover violation
- hvem** *vil far-en* **hans** *ta med t_O?*
who will **father-DEF** **his** take with
 ‘Who_i will his_{j/*i} father bring?’

NEW ANTECEDENTS FOR BINDING Binding relations in Äiwoo are a complex topic to investigate, because it’s often hard to control for the multiple movements that arguments undergo in one single clause. However, it is possible to verify that a fronted VIA object can bind into the subject. Note that I do not discuss anaphor binding, as sentences containing anaphors have a different syntax altogether than regular non-reflexive sentences; see 5, §5.3.2. I limit the discussion below to quantifier-variable binding.

First, we must establish some baselines about how (universal) quantification works in Äiwoo. Universal quantification is often expressed with the morpheme *du* ‘all’ that attaches inside the verb complex, suffixed to the stem (196a) (Næss 2015a). It is also attested as attaching directly to a noun, although this is not consistently accepted in elicitation and it is rarer in the corpus; (196c) is part of an attested example. Note that unlike for English ‘every’, and more similarly to ‘all’, a nominal quantified by *du* is grammatically plural (as revealed by the obligatory 3AUG agreement prefix *li-* in (196a,b)).

- (196) *Du* ‘all’ attaches (mostly) to the verb: (250226)
- a. *pedevalili ki-li-bakisi-**du**-mä=kaa*
 children IPFV-3AUG-run-all-DIR1=FUT
 ‘All the children/Every child will run (towards here)’
 - b. ?? *pedevalili-**du** ki-li-bakisi-mä=kaa*
 children-all IPFV-3AUG-run-DIR1=FUT
 ‘All the children/Every child will run (towards here)’
 Native speaker’s comment: ‘[(196a)] sounds more natural’
 - c. *nyenaa-**du** ngä paveli enge*
 tree-all in garden this
 ‘All the trees in this garden’ (Næss 2015a: 97)

From its position inside the verb, *du* ‘all’ can quantify either argument in a transitive sentence, regardless of voice (197). I don’t have a concrete analysis as to how *du* ‘all’ comes to be affixed to the verb stem, and how it is interpreted as quantifying an argument. Potentially, it could be a base-generated quantifier in the clausal spine, *a la Fitzpatrick (2006)*, which the verb picks up by head movement. Alternatively, it could perhaps have a semantics akin to ‘completely’, and its interpretation as quantifying an argument would be achieved only indirectly⁴⁵.

- (197) a. Association possibilities of *du* ‘all’ in AV: (250311)

<i>pedevalili</i>	<i>ki-li-gâwââ-du=kaa</i>	<i>buk</i>
children	IPFV-3AUG-read.AV-all=FUT	book
✓ S _V :	<u>All the children/every child will read a book</u>	
✓ O _V :	<u>The children will read all books/every book</u>	

- b. Association possibilities of *du* ‘all’ in UV:

<i>buk</i>	<i>enge ki-gââ-du</i>	<i>pedevalili=kaa</i>
book	IPFV-read.UV-all	children=FUT
✓ O _V :	<u>The children will read all these books</u>	
✓ S _V :	<u>All the children/every child will read this book/these books</u>	

Although much is unclear about the syntax and semantics of *du* ‘all’, we can use this quantifier to establish that VIA fronting indeed generates new antecedent possibilities for binding, like canonical A-movement and unlike canonical Ā-movement. In UV, the universally quantified object fronted to spec,CP can bind a variable contained within the subject (here, the possessor):

- (198) UV: the fronted object can bind into the subject (250123)

		✓ O can bind S
<i>mikilibei</i>	<i>ku-tu-usi-du-kä</i>	<i>nurse nogo-du-i=laa</i>
patients	IPFV-bring.UV-back.UV-all-DIR3	nurse POSS-all-3AUG=FUT
<i>t_S</i> <i>t_O</i>	<i>ngâ nuwopaa nyibei</i>	
	to house.of place.sick	
'His _i nurse will bring every patient _i back to the hospital'		
Lit. 'They-all; _i 's nurses will bring all patients _i back to the hospital'		

Conversely, and as expected, this kind of binding is impossible in AV (199). Here, the possessor pronoun embedded in the subject cannot be bound by the universally quantified object, so that only a disjoint (non-bound) reading is available.

⁴⁵ This is a potential confound for whether this diagnostic is actually informative in the first place. Another possible confound is the fact that a DP quantified by *du* is plural rather than singular (like English ‘all’, unlike English ‘every’). This might make it possible to generate “fake-bound” readings that are extensionally equivalent to a true, covarying, bound reading, but achieve this via cumulativity rather than actual syntactic/semantic binding. I thank Danny Fox for this observation, and leave this is as an open problem.

- (199) AV: the object cannot bind into the subject

(250123)

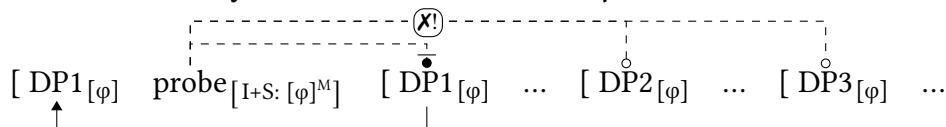
	X O cannot bind S
nurse	nogo	-Øⁿ
nurse	POSS-3MIN	IPFV-bring.AV-back.AV-all-DIR3=FUT
<i>ngâ</i>	<i>nuwopaa</i>	<i>nyibei</i>
to	house.of	place.sick
'His _j / ⁱ nurse will bring back every patient _i to the hospital'		

3.7.2 THE LOCALITY OF (ALL) MOVEMENT IS FEATURALLY RELATIVIZED

In the previous section we observed that movement to spec,CP in Äiwoo has almost all the properties of A-movement – it can feed φ -agreement, it's restricted to nominals, and all the binding-theoretical properties – and yet, it can skip an intervening nominal. Therefore, I described it as “non-local A-movement”. I argue that this should not be considered an empirical or theoretical innovation, or even surprising at all. Rather, this kind of pattern is in fact already predicted to be possible by the conjunction of two pre-existing and independently motivated ingredients of our theory: (i) featural Relativized Minimality (Rizzi 1990), and (ii) the concept of featurally relativized probes (Béjar 2003 et seq.). These two, in addition to the assumption that all movement is triggered by a step of Agree (see chapter 1, §1.5), predicts that precisely this kind of “non-local A-movement” should exist. Äiwoo confirms this prediction⁴⁶.

Deriving the canonically strict locality of A-movement from Relativized Minimality was already a fundamental part of the featural theory of the A/Ā-distinction (van Urk 2015). According to this approach, “A-movement” and “Ā-movement” don't actually exist as distinct primitives. Rather, there exists only one kind of phrasal movement, and “A/Ā-movement” are just descriptive labels for frequent clusterings of independent properties. More specifically for our purposes, the locality profile of classic A-movement is an epiphenomenon of the fact that the probes which drive (what we descriptively call) “A-movement” search for φ -features. All nominals have φ -features, purely in virtue of being nominals. Due to Relativized Minimality (Rizzi 1990), every nominal in a probe's c-command domain will constitute a valid goal for the probe, and therefore, every nominal will be a potential intervener. The result is the familiar strictly local/“no skipping” profile: only the nominal that is highest/closest to a probe can be targeted, or in other words, the highest/closest nominal intervenes for the probing of every lower nominal. This is schematized in (200).

- (200) The strict locality of A-movement is due to
- φ
- intervention:



⁴⁶ We will see in chapter 6 that Äiwoo actually showcases *two* instances of non-local A-movement: both the one to spec,CP, discussed here, and also movement to spec,TP, which will be the object of that chapter.

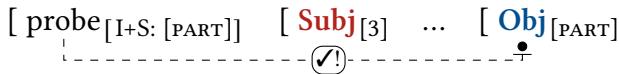
Enter now the second ingredient, namely the idea that probes can be relativized as for the specific features they search for. This has been established especially in the domain of agreement in a very rich literature for the past two decades, starting at least with [Béjar \(2003\)](#) (and [Béjar & Rezac 2003, 2009](#), [Nevins 2011](#), [Deal 2015b](#), and many others). We know that, for example, agreement probes may search for specific φ -features, only agreeing with, say, [PART] nominals (1st and 2nd person) but not 3rd person ones. As an illustration, consider the following paradigm from Chirag Dargwa ([201](#)). If the subject is [PART], as in ([201a,b](#)), the verb will agree with the subject. However, if the subject is 3rd person but the object is [PART], then the verb will agree with the object instead ([201c](#)).

- (201) Agreement for [PART] ([Sumbatova 2011](#): 135): (Chirag Dargwa)

- a. ***dicce*** {***fu*** / ***it***} ***r-iqqan-da***
1SG.ERG **2SG.ABS** **3SG.ABS** f-lead-1
‘I lead you/her’
- b. ***ficce*** ***du*** ***r-iqqan-de***
2SG.ERG **1SG.ABS** f-lead-2
‘You lead me’
- c. ***ite*** ***du*** ***r-iqqan-[da]***
3SG.ERG **1SG.ABS** f-lead-1
‘S/he leads me’

This is captured by positing an agreement probe whose featural specification is not [φ], but [PART]⁴⁷. When the subject is 3rd person, it will not constitute a valid goal for the probe, and will therefore be skipped. If the object then happens to be [PART], we see non-local agreement: the verb agrees with the less-local object instead of the closer subject ([202](#)) (I represent this schematically as head-initial for simplicity). In this case, there is no intervention because of the featural specification of the probe.

- (202) Non-local agreement for [PART]:

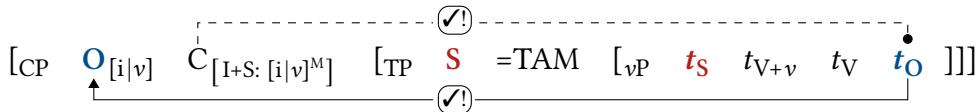


The point of connection here is the idea that all movement is dependent on a step of agreement. If agreement probes can do ([202](#)), then – in principle – probes driving movement should be able to do ([202](#)) too. Putting together Relativized Minimality and the notion of featurally relativized probes now generates a clear prediction. We should expect to find patterns of movement that show no properties of Ā-movement, and yet can be non-local (in the sense that a lower nominal can be picked over a higher one, which gets skipped). As long as the probe driving the movement in question is featurally specific enough, a higher argument might not constitute a valid intervener for a lower one. Essentially, what these two ingredients together predict is the same pattern illustrated in ([202](#)) for φ -agreement, but for syntactic movement instead.

⁴⁷ I use the interaction/satisfaction notation here for consistency, but [*u*PART] would be equivalent.

Indeed, this is precisely what I propose we see for movement to spec,CP in Äiwoo. The (primary) probe on C is featurally specific: it wants [i|v], rather than just [φ]. The highest nominal carrying [i|v] will be agreed with and fronted to spec,CP; a higher nominal *without* this feature (i.e., the subject in a UV clause) will not constitute a valid goal, and not intervene (203).

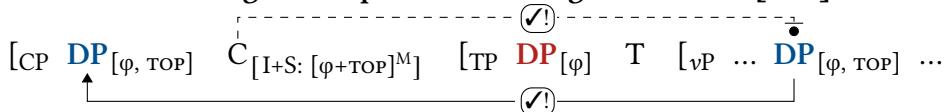
(203) Non-local A-movement to spec,CP:



This agreement-plus-movement step is thus not “strictly local” in the same way that classic A-movement is, but it is nonetheless local in this more specific, relativized way⁴⁸. As mentioned above, already in van Urk (2015), the strict locality of canonical A-movement was argued to be an epiphenomenon of the featural specifications of the probes driving such movement, i.e., a consequence of Relativized Minimality. Here, what I do is just reinforce this point. Because probes can have arbitrary featural specifications, we should expect to find precisely this kind of “violation” of classic strict A-locality.

Of course, movements with the kind of properties we see for CP-fronting in Äiwoo are nothing new. Perhaps especially since van Urk’s (2015) influential work, a rich literature has analyzed cases of movement with similar profiles. This is the case for, among others, movement to spec,CP in Dinka (van Urk 2015), non-canonical passives in Khanty (Colley & Privoznov 2020), and *bei*-passives in Mandarin (F. Chen 2023); see Lohninger (2025) for an overview (see also Webelhuth 1989, Mahajan 1990, Saito 1992, Miyagawa 1997, McGinnis 1998, a.o., for earlier discussion of movements with mixed A/Ā-properties). Like for CP-fronting in Äiwoo, these movements can be non-local/skip intervening nominals, but they otherwise show categorial restrictions and binding-theoretical properties typical of A-movement. These movements have been analyzed as instances of “mixed A/Ā-movement”, and this label is intended in a rather literal sense: the probes driving these movements are simultaneously searching for φ-features and for some Ā-feature(s) (e.g., [TOP] or [FOC]), and this combination of features is what derives their properties. For example, take the case of CP-fronting in Dinka, which is on the surface very similar to the Äiwoo case. For van Urk (2015), the probe on C in Dinka is specified as searching for both [φ] and [TOP], and it can therefore skip an intervening nominal without a [TOP] feature (204). The resulting movement is therefore non-local.

(204) Dinka CP-fronting can skip an intervening DP without [TOP]:



What I aim to add to this discussion is that the notion of “mixed A/Ā-probing” is not strictly speaking necessary to derive movement patterns of this kind (that is, with A-

⁴⁸ As described above (§3.5.3), an additional “plan B” probing step kicks in just in case the first round of [i|v]-probing could not find anything. This is strictly speaking orthogonal to the issue under discussion here.

style categorial restrictions and binding-theoretical properties, but no strict locality). To be clear, the analysis in terms of mixed/composite probes may of course be completely correct for the languages mentioned above. Nonetheless, what Äiwoo shows us is that this movement profile can arise even in the complete absence of any Ā-features on the probe, purely as an epiphenomenon of Relativized Minimality and the independently needed notion of featurally specific probes. CP-fronting in Äiwoo could in principle be thought of as another instance of “mixed A/Ā-movement”; after all, this instance of movement is strikingly similar to CP-fronting in Dinka (204). However, the probe I posit for Äiwoo C is not actually interested in any Ā-features. Instead, it searches for [i|v] – which is only indirectly correlated to the presence of Ā-features⁴⁹.

Labeling Äiwoo CP-fronting as “mixed A/Ā-movement” would thus be somewhat uninformative or at worst misleading, because there really is no Ā-ingradient to it whatsoever other than the locality profile – which, as we have seen, is independently derived by probing for [i|v], which is not an Ā-feature (in the sense that it has no information-structural/discourse import, it is not related to relativization or *wh*-movement, or any other classic Ā-processes). The proposal that non-local A-movement patterns can arise even in the complete absence of Ā-features will be strengthened in chapter 6, when tackling the more complex part of the Word Order Puzzle (i.e., the word order alternation found in non-canonical UV clauses). We will see that Äiwoo showcases another instance of featurally motivated, non-local movement with A-type binding properties – this time with a clear absence of any connection to Ā-features (or even potential “Ā-positions”) of any kind. This will be the case of movement to spec,TP, which preferentially targets less local nominals with “marked” φ -features over closer nominals with less marked features.

Our discussion thus far has established why Äiwoo CP-fronting shows the locality properties it does: the probe on C searches for [i|v], a feature that not all nominals have, and therefore the resulting movement can be non-local. This, however, leaves open the question of why the *other* properties of this movement are the way they are. More specifically: why does Äiwoo CP-fronting have A-style binding-theoretical properties? In the original proposal of the featural theory of the A/Ā-distinction, van Urk (2015) argues that the binding-theoretical differences between A- and Ā-movement derive from a difference in the type of trace these movements leave behind, and how these different traces are interpreted. In this model, movement created by probing for [φ]-features triggers abstraction over *individuals*, whereas probing for Ā-features results in abstraction over *choice functions*, and the various binding-theoretical differences follow from this split (see van Urk 2015: 37–51 for details).

Our question about the binding-theoretical properties of Äiwoo CP-fronting, then, becomes a question about what kind of feature [i|v] actually is, given the properties we observe in movement triggered by searching for this feature. Following van Urk (2015), what

⁴⁹ For now, I have just asked the reader to temporarily trust that [i|v] as the probing feature is the right analytical choice; the fact that C does not directly search for Ā-features has not been demonstrated yet. This will be shown to be a fundamental part of the model in the next chapters (4 and 6), where we will see cases where a nominal may have [i|v] and get raised to spec,CP despite, crucially, not having any Ā-features.

we learn is that a feature like $[i|v]$ must somehow behave like φ -features in triggering abstraction over individuals (i.e., generating movement with A-type binding-theoretical properties). One possible way to think of this goes back to the idea of goal flagging as implementing the bidirectional transfer of information under agreement between a probe and a goal ([Deal to appear](#), going back to e.g. [Pesetsky & Torrego 2001, 2007](#)). From this perspective, “goal flagging” is essentially a close relative of, or really the same thing as, case assignment; see [Clem & Deal 2024](#) for a concrete proposal to analyze (dependent) case assignment in terms of goal flagging. Then, “ v agrees with the object and flags it with $[i|v]$ ” would be just another way of saying “ v assigns accusative case to the object” (although Äiwoo has almost no have morphological case distinctions). If $[i|v]$ is an equivalent of the same thing as case, our analysis could be reframed in perhaps more familiar terms as follows: (i) v assigns accusative case to \bar{A} -marked objects, while \bar{A} -featureless objects remain caseless (essentially, a DOM system); (ii) the probe on C is case-discriminating, preferentially attracting an accusative-marked argument if there is one.

Independently from whether $[i|v]$ is an incarnation of case or not, another relevant aspect is the fact discussed by [van Urk \(2015\)](#) that \bar{A} -features are *optional* features on nominals, in the sense that the speaker themselves decides to add them to a nominal or not (depending on how they want to structure the discourse), whereas φ -features are *obligatory* features on nominals. In this dichotomy, $[i|v]$ is definitely closer to the latter than to the former category. Although not all nominals have $[i|v]$ (unlike $[\varphi]$), which do and which do not is a purely mechanic outcome of the syntactic derivation (like case), and not up to the speaker to decide. Or at least, not directly: a speaker can choose to put \bar{A} -features on an object, which in turn will trigger object agreement by v and therefore cause $[i|v]$ to be present on the object. However, in the next chapters we will see that this *indirect* connection between a speaker’s information-structural choices and the presence of $[i|v]$ is very much intentional, as it will be important in deriving cases where the object *always* gets moved to spec,CP, regardless of any information-structural factors.

3.7.3 POTENTIAL PARALLELS

Proposing that non-local A-movement can arise without any connection to \bar{A} -features (thus, not being an instance of genuinely “mixed A/ \bar{A} -movement” in the featural sense) raises the question of what others patterns this type of analysis could be extended to⁵⁰. As briefly mentioned above, a large literature has been produced about apparent locality violations in A-movement. In the rest of this section I discuss a series of phenomena from other languages that may be re-analyzed with an Äiwoo-style story. The reader who is not necessarily interested in the cross-linguistic extensions of this analysis will not need to devote too much attention to this part.

Among these are cases of A-scrambling in Germanic languages, Hindi, Japanese, Korean, Mongolian, and other languages ([Webelhuth 1989](#), [Mahajan 1990](#), [Saito 1992](#), [Miya-](#)

⁵⁰ As anticipated, Äiwoo showcases another instance of non-local A-movement to spec,TP, which is clearly driven by a φ -feature hierarchy effect; see chapter 6. In this section, I focus on parallels from other languages.

gawa 1997, McGinnis 1998, Ko 2014, Gong 2023, a.o.). Moreover, similar patterns have been argued to obtain for locative inversion in English (e.g. C. Collins 1996, though see Feldcamp 2025), and Generalized Inversion in Russian (Bailyn 2004, 2020). It is less clear to me how several of these cases could be accounted for by an Äiwoo-style explanation, since this crucially relies on there being some featural way to single out a lower nominal to the exclusion of a higher one, at least without positing an ad-hoc scrambling feature (e.g. Müller 1997, 1998, McGinnis 1998, Grewendorf & Sabel 1999; though see Erlewine & J. Lim 2023 for a featural account of scrambling in Pangasinan).

These cases aside, there are other attested patterns (discussed under a variety of headings) that might be thought of in terms of an Äiwoo-style analysis. A first example concerns the ordering of Romance clitics, which often has been described as “templatic” in the sense that it seems to vary arbitrarily both between and within languages (see e.g. Pescarini 2023, a.m.o.). For example, in French a direct object clitic precedes an indirect object one if they are both third person (205), but the opposite order obtains if the indirect object is 1st/2nd person (206). (These examples are from Crysman & Luís 2024: 4.)

- (205) 3 > 3: DO precedes IO (French)

- a. *Paul la lui présentera*
Paul ACC.3SG.F DAT.3SG introduce.FUT.3SG
'Paul will introduce her to him'
- b. * *Paul lui la présentera*
Paul DAT.3SG ACC.3SG.F introduce.FUT.3SG

- (206) 1/2 > 3: IO precedes DO

- a. *Paul me la présentera*
Paul DAT.1SG ACC.3SG.F introduce.FUT.3SG
'Paul will introduce her to me'
- b. * *Paul la me présentera*
Paul ACC.1SG.F DAT.1SG introduce.FUT.3SG

Moreover, at least for Italian speakers who have a Weak PCC pattern (myself included; see e.g. Bonet 1991, Bianchi 2006), for combinations of [PART] direct and indirect object, the only possible linear order is 1st > 2nd person. This is ambiguous between the direct object being 1st person and the indirect object being 2nd person, or viceversa (207a). The opposite order is completely impossible, under any reading (207b).

- (207) Italian (Weak PCC): 1st precedes 2nd

- a. *mi ti hanno presentato*
1SG 2SG have.3PL introduced
✓ 'They introduced you to me'
✓ 'They introduced me to you'
- b. * *ti mi hanno presentato*
2SG 1SG have.3PL introduced

If one assumes that (i) clitics are base-generated in argument position and then (A-)moved (Kayne 1975 et seq.), and (ii) the linear order of clitics is established syntactically and not morphophonologically, these could at least potentially be patterns amenable to an Äiwoo-style story. For example, one could say that in French arguments carrying [PART] are attracted by a higher probe than 3rd person ones, or that in Italian 1st person arguments are attracted by a higher probe than 2nd person ones. See Bianchi (2006) a proposal along these lines (at least in spirit)⁵¹.

Another such potential case is reported in Myler (2017) for a number of Quechua varieties, where a 2nd person object raise to a higher position than both 1st and 3rd person ones, from where it ends up c-commanding the subject, and it can thus feed agreement in a slot that is normally reserved for the subject. In (208a,b) we see the usual pattern: the object clitic precedes the tense marker, which in turn precedes subject agreement⁵². However, if the object is 2nd person (208c), now it follows the tense marker, and moreover, the outermost slot that is normally reserved for subject agreement is now controlled by the 2nd person object as well (leaving the 3rd person subject unexpressed). See Myler (2017) for arguments that this pattern reflects actual syntactic movement.

(208) Cuzco Quechua: 2nd person arguments are raised higher (Myler 2017: 753):

- a. *maylla-wa-rqa-ni*
wash-1.OBJ-PST-3.SUBJ
'S/he washed me'
- b. *maylla-Ø-rwa-ni*
wash-3.OBJ-PST-1.SUBJ
'I washed him/her'
- c. *maylla-rqa-su-nki*
wash-PST-2.OBJ-2.“SUBJ”
'S/he washed you'

Another proposal that is more similar in letter to the one being made here is made in Hammerly (to appear) and Hammerly & Mathieu (to appear) for Long-Distance Agreement (LDA) in Border Lakes Ojibwe, under the term of “relativized EPP”. In this language, matrix verbs can sometimes agree with an argument in the embedded clause. If the embedded subject is 1st/2nd person and the embedded object is 3rd person, only the embedded subject can control LDA (209a), but not the embedded object (209b)⁵³. However, in

51 Moreover, clitic doubling in languages like Rioplatense Spanish, Greek, Bulgarian and Amharic (Suñer 1988, Anagnostopoulou 2017, Harizanov 2014, Kramer 2014) has been analyzed as showing properties of A-movement, and since it can target an object from skipping the intervening subject, it could be thought of as another instance of a movement of this kind.

52 See Myler (2017) for arguments why these morphemes are analyzed as clitics vs. agreement markers, though see also chapter 5 for a critical assessment of these diagnostics.

53 Verbal agreement patterns in Algonquian languages are morphologically highly complex, so I refer the reader to Hammerly & Mathieu (to appear) for details. Here I have simplified the glosses somewhat, and added typographical representations of null pronouns for ease of exposition.

the opposite configuration, either argument can control LDA (210). The same is true for combinations of 3rd and 1st person, not shown here (see Hammerly & Mathieu to appear).

- (209) 2nd > 3rd: only subject LDA (Hammerly & Mathieu to appear: 9–10)

- a. *gi-gii-waabam-in* [CP $\emptyset_{2\text{SG}}$ *gii-miigwechiwi'-ad John*]
2-PST-see-2 PST-thank-2>3 *John*
'I saw that **you** thanked **John**'
- b. * *in-gii-waabam-aa* [CP $\emptyset_{2\text{SG}}$ *gii-miigwechiwi'-ad John*]
1-PST-see-3 PST-thank-2>3 *John*
Intended: 'I saw that **you** thanked **John**'

- (210) 3rd > 2nd: subject or object LDA (Hammerly & Mathieu to appear: 10)

- a. *in-gii-waabam-aa* [CP *ikwe* *gii-miiwechiwi'-ik* $\emptyset_{2\text{SG}}$]
1-PST-see-3 **woman** PST-thank-3>2
'I saw that **the woman** thanked **you**'
- b. *gi-gii-waabam-in* [CP *ikwe* *gii-miiwechiwi'-ik* $\emptyset_{2\text{SG}}$]
2-PST-see-2 **woman** PST-thank-3>2
'I saw that **the woman** thanked **you**'

Abstracting away from several complications, Hammerly (to appear) and Hammerly & Mathieu (to appear) propose that LDA is consistently into a position they identify with embedded spec,CP. C simply attracts the closest argument to its specifier, whichever that may be. Crucially, they propose that a probe on Voice has an EPP feature relativized to [PART], which specifically raises 1st/2nd person objects across subject, but not viceversa. After this step, a [PART] object and the subject are both in spec,VoiceP, and thus equidistant from C, which can therefore raise either without intervention problems. This results in free LDA. The entire process is schematized in (211)–(212).

- (211) Embedded 2 > 3: only subject LDA

- a. verb-**2SG** [CP **2SG** C ... [VoiceP **2SG**] Voice_{[I+S: [PART]^M]} ... **3SG**]
- b. * verb-**3SG** [CP **3SG** C ... [VoiceP **2SG**] Voice_{[I+S: [PART]^M]} ... **3SG**]

- (212) Embedded 3 > 2: subject or object LDA

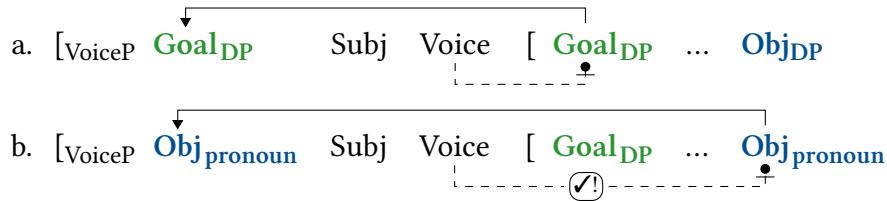
- a. verb-**3SG** [CP **3SG** C ... [VoiceP **2SG** **3SG**] Voice_{[I+S: [PART]^M]} ... **2SG**]



Although Hammerly & Mathieu's notion of "relativized EPP" is not used to model a case of non-local A-movement *per se*, it is nonetheless a fairly exact equivalent of what I am proposing for Äiwoo: a movement-inducing probe that is relativized to a particular feature, and can therefore trigger movement of a lower nominal across a higher one without appealing to any Ä-features.

Finally, another case of non-local A-movement that is featurally motivated is proposed in Brodkin (2025) for Mandar, an Austronesian language of Sulawesi (Indonesia). Through ordering effects and binding tests, Brodkin (2025) shows that in ditransitive clauses where both objects are lexical DPs, the goal is base-generated above the theme, and is then moved to an outer specifier of VoiceP, above the subject (213a). However, the probe triggering this movement has a featural preference for pronouns: if the theme is a pronoun instead of a lexical DP, then the theme is attracted to this position instead of the goal, which remains low (213b).

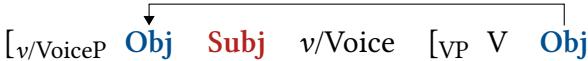
(213) Mandar Voice moves a less-local pronoun over a closer DP:



Although Brodkin's technical implementation is somewhat different from mine, the spirit is the same: a probe is relativized to agreeing with and moving arguments of a certain type, and can therefore skip closer non-fitting nominals along the way.

A final case that can be explained in these terms is that of syntactic inversion in so-called "High Absolutive" Mayan languages (Coon et al. 2014, Assmann et al. 2015, Coon et al. 2021, Royer 2025, a.o.). In these languages, the object is consistently A-moved across the subject (214), and this movement step feeds a variety of other syntactic phenomena (controlling agreement, feeding/bleeding binding relationships, restricting Ä-extraction, etc.). Importantly, this always happens regardless of the features of the two arguments.

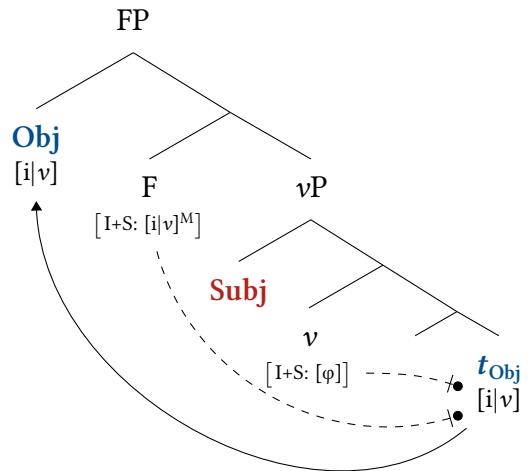
(214) High Absolutive Mayan languages: the object A-moves across the subject



A possible way to capture this pattern, illustrated in (215), is a variation of my proposal for Äiwoo, where *v* agrees with Ä-marked objects, but not with objects without Ä-features⁵⁴. Suppose that in High Absolutive Mayan languages, instead, *v* always agrees with *all* objects, across the board. Then, a higher head (left unspecified as "F" below) searches for [i|v], which by assumption will be present on all objects. This derives the desired outcome: the object will consistently (A-)move across the subject.

54 I thank Amy Rose Deal and David Pesetsky for suggesting this possibility, independently from each other.

(215) Syntactic inversion through goal flagging:



4

CHAPTER

THE Ā-EXTRACTION RESTRICTION, AND THE LOGIC OF AN EXCEPTION

It's not right, but it's okay

— Whitney Houston

4.1 {OVER/PRE}VIEW

This chapter focuses on a well-trodden topic within Austronesian syntax: the Ā-extraction restriction. A characteristic trait of many Austronesian languages is that there is a correlation between the voice of a given sentence and what argument(s) may be Ā-extracted (relativized, topicalized, focused, participate in *wh*-question formation, etc.). The first half of this chapter (§§4.2–4.3) will focus on describing how this phenomenon manifests in Äiwoo, and building a model that correctly derives a particularly interesting incarnation of the extraction restriction, since in Äiwoo, in addition to its general profile we observe a set of systematic *exceptions*. The latter half of this chapter (§§4.4–4.5) will then focus on one particular category of exceptional Ā-extraction: the acceptability of extraction of the subject of certain specific UV verbs. Considering once again our overview table (216), this chapter concentrates on deriving the difference between the first two rows, where extraction is restricted, and the third, where it's not. Below, I give an informal characterization of the puzzle.

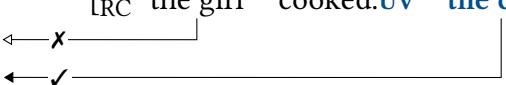
(216) Overview of clausal patterns and Ä-extraction profiles:

Clause type:	Word order:	Extract non-VIA?
a. AV:	S✓ φ _S -V. AV =TAM O ^X	no
b. UV _{plain} :	O✓ V.UV S ^X =TAM	no
c. UV _{only} :	O✓ V.UV S✓ =TAM	yes
<hr/>		
d. UV _{inā} :	O ^{NA} V.UV S✓ =TAM	yes
e. UV _{gu} :	O ^{NA} V.UV -π _O =TAM S✓	yes
f. UV _{SVO} :	S ^{NA} V.UV -π _S =TAM O ^{NA}	NA

Three smaller appendices conclude this chapter. Appendix §4.A argues for the particular analysis of relativizing morphemes assumed here *contra* the existing descriptive literature. Appendix §4.B is a note about topicalization and focus constructions, arguing that the former is not movement-based and the latter is a sub-case of relativization. Finally, appendix §4.C briefly discusses the cases of some verbs with oscillating behavior between generating clauses of type (216b) or type (216c).

WHAT THE RULES SAY At first glance, Äiwoo is a relatively well-behaved Austronesian language when it comes to relativization. In general, only the VIA of any clause can undergo relativization, and the other argument(s) cannot (217).

(217) Only the VIA can be extracted:

- a. [RC the girl cooked.**AV** the crab]
 
- b. [RC the girl cooked.**UV** the crab]
 

Since this is a bidirectional correlation, one can also frame it the other way around: the extracted argument must be the VIA of its clause (218).

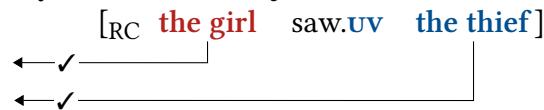
(218) The extracted argument must be the VIA of its clause:

- a. **The girl** [RC that $\left\{ \begin{array}{l} \checkmark \text{cooked.} \textbf{AV} \\ \times \text{cooked.} \textbf{UV} \end{array} \right\}$ the crab]
- b. **The crab** [RC that the girl $\left\{ \begin{array}{l} \times \text{cooked.} \textbf{AV} \\ \checkmark \text{cooked.} \textbf{UV} \end{array} \right\}$]

WHAT TO DO WHEN THE RULES ARE RIGGED AGAINST YOU We will see that Äiwoo has a class of transitive verbs that are special in that they *do not have an Actor Voice*: their AV form simply doesn't exist. This is what I'll call UV-only verbs. Now, we just saw above how the system imposes a requirement that when a subject is extracted, AV is the only

possible option, and UV is ungrammatical. What is one to do then, when one wants to relativize the subject of such a UV-only verb, for example *te* ‘see’? In this case, Äiwoo syntax shows some understanding towards the speaker: in contrast to the ordinary cases, *non-VIA extraction is exceptionally grammatical* (219).

(219) UV-only verbs allow subject extraction:



- a. ✓ **The thief** [RC that the girl saw.UV]
- b. ✓ **The girl** [RC that saw.UV the thief]

DESIDERATA AND CONSEQUENCES On one hand, we want a model that is *restrictive* enough to correctly predict the Ä-extraction restriction we find with most Äiwoo verbs (217)-(218). On the other hand, we want our model to be *flexible* enough to capture this systematic exception, where subjects can be extracted specifically from clauses containing UV-only verbs (219). Intuitively, this problem has an almost OT-like quality to it. Metaphorically speaking, a constraint banning the existence of the AV form of certain verbs is ranked higher than a constraint banning non-VIA extraction (“*see.AV > *subject-extraction-from-UV”).

Such exceptions to the extraction restriction (that is, the possibility to extract non-VIA/pivot arguments) have occasionally been discussed in the literature, but they “appear in scattered sources and lack a unified analysis” (Hsieh 2025: 520). Erlewine & C. Lim (2023) and Hsieh (2025), for example, discuss exceptional non-pivot Ä-extraction in Bikol and Tagalog respectively (see also Ceña 1979, McGinn 1988, Nakamura 1996). However, these languages are different from Äiwoo in important respects, the primary one being not having a lexically defined class of UV-only verbs that allow this. Furthermore, see Tanaka et al. (2016), Pizarro-Guevara & Wagers (2018, 2020, 2021, 2024), and Pizarro-Guevara & Garcia (2024) for experimental perspectives, focusing on Tagalog.

The non-absolute character of the Ä-extraction restriction in Äiwoo has important consequences for our theory of this restriction. Particularly, I will argue that it constitutes evidence for an approach where the extraction restriction in Äiwoo is a consequence of specifically Ä-intervention, and it cannot arise due to phasehood (*contra* e.g. Rackowski & Richards 2005, Hsieh 2020, 2025, Erlewine & Sommerlot 2023b for Tagalog and several Malayic languages, a.o.) or other types of DP-intervention (*contra* e.g. Aldridge 2004, 2008, Erlewine & C. Lim 2023 for Tagalog, Indonesian, and Bikol, a.o.).

4.2 SETTING THE STAGE: ÄIWOORELATIVE CLAUSES

4.2.1 EMPIRICAL DESCRIPTION

Throughout this chapter and the rest of the dissertation, I use relativization as the main example of Ä-extraction (see this chapter's appendix 4.B for why relativization and not other types of Ä-dependencies). Therefore, it's important to first establish an empirical baseline of what relative clauses (RCs) in Äiwoo look like. A typical example is given in (220). We can observe that (i) there is no obvious overt complementizer, aside perhaps from the optional marker *mi=* at the left edge¹; (ii) in the absence of *mi=*, the relative clause (bracketed) is simply juxtaposed to the right of the head noun *kuli* 'dog', and (iii) there is a gap inside the RC corresponding to the head noun.

- (220) [kuli (*mi=*)[RC \square] ki-*ngoduwâ-lâoo ngä paveli eângâ]]=*kâ* no Mary
 dog REL= IPFV-shout-always in garden that=DIST POSS Mary
 '[The dog that kept barking in that garden] is Mary's' (241015)*

Because of the lack of embedding morphology – aside from the optional *mi=* – and the most often RC-initial position of the gap, a DP containing a relative clause is often string-identical to a main clause having the head noun as its VIA/pre-verbal argument. Compare the bracketed portion of (220) to (221), which is just an entire (main) clause on its own, with no extraction going on.

- (221) kuli ki-*ngoduwâ-lâoo ngä paveli eângâ* (241015)
 dog IPFV-shout-always in garden that
 'The dog kept barking in that garden'

First and foremost, even in the absence of *mi=* we can be sure that the bracketed portion of (220) is a DP containing a relative clause because it has the external syntax of a DP with respect to the rest of its larger clause. That entire string is being parsed as the subject of a copular clause, marked as such by the particle =*kâ*. We can observe the same string being used in clearly defined argument positions in the next set of examples². In (222a) it's the direct object of a UV clause, in the VIA position between a sentence-initial adverbial (*dâbu dâuwângâ* 'every day') and the verb. In (222b) it's the subject of an UV clause, be-

1 As a bookkeeping note going forward, the examples throughout the text will variably contain the marker *mi=* or not, according to how they were produced in the elicitation context. For the sake of exposition, throughout the text I will just assume these are (optional) relativizers, *contra* Næss (2017b). See appendix 4.B for a discussion of this and a few other similar markers, and arguments in favor of this analysis.

2 In natural speech (as attested from the corpus), speakers often avoid having heavy constituents like the ones in (222a,b) in argument positions. This is because due to the syntax of arguments in Äiwoo, these configurations will unavoidably involve a degree of center-embedding, which is known to be taxing to process (Miller & Chomsky 1963). Instead, speakers will frequently topicalize the heavy DP containing a relative clause, and then leave a null pronoun in the corresponding argument position. For example, a slightly more natural version of (222b) would be (i); the null resumptive pronoun (the subject of 'bite') is boxed.

tween the verb and the TAM/negation particles. Finally, in (222c) it's the complement of a preposition.

(222) DPs containing a RC in various argument positions:

(241015)

a. Object of UV clause:

*dâbu dâuwângâ [kuli (mi=)[RC □ ki-*ngoduwâ-lâoo ngä paveli eângâ]]Obj ku-wâpunâ-kâ-no, mo ba ku-mâlu=gu that IPFV-feed.UV-DIR3-1MIN but NEG IPFV-stop=NEG*
 ‘Every day I feed the dog that’s always barking in that garden, but it doesn’t stop’*

b. Subject of UV clause:

*gino-mu ba ku-mangi [kuli (mi=)[RC □ ki-*ngoduwâ-lâoo ngä paveli eângâ]]Subj=gu=naa garden that=NEG=FUT**

‘The dog that’s always barking in that garden won’t bite your son’

c. Complement of preposition:

*bugulo i-tou-kä dekilingä go [kuli (mi=)[RC □ ki-*ngoduwâ-lâoo ngä paveli eângâ]]*
 yesterday 1MIN-bring.AV-DIR3 food to dog REL=*

IPFV-shout-always in garden that

‘Yesterday I brought food to the dog that’s always barking in that garden’

The fact that the head noun is external to the RC is not obviously evident from these examples, since the gap is always RC-initial and there is no overt complementizer (again, aside from the optional *mi=*). Even having convinced ourselves that these are indeed DPs containing RCs, we could imagine that they’re *internally-headed* relative clauses, with the head noun being in its canonical argument position inside the RC. However, we can demonstrate that the head noun is in fact external by adding other material at the start of

- (i) *[kuli (mi=)[RC □ ki-*ngoduwâ-lâoo ngä paveli eângâ]]_{TOP}=kâ, gino-mu ba ku-mangi (-* \emptyset^{N} *)=gu=naa*
 dog REL= IPFV-shout-always in garden that=DIST son-2MIN
 NEG IPFV-shout-always-3MIN=NEG=FUT*

‘The dog that’s always barking in that garden, it won’t bite your son’

(241015)

However, this is clearly a performance-related effect. Sentences with a “reasonable” degree of center-embedding like the ones above are accepted by my consultant as grammatical, since – despite being maybe hard to parse – they don’t break any syntactic rules of the language. In fact, center-embedding structures like these are attested in the natural speech corpus. One example is (ii), repeated from chapter 3, §3.5.2, where the entire DP “the person sitting in the boat” stands between the verb and the negative particle =*gu*.

- (ii) *ngaama lâ ba i-kää [me=[RC ki-tokoli-woli-mä ngä botu]]=gu=nâ if DIST NEG ASP-know.UV REL:person=IPFV-sit-down-DIR1 in boat=NEG=DIST*
 ‘If [the person sitting in the boat] doesn’t know (it), ...’ (Nyeliwânubona tonponu 141)

the RC, to the left of the posited gap. As we have seen earlier (chapter 3, §3.2), adverbials like *dâbu dâuwângâ* ‘every day’ can precede the VIA position, but not intervene between the VIA and the verb (223a). In light of this, consider now (223b). If *singedâ* ‘girl’ was internal to the RC, we would expect it to appear in the position where I have notated the gap, and it would be ungrammatical to the left of the adverbial. Therefore, in (223b) we can be sure that the adverbial marks the left edge of the RC, thus proving both that the head noun is external and that there is indeed a gap in its correspondent position inside the RC. The sentences in (224) make the same point, but with object extraction from a UV clause instead of subject extraction from AV. Sentence (224b) was judged as only slightly degraded, but possible.

- (223) a. Monoclausal context (AV): *{DP} Adv ✓{DP} V ... (240418)
- *{*singedâ*} *dâbu dâuwângâ* ✓{*singedâ*} *ki-tou-lâoo-kä* *flaua*
 girl day every girl IPFV-bring.AV-always-DIR3 flower
*go mekivaavee nogo-*Øⁿ
 to teacher POSS-3MIN
 ‘Every day the girl brings flowers to her teacher’
- b. Subject relativization across a sentence-initial adverbial:
- [*singedâ* [RC *dâbu dâuwângâ* □ *ki-tou-lâoo-kä* *flaua*
 girl day every IPFV-bring.AV-always-DIR3 flower
*go mekivaavee nogo-*Øⁿ]]=*nâ i-te-kâ-no*
 to teacher POSS-3MIN=DIST ASP-see.UV-DIR3-1MIN
 ‘I met a girl who every day brings flowers to her teacher’
- (224) a. Monoclausal context (UV): *{DP} Adv ✓{DP} V ... (240516)
- *{*buk*} *dâbu dâuwângâ* ✓{*buk*} *ki-gââ pedevalili=kaa*
 book day every book IPFV-read.UV children=FUT
 ‘Every day the children will read the book’
- b. Object relativization across a sentence-initial adverbial:
- (?)*kâ-no=ngä nyä-veve [buk [RC *dâbu dâuwângâ* □*
 want-1MIN=CV 1MIN.IRR-buy.AV book day every
ki-gââ pedevalili=kaa]]
 IPFV-read.UV children=FUT
 ‘I want to buy a book that every day the children will read’

Another strong piece of evidence for an analysis of the RC head as external comes from the exceptional cases of non-VIA extraction, which – as anticipated – Äiwoo allows in particular contexts. These will be discussed in depth in the second half of this chapter. For now, their relevance is that in these contexts one can very clearly observe the RC-external position of the head. In (225a), the head noun *singedâ* ‘girl’ corresponds to a gap that is *not* sentence-initial inside the RC, thus clearly demonstrating that the head noun is RC-external. Compare this to the baseline OVS order that the RC portion of (225a) would have if it were just an independent clause (225b).

- (225) a. Extraction across an overt DP shows that RCs are head-external: (250717)
- kokä polis=kä nä-li-euu-kä go [singedâ [RC mekipä*
 want police=CV IRR-3AUG-speak-DIR3 go girl thief
i-te-kä-∅ⁿ]=to]]
 ASP-see.UV-DIR3-3MIN =TAM
 'The police wants to talk to the girl who has seen the thief'
 b. Baseline OVS order:
mekipä i-te-kä singedâ=to
 thief ASP-see.UV-DIR3 girl=TAM
 'The girl has seen the thief'

4.2.2 RELATIVIZATION IS AN Ä-DEPENDENCY

After having examined what RCs look like, we need to ascertain that relativization is in fact an Ä-dependency in Äiwoo. Indeed, relativization shows two important hallmarks of Ä-dependencies cross-linguistically. First, it can cross clausal boundaries. The sentences in (226) show long-distance relativization, for transitive subjects and objects; (227) is an attested example of long-distance relativization of an intransitive subject³.

- (226) Long-distance relativization: (240606)
- a. [*singedâ mi=[RC* *kâ-no=ngä* [*ki-veve-wâ=kaa* *nupwää*
- woman** REL= think-1MIN=CV IPFV-buy.AV-DIR2=FUT clothes
- nâ-nugu-mu]]] i-wâ=to bugulo*
- IRR-POSS-2MIN ASP-go=PRF yesterday
- 'The woman who I thought would buy clothes for you left yesterday'
- b. *dengâ [nupwää mi=[RC* *kâ-no=ngä* [*ki-ve-wâ*
- that **clothes** REL= think-1MIN=CV IPFV-buy.UV-DIR2
- Mary=kaa nâ-nugu-mu]]]*
- Mary=FUT IRR-POSS-2MIN
- 'Those are the clothes that I thought Mary would buy for you'

- (227) [*me=[RC* *kä-i=lä* [*ku-wopo-lâ-mä* go King Deved]]]
- REL:person= say-3AUG=CV IPFV-come-out-DIR1 from King David
- 'The person who they say descends from King David' (MT 12:23)

Despite being able to cross clausal boundaries, however, relativization is not completely free. As we might expect from an Ä-dependency, relativization cannot cross syntactic islands. More specifically, a relative clause constitutes itself an island for further relativization (228). Examples (228a,b) serve as a baseline to establish that relativizing both

³ I assume there is an additional gap as notated, to the left of *kânongä* 'I think', as a result of successive-cyclic movement, though this is not crucial. The details of long-distance relativization in Äiwoo are being investigated in ongoing work.

the object and the subject from this kind of clause is independently grammatical⁴. The crucial test case for islandhood is then (228c). Here, first we relativize the object from RC1 ('the dog that the boys adopted'). Once we've done this, RC1 is an island for relativization, so extracting the subject to create RC2 is impossible.

- (228) a. **Baseline 1:** (240606)

[**kuli** mi=[RC *i-luwa-kä* **pesigiläi** *eāngâ*]]=*kâ* mi=olo
dog REL= ASP-take.UV-DIR3 **boys** that=DIST REL=big
 'The dog that those boys adopted was big'

- b. **Baseline 2:**

[**pesigiläi** mi=[RC **kuli** *eāngâ* *i-luwa-kä*-*i*]]=*lâ*
boys REL= **dog** that ASP-take.UV-DIR3-3AUG=DIST
ki-li-vevaale-päko *ngämi*
 IPFV-3AUG-take.care-good of.it

'The boys who adopted that dog took good care of it'

- c. **Test case: a RC is itself an island for relativization**

* [**pesigiläi** mi=[RC2 [**kuli** mi=[RC1 *i-luwa-kä*-*i*]]=*lâ*
boys REL= **dog** REL= ASP-take.UV-DIR3-3AUG=DIST
mi=olo]=*kâ* *ki-li-vevaale-päko* *ngämi*
 REL=big=DIST IPFV-3AUG-take.care-good of.it

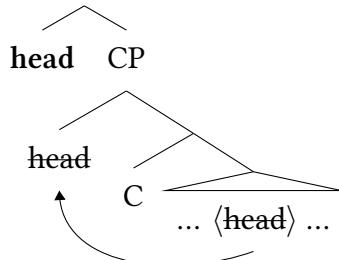
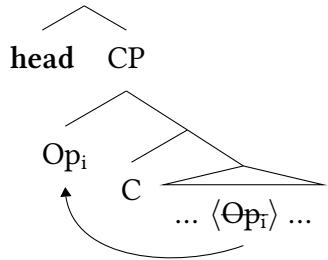
Intended: 'The boys_i who the dog_j that they_i adopted was big treated it_j well'

4.2.3 THE SYNTACTIC STRUCTURE(S) OF ÄIWOO RCs

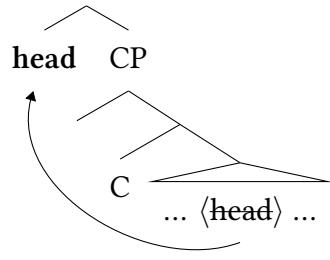
A few types of analyses have been proposed for relative clauses. These can be chiefly divided into three main groups. First, we can distinguish between analyses depending on where the head of the RC is base-generated. For operator-movement and matching analyses (229a,b), the head is base-generated outside of the RC, whereas for raising analyses (229c), the head is base-generated internally to the RC and then moves to a position outside of it (Schachter 1973, Vergnaud 1974, Kayne 1994, Bianchi 1999, Bhatt 2002). Then, within the first group we can distinguish two analyses depending on the nature of the movement dependency established within the RC. For operator-movement analyses (Partee 1975, Chomsky 1977, Jackendoff 1977), what undergoes movement is a null operator or a relative pronoun (229a). For matching analyses (Chomsky 1965, Sauerland 1998, 2000, 2003, Cinque 2020), it's a second instance of the head, which then undergoes deletion under identity with the (RC-external) head (229b). All three trees in (229) are meant to be heavily simplified illustrations, abstracting away from a lot of differences in the details of the various analyses cited above.

4 This is because *luwa* 'take' is a "UV-only verb", which therefore allows extraction of its subject despite being UV; see §4.5. In this case, we see an "overt gap" (notated as *-i*): the extraction site – in the red box – contains an overt suffix, rather than being null like elsewhere. This is because a pronoun in this position (spec,TP) must be overtly realized (as a suffix) even if it is a lower trace of movement, as a result of post-syntactic Local Dislocation onto the verb. See chapter 5, §5.5 for discussion.

(229) a. Operator movement: b. Matching:



c. Raising:



Distinguishing between operator-movement and raising/matching analyses is often not a trivial task. The main source of evidence comes from different kinds of connectivity effects, that is, any signs that the head noun of the RC is present inside the RC at some stage of the derivation. These connectivity effects may be of different kind: morphological case patterns (inverse case attraction; [Bianchi 1999, Deal 2016a, Abramovitz 2021](#)), idiom chunk interpretation ([Schachter 1973, Jarvis 2025](#)), semantic scope facts (e.g. [Bhatt 2002](#)), binding-theoretical effects ([Schachter 1973](#)), among others.

However, when it comes to Äwoo, all of these phenomena are hard or impossible to investigate for independent reasons. Äwoo does not have morphological case, we don't know of any NPIs, and we don't know of any VP-idioms like 'make headway' whose parts we could manipulate in the relevant way. Moreover, classic binding principles A/B/C do not provide a good testing ground either, due to language-specific confounds. For example, Condition C can be shown to apply in the canonical (structural) way; see chapter 3, §3.7. At the same time, however, its effects are often obscured by an additional, linearly-defined strict ban on cataphora targeting arguments in certain structural positions. Essentially, from certain positions a pronoun embedded inside a larger DP cannot corefer to any R-expression to its right, regardless of any structural factors. The patterns are quite complex, and not of importance here; see [Roversi \(2024a\)](#) for details. However, this anti-cataphora effect would get in the way of testing the possibilities for Condition C reconstruction in relative clauses. As for binding principles A and B, the main issues are (i) there is no morphologically dedicated anaphor, and the regular pronouns are used instead (lit. "he_i cut him_i"; see a brief description in chapter 5, §5.3.2); (ii) reflexive contexts of this kind result in sentences with pronominal objects, and these ("John saw him/himself/us/you/...") have rather different syntax and word order compared to sentences with lexical DP objects ("John saw the dog"); these word order alternations will be the focus of chapter 6.

Setting aside these kinds of connectivity effects, then, what little evidence we have at the current stage (to be presented below) seems to point towards the existence of, at least, non-raising/operator movement-type RCs in Äwoo. This, alone, does not necessarily exclude the presence of other types of structures for Äwoo RCs. That RCs are structurally ambiguous and can be derived in multiple ways in the same language is already known to be a possibility in several languages; among others, this case has been made for English ([Bhatt 2002, Hulsey & Sauerland 2006](#)), Bulgarian ([Krapova 2010](#)), Georgian ([S. Foley 2013](#)), Nez Perce ([Deal 2016a](#)), Hebrew ([Sichel 2018](#)), and Atchan ([Jarvis 2025](#)).

As for non-raising derivations, the evidence comes from cases of what at least superficially looks like extraposition. I follow [Fox & Nissenbaum \(1999\)](#) and [Hulsey & Sauerland \(2006\)](#) in assuming that extraposed RCs must have non-raising derivations; see the cited works for the arguments behind this claim. Äiwoo speakers often produce structures like the sentences in (230), that could potentially be analyzed as involving extraposition. Here, the RCs (bracketed and labelled) are uttered at the end of the clause instead of appearing to the immediate right of the head noun; (231) are the non-extraposed baselines for comparison. If we could confirm that these structures indeed involve genuine extraposition, that would be an argument in favor of non-raising derivations being available for Äiwoo RCs.

(230) Putative RC extraposition:

- a. [nubole] *i-epavi-no* *bugulo* [RC *i-tu-mä* *Mary*]
taro ASP-cook.UV-1MIN yesterday ASP-bring.UV-DIR1 Mary
‘Yesterday I cooked the taro that Mary brought me’ (240411)
- b. [butete] *ki-ii* *Anna=kaa* *bulaape* [RC *i-kili-no*
potato IPFV-peel.UV Anna=FUT tomorrow ASP-dig.UV-1MIN
pevaio=ke
morning=PROX
‘Tomorrow Anna will peel the potatoes that I harvested this morning’ (250123)

(231) Non-extraposed baselines:

- a. [nubole [RC *i-tu-mä* *Mary*]] *i-epavi-no* *bugulo*
taro ASP-bring.UV-DIR1 Mary ASP-cook.UV-1MIN yesterday
‘Yesterday I cooked the taro that Mary brought me’ (240411)
- b. [butete [RC *i-kili-no* *pevaio=ke*]] *ki-ii* *Anna=kaa*
potato ASP-dig.UV-1MIN morning=PROX IPFV-peel.UV Anna=FUT
bulaape
tomorrow
‘Tomorrow Anna will peel the potatoes that I harvested this morning’ (250123)

At the very least, we can be sure that the RC portion that I am labelling as “extraposed” is not simply stranded *in situ* by the fronting of the head noun. That is, we can exclude the following analysis:

(232) Analysis to be excluded:

- [nubole] *i-epavi-no* [nubole [RC *i-tu-mä* *Mary*]]
taro ASP-cooked.UV-1MIN taro ASP-brought.UV-DIR1 Mary
‘I cooked the taro that Mary brought me’

Remember that in Äiwoo, all sentential adjuncts (PPs and adverbs, chiefly) are linearized to the right of a postverbal object. That is, any object in the vP domain must surface immediately right adjacent to the TAM material, with nothing intervening. This is true for objects in AV clauses (233a) and in UV_{SVO} clauses (233b) (see chapter 6 for details about these).

- (233) Postverbal objects must always be right-adjacent to the TAM particles:

- a. *Jen ki-ebi=kaa ✓{butete} ngä nyopwä *{butete}* (230914)
Jane IPFV-bake.AV=FUT potato in oven potato
'Jane will bake potatoes in the oven'
- b. *(ijii) ku-potaa-i=laa ✓{iude} ngä nuumä *{iude}* (250717)
3AUG IPFV-search.UV-3AUG=FUT 12AUG in town 12AUG
'They will look for us in town'

Moreover, we can see this adjacency effect even in canonical UV clauses, where the object is fronted to spec,CP. When the object is plural, a 3AUG pronoun *ijii* can optionally be pronounced in the same position as the objects in (233). Note that nouns are number-neutral in Äiwoo, so that this optional pronoun is the only overt signal of plurality for *kuli* 'dog'; see chapter 2, §2.5.1. I assume this optional pronoun is a reduced spell-out of the lower copy of the object (a very similar phenomenon is known from Dinka; van Urk 2015, 2018). Once again, we see that this pronoun must be adjacent to the TAM particles, and precede sentence adjuncts:

- (234) *kuli i-wâpunâ-kâ-no ✓{(ijii)} bugulo *{ijii}* (250717)
dog ASP-feed.UV-DIR3-1MIN 3AUG yesterday 3AUG
'Yesterday I fed the dogs'

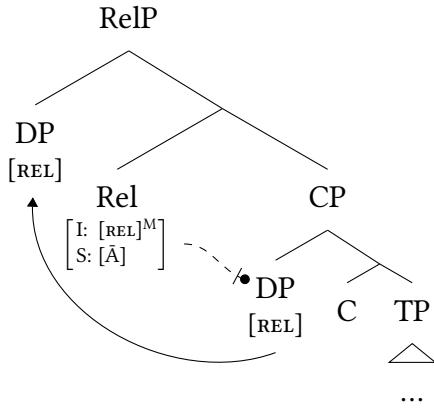
Consider now again one of the putative cases of RC-extrapolation, repeated in (235). If the bracketed RC portion here was stranded by the object after fronting to spec,CP, we would expect that it should surface to the *left* of the adverbial *bugulo* 'yesterday', since that is the *in situ* position of objects. Instead, we see that the RC follows the adverbial.

- (235) *[nubole] i-epavi-no bugulo [RC i-tu-mä Mary]* (240411)
taro ASP-cook.UV-1MIN yesterday ASP-bring.UV-DIR1 Mary
'Yesterday I cooked the taro that Mary brought me'

If confirmed, the presence of extraposition in Äiwoo would support the existence of non-raising derivations for RCs. As highlighted above, however, this alone does not necessarily exclude that raising derivations might be possible too, although we cannot confirm this at the present time.

For concreteness, I will assume that RCs in Äiwoo have the following structure (236). Inside the RC, the constituent undergoing relativization carries an Ä-feature [REL]. A relativizing head ("Rel") takes CP as its complement. This head contains a probe searching its c-command domain for a constituent carrying a [REL] feature, and it will move the goal to its specifier ([INT: REL^M]); why the satisfaction feature is set as [Ä] will become clear in §4.3. Relativization of an argument is impossible when the relativizing probe cannot agree with the argument in question.

(236) General tree for Äiwoo RCs:



I remain agnostic as to how exactly the moved $\text{DP}_{[\text{REL}]}$ constituent within the RC is connected to the RC-external head noun. Because of the extraposition facts discussed above, at the very least it should be possible that this RC-internal moved DP is just a relative operator, and not the head noun itself. The posited Ā-feature [REL] may then be thought of as the feature that is characteristic of/identifies relative operators. For simplicity, throughout the examples below I will only mark the extraction site with a gap (notated as \square) in the (last) position of the relativized constituent before moving to spec,RelP – i.e., in spec,CP here (236) – and not the final landing site in spec,RelP .

There is some possible evidence for the presence of this high Ā-position above spec,CP , coming from certain effects in the syntax of *wh*-questions. In Äiwoo, leaving a *wh*-word *in situ* is always possible. This is shown for objects and subjects in UV (237); see also Næss (2015a).

(237) Object question:

(230327)

- | | |
|---|--|
| a. <i>doo i-ŋä̃ Jon(=kâ)?</i>
what ASP-eat.UV John=DIST
‘What did John eat?’ | b. <i>nubole i-ŋä̃ <i>iie</i>(=kâ)?</i>
taro ASP-eat.UV who =DIST
‘Who ate the taro?’ |
|---|--|

However, this interacts with a strict ban on (linearly defined) cataphora that targets the VIA position in non-AV clauses, that is, UV and CV; see Roversi (2024a) for more details. For example, the RC-subject pronoun in (238) embedded inside the matrix subject cannot corefer with ‘Mary’, despite there being no c-command relation between them:

- (238) *[nubole [RC *i-kili*(- \emptyset^n) *bugulo*] ki-epavi Mary* (230608)
 taro ASP-dig.UV-3MIN yesterday IPFV-cook.UV Mary
 ‘Mary_i is cooking the taro that s/he_{j/*i} harvested yesterday’

In light of this, consider now the following minimal pair. Sentence (239a) is a perfectly grammatical *wh-in situ* question, cf. (237b) above. However, only a disjoint reading is possible, because of the anti-cataphora effect. To get the intended bound reading, *iie* ‘who’ is fronted to a position before the object, in a seeming violation of V2 (239b). Now, there is no cataphora, because the possessor pronoun follows ‘who’, so binding can succeed.

- (239) a. # [buk no-Øⁿ] ki-gââ *iie=kaa?* (240201)
 book POSS-3MIN IPFV-read.UV **who=FUT**
 ‘Who_i will read his_{j/*i} book?’
- b. *iie* [buk no-Øⁿ] ki-gââ-Ø<sup>n=naa?
 who book POSS-3MIN IPFV-read.UV-3MIN=FUT
 ‘Who_i will read his_i book?’</sup>

Because the fronted constituent is a *wh*-word, (239b) cannot involve topicalization. I assume that the position where ‘who’ exceptionally surfaces in (239b) is the high Ä-position posited in (236), above spec,CP. Presumably, because *wh-in situ* is always possible in Äiwoo, a *wh*-word will not need to be pronounced in its high position in a general case, but the pronunciation of this copy might be required in certain circumstances to obviate independent constraints.

4.3 THE ASTRONESIAN Ä-EXTRACTION RESTRICTION

In this section, I will illustrate how the analysis of Äiwoo clauses developed in chapter 3 also explains the pattern of Ä-extraction in the language, without any extra necessary mechanisms. The model I propose will be (in part) based on Ä-intervention: the highest argument in a clause, in virtue of carrying [PIV], intervenes for Ä-extracting other lower arguments. (In the other half of the chapter, we will then see how this kind of model also opens the door to the specific kind of exceptions to the Ä-extraction restriction that Äiwoo allows.) I will discuss how other theories that have been proposed of similar patterns in other Austronesian language, respectively based on phasehood and DP-intervention, would not be able to account for the Äiwoo facts.

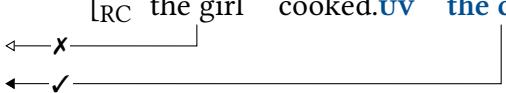
4.3.1 WHAT CAN BE RELATIVIZED WHEN

Having established what relativization looks like in the language and that it is indeed an Ä-movement dependency, we are now ready to examine *which* arguments can be relativized. Many Austronesian languages with the kind of voice system we see in Äiwoo notoriously restrict relativization (and often other Ä-dependencies) to the VIA/pivot argument; see §4.3.2 for references. This is the so-called “pivot-only” Austronesian Extraction Restriction. Given that in its most core manifestation the restriction is biconditional, one can frame it two ways. On one hand, in (240), we can fix the argument we want to extract, and ask “if I want to extract argument X, which voice(s) can I use?”. On the other hand, in (241), we can fix the voice of a given clause, and ask “from a clause in voice X, which argument(s) can I extract?”. These options are both shown schematically in (240)-(241).

- (240) The extracted argument must be the VIA of its clause:

- a. **The girl** [RC that $\left\{ \begin{array}{l} \checkmark \text{cooked.} \text{AV} \\ \times \text{cooked.} \text{UV} \end{array} \right\}$ the crab]
- b. **The crab** [RC that the girl $\left\{ \begin{array}{l} \times \text{cooked.} \text{AV} \\ \checkmark \text{cooked.} \text{UV} \end{array} \right\}$]

- (241) Alternative framing: from any clause, only the VIA can be extracted:

- a. 
- b. 

A concrete example of this restriction in another Austronesian language is given in (242)–(244), adapted from Pearson (2005: 412–413). Malagasy, like Äiwoo, features three voices: AV, UV, and CV (although differently from Äiwoo, Malagasy word order is pivot-final rather than pivot-initial)⁵. I use the shorthand notation ‘X{Y’ to iconically represent extraction of X from domain Y. For example, ‘S{AV’ should be read as “(Ä-)extraction of a subject from an Actor Voice clause”; ‘O{UV’ means “(Ä-)extraction of an object from an Undergoer Voice clause”, etc.

As anticipated, relativization is strictly pivot-only. From AV, only the subject can be extracted (242a), and not the object or an applied argument (242b,c). From UV, only the object can be extracted (243a), and not the subject⁶ or an applied argument (243b,c). Finally, from CV, only the applied argument – here, an instrument – can be extracted (244a), and neither the subject nor the object can (244b,c)⁷. Similar paradigms can be found in the literature for other languages with similar systems, like Tagalog (Rackowski 2002, Rackowski & Richards 2005, a.o.), Seediq (V. Chen 2023), Dinka (van Urk 2015), etc.

- (242) Only the **subject** can be extracted from **AV**:

- a. ✓ S{AV:

*ny mpamboly [(izay) mamono ny akoho amin-ny antsy]
DET farmer REL AV.kill DET chicken with-DET knife*
‘The farmer who is killing chickens with the knife’

⁵ Pearson (2005) and other Malagasy literature uses the term “trigger” where I use “pivot”, and consequently uses the terms “Actor Trigger”, “Theme Trigger”, etc.; I have simply reglossed these for consistency. See Pearson (2001: §§2.2.1, 2.4, 2005: §3.1) for details about the complex verbal morphology of Malagasy.

⁶ For some Austronesian languages, this is a simplification. In fact, subject extraction from UV is sometimes possible, perhaps somewhat degraded but not ungrammatical. See the discussion about Tagalog non-pivot subject extraction in 4.3.2.

⁷ For expository reasons, here I’m grouping the sentences by which voice the RC shows. This is a reordering from Pearson (2005), which groups them by extracted argument (i.e., the three subject-extraction sentences (242a)-(243b)-(244b) are grouped together, and so are all three object-extraction sentences, etc.).

b. ~~X~~ O \nsubseteq AV:

* *ny akoho [(izay) mamono amin-ny antsy ny mpamboly]*
 DET chicken REL AV.kill with-DET knife DET farmer
 Intended: ‘The chickens which the farmer is killing with the knife’

c. ~~X~~ X \nsubseteq AV:

* *ny antsy [(izay) mamono ny akoho (amin') ny mpamboly]*
 DET knife REL AV.kill DET chicken with DET farmer
 Intended: ‘The knife that the farmer is killing the chickens with’

(243) Only the object can be extracted from UV:

a. ✓ O \nsubseteq UV:

ny akoho [(izay) vonoin' ny mpamboly amin-ny antsy]
 DET chicken REL uv.kill DET farmer with-DET knife
 ‘The chickens which the farmer is killing with the knife’

b. ~~X~~ S \nsubseteq UV:

* *ny mpamboly [(izay) vonoina amin-ny antsy ny akoho]*
 DET farmer REL uv.kill with-DET knife DET chicken
 Intended: ‘The farmer who is killing chickens with the knife’

c. ~~X~~ X \nsubseteq UV:

* *ny antsy [(izay) vonoin' ny mpamboly (amin') ny akoho]*
 DET knife REL uv.kill DET farmer with DET chicken
 Intended: ‘The knife that the farmer is killing the chickens with’

(244) Only the applied argument (X) can be extracted from CV:

a. ✓ X \nsubseteq CV:

ny antsy [(izay) amonoan' ny mpamboly ny akoho]
 DET knife REL cv.kill DET farmer DET chicken
 ‘The knife that the farmer is killing the chickens with’

b. ~~X~~ S \nsubseteq CV:

* *ny mpamboly [(izay) amonoana ny akoho ny antsy]*
 DET farmer REL cv.kill DET chicken DET knife
 Intended: ‘The farmer who is killing chickens with the knife’

c. ~~X~~ O \nsubseteq CV:

* *ny akoho [(izay) amonoan' ny mpamboly ny antsy]*
 DET chicken REL cv.kill DET farmer DET knife
 Intended: ‘The chickens which the farmer is killing with the knife’

Āiwoo behaves exactly how we would expect an Austronesian language to behave, perfectly replicating the Malagasy paradigm. Here, too, what can undergo relativization is only the VIA in any given clause⁸. From an AV clause, only the subject can be extracted

⁸ As mentioned earlier in passing, in the examples in (228a,b), both the subject and the object could be extracted from the same UV clause. This is because the verb *luwa* ‘take’ is a UV-only verb, that simply does not

(245a) and not the object (245b). From a UV clause, conversely, only the object can be extracted (246a) and not the subject (246b).

- (245) Only the **subject** can be extracted from **AV**: (240425)

- a. ✓ S \leftarrow AV:

[<i>pedevalili</i>	(<i>mi</i> =)[RC	<input type="checkbox"/>	<i>ki-li-vängä=kaa</i>	<i>si</i>]]= <i>kâ</i>
children	REL=		IPFV-3AUG-eat. AV =FUT	fish=DIST
<i>pelivano</i>	<i>gisi</i>			
children	brother.1MIN			

‘The kids who will eat the fish are my brother’s children’⁹

- b. ✗ O \leftarrow AV:

* [<i>sii</i>	(<i>mi</i> =)[RC	<i>pedevalili</i>	<i>ki-li-vängä=kaa</i>	<input type="checkbox"/>]]= <i>kâ</i>
fish	REL=	children	IPFV-3AUG-eat. AV =FUT	=DIST
<i>i-epavi-no</i>				
ASP-cook.UV-1MIN				

Intended: ‘I cooked the fish that the children will eat’

- (246) Only the **object** can be extracted from **UV**: (240425)

- a. ✓ O \leftarrow UV:

[<i>sii</i>	(<i>mi</i> =)[RC	<input type="checkbox"/>	<i>ki-ngä</i>	<i>pedevalili=kaa</i>]]= <i>kâ</i>
fish	REL=		IPFV-eat. UV	children=FUT=DIST
<i>i-epavi-no</i>				ASP-cook.UV-1MIN

‘I cooked the fish that the children will eat’

- b. ✗ S \leftarrow UV:

* [<i>pedevalili</i>	(<i>mi</i> =)[RC	<i>sii</i>	<i>ki-ngä</i>	<input type="checkbox"/> - <i>i=laa</i>]]= <i>kâ</i>
children	REL=	fish	IPFV-eat. UV	children=FUT=DIST
<i>gisi</i>				
brother.1MIN				

Intended: ‘The kids who will eat the fish are my brother’s children’

These patterns are summarized in (247). Again, due to the one-to-one correspondence, one can frame it in two logically equivalent ways: (i) only the subject can be extracted from AV, only the object from UV, etc.; (ii) to extract a subject one needs AV and not UV/CV, to extract an object one needs UV and not AV/CV, etc.

- (247) Extract ↓ from →: AV UV

Subject	✓	✗
Object	✗	✓

have an AV form. These verbs and the Ā-extraction patterns they showcase will be the topic of the second part of this chapter.

⁹ The nouns *pedevalili* and *pelivano* are both glossed as ‘children’, but the former is non-relational (‘kids, people of very young age’), and the latter is relational/obligatorily possessed (‘someone’s children/offspring’).

Given the structural description of RCs given above (§4.2.3), we already have an account for the impossibility of extracting an object from an AV clause, without any additional mechanisms. If an object is going to be relativized, this means it must carry the \bar{A} -feature [REL]. But because it has an \bar{A} -feature, this causes v to agree with it. Therefore, a clause where the object undergoes (or tries to undergo) relativization will simply never be able to be AV; that is just an underivable scenario. However, at this point we still cannot explain why the subject of a UV clause cannot be extracted. We turn to this in the next section.

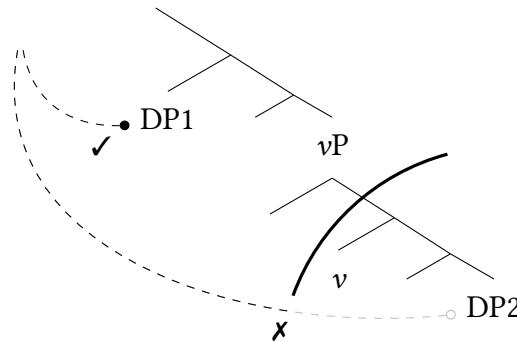
4.3.2 DEVELOPING A THEORY OF THE EXTRACTION RESTRICTION

Restrictions on \bar{A} -extraction of the kind presented above have been discussed in a vast literature, both when it comes to Austronesian languages (Schachter 1973, 1976, Kroeger 1993, Guilfoyle et al. 1992, Nakamura 1996, Aldridge 2004, 2008, 2017, Rackowski 2002, Rackowski & Richards 2005, Erlewine et al. 2017, V. Chen 2017a, 2023, Erlewine 2018, Hsieh 2020, 2025, Keine & Zeijlstra 2025, a.m.o), and languages from other families that show similar patterns (Dinka < Nilotic, van Urk 2015; Kawahíva < Tupi-Guaraní, dos Santos 2023). Whereas in chapter 3 we divided families of theoretical approaches to Austronesian voice into voice-as-cause vs. voice-as-effect, an orthogonal division can be made based on how these theories model the extraction restriction. Chiefly, two large-tent camps can be identified. Some theories make crucial use of the concept of *phasehood*. Others rather model this as an *intervention* effect, i.e., a byproduct of Relativized Minimality.

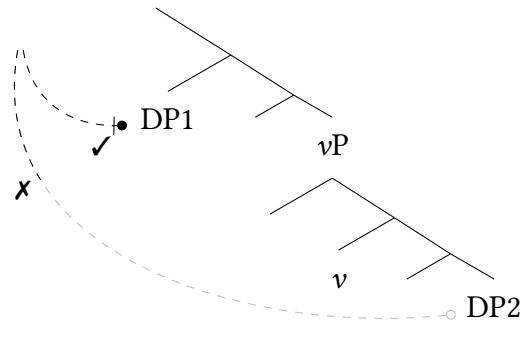
Here are two abstract illustrations of both kinds of approaches. Since I assume that all movement is triggered by a step of agreement, I represent this with a line targetting both DPs coming from some unlabelled node higher in the structure. Remember that I use the typographical convention of notating a successful agree step with a dashed line ending in a solid circle, whereas an open circle signifies unsuccessful agreement.

Let's consider a configuration with a higher DP1 and a lower DP2, and a phase boundary in between them. Here, both kinds of theories make the same predictions: DP1 can be extracted, and DP2 cannot. What is different between the two systems is the *reason* for this restriction. In a **phase-based approach** (248a), DP2 can't be agreed with and thereby extracted *because it's below a phase boundary* (typically, the clause-internal vP phase, as shown here; I abstract away from whether or not a constituent in the phase edge is a possible goal). In an **intervention approach** (248b), on the other hand, DP2 can't be agreed with *because DP1 is in the way*, and a higher probe can't see past it. This is standard Relativized Minimality, as long as DP1 and DP2 have some relevant feature(s) in common. In other words, the problem for extracting DP2 is one of *absolute locality* for a phase-based approach, whereas in an intervention approach the problem is one of *relative locality*.

- (248) a. Phase-based approaches:



- b. Intervention approaches:



For the time being, I remain deliberately vague about the exact feature(s) that are relevant for the intervention effect in (248b). This will be object of in-depth discussion later. I proceed now to argue that a phase-based approach is unfit to modeling the Äiwoo pattern, and that therefore an intervention-based one will be superior.

4.3.2.1 AGAINST A PHASE-BASED ACCOUNT OF ÄIWOON EXTRACTION

In the preceding discussion, we have seen how a phase-based theory of the Austronesian extraction restriction makes predictions as to which DPs should be available for extraction based on their absolute position in the clausal structure. The idea is simple: any DP above a certain phase boundary can be extracted; any DP below the same boundary cannot. Of course, if *multiple* DPs are above the phase boundary, then all of them should be extractable. First, we will see how this prediction can be a feature and not a bug for certain languages (Tagalog in Hsieh 2020, 2025; Bikol in Erlewine & C. Lim 2023). Then, I will argue that this would be indeed be a bug for Äiwoo, and would make incorrect predictions.

Hsieh's (2020) work will constitute a good illustration of this prediction about the ability to extract multiple DPs. I present here a simplified version of it, abstracting away from some details; the reader is referred to the original work for the full discussion. First, Hsieh (2020, 2025) models Tagalog as involving case-agreement between Voice (a head above *v*) and the pivot argument, similarly to what we are doing here for Äiwoo, but crucially involving *early* inversion rather than late. When Voice agrees with the pivot, it moves it to its outermost specifier, rendering it the only DP available for extraction, due to phasehood. In AV, for example, the subject is the only DP above the phase boundary, so the object is too low to be extracted (249).

- (249) Non-pivot extraction:
- $\times O \nmid AV$

$$\begin{array}{c} *Obj \quad [RC \ verb.\textbf{AV} \ [VoiceP \ Subj \left([vP \ t_{Subj} \ \dots \ t_{Obj}] \right)]] \\ \uparrow \\ \times \end{array}$$

Hsieh (2020) then makes an empirical observation: in Tagalog, non-pivot extractions are not all born alike. Extracting objects from AV is indeed ungrammatical (249)-(250a). More interestingly, extracting subjects from UV¹⁰ is in many cases actually not judged by native speakers as ungrammatical, but as only somewhat degraded, and fundamentally acceptable (250b). This has also been confirmed experimentally in Tanaka et al. (2016) and Pizarro-Guevara & Wagers (2018, 2020, 2021)¹¹; see also Pizarro-Guevara & Garcia (2024).

- (250) Asymmetry in Tagalog non-pivot Ä-extraction (Hsieh 2025: 535):

- a. ✗ O{AV: ungrammatical

* *mani=ng* [RC *mag-ha-hanap ang ibon <ng mani>*]
 peanut=LK AV-FUT~search NOM bird GEN peanut
 Intended: ‘Peanut that the bird will look for’

- b. ✓ S{UV: somewhat degraded but attested and acceptable

? *ibo[n]=ng* [RC *ha~hanap-in <ng ibon> ang mani*]
 bird=LK FUT~search-UV GEN bird NOM peanut
 ‘Bird that will look for the peanut’

Hsieh discusses how Tagalog also independently features an understudied phenomenon which he labels Genitive Inversion. In this construction, what normally would've been an agent in UV (which in Tagalog bears genitive case) is instead realized in a high preverbal position, in oblique case (251). Importantly, Genitive Inversion is strictly limited to non-pivot agents: themes in general and AV agents cannot participate in this process. See also Hsieh (2023) for more details about Genitive Inversion.

- (251) Genitive Inversion: [V DP_{GEN}] → [DP_{OBL}=LK V ...]

aki[n]=ng bi~bilh-in <ko> ang damit
 1SG.OBL=LK FUT~buy-UV 1SG.GEN NOM clothes
 ‘I will buy the clothes’ (Hsieh 2025: 537)

Finally, we now have the ingredients to model the possible non-pivot subject extraction (S{UV) in (250b). Simply put, Genitive Inversion can *feed* relativization. Hsieh argues that Tagalog has *two* ways for an argument to get out of the lower phase. Standard pivot movement can bring a DP above the phase boundary, which is why pivots can always be extracted. Additionally, Genitive Inversion constitutes a separate way for (some) DPs to be placed above the phase boundary. Crucially, once Genitive Inversion has taken place, both the agent and the theme can be relativized, as both are above the phase boundary: the theme due to being the pivot, and the agent due to Genitive Inversion.

¹⁰ I change Hsieh’s glosses from PV (“Patient Voice”) to UV, to ease comparison with Äwoo. This is purely a terminological choice, and of no theoretical substance.

¹¹ Interestingly, in a follow-up study Pizarro-Guevara & Wagers (2024) find that there are essentially two populations of Tagalog speakers, those who accept non-pivot subject extraction (S{UV) and those who don’t (although this is a rather coarse simplification of their findings, which are more nuanced and distinguish between relativization and wh-movement).

- (252) Extraction possibilities with genitive inversion: (Hsieh 2025: 540–542, adapted)

- a. ✓ S \notin UV:

ibo[n]=ng [RC *ha~hanap-in* *ang mani*]
bird=LK FUT~search-UV **NOM peanut**

‘Bird that will look for the peanut’

- b. ✓ O \notin UV:

mani=ng [RC *kanya=ng* *ha~hanap-in*]
peanut=LK **3SG.OBL=LK** FUT~search-UV

‘Peanut that he will look for’

Let’s now examine how precisely what makes this analysis good for Tagalog, also makes it unfit for Äiwoo. Importantly, the general clausal syntax of the two languages is different. In Tagalog, only one argument – the pivot – is raised above the clause-internal phase boundary by standard pivot movement. In Äiwoo, however, we saw in chapter 3 that the subject always moves to spec,TP. Crucially this is also true when it’s not the VIA, like in UV, as can be easily seen by its position to the left of TAM material. Under relatively standard assumptions about which functional projections are phases (e.g. Chomsky 2001), this would mean that in a UV clause *both arguments* are above the phase boundary. This would then predict that in UV we should be able to relativize either arguments, contrary to fact. The examples in (253) are repeated from above, adding the phase boundary under discussion and the relevant trace of subject movement¹².

- (253) From UV you can’t extract the S, despite it being above the phase boundary:

- a. ✓ O \notin UV:

(240425)

[*sii* [RC *ki-ŋä* *pelivanou=ngaa* $(\text{t}_S \text{ })_{vP}$]
fish IPFV-eat.UV **children.1MIN=FUT** ‘The fish that my children will eat’

- b. ✗ S \notin UV:

* [*pedevalili* [RC *sii* *ki-ŋä* $\text{[i]}_{=laa}$ $(\text{t}_S \text{ })_{vP}$]
children fish IPFV-eat.UV-3AUG=FUT Intended: ‘The kids who will eat the fish’

This alone is sufficient to rule out a phase-based analysis of the Ā-extraction restriction we observe in Äiwoo. Moreover, in the next sections we will also see that indeed *some* non-VIA (UV) subjects can be relativized (like in Tagalog, but with crucial differences as to when and how). However, importantly there will be nothing different between the structural position of these extractable non-VIA subjects vs. the canonical non-extractable ones shown here. An abstract illustration of the problem is given in (254).

12 Even if we assumed that in Äiwoo TP constituted a phase boundary, in chapter 2 we will see instances where subject extraction is allowed from an even lower position, i.e. the one marked by the subject trace in (253) (spec,vP). This will constitute an even stronger argument against phasehood being the determining factor behind the Ā-extraction restriction in Äiwoo.

- (254) a. In most cases: $\cancel{X} S \vdash UV$

* head noun [RC object verb.uv [TP \square =TAM [_{vP} t_{Subj} ...]]]
 ↑ X ↓

- b. In some exceptional contexts: $\checkmark S \vdash UV$

head noun [RC object verb.uv [TP \square =TAM [_{vP} t_{Subj} ...]]]
 ↑ ✓ ↓

The precise nature and derivation of the constructions that allow non-VIA extraction will be discussed below. However, their sheer existence shows that one can still detect an asymmetry in extractability between certain arguments, despite them being in the same identical structural positions. Therefore, phasehood and absolute locality cannot provide a valid explanation of the Äiwoo extraction restriction.

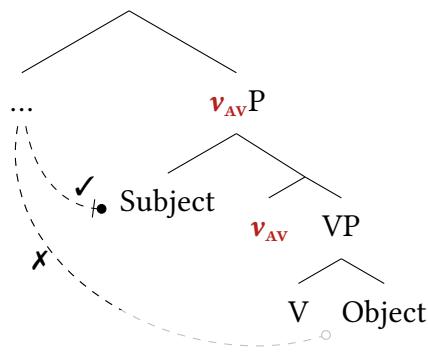
4.3.2.2 AN (\bar{A})-INTERVENTION THEORY OF ÄIWOO EXTRACTION

In the last section we have seen how in cases where an argument can't be Ä-extracted in Äiwoo, the problem cannot be (only) its *absolute* position. We can now consider the logical alternative: certain nominals can't be extracted due to their *relative* position with respect to other elements in the relevant domain. This is another widespread approach to modelling extraction restrictions of various sorts, both the voice-conditioned one commonly found in Austronesian languages, and also what is often labelled “syntactic ergativity”, that is, the presence of Ä-extraction processes that cannot target ergative arguments (transitive subjects), but can target absolutive ones (intransitive subjects and transitive objects); see Deal (2016b) and references therein for an overview.

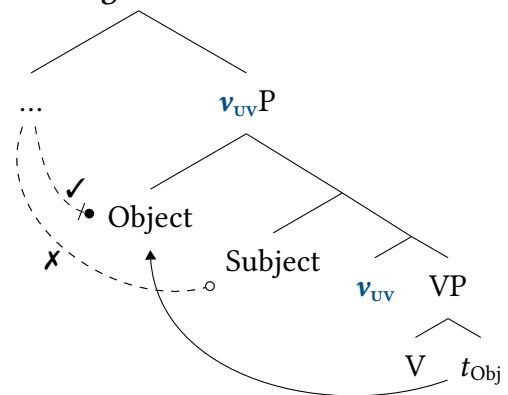
In theories of this kind, extraction of a nominal is blocked by the presence of an *intervener* higher up in the structure – typically, another nominal. An influential analysis of this kind of the Austronesian extraction restriction is that of Aldridge (2004, 2008). Here is a rather simplified illustration. This is a voice-as-cause approach featuring early syntactic inversion; however, the intervention idea is independent from both of these aspects of the analysis. In AV (255a), nothing of note happens. Both arguments remain in the canonical position they're base-generated in. In UV (255b), on the contrary, the object is raised above the subject. This is the crucial step that makes extraction of the subject impossible in UV. In both cases, the higher DP (the subject in AV, the object in UV) *intervenes* for extracting the lower DP (the object in AV, the subject in UV).

- (255) The higher DP intervenes for extracting the lower one:

a. Actor Voice:

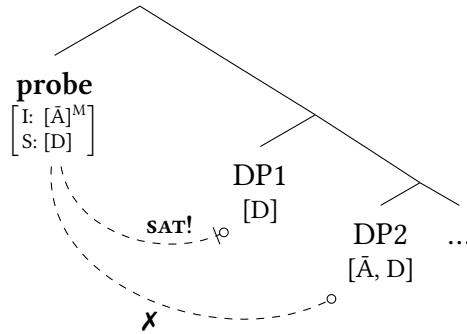


b. Undergoer Voice:



Of course, the existence of syntactic inversion doesn't alone explain why a lower DP shouldn't be \bar{A} -extracted. \bar{A} -movement is canonically non-local, and thus able to skip intervening DPs (think of any non-subject questions in English, for example; see the discussion of the locality of A/ \bar{A} -movement in chapter 3, §3.7). Therefore, \bar{A} -movement of the lower DP is only blocked once we make the additional assumption that in a language showcasing an extraction restriction of this kind, \bar{A} -movement is somehow subject to stricter locality constraints than we might be used to. Particularly, we need to assume that *\bar{A} -movement can only target to the highest DP* (Branan & Erlewine 2024). This is, in a way, the logical opposite of the non-local A-movement discussed in chapter 3: it is \bar{A} -movement, but with a stricter locality profile than usual.

Perhaps because patterns of “surprisingly local” \bar{A} -movement are so widespread cross-linguistically, this intuition has been formalized in a lot of recent literature, often under the headings of syntactic ergativity and/or mixed A/ \bar{A} -movement (see a.o. Legate 2014, van Urk 2015, Baier 2018, Erlewine 2018, Ostrove 2018, Bossi & Diercks 2019, D’Alessandro 2020, Colley & Privoznov 2020, Scott 2021, Coon et al. 2021, Jarvis 2023, Jenks 2023, Branan & Erlewine 2024, Lohninger 2025; see also Keenan & Comrie 1977 for an influential typological observation that can be framed in the same terms). Within the framework I assume this dissertation, this pattern can easily be implemented, as the probe is separately specified for what features it copies and what features stop it from searching further. A probe that has \bar{A} -features in its interaction condition, but φ -features (or [D], e.g.) in its satisfaction condition, will derive precisely the desired kind of strictly local \bar{A} -movement. Consider the tree in (256), illustrating the mechanism just described. The probe is seeking to copy back \bar{A} -features, and move the goal that carries them. However, upon meeting DP1, the probe has its satisfaction condition met ([D]), and therefore the search immediately halts. The \bar{A} -carrying DP2 is never found by the probe. This is precisely what Branan & Erlewine (2024) label “ \bar{A} -probing for the closest DP”. See also Deal (2024b) for a more in-depth discussion of various types of movements with mixed A/ \bar{A} -locality profiles, and how they can be modelled in this framework.

(256) Local-only \bar{A} -movement:

Having discussed how we can think about patterns of \bar{A} -movement with the locality profile canonical of A-movement, we now ought to ask whether this is the correct interpretation of the extraction restriction in Äiwoo. Indeed, in all the cases of \bar{A} -extraction we have seen so far, the only extractable nominal was in fact the highest one in the clause (the VIA in spec,CP). This is summarized in (257), where superscript ✓/✗ indicates whether an argument can/cannot be \bar{A} -extracted.

(257) Partial overview of clause patterns and extractability (canonical clauses):

Voice	Word Order
AV	S✓ V =TAM O✗
UV	O✓ V S✗ =TAM

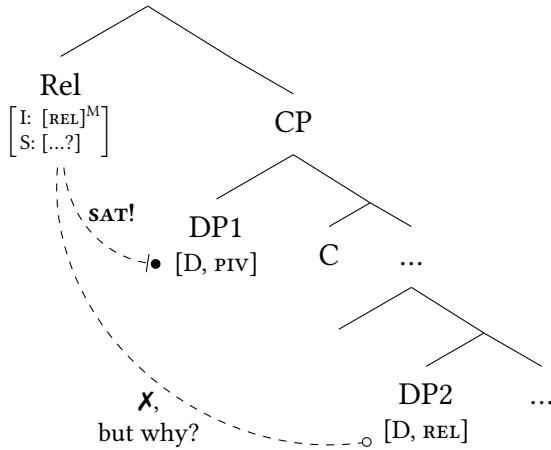
On the one hand, we briefly saw earlier how our model already derives the impossibility of object extraction from AV (the first row in (257)). The reasoning is shown in (258). If the object is to be relativized, this means it carries an \bar{A} -feature ([REL]). In turn, this will cause v to agree with the object, thus giving us UV and not AV. In other words, whenever the object is going to be relativized, AV just cannot arise in the first place.

(258) If the object is going to be relativized, AV cannot arise:



However, we still need an explanation of why subjects cannot be extracted from UV clauses. The fact alone that throughout (257), only the highest argument can be extracted would support an Aldridge-style highest-DP-only approach. However, given the analysis of the clausal structure of Äiwoo developed in chapter 3, we have a confounding factor. Although we know that this intervention effect is caused by Relativized Minimality, we don't know exactly relativized to *what*. Here is why. For concreteness, consider the following general illustration of the problem in (259).

- (259) Relativization is impossible across the pivot DP:



Remember that we modelled pivothood as an \bar{A} -feature [PIV], carried by an argument. Specifically, in a UV clause, the object is a $DP_{[PIV]}$ that ends up in spec, CP . In general then, we know that the highest nominal in every UV clause will also always carry an \bar{A} -feature (DP_1 here, the pivot in spec, CP). By assumption, the constituent we are trying to relativize also carries an \bar{A} -feature, [REL], and the relativizing probe aims to move something carrying [REL]. Finally, we know from the empirical facts that DP_2 (the lower one) cannot be relativized.

This teaches us that something about DP_1 makes it an intervener, that is, DP_1 carries *some* feature(s) that satisfy the relativization probe, so that this cannot reach the subject (DP_2) and move it. The problem, of course, is that we don't know *what* the offending feature(s) might be. Evidently, we have at least two candidate features. On one hand, this could be an issue of DP-intervention: the probe has [SAT: D], and will be stopped by any DP (as in the model discussed above). On the other hand, it could also be that this is an issue of \bar{A} -intervention: although DP_1 was raised to spec, CP by (non-local) A-movement (chapter 3, §3.7), it always carries an \bar{A} -feature after all ([PIV]), and we could hypothesize that this is what is stopping the probe. That is, the probe is specified as [SAT: \bar{A}], where [\bar{A}] subsumes both [PIV] and [REL]; see e.g. Abels 2012, Aravind 2017, 2018, Callegari 2018).

If this problem is one of DP-intervention (as in Aldridge's analysis), we would be witnessing yet another case of \bar{A} -movement with the locality profile of A-movement – that is, only the highest DP can move. If, on the other hand, this is a problem of \bar{A} -intervention, we would also have a different but familiar problem, as \bar{A} -features are known to intervene for each other. Consider for example the canonical effect of *wh*-superiority (260b), where the higher *wh*-phrase makes it impossible to move the lower one.

- (260) a. \downarrow *Who do you wonder [CP \square bought **what**]?*

- b. * \downarrow *What do you wonder [CP **who** bought \square]?*

The same intervention dynamic obtains between different types of Ā-movement, such as *wh*-movement, focus movement, relativization, etc. (Abels 2012, Aravind 2017, 2018, Callegari 2018). For example, in Italian, embedded foci are possible (261a). However, an embedded focus will block *wh*-movement across it (261b). See Abels (2012) for arguments why this should be regarded as an intervention effect, as opposed to a function of how the left periphery of Italian CPs is organized (*contra* Rizzi 1997, 2004a,b)¹³.

- (261) a. **Embedded foci are possible:**

credo [CP *che* [IL PREMIO NOBEL]_{FOC} *abbiano* *dato* t_{FOC}
 believe.1SG that the prize Nobel have.SBJV.3PL given
a Rita
 to Rita

‘I think that they gave Rita THE NOBEL PRIZE’

- b. **Wh-movement cannot cross an embedded focus:**

* [a *chi*_{wh} *credi* [CP *che* [IL PREMIO NOBEL]_{FOC} *abbiano* *dato* t_{FOC} t_{wh}?
 to who believe.2SG that the prize Nobel have.SBJV.3PL given

Intended: ‘Who do you think they gave THE NOBEL PRIZE to?’

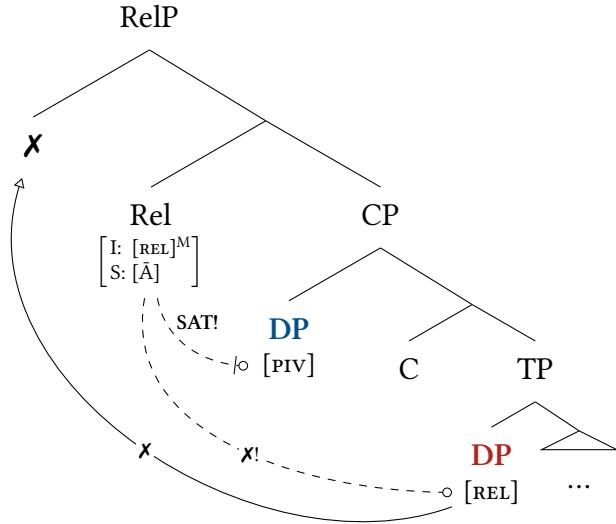
I argue that this is precisely what goes wrong with non-VIA subject extraction (*S-[UV]) in Āiwoo. The tree (262) illustrates this intervention effect. The DP_[PIV] object in spec,CP satisfies the relativizing probe before this can ever reach the subject in spec,TP. Therefore, the subject cannot be extracted.

13 Note, however, that not all Ā-features intervene for each other. For example, *wh*-movement in Italian can take place across a topicalized constituent (i) (the reported judgment is from the cited source, and I share it). See Abels (2012), Aravind (2017, 2018), and Callegari (2018) for more discussion of which Ā-features intervene for which, and what this teaches us about their feature hierarchy.

- (i) ? *non so* [a *chi*_{wh} *pensi* [CP *che*, [*queste cose*]_{TOP}, *le dovremmo dire* t_{TOP} t_{wh}] say

‘I don’t know to whom you think that, these things, we should say’ (Rizzi 2004a: 232)

- (262) [PIV] on the object \bar{A} -intervenes for extracting the subject:



Under this approach, it is the [PIV] feature on the higher argument that is blocking extraction of a lower one, and not just the higher argument's mere presence or category. The crucial evidence will come from cases of *exceptional non-VIA extraction*. In special circumstances, Äiwoo in fact does allow to extract a lower argument across a higher one. Specifically, this applies to subjects of certain UV clauses. An example is provided in (263). Here, the agent *singedâ* 'girl' is clearly being relativized across another argument, specifically the object *mekipä* 'thief' in sentence-initial position. (See fn. 4 about the nature of the gap in the red box.)

- (263) Non-pivot extraction is sometimes possible:

(250717)

<i>singedâ</i>	[RC <i>mekipä</i> <i>i-te-kä</i> -Ø ⁿ] =jo]
girl	thief ASP-see.UV-DIR3-3MIN=TAM
'The girl who has seen the thief'	

The properties and derivation of constructions like these will be the focus of the next sections. For the time being, we can limit ourselves to take these as evidence that *not all nominals* intervene for \bar{A} -extraction in Äiwoo. In the canonical cases discussed above, a VIA object blocks extraction of everything else, but here (263) we see how that is not always the case. Therefore, we can exclude DP-intervention as the cause for the extraction restriction in Äiwoo, and this alone provides support for our \bar{A} -bar intervention approach.

4.4 UV-ONLY VERBS: A DESCRIPTION

This section presents an empirical description of what I call “UV-only verbs”, which simply only exist in UV and lack an AV form altogether¹⁴. That some verbs of this kind exist in Äiwoo has been briefly noted in passing in the descriptive literature (Næss 2015b: 279, Næss 2024: 9). However, the existence of these verbs has important implications for any syntactic analysis of Äiwoo, and of Austronesian languages in general. This is the first piece of work examining these implications. The present section is largely descriptive, and a reader who is more interested in the theoretical implications of the existence of these verbs might want to just skim it, and proceed to the §4.5.

4.4.1 AN IDIOSYNCRATIC LEXICAL CLASS

First, let us establish what verbs we are talking about. At the time of writing, we have no exhaustive list of UV-only verbs in Äiwoo. Or rather: we have a list of *the ones we know*, but no guarantee that there are no others in the lexicon. Several of these have surfaced during the elicitation process, and I have no reason not to expect that others might do so in the future.

The known UV-only verbs are the following: *kää* ‘know’ (264a), *te* ‘see’ (264b), *lâwâle* ‘help’ (264c), *nyida* ‘love’ (264d), *wagu* ‘tell’ (264e), *luwa* ‘take’ (264f), *tuwo* ‘hold, grasp’, *siwo* ‘hold, keep’. Moreover, Äiwoo has two applicatives *-ive* (general; (264i)) and *-i* (comitative) that attach to intransitive stems. Any verb built with these applicatives is a UV-only verb as well (264i,i). All the examples below contain negation and/or the future marker =Caa, to show that the subject is in the typical UV position (between the verb and the TAM particles).

(264) Examples of UV-only verbs

(250717)

- a. *Jon ba i-kää Mary=gu*
John NEG ASP-know.UV Mary=NEG
'Mary doesn't know John'
- b. *Jon ba ki-te-kä Mary=gu=naa ngâ nuumä*
John NEG IPFV-see.UV-DIR3 Mary=NEG=FUT in village
'Mary will not see John in town'
- c. *Jon ba ki-lâwâle-kä Mary=gu=naa ngâ pole*
John NEG IPFV-help.UV-DIR3 Mary=NEG=FUT with work
'Mary will not help John with the work'
- d. *Jon ba ki-nyida Mary=gu*
John NEG IPFV-love.UV Mary=NEG
'Mary doesn't love John'

¹⁴ This is different from how so-called deponent verbs behave e.g. in Latin (see e.g. Weisser 2014, a.m.o.), since those have passive morphology but otherwise active syntax and interpretation. UV-only verbs have not only UV morphology but also UV syntax, as will be shown below.

- e. *lopwâ ba ki-wagu-mä Mary=gu=naa bulape*
story NEG ASP-tell.UV-DIR1 Mary=NEG=FUT tomorrow
'Mary will not tell me a/the story tomorrow'
- f. *nyibä nogo Mary ba i-luwa-kä Jon=gu* (230706)
basket POSS Mary NEG ASP-take.UV-DIR3 Jon=NEG
'John didn't take Mary's basket'
- g. *mekipä ba ku-tuwo polis=gu=naa ngä skul*
thief NEG IPFV-grab.UV police=NEG=FUT in school
'The police will not catch/arrest the thief at school'
- h. *buk ba ki-siwo Mary=gu ngä nyimä*
book NEG IPFV-hold.UV Mary=NEG in hand.3MIN
'Mary is holding a/the book in her hand'
- i. *Jon ki-sââ-ive Mary=kaa go ku-pole-mana*
John IPFV-proud-APPL Mary=NEG because IPFV-work-very
'Mary will be proud of John because he works hard'
- j. *nubââ ba ki-eâ-i mekitei=gu=naa ngä bolevi*
shark NEG ASP-paddle-COM fisherman=NEG=FUT in shore
'The fisherman will not paddle (with) the shark to the shore'

The following verbs might also be UV-only, although their status is less clear: *weevä* 'visit', *komaa* 'invite', and possibly *potaa* 'search, look for'. The reason for the uncertainty is that these show a behavior that overlaps both with UV-only verbs and with voice-syncretic verbs; see §4.4.3 for the difference between these.

At the present state of research, all the known UV-only verbs don't seem to obviously belong to a coherent natural class at any syntactic or semantic level. They are better described as constituting an idiosyncratic or arbitrary lexical class, and I will treat them as such. Semantically, some of them are verbs that might be characterized as "psych-verbs" (Bellotti & Rizzi 1988) in the sense that their subject is an experiencer ('know', 'see', 'love'). However, this does not extend to verbs like 'grab/take', 'hold', and 'help', which describe physical actions. On the syntactic side, at least some of them ('know', 'see', 'love', 'help', possibly 'search') are verbs that cross-linguistically often show peculiar case patterns, for example taking dative-marked subjects or objects. For example, Icelandic *hjálpa* 'help' takes a dative direct object instead of an accusative one (Thráinsson 1979, Sigurðsson 1991, 1992, a.m.o.). Once again, however, this property does not extend to all UV-only verbs in Äiwoo. Hopefully, future work will be able to shed more light on what verbs are UV-only, and on whether they constitute any natural class.

4.4.2 PROVING THE NON-EXISTENCE OF AV FORMS

I claim that AV forms of these verbs do not exist. Indeed, no AV form of these verbs is known, but of course, absence of evidence is not evidence of absence. My claim, therefore, must be argued for somewhat indirectly. The main reason is the general irregularity

of Äiwoo voice morphology. In other Austronesian languages (e.g. Tagalog, Formosan languages, etc.), voice morphology is segmentable and regular. If we want to know whether the AV form of a given stem *exists*, we simply attach an AV marker to that stem. In Äiwoo, however, we don't have this luxury. As described in chapter 3, §3.3, verbs mostly just have two stems, one for AV and one for UV, with largely irregular/idiosyncratic alternations. In short, there is simply no reliable way to derive either form from the other. Therefore, something we cannot do is "add AV morphology" to verbs like *kää* 'know' or *te* 'see', because there just is no such morphology. As a result, we must pursue other ways to show that these verbs really only exist in UV, and never in AV.

Since we cannot use stem morphology to reliably observe voice, we must rely on the three other reliable indicators described in §3.3: word order, voice concord on modifiers, and presence of prefixal φ-agreement. For our UV-only verbs, all three of these phenomena point in the same direction: no AV version exists or is possible. First, consider **word order**. As we should expect, only UV-style OVS is ever grammatical (265a), and never AV-style SVO (265b)¹⁵. Because of the irregularity of Äiwoo voice morphology, of course we cannot *a priori* assume that the AV form of *te* 'see.UV' would also be /te/. However, seen as there is no reliable way to derive a putative AV form of this verb (which I claim does not exist), throughout the examples below I use small caps (e.g. TE 'see', KÄÄ 'know') to mean "there is no stem in the language that will make this sentence grammatical".

(265) Word order: always like UV, never like AV

(250728)

- a. *devalili ki-te-usi-kä mikilivaavee=kaa*
child IPFV-**see.UV-again.UV**-DIR3 teachers=FUT
'The teachers will see a/the child again'
- b. * *mikilivaavee ki-li-**TE-ute**-kä=naa devalili*
teachers IPFV-3AUG-**SEE.AV-again.AV**-DIR3=FUT child
Intended: 'The teachers will see a/the child again'
Speaker's comment: 'kiliteutekä(naa) is not a word'

Consider now voice concord and prefixal φ-agreement, both described in §3.3. As for the former: when adverbial modifiers are attached to a transitive verb, they must take a suffix *-i nyii* if the base verb is UV, and they cannot take this suffix if the base verb is AV. As for the latter: AV verbs consistently take a subject-agreement prefix, whereas UV verbs never do so. In fact, the latter take a subject-indexing *suffix*, although I show in chapter 5 that this is not syntactic agreement, but just a phonologically reduced subject pronoun in spec,TP. Two baselines examples where both of these phenomena can be observed are given in (266).

(266) a. *nuwopa eāngā ki-lāā-päko-i-mana-i-no=ngaa*

(240425)

- house that IPFV-**build.UV**-good-UV-very-UV-1MIN=FUT
'I will build that house/those houses very well'

¹⁵ The only caveat will be non-canonical UV sentences with SVO order; these are treated in chapter 6, and are independent from the issue of UV-only verbs vs. ordinary voice-alternating verbs.

- b. *i-ki-lâwââ-päko-mana=kaa nuwopa*
 1MIN-IPFV-build.AV-good-very=FUT house
 'I will build a house/houses very well'

As can be seen from the examples in (265), UV-only verbs only ever show the UV pattern of prefixal agreement and voice concord (265a), and never the AV one (265b), as expected¹⁶. As a side note, in elicitation contexts native speakers will often volunteer the AV form of a verb if I have mistakenly constructed it wrong. It is instructive, then, that the same speakers reject any attempt at putting AV-style morphology on a UV-only verb stem, simply judging the word ill-formed; see the comment in (265b).

To sum up, we have seen that UV-only verbs have only one stem, and show no sign whatsoever of ever existing in AV. All possible morphosyntactic indicators (word order, voice concord, prefixal φ -agreement) point in the same direction: these verbs just do not have an AV form.

4.4.3 UV-ONLY VERBS ARE NOT JUST SYNCRETIC FOR VOICE

We must also exclude the possibility that these verbs might just be morphologically syncretic, with both the AV and UV stem being homophonous. In fact, such voice-syncretic verbs do exist in Äiwoo. However, they are different from UV-only verbs in the simple fact that their AV form *exists*, despite their stem being identical to the UV one. For example, *nu* 'drink' has the same stem in both voices, but the three indicators considered above show that an AV form clearly exists (267a): it can have SVO order, adverbial modifiers can take no voice concord suffix (*mana* 'very'), and it can take φ -prefixes (*lu-* 3AUG).

- (267) 'Drink' has both voices, but with the same stem *nu*:

(231012)

- a. AV: SVO order, no voice concord, φ -prefixes
pedevalili ku-lu-nu-mana=kaa nuwoi
 children IPFV-3AUG-drink.AV-very=FUT water
 'The children will drink a lot of water'
- b. UV: OVS order, voice concord, no φ -prefixes
nuwoi ku-nu-mana-i pedevalili=kaa
 water IPFV-drink.UV-very-UV children=FUT
 'The children will drink a lot of (the) water'

Furthermore, aside from these morphosyntactic indicators, we can tell that *nu* 'drink' has both voices by syntactically imposing either AV or UV. Conforming to the \bar{A} -extraction restriction described in the first part of this chapter (§4.3), if we extract the subject only the AV form is possible (268), and if we extract the object only the UV form is possible (269). We will see in the next section that on the contrary, UV-only verbs stubbornly remain UV even when the subject is extracted, thus exceptionally allowing non-VIA extraction.

16 The UV form *usi* of the adverbial modifier meaning 'again' is presumably segmentable as *ute-i* 'again-uv', where *ute* is the AV/default form, with vowel hiatus resolution and regular t > s / __i (see chapter 2, §2.4.3).

In other words, an equivalent of (268b) with a UV-only verb (e.g. ‘see’ instead of ‘drink’) will be perfectly grammatical, and an equivalent of (268a) will be ungrammatical.

- (268) Subject extraction: ✓ S-[AV], ✗ S-[UV] (23.10.26)

- a. [***pedevalili*** (*mi=*)[RC] ***ku-lu-nu-mana*** ***nuwoi***] = *kâ*
children REL= IPFV-**3AUG-drink.AV**-very water=DIST
ki-li-nudâ-mana
IPFV-**3AUG-thirsty**-very
‘The children who were drinking a lot of water were very thirsty’
- b. * [***pedevalili*** (*mi=*)[RC ***nuwoi*** ***ku-nu-mana-i****-i*]] = *lâ*
children REL= water IPFV-**drink.UV**-very-**UV**-**3AUG=DIST**
Intended: ‘The children who were drinking a lot of water’

- (269) Object extraction: ✓ O-[UV], ✗ O-[AV] (23.10.26)

- a. [***nuwoi*** (*mi=*)[RC] ***ku-nu-mana-i*** ***pedevalili***] = *kâ*
water REL= IPFV-**drink.UV**-very-**UV** child=DIST
ba pâko=gu
NEG good=NEG
‘The water that the children were drinking a lot (of) was not good’
- b. * [***nuwoi*** (*mi=*)[RC ***pedevalili*** ***ku-lu-nu-mana***]] = *kâ*
water REL= children IPFV-**3AUG-drink.AV**-very =DIST
Intended: ‘The water that the children were drinking a lot (of)’

As briefly mentioned in the introduction of this section, a few verbs show a sort of mixed behavior between being voice-syncretic and UV-only. Three known ones are *potaa* ‘search, look for’, *weevä* ‘visit’, and *komaa* ‘invite’. To avoid an unnecessary digression for the sake of exposition, I treat these “oscillating” verbs in this chapter’s appendix 4.C.

4.4.4 UV-ONLY VERBS IN THE AUSTRONESIAN CONTEXT

The specific kind of strictly UV-only verbs that I describe here for Äiwoo has not been reported to exist in any other Austronesian languages, to my knowledge, and as such it constitutes a novel finding. However, somewhat similar phenomena have been reported for a few languages, although they all differ from the Äiwoo case in certain respects.

Tagalog has some verbs that have been reported to show a preference for UV (Latrouite 2011 calls these “Undergoer-oriented verbs”). Latrouite (2011: 196–197) reports that Tagalog speakers find the AV forms of these verbs “strongly dispreferred” (270). However, unlike for Äiwoo UV-only verbs, once one extracts the subjects, AV is indeed the only possible option (271).

(270) *Sira* ‘broken’ is dispreferred in AV (Latrouite 2011: 197; glosses adapted):

- a. ?? *s(um)ira ang bata ng mesa*
 ⟨AV.PFV⟩broken NOM child GEN table
 Intended: ‘The child destroyed/broke a table’
- b. *s(in)ira-Ø ng bata ang mesa*
 ⟨PFV⟩broken-UV GEN child NOM table
 ‘The child destroyed the table’

(271) Subject extraction imposes AV:

- sino ang {✓s(um)ira / *s(in)ira-Ø} sa mesa?*
 who NOM ⟨AV.PFV⟩broken ⟨PFV⟩broken-UV DOM table
 ‘Who destroyed/broke the table?’ (Henrison Hsieh, p.c.)

Moreover, it is not entirely clear how deep this “AV-dispreference” actually is in the first place. For example, Henrison Hsieh (p.c.) reports to me that using the abilitative/non-volitional AV form improves sentences like (270a), cf. (272a). The same is true for *kita* ‘see’, another Tagalog verb that was reported by Latrouite (2011) as belonging to this class of verbs. For two Tagalog speakers I was able to consult, sentences with the abilitative AV form of this verb are unremarkably acceptable (272b)¹⁷.

(272) The abilitative/non-volitional AV form of these verbs is acceptable:

- a. *naka-sira ang bata ng mesa*
 AV.NVOL.PFV-broken NOM child GEN table
 ‘The child {was able to/happened to} break a table’ (Henrison Hsieh, p.c.)
- b. *naka-kita ako ng pating*
 AV.NVOL.PFV-see 1SG.NOM GEN shark
 ‘I saw a shark’ (Henrison Hsieh, Jed-Sam Pizarro Guevara, p.c.)

Because of these aspects, these Tagalog verbs are not quite a close parallel to the Äiwoo UV-only class. The same can be said for other syntactic contexts in Tagalog that allow for non-pivot A-extraction, such as gerunds, recent perfective constructions, and exclamative adjective forms (Ceña 1979, McGinn 1988, Nakamura 1996, Schachter 1996, Hsieh 2020, 2025, a.o.). All of these are reduced forms in some sense and have been analyzed as “voiceless” (concretely, for Hsieh 2025 they lack certain inflectional layers). This is not true for Äiwoo UV-only verbs, which are not voiceless in any sense.

Two other relevant cases discussed in the literature are those of extraction in certain comparative (273) and comitative (274) constructions in Tagalog (Ceña 1979, Nakamura 1996; the glosses throughout these examples are adapted from Hsieh 2020).

17 The verb *kita* ‘see’ obligatorily requires the nonvolitional/abilitative forms, also in non-AV contexts (i).

(i) *na-kita=ko ang pating*
 UV.NVOL.PFV-see=1SG.GEN NOM shark
 ‘I saw the shark’ (Henrison Hsieh, p.c.)

(273) Comparative of equality:

- a. Baseline ([Ceña 1979](#): 123, [Hsieh 2020](#): 279):
kasing-tangkad ng doktor ang anak
 as.ADJ.as-tall GEN doctor NOM child
 ‘The child is as tall as the doctor’
- b. Extraction of the non-pivot object of comparison: ([Hsieh 2020](#): 279)
na-dismaya ang doktor na [kasing-tangkad ang bata]
 PFV-disappoint NOM doctor LK as.ADJ.as-tall NOM child
 ‘The doctor whom the child is as tall as was disappointed’

(274) Comitative construction:

- a. Baseline ([Ceña 1979](#): 122):
ka-sama ng doktor ang anak
 COM-with GEN doctor NOM child
 ‘The child is with the doctor’
- b. Extraction of the non-pivot comitative argument ([Ceña 1979](#): 122):
na-dismaya ang doktor na [ka-sama ang anak]
 PFV-disappoint NOM doctor LK COM-with NOM child
 ‘The doctor who is with the child was disappointed’

Nakamura’s ([1996](#)) economy-based account of the general Tagalog extraction restriction is based on minimizing the length of Ā-dependencies: simplifying coarsely, Ā-movement of a constituent is forbidden when there exists an alternative derivation in which the same movement chain would be shorter. For example, the reason why objects cannot be Ā-extracted from AV clauses is that there is an alternative derivation (namely, that resulting in a UV clause) where the Ā-movement chain would be shorter than in the AV case. For Nakamura, then, these cases of non-pivot extraction (273)–(274) are conceptually similar to what I argue for UV-only verbs in Āiwoo (though the implementation and technical apparatus is, of course, rather different). For comparative and comitative constructions there just is no such alternative/more economical derivation in the language, and therefore, Ā-extraction of a non-pivot is exceptionally allowed. The logic is the same as we see in Āiwoo: non-VIA extraction is allowed precisely in those contexts where the voice alternation is unavailable.

4.5 EXCEPTIONAL NON-VIA EXTRACTION

4.5.1 UV-ONLY VERBS ALLOW SUBJECT EXTRACTION

First, let us establish the empirical pattern. We can compare an ordinary transitive verb, *tu/tou* ‘bring.UV/AV’, to a UV-only verb, *te* ‘see’. In all four sentences below (275)–(276) I include an adverbial modifier, *ngege* ‘immediately, straight away’, so that we can easily verify that the verb inside the RCs is in UV due to the voice concord suffix *-nyi*. For

ordinary transitive verbs, as we know (§4.3), from UV only the object can be extracted (275a), and not the subject (275b). To do this, we need AV instead (275c).

- (275) An ordinary transitive verb: ‘bring’ (250728)

- a. ✓ O $\not\vdash$ UV:

<i>kuli</i>	(<i>mi</i> =)[RC	<input type="checkbox"/>	<i>ku-tu-ngege-nyi-kä</i>	<i>pesingedâ=kaa</i>
<i>dog</i>	REL=		IPFV- bring.UV -immediate- UV -DIR3	girls=FUT
'A/The dog that the girls will bring straight away'				

- b. ✗ S $\not\vdash$ UV:

* <i>pesingedâ</i>	(<i>mi</i> =)[RC	<i>kuli</i>	<i>ku-tu-ngege-nyi-kä-i=laa</i>	
<i>girls</i>	REL=	<i>dog</i>	IPFV- bring.UV -immediate- UV -DIR3-3AUG=FUT	
Intended: '(The) girls who will bring the dog straight away'				

- c. ✓ S $\not\vdash$ AV:

<i>pesingedâ</i>	(<i>mi</i> =)[RC	<input type="checkbox"/>	<i>ku-lu-tou-ngege-kä=naa</i>	<i>kuli</i>
<i>girls</i>	REL=		IPFV-3AUG- bring.AV -immediate-DIR3=FUT	dog
'(The) girls who will bring the dog straight away'				

If we switch the verb from ‘bring’ to the UV-only verb ‘see’, however, we see a clear difference. Unsurprisingly, extracting the object is still perfectly fine (276a). Crucially, however, *extracting the subject is also grammatical* (276b), sharply contrasting with what is the case for ordinary verbs (275b). In this case, we can also clearly see that we are extracting an argument across a higher one, since the RC-internal direct object *kuli* ‘dog’ is – unexceptionally – sitting in spec,CP, where it ordinarily belongs. Because ‘see’ is a UV-only verb, a hypothetical AV form is impossible, even under subject extraction (276c).

- (276) A UV-only verb: ‘see’ (250728)

- a. ✓ O $\not\vdash$ UV:

<i>kuli</i>	(<i>mi</i> =)[RC	<input type="checkbox"/>	<i>ki-te-ngege-nyi-kä</i>	<i>pesingedâ=kaa</i>
<i>dog</i>	REL=		IPFV- see.UV -immediate- UV -DIR3	girls=FUT
'A/The dog that the girls will see straight away'				

- b. ✓ S $\not\vdash$ UV: possible!

* <i>pesingedâ</i>	(<i>mi</i> =)[RC	<i>kuli</i>	<i>ki-te-ngege-nyi-kä-i=laa</i>	
<i>girls</i>	REL=	<i>dog</i>	IPFV- see.UV -immediate- UV -DIR3-3AUG=FUT	
'(The) girls who will see the dog straight away'				

- c. ✗ S $\not\vdash$ AV: impossible, because the AV form of ‘see’ does not exist

* <i>pesingedâ</i>	(<i>mi</i> =)[RC	<input type="checkbox"/>	<i>ki-li-TE-ngege-kä=naa</i>	<i>kuli</i>
<i>girls</i>	REL=		IPFV-3AUG- SEE.AV -immediate-DIR3=FUT	dog
Intended: '(The) girls who will see the dog straight away'				

This behavior is not unique to *te* ‘see’, but extends to every UV-only verb. In (277)–(280) I include some examples of subject extraction from a few other UV-only verbs; see §4.4.4 above for a complete list of the UV-only verbs we know of. In each pair of examples,

the a. sentence shows the grammatical subject relativization from a UV clause, and the b. sentence shows the ungrammatical AV RC (which can be identified as AV from either its word order, and/or prefixal φ-agreement, and/or lacking voice concord on modifiers). For the ungrammatical AV ones, I only report the DP containing the RC, for conciseness.

- (277) *Kää* ‘know’: (250728)

- a. ✓ S \vdash UV:

[*isä devalili* [RC *ile lopwâ enge i-kää-päko-i* \square *-i*]]
women PROX story this ASP-**know.UV**-good-**UV**-3AUG
i-te-kâ-no=dä *ijii*
 ASP-see.UV-DIR3-1MIN=some 3AUG

‘I’ve met some women who know this story well’

- b. ✗ S \vdash AV:

* [*isä devalili* [RC \square *i-li-KÄÄ-päko* *ile lopwâ enge*]]
women ASP-3AUG-**KNOW.AV**-good PROX story this

Intended: ‘Women who know this story well’

- (278) *Wagu* ‘tell’: (250728)

- a. ✓ S \vdash UV:

[*sime* [RC *lopwâ eângâ i-wagu-mä* \square *-i=lâ* *li-pe=Lende*
person story that ASP-**tell.UV**-DIR1-3AUG=DIST 3AUG-COLL=S.Cruz
 ‘The people who told me that story were from Santa Cruz’

- b. ✗ S \vdash AV:

* [*sime* [RC \square *i-lu-WAGU-mä* *lopwâ eângâ*] $=kâ$
person ASP-3AUG-**TELL.AV**-DIR1 story that=DIST
 Intended: ‘(The) people who told me that story’

- (279) *Nyida* ‘love’: (250728)

- a. ✓ S \vdash UV:

[*gilaki mi=[RC *isä-* \emptyset^n *ba ki-nyida-mana-i* \square *-* \emptyset^n *=gu*] $=nâ$*
boy REL= mother-3MIN NEG IPFV-**love.UV**-very=UV-3MIN=NEG=DIST
mola nogo- \emptyset^n *ea*
 manner POSS-3MIN bad

‘A boy who doesn’t love his mother very much has bad manners’ (lit. ‘A boy who doesn’t love his mother very much, his manners are bad’)

- b. ✗ S \vdash AV:

* [*gilaki mi=[RC \square *ba ki-NYIDA-mana=gu* *isä-* \emptyset^n] $=nâ$*
boy REL= NEG IPFV-**LOVE.AV**-very=NEG mother-3MIN=DIST
 Intended: ‘A boy who doesn’t love his mother very much’

- (280) *Mâea-ive* ‘laugh-APPL’ = ‘laugh at’: (25.07.28)

a. ✓ S \leftarrow UV:

[*pedevalili* [RC *Jon* *ku-mâea-ive-mana-i*⁻ⁱ]^{=lâ} *liluwaio*
children John IPFV-laugh-APPL-very-UV-3AUG=DIST small.PL
‘The children who were laughing at John a lot were very small’

b. ✗ S \leftarrow AV:

* [*pedevalili* *mi*=[RC *ku-lu-mâea-ive-mana* *Jon*]^{=kâ}
children REL= IPFV-3AUG-laugh-APPL-very John=DIST
Intended: ‘The children who were laughing at John a lot’

4.5.2 ANALYSIS: SELECTING A SPECIAL V HEAD

Before we start discussing the analysis of this exceptional extraction pattern, I want to immediately rule out one particular potential line of reasoning, due to a fundamental conceptual issue. One thing we *cannot* say is something along the lines of “UV-only verbs can only ever take objects with a [PIV] feature”. The reason why this is conceptually troubling is that [PIV] is, by assumption, an Ä-feature, with a semantic/pragmatic contribution connected to discourse and information structure. Ä-features are syntactically free, that is, they are distributed purely according to the human free will of the speaker. Simply put, whether a speaker decides to put [PIV] on the subject or on the object depends on what they want their sentence “to be about” (for some as yet unclear definition of aboutness). Stating a restriction of that sort would be equivalent to imagining, for example, that English might have certain lexically specific verbs that can only ever take object focus, and never subject focus. This, of course, is nonsensical: whether a speaker wants to put focus on the subject or the object should be a choice entirely in their hands, and not dictated by the particular verb they decide to build their clause with¹⁸.

With this out of the way, let us now see how an analysis of UV-only verbs can be developed. Our reasoning should go in the opposite direction, so to speak. It is not that these particular lexical roots force a particular information structure. Rather, these particular lexical roots *do not react* to the information structure of the clause they are in like ordinary Äiwoo verbs do, and therefore do not show a voice alternation.

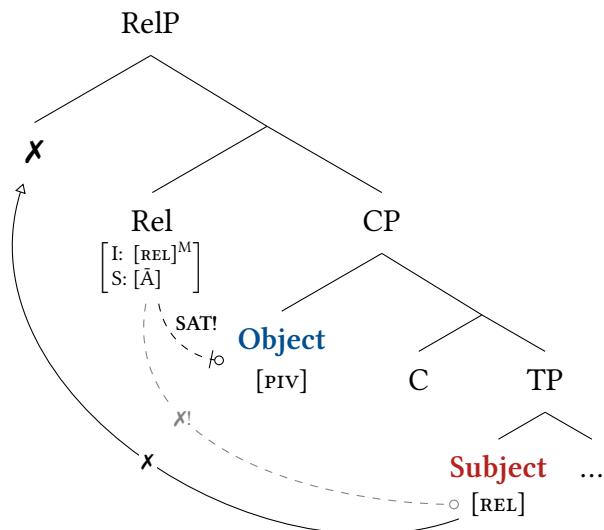
¹⁸ It is true that natural language syntax does in fact put restrictions on what set of meanings a speaker may be able to express; consider e.g. island violations. To offer an example that I actually witnessed happening, an English-speaking physical therapist will be syntactically in trouble if they want to ask their patient ‘what is the thing *x* such that if you move *x* it hurts’ (**what_i, does it hurt if you move ___i?*) – a perfectly sensible question given their profession and the conversation context. However, this is a ban on a certain type of syntactic configuration, and not a ban on the combination of a particular lexical verb and a particular choice of information structure/discourse structure. I assume natural languages do not/should not feature any such restrictions. I thank David Pesetsky for raising this point.

4.5.2.1 WALKING BACKWARDS: HOW THE STORY MUST GO

To understand how and why UV-only verbs are special, let us retrace our steps and consider what we said for ordinary voice-alternating verbs. For those, we said that the extraction restriction is about \bar{A} -intervention. Let us take examine a concrete case, that we will then later compare to how our UV-only verbs must work.

According to the analysis developed in §4.3, in a UV clause, the subject (in spec,TP) cannot be relativized because the higher object, in spec,CP, carries an \bar{A} -feature [PIV] (281). This feature satisfies the relativizing probe, which will therefore halt, and it will never be able to reach the subject further down and move it.

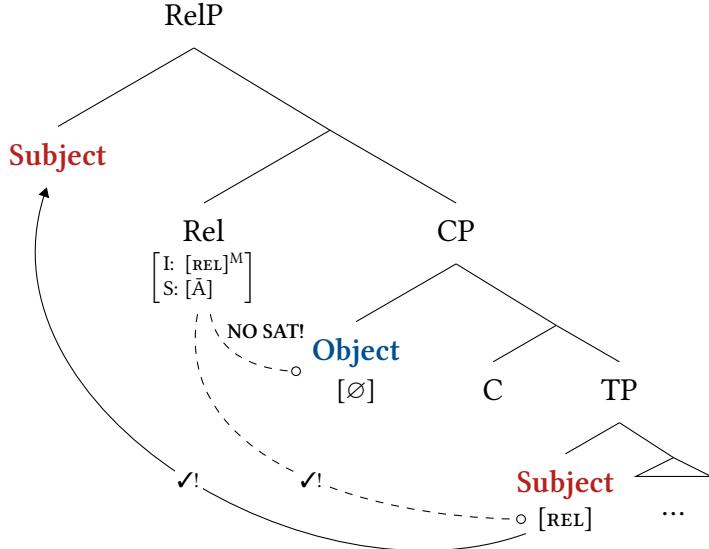
- (281) [PIV] on the object \bar{A} -intervenes for extracting the subject:



Let us consider the causal chain of events that got us there. According to our analysis, the object is high, in spec,CP, because C raised it. C raised the object because v agreed with it earlier on. In turn, v agreed with it because it had an \bar{A} feature [PIV], which will ultimately cause an \bar{A} -intervention problem. In other words, for all ordinary transitive verbs, “being the pivot” (that is, carrying the [PIV] feature) is coextensional with “being the VIA” (that is, the argument reflected by the voice morphology).

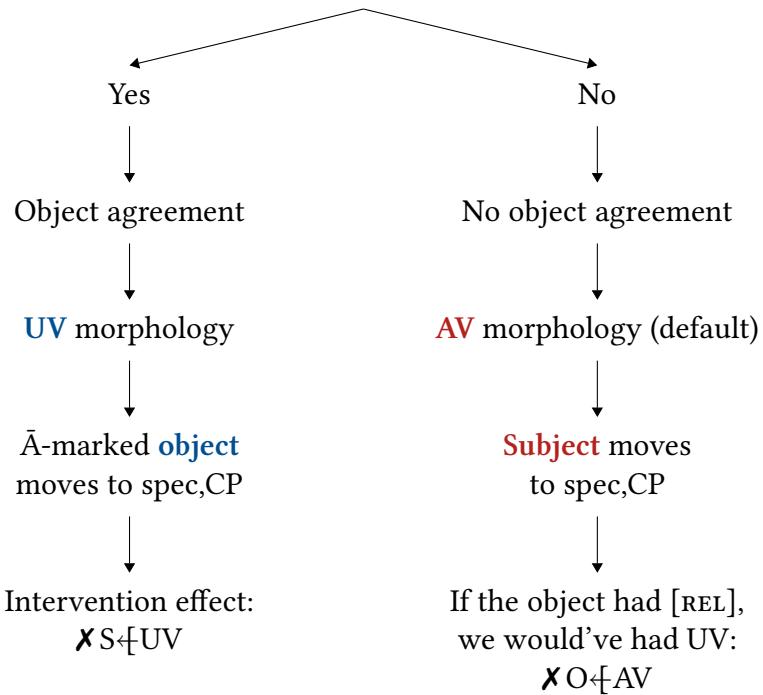
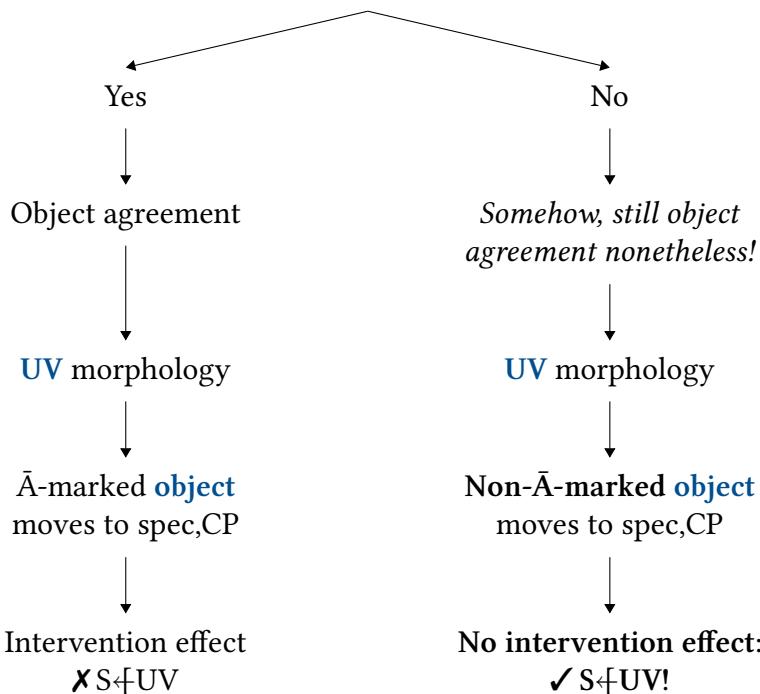
Let us now reconsider the important contrast under discussion in light of the \bar{A} -intervention approach. The object of an ordinary verb \bar{A} -intervenes for extracting the subject; somehow, the object of a UV-only verb does not. Other than this extraction pattern, UV-only verbs and ordinary verbs in UV are completely identical. Therefore, we want our derivation for UV clauses to look the same in both cases, with the object being in spec,CP and the subject in spec,TP. Of course, \bar{A} -intervention is caused by \bar{A} -features: namely, the [PIV] feature on the object in spec,CP. If that is the source of the intervention effect, this must mean that only for UV-only verbs, somehow, the object gets raised to spec,CP even *without* having an \bar{A} -feature. That is, our aim should be to make sure the derivation reaches the following result:

- (282) A [PIV]-less object does not \bar{A} -intervene for extracting the subject:



Here, the object is still high in spec,CP but has *no [PIV]* feature – which is why the subject is extractable. At this juncture, note that reaching this state of affairs is only made possible by the otherwise seemingly unmotivated move we made in chapter 3 in positing that the probe on C searches for $[i|v]$, and not anything connected to \bar{A} -features. For C to raise the object, it must mean that v agreed with it. In our analysis, object agreement by v is what causes verb stems to be spelled out with UV morphology. If these verbs do not have an AV form, it means that in these cases, v must *always* agree with the object, no matter what. Now, our goal is to understand why for these verbs, v will always agree with the object even when it does not have [PIV].

Before continuing, I want to note that this idea of UV-only verbs somehow always involving object agreement is intuitively appealing at a conceptual level. This point was briefly made in passing in the introduction to this section, but we are now in a position to appreciate it better. Ordinary voice-alternating verbs, in a sense, “care” about \bar{A} -features: depending on where the speakers chose to put these features, the verb will take one of two different forms. UV-only verbs have only one form, and thus, if \bar{A} -features are still distributed freely (as they ought to be), this means that these verbs “don’t care” about \bar{A} -features. Regardless of what information structure the speaker wants to convey with their sentence, these verbs can only ever be UV. These verbs show a “fake UV”, so to speak: even if the speaker chose to put \bar{A} -features ([PIV]) on the subject (or nowhere, for that matter), these verbs will still look like UV ones – which, by hypothesis, means that v still somehow agreed with the object despite it lacking [PIV]. Schematically, this can be illustrated as follows:

(283) **Ordinary verbs:** voice alternation depends on where \bar{A} -features areDoes the object have \bar{A} -features?(284) **UV-only verbs:** no voice alternation = \bar{A} -features don't matterDoes the object have \bar{A} -features?

4.5.2.2 FORCING UV/OBJECT AGREEMENT WITH SELECTION

What we did in the previous section is, figuratively, to move the target of our question a few nodes down in the tree: from “Why is this object in spec,CP if it doesn’t have [PIV]?” to “Why do these verbs always agree with their object, even when it doesn’t have [PIV]?” We know that for ordinary, voice-alternating transitive verbs, v searches for \bar{A} , and agrees with objects that carry any \bar{A} -feature(s). We now need a way to make sure that for UV-only verbs, v will agree with *any* object instead.

Here is how we do it. First, remember that in chapter 3, §3.6, we posited that intransitives verb roots select for a special v_{INTR} head, which – unlike the ordinary v head – carries no probe at all (285a,b). As a result, intransitive verbs always surface with AV-style morphology, φ -agreement, etc. Now, remember that UV-only verbs are, as far as we can tell, a lexically idiosyncratic/arbitrary class: whether a verb is UV-only or not is only dependent on the specific lexical root (§4.4). There is another syntactic phenomenon that is notoriously arbitrary: selection. I propose that this specific set of verb roots is singled out by selecting for a special type of v head, which I label v^* ('little v-star'), whose probe has a different, less "picky" featural specification than the ordinary v head (285c)¹⁹.

(285) Inventory of v heads in Äiwoo:

- a. v : $\begin{bmatrix} I: [\bar{A}] \\ S: [D] \end{bmatrix}$ (selected by ordinary transitive verb roots)
- b. v_{INTR} : no probe (selected by intransitive verb roots)
- c. v^* : $\begin{bmatrix} I: [\varnothing] \\ S: [D] \end{bmatrix}$ (selected by UV-only verb roots)

The interaction condition of v^* is set to $[\varnothing]$, that is, a feature that absolutely all nominals have: therefore, v^* will *always agree with its object*, whether or not it has \bar{A} -features. This gives us the UV-only profile: because object agreement always takes place, AV is simply impossible. In this respect, the syntactic behavior UV-only verbs could be similar to the sketch idea proposed for “High Absolutive” Mayan languages in chapter 3, §3.7.3. There, I suggested that the general syntactic inversion of the object across the subject found in these languages could be derived by positing a v head that always agrees with any object, instead of only the \bar{A} -marked ones, then followed by a step of probing for $[i|v]$ by a higher head (like C does in Äiwoo). In other words, High Absolutive Mayan languages would only have an equivalent of v^* , whereas Äiwoo has both an \bar{A} -seeking v and the more general, all-object-agreeing v^* .

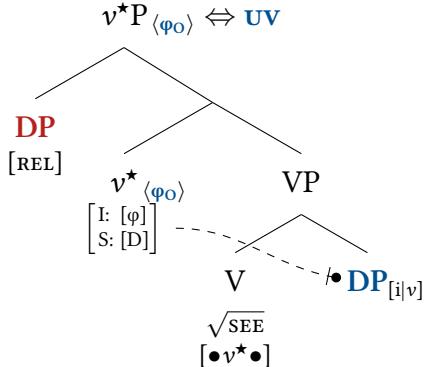
¹⁹ Why the satisfaction condition of v^* is set to $[D]$, like for ordinary v , will become clear in chapter 6. Note that there is no implied connection to Chomsky's (1995) ' v^* ' notation, which would rather correspond to my diacritic-less v here.

4.5.2.3 DERIVING THE LACK OF AN EXTRACTION RESTRICTION

In the last section we have established what exactly is special about UV-only verbs: they select for v^* , a head which always agrees with its object. This hypothesis correctly predicts that these verbs only have UV, and will never have an AV form. We will now see how this also correctly predicts that clauses built around UV-only verbs (henceforth, UV_{only} clauses) exceptionally allow for subject extraction, unlike other UV clauses (“UV_{plain}”).

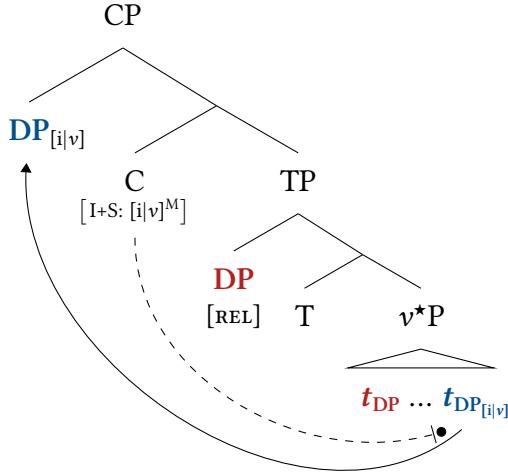
Let us consider the case of a UV_{only} clause where the speaker has decided not to put [PIV] on the object (286), and wants to relativize the subject, which therefore carries [REL]. The verb ‘see’ selects for v^* , which has [INT: \emptyset], instead of the ordinary v with [INT: \bar{A}]. Therefore, v^* will interact with the object even when this does not have \bar{A} -features, flag it, and halt. In other words, whenever the verb ‘see’ is merged, because of its selectional requirement there is no way to avoid object agreement, so this verb will always be in UV. (I assume that the interaction flag assigned by v^* is identical to the one assigned by ordinary v , or at least that the two are similar enough that the probe on C can target either.)

- (286) ‘See’ selects for v^* , and will always have object agreement:



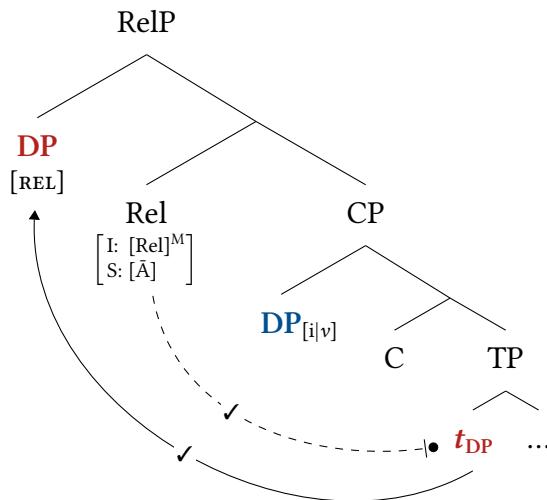
Later, as usual, the subject will move to spec,TP. Finally, C will scan its c-command domain for the closest goal bearing $[i|v]$, i.e., the object, and raise it.

- (287) With v^* , an \bar{A} -less object may end up being raised in spec,CP:



We have now achieved the situation we wanted to derive (§4.5.2.1; example (282)). Now, we have an object in spec,CP with *no* \bar{A} -features, ultimately caused by the selectional requirement of this specific verb. Therefore, we predict no extraction restriction, because there is no \bar{A} -intervention effect. Because the object has no \bar{A} -features, the relativization probe will simply skip it, and it will successfully extract the subject (288)²⁰.

- (288) No intervention effect/extraction restriction from UV_{only} clauses:



A potential cross-linguistic parallel to UV-only verbs can be found once we think of UV as object agreement, as I'm doing here (see chapter 3, §3.5.1.2). In Bulgarian, object clitic

²⁰ The derivation outlined here is one out of two possible ones that could happen for a UV_{only} clause. If we had put the [PIV] feature on the object, the clause up until the CP level would look identical, but there would be an \bar{A} -intervention effect and thus, the subject would not be extractable. What I am claiming, therefore, is not that UV_{only} clauses *always* allow for subject extraction. Rather, the idea is that for any surface string reflecting a UV_{only} clause, there exists at least one possible derivation that will ultimately allow for subject extraction.

doubling – which bears likes to object agreement – depends on a complex variety of factors such as the object’s definiteness, specificity, topicality, or a combination thereof (see Harizanov 2014: 1037 and the references cited there). However, there also exist classes of predicates that always, obligatorily require object clitic doubling, regardless of the object’s properties (Krapova & Cinque 2008). These are more coherent natural classes than the Äiwoo UV-only verbs (e.g. psych- and perception predicates, certain modal predicates, etc.; see Krapova & Cinque 2008: 266–267 for a list)²¹. Syntactically, however, the parallel holds: ordinary verbs will agree with their object only if it presents certain semantic/pragmatic properties, but a particular set of verbs will always agree with their object no matter what.

4.6 SUMMARY

In this chapter I have started addressing the Extraction Puzzle, temporarily limiting the scope to canonical clauses and UV_{only}-clauses. In canonical AV and UV_{plain} clauses, we observe a classic Austronesian Ā-extraction restriction: only the VIA can be extracted (the subject in AV, the object in UV). In UV_{only}-clauses, however, this restriction vanishes, and non-VIA subject extraction from UV becomes possible.

I have argued that the Ā-extraction restriction in Äiwoo has diverse, non-uniform causes (289). First, object extraction is impossible from AV (289a) because if the object is to be extracted it means that it carries an Ā-feature ([REL]), and therefore *v* will agree with it; in this case, AV just cannot arise in the first place. Then, I have argued that subject extraction from UV is impossible due to Ā-intervention (289b), and not phasehood or DP-intervention, *contra* other analyses of similar patterns in Austronesian (e.g. Rackowski & Richards 2005, Hsieh 2020, 2025, Erlewine & Sommerlot 2023b for phase-based approaches, and Aldridge 2004, 2008, Erlewine & C. Lim 2023 for DP-intervention approaches). The VIA in canonical UV clauses is raised to spec,CP by (non-local) A-movement, but it also carries the Ā-feature [PIV]; in other words, in these clauses, the VIA and the pivot coincide. This creates an Ā-intervention effect, making it impossible to Ā-extract a lower argument across the VIA.

(289) Subcases of the Ā-extraction restriction in Äiwoo:

- | |
|----------------------------|
| Cause: |
| a. *O+[AV]: Underivable |
| b. *S+[UV]: Ā-intervention |

In the case of UV-only verbs, I have argued that the VIA does not necessarily coincide with the pivot anymore. The feature [PIV] may well be on the subject (or nowhere), but the VIA

²¹ In addition to Bulgarian, similar classes of predicates also trigger obligatory clitic doubling in Albanian (kallulli2000), Amharic (Kramer 2014), Greek (Anagnostopoulou 2003), Macedonian (Krapova & Cinque 2008), and Romanian (dobrovie-sorin1994).

– the argument that *v* agrees with – will still be the object. The reason for this difference from standard transitive clauses is that UV-only verb roots idiosyncratically select for v^* , which – unlike ordinary *v* – always agrees with its object no matter what. Even if a speaker chooses not to put \bar{A} -features on the object of such a verb, object agreement will still take place, thus always giving UV. This way, the [i|v]-flagged object might end up being raised to spec,CP even without having \bar{A} -features. Therefore, there won’t be any intervention effect, and \bar{A} -extraction of the subject will be possible.

4.A A NOTE ABOUT *mi=* AND OTHER “RELATIVIZERS”

Some of the examples throughout this dissertation include an optional morpheme *mi=* at the left edge of the RC, which I gloss ‘REL’. This marker is part of a small group of monosyllabic markers that Næss (2017b) labels “Generic Bound Nouns”. These are morphologically bound in the sense that they never appear on their own, but always in combination with a host. I reproduce a list in (290)^{22,23}. In this appendix, I argue that these are relativizers.

(290) Relativizers (elaborated from Næss 2017b: 919):

<i>mi=</i>	‘the one that ...’
<i>me=</i>	‘the person who ...’
<i>de=</i>	‘the thing that ...’
<i>pe=</i>	‘the people who ...’
<i>nye/nyi=</i>	‘the place where ..., the way/manner in which ...’
<i>me=</i>	‘the time when ...’

4.A.1 DISTRIBUTION

All these markers are productively combined with predicates of any size to form relative clauses: ‘the one that ...’, ‘the person who...’, ‘the thing that...’, ‘the place where...’, etc. In fact, Næss (2017b) raises the possibility of a relativizer analysis for these, although she does not argue for it. Their distribution is determined syntactically, and not morpho(phono)-logically: they attach at the left edge of a clausal constituent, namely, a RC. However, this

²² Næss (2017b) includes two more, *gi-* ‘man, male’ and *si-* ‘woman, female’. These are commonly found forming parts of kinship terms (*gite* ‘man’s brother’ vs. *site* ‘woman’s sister’; *gibo* ‘nephew, grandson’ vs. *sibo* ‘niece, granddaughter’) and other human-referring terms (*gilaki* ‘boy’ vs. *silaki* ‘girl’, where *gi-* and *si-* are possibly combined with *laki* ‘small’). In addition, they can be found combined with the demonstratives *enge* (proximal) and *eāngā* (distal): *ginenge/gināngā* ‘this/that man’, *siwenge/siwanāngā* ‘this/that woman’. However, at least some of these forms may be synchronically unsegmentable/lexicalized, as these alternations don’t seem to be productive (cf. *gino* ‘son’ but *sipe* ‘daughter’, rather than **sino*). As these don’t seem to be productively used to form relative clauses, I will exclude them from the discussion, and I will focus on the ones that can clearly productively combine with verbs/predicates (290).

²³ The relativizer *me=* ‘the time when’ is a novel discovery. It is completely homophonous with *me=* ‘the person who’, though this is most likely just a coincidence.

might not be immediately evident. Most often, in natural speech data we will see these relativizers combined with rather “small” hosts, typically a single phonological word:

(291) Examples from Næss (2017: 923):

- a. ***mi=olo***
REL=big
‘A/the big one’
- b. ***de=laki***
REL:thing=small
‘A/the small thing; something small’
- c. ***nye=maapi***
REL:place=overgrown
‘Overgrown place, bush’

Common formations like these may have prompted the analysis of these morphemes in Næss (2017b) as bound prefixes. However, these “small” forms are misleading with respect to the relativizers’ actual combinatory possibilities. In fact, the constituent they can attach to is clearly clause-sized, as it can include several DP arguments, TAM marking, temporal adverbials, clausal adjuncts, and even nested embedded clauses (292d)–(293d).

(292) Attested examples (Næss 2017b: 926):

- a. ***me=[wasele nyepolââ enge]***
REL:person=make.AV world this
‘The one who made this world’
- b. ***nye=[ki-vaabe ipebo-i-le=nä nänyi=kâ]***
REL:place=IPFV-beat grandmother-3AUG-UA=CV coconut.fiber=DIST
‘The place where their grandmother was beating coconut fiber’
- c. ***de=[wâte-wâ ngâgu-mu]***
REL:thing=happen-DIR2 to-2MIN
‘The thing that happened to you’
- d. ***me=[kä-i-lä [ku-wopo-lâ-mä go King Deved]]***
REL:person=say-3AUG=CV IPFV-go-in-DIR1 PREP King David
‘The person who they say descends from King David’ (MT 12:23)

(293) Elicited examples:

- a. ***me=[ku-tu-usi-mä pedevalili=kaa]*** (231109)
REL:person=IPFV-bring.UV-back.UV-DIR1 children=FUT
‘The person that the children will bring back’
- b. ***i-wagu-mä-i ngâgu de=[wanyinyi-i bugulo]*** (240208)
ASP-tell.UV-DIR1-3AUG to.1MIN REL:thing=do.UV-3AUG yesterday
‘They told me what they did yesterday’
- c. ***i-evä-kâ-no go Jen nye=[wä site-∅ⁿ=nä]*** (231026)
ASP-ask.UV-DIR3-1MIN to Jane REL:place=go sister-3MIN=CV
‘I asked Jane where her sister was’

- d. *bââ de=[kä Mary=kä [nä-ve-∅ⁿ]]* (240418)
 not.exist REL:thing=want Mary=cv IRR-buy.UV-3MIN
 ‘There’s nothing that Mary wants to buy’

Even considering rather rich examples like these, it could seem like these morphemes consistently attach to verbs/predicates, which is why Næss (2017b) (et seq.) glosses them as (verbal) affixes. However, this is purely a consequence of the syntax of relativization in Äiwoo. Since the RC-internal gap is most often sentence-initial, the first overt morphophonological word of the RC will indeed be the verb. Instead, we can make sure that these morphemes are attached not to a morphomorphological word but to a syntactic constituent, that is, an entire RC²⁴. To confirm that they are not restricted to attaching to the verb, one can for example add negation inside the RC, and the relativizers will consistently show up to the left of the pre-verbal negative particle *ba*:

- (294) a. *sime mi=[ba ku-wâ-une=gu]*
 person REL=NEG IPFV-CAUS-true=NEG
 ‘Person/people who don’t believe (in it)’ (Roversi & Næss 2019: 335)
 b. *singedâ mi=[ba i-lâwâle-mole-nyi-mä-gu-∅ⁿ=gu]* (240502)
 girl REL=NEG ASP-help.UV-exactly-UV-DIR1-GU-1MIN=NEG
 ‘A/the girl who didn’t help me at all’

Even stronger evidence comes from those contexts where one can do non-VIA relativization (discussed in §4.5.1). Here, the extracted DP is not sentence-initial. In these cases, we can clearly see the relativizer morphemes attaching to the first phonological word at the left edge of the RC, whatever that may be, and not to the verb:

- (295) *pesingedâ mi=[kuli no-mu i-te-usi-kä-i]* (240328)
 girls REL=dog POSS-2MIN ASP-see.UV-again.UV-DIR3-3AUG
 ‘(The) girls who saw your dog again’

4.A.2 (NON-)COMPLEMENTARITY WITH A HEAD NOUN

My labelling these morphemes ‘relativizers’ is meant to remain somewhat agnostic as to their precise syntactic nature. A couple potential analyses are possible. They could be Ä-complementizers (C-heads), with some semantic restrictions on the head noun they may modify. Alternatively, they could be phonologically reduced nominal elements that constitute the actual head of the RC. Furthermore, in principle we should not have any expectations that all six of these are of the exact same nature. In fact, there seems to be a distinction between *mi*= and the other more semantically contentful ones. The general relativizer *mi*= routinely co-occurs with an overt head noun for the RC, as we can see in (294)-(295) above and in many other examples throughout. This perhaps suggests an analysis of *mi*= as a pure Ä-complementizer. However, the other relativizers seem to be more

²⁴ This is why I depart from Næss’s notation and gloss them as morphophonological clitics rather than affixes, with the symbol ‘=’ rather than ‘-’.

or less in complementary distribution with an overt head noun²⁵. Two sets of examples are shown below for *nye*= ‘the place where...’ and *de*= ‘the thing that...’. In the (a) sentences we see the relativizers combining with the RC, and no overt head noun. In the (b) sentences, adding an overt head noun makes the structure unacceptable. The (c) sentences confirm that the head nouns themselves are not a problem, as long as the relativizers are absent²⁶.

- (296) *Nye*= ‘the place where...’ is incompatible with an overt head noun: (240404)

- a. [DP *nye*=[*wâ-no=ngä ngä skul*]_{RC}]=*kâ nyopu-mana*
REL:place=go-1MIN=CV to school=DIST far-very
‘The place where I went to school is very far’
- b. * [DP *taun nyе*=[*wâ-no=ngä ngä skul*]_{RC}]=*kâ nyopu-mana*
town REL:place=go-1MIN=CV to school=DIST far-very
Intended: ‘The town where I went to school is very far’
- c. [DP *taun* [*i-wâ-no=ngä ngä skul*]_{RC}]=*kâ nyopu-mana*
town ASP-go-1MIN=CV to school=DIST far-very
‘The town where I went to school is very far’

- (297) *De*= ‘the thing that...’ is incompatible with an overt head noun: (240404)

- a. [DP *de*=[*ii-no=ngä butete*]_{RC}]=*kâ ba mebädo=gu*
REL:thing=peel.UV-1MIN=CV potato=DIST NEG sharp=NEG
‘The thing that I peeled the potatoes with was not sharp’
- b. * [DP *nuwoli de*=[*ii-no=ngä butete*]_{RC}]=*kâ ba mebädo=gu*
knife REL:thing=peel.UV-1MIN=CV potato=DIST NEG sharp=NEG
Intended: ‘The knife that I peeled the potatoes with was not sharp’
- c. [DP *nuwoli* [*i-ii-no=ngä butete*]_{RC}]=*kâ ba mebädo=gu*
knife ASP-peel.UV-1MIN=CV potato=DIST NEG sharp=NEG
‘The knife that I peeled the potatoes with was not sharp’

Contrary to e.g. *de*= ‘thing’ and *nye*= ‘place’, as established above *mi*= does in fact co-occur with an overt head noun. This could be analyzed as an appositive construction (Næss, p.c.): *mi*= is a semantically bleached nominal element that is the “real” head of the RC (‘the one that...’), and stands in apposition to the more semantically contentful noun to its left. A more literal translation of (295) would then be “(the) girls, the ones who saw

25 Rare cases of co-occurrence are sporadically attested (i). However, combinations like this are systematically rejected in elicitation contexts. I don’t have an explanation for structures like this; perhaps, this could be a case of a more syntactically loose apposition (‘our law, the one that Moses gave us’). Further research is needed in this respect. However, for the cases where *mi*= co-occurs with an overt relative head noun I argue against an apposition analysis; see below.

(i) *ile ngä [molâ nugu-de de=[la-mä Moses]]=ke*
here in law POSS-12AUG **REL:thing=give.UV-DIR1 Moses=PROX**
‘In our law that Moses gave us’ (MT 22:17)

26 The aspectual prefix *i-* systematically disappears when it’s not word-initial (chapter 2, §2.4.3). This is why it’s visible in the (c) sentences but not in the (a,b) sentences.

your dog again”. However, I believe we can show that this cannot be the correct analysis. A characteristic trait of appositive RCs is that they can modify definite descriptions (298a), but not quantified expressions (298b–d) (J. Ross 1967 et seq.).

- (298) Appositive RCs cannot modify a quantified expression (Bhatt 2005a: 4):

- a. *She/The president/Anne, who was tired, ...*
- b. * *Susan interviewed every senator, who is crooked*
- c. * *The doctor gave a lollipop to each child, who she examined*
- d. * *No person, who knows everything, is perfect*

Contrary to this, a *mi-*-marked relative clause in Äiwoo *can* be headed by a quantified expression (299). This speaks against an analysis of *mi-*RCs as appositive, even when *mi-* co-occurs with an overt noun.

- (299) *i-eeu-kä go [pesigiläi-du mi=[isä-i i-lâwâle-kä-i]]_{RC}*
 ASP-speak-DIR3 to boys-all REL=mother-3AUG ASP-help.UV-DIR3-3AUG
 ‘I talked to every boy_i who helped his_i mother’
 (more literally: ‘I talked to all the boys_i who helped their_i mother’)

4.A.3 OTHER PROPERTIES

4.A.3.1 OPTIONALITY

As mentioned earlier, these relativizers are largely optional, and in most cases sentences receive the same judgment by native speakers both with and without an overt relativizer. One factor that seems to influence this judgment is that including an overt relativizer disambiguates a string that would otherwise be syntactically ambiguous as containing a RC, thereby preventing garden-path effects that may arise from not having any overt marking of the RC boundary. For example, (300) (repeated from above) was judged to be better with *mi-* than without, perhaps due to the fact that without *mi-* one ends up with two DPs in a row, something that might be hard to parse in an out-of-the-blue elicitation context.

- (300) *pesingedâ mi=[kuli no-mu i-te-usi-kä-i] (240328)*
 girls REL=dog POSS-2MIN ASP-see.UV-again.UV-DIR3-3AUG
 ‘(The) girls who saw your dog again’

However, this seems to be a performance/processing type of constraint, and not a hard and fast syntactic rule. In other cases, strings with two DPs in a row and no *mi-* were judged to be acceptable (301).

- (301) a. *[sime [RC lopwâ eângâ i-wagu-mä-i]] =lâ li-pe=Lende*
 person story that ASP-tell.UV-DIR1-3AUG=DIST 3AUG-REL:people=S.Cruz
 ‘The people who told me that story were from Santa Cruz’ (240208)

- b. [*mikilitei* [RC *nubââ i-eâ-i-to-mä[-i]*]=*lâ* *li-ŋâgo-mana*
 fishermen shark ASP-paddle-COM-go.in-DIR1-3AUG=DIST 3AUG-strong-very
 'The fishermen who paddled back with the shark were very strong' (230615)
- c. [*pedevalili* [RC *John ku-mâea-ive-mana-i[-i]*]=*lâ* *liluwai*
 children John IPFV-laugh-APPL-very-UV-3AUG=DIST small.PL
 'The children who were laughing at John a lot were very small' (250728)

Furthermore, *mi-* seems to be subject to haplology. To observe this, first note that many common nouns (especially human-denoting ones) are morphologically complex, consisting of (null-headed) RCs marked by *mi-* or one of the other relativizers²⁷:

- | | |
|--|---|
| (302) a. <i>mekivaavee</i> 'Teacher'
<i>me=ki-vaavee</i>
REL:person=IPFV-show
Lit. 'person who shows' | (303) a. <i>mekibei</i> 'Patient, sick person'
<i>me=ki-bei</i>
REL:person=IPFV-sick
Lit. 'Person who is sick' |
| b. <i>mikilivaavee</i> 'Teachers'
<i>mi=ki-li-vaavee</i>
REL=IPFV-3AUG-show
Lit. 'Those who show' | b. <i>mikilibei</i> 'Patients, sick people'
<i>mi=ki-li-bei</i>
REL=IPFV-3AUG-sick
Lit. 'Those who are sick' |

When a RC starts with a noun like *mikilibei* 'patients', *mi-* is avoided, probably because this would result in a sequence of two *mi-*'s in a row (304). To further support the idea that this is a haplology effect, consider also the minimal pair in (305). In (305a), where *mi-* would attach to the nominal *mekipä* 'thief, person who steals', *mi-* is dispreferred – presumably due to haplology with the immediately adjacent relativizer *me-*. When there is no haplology issue, because *mi-* attaches to a proper noun (305b), *mi-* is then perfectly acceptable (and in fact judged to be slightly better).

- (304) *dokta* (?**mi=*)[*mi=ki-li-bei* *ku-wâpäkoeâ-gu-i=laa*] (240912)
 doctor REL=REL=IPFV-3AUG-sick IPFV-cure.UV-GU-3AUG=FUT
 'The doctor who will cure the patients'
 Comment: "mi-mikilibei doesn't sound good, you're repeating mi-"
- (305) a. *pesingedâ* (?*mi=*)[*me=ki-pä* *i-te-kä[-i]*] (240404)
 girls REL=REL:person=IPFV-steal.AV ASP-see.UV-DIR3-3AUG
 'The girls who saw the thief' (*mi-* is dispreferred)
- b. *pesingedâ* ?(*mi=*)[*Joseph* *i-te-kä[-i]*]
 girls REL=Joseph ASP-see.UV-DIR3-3AUG
 'The girls who saw Joseph' (*mi-* is preferred)

²⁷ There is a strong tendency in my data for *me-* to show up in "singular" forms like (302a)-(303a), and *mi-* in "plural" forms like (302b)-(303b) (the semantics of nominal number in Äiwoo are complex and poorly understood, hence the hedging; see chapter 2, §2.5.1). I don't have an explanation for this. However, exceptions exist in both directions, which may suggest it probably isn't a hard syntactic fact.

This haplology phenomenon also shows us that despite their frequency, nouns formed with *mi=* or other relativizers are *synchronously* complex, and their internal structure is accessible to and manipulable by speakers. Another piece of evidence for this comes from the standard expression meaning ‘food’, which is again a relativized form (306). When speakers want to add a possessive to this, they will either treat the entire thing like a normal noun and just add the possessive classifier appropriate for food (307a), or alternatively, another option is to insert a 1MIN subject inside the RC, thus altering the form of the verb that *de=* attaches to (307b).

- (306) *de=ki-li-ŋä*
 REL:thing=IPFV-GEN.A-eat.UV
 ‘Food’; lit. ‘Thing(s) that one eats’
- (307) “Possessed” forms (Næss 2017b: 925):
- | | |
|--|--|
| a. <i>dekilingä nugo</i>
food POSS.1MIN
‘My food’ | b. <i>de=ki-ŋä-no</i>
REL:thing=IPFV-eat.UV-1MIN
‘My food’; lit. ‘Thing(s) that I eat’ |
|--|--|

Throughout the dissertation, to simplify the glosses for readability I will not segment the internal structure of nominal forms like *mikilivaavee* ‘teachers’ or *dekilingä* ‘food’ (as in (307a)) when not immediately relevant.

4.A.3.2 RESTRICTIVENESS

An additional property of *mi=* is that it’s incompatible with non-restrictive RCs. When the head noun is unique, so that restrictive modification is impossible, adding *mi=* is not acceptable (308). This fits well with the descriptive characterization of *mi=* in Næss (2017: 920): “forms in *mi[=]* are used to identify entities by picking them out from a larger set” (emphasis in the original).

- (308) [Context: I have only one sister] (240502)
siwou (#*mi=*) [*ku-mo Honiara*] =*kâ i-weevä-mä-gu-*Ø¹
 sister.1MIN REL=IPFV-stay Honiara=DIST ASP-visit.UV-DIR1-GU-1MIN
 ‘My sister, who lives in Honiara, came to visit me’
 Comment: “*mi=* doesn’t fit in this context where there’s only one sister, if I say *mikumo* it sounds like I have more than one sister”

In several cases where *mi=* was judged as optional, the variant including *mi=* received comments that seemed to point towards this restrictive interpretation:

- (309) [*nubole (mi=)* [*tu-mä Mary*]] *ki-epavi-no=ngaa bulaape*
 taro REL=bring.UV-DIR1 Mary IPFV-cook.UV-1MIN=FUT tomorrow
 ‘Tomorrow I will cook the taro that Mary brought me’
 Comment: “If you say *mitumä* it implies that there is some taro available to you that Mary didn’t bring, but that someone else might have brought” (240418)

4.B A NOTE ABOUT OTHER Ä-DEPENDENCIES

The reason why I chose relativization as the main Ä-dependency under discussion is that it simply is the currently best understood one. Other types of classic Ä-dependencies in Äiwoo are either not movement-based at all (topicalization), can be reduced to relativization (focus/clefting), or are simply not well-understood (*wh*-question formation). In this appendix I will briefly go through the first two. I hope future research will shed light on the syntax of *wh*-questions in Äiwoo.

4.B.1 TOPICALIZATION IS NOT MOVEMENT-BASED

As mentioned (3, §3.2), left-peripheral topicalized DPs are rampant in Äiwoo, to the point that in the natural speech corpus, sentences with multiple DPs in the dedicated argument positions are in fact rather rare. Speakers typically prefer to topicalize their DPs, and leave pronominal forms in the argument positions (e.g. *Anna_i*, *that book_j*, *she_i bought it_j*). These pronouns are most often null when morphosyntactically possible (i.e., for 3MIN referents; non-3MIN pronouns must be overt).

However, Äiwoo topicalization shows no signs of being movement-derived. There seems to be no locality limits or restrictions on what nominals can be topicalized. For example, topicalization show no voice-related restrictions: any argument can be topicalized from any voice. The sentences in (310) provide AV and UV baselines without any topicalization. In (311), we observe that a subject topic is allowed from both AV and UV. In (312), conversely, we observe that an object topic is also allowed from both AV and UV²⁸.

(310) **Baselines:**

(240530)

- a. *bulaape pedevalili ki-li-kei-mä=kaa nubole* (AV)
tomorrow children IPFV-3AUG-dig.AV-DIR1=FUT taro
'Tomorrow the children will harvest taro for me'
- b. *bulaape nubole ki-kili-mä pedevalili=kaa* (UV)
tomorrow taro IPFV-dig.UV-DIR1 children=FUT
'Tomorrow the children will harvest the taro for me'

(311) **Subject topic: ✓ AV, ✓ UV**

(240530)

[Context: "what are the children doing tomorrow?"]

- a. *pedevalili=kâ, bualaape* $\emptyset_{3\text{AUG}}$ *ki-li-kei-mä=kaa nubole*
children=DIST tomorrow IPFV-3AUG-dig.AV-DIR1=FUT taro
'(As for) the children_i, tomorrow they_i will harvest taro for me'

²⁸ In fact, (312a) is somewhat surprising not because an object is being topicalized from an AV sentence, but because the result is an AV sentence containing what could be described as a pronominal object. This is usually not possible; see chapter 2, §2.5.3. It is perhaps possible that there is in fact no object in this sentence, and that *kei* 'dig' is being used intransitively.

- b. *pedevalili*=kâ, *bulaape* *nubole* *ki-kili-mä*-*i*=laa
children=DIST tomorrow taro IPFV-**dig.UV**-DIR1-3AUG=FUT
 '(As for) the children_i, tomorrow they_i will harvest the taro for me'

(312) **Object topic:** ✓ AV, ✓ UV (240530)

[Context: "who is picking up the taro tomorrow?"]

- a. *nubole*=kâ, *bulaape* *pedevalili* *ki-li-kei-mä*=kaa Ø_{3MIN}
 taro=DIST tomorrow children IPFV-3AUG-**dig.AV**-DIR1=FUT
 '(As for) the taro_i, tomorrow the children will harvest (it_i) for me'
- b. *nubole*=kâ, *bulaape* Ø_{3MIN} *ki-kili-mä* *pedevalili*=kaa
 taro=DIST tomorrow IPFV-**dig.UV**-DIR1 children=FUT
 '(As for) the taro_i, tomorrow the children will harvest it_i for me'

Moreover, topicalization also doesn't show any island-sensitivity. While RCs constitute islands for relativization, as shown above, topicalization is not sensitive to this kind of boundary. In the two sentences below, a left-peripheral topic in the matrix clause is associated with an argument (boxed) inside a relative clause. The fact that this is grammatical confirms that this dependency is not movement-based.

(313) **Topicalization is not sensitive to RC islands:** (250116)

- a. *pedevalili*=kâ, [*nubole* [RC *ki-kili-mä*-*i*=laa]]=kâ
children=DIST taro IPFV-**dig.UV**-DIR1-3AUG=FUT=DIST
ba-nägä ki-be
 NEG-yet IPFV-ready
 '(As for) the children_i, the taro that they_i will harvest is not ready yet'
- b. *nubole*=kâ, [*pedevalili* [RC *ki-li-kei-mä*=kaa Ø_{3MIN}]=kâ
 taro=DIST children IPFV-3AUG-**dig.AV**-DIR1=FUT =DIST
ku-lu-pole-eke
 IPFV-3AUG-work-fast
 '(As for) the taro_i, the children who will harvest it_i work fast'

4.B.2 FOCUS IS DONE WITH PSEUDO-CLEFTS (SO IT'S JUST RELATIVIZATION)

The syntax of argument focus has been somewhat briefly described in passing in Næss (2015b) a.o., in its core surface traits. Considering naturally attested examples like (314), Næss claims that (i) a focused argument (boxed) is in clause-final position; (ii) the verb does not agree with it. In ordinary non-focus contexts, the intransitive verb in (314a) would've taken a 2MIN prefix *mu-*, and the AV verb in (314b) a 1MIN prefix *i-*.

(314) Næss (2015: 292; slightly adapted):

- a. *ku-mo ngä nuumä=ke* iumu
 IPFV-stay in village=PROX 2MIN
 'You are the one who stays at home'

- b. *ba, dee sii=ee, ku-wânubo=kâ [iu]*
 no this fish=PROX IPFV-kill.AV=DIST 1MIN
 ‘No, this fish, I am the one who killed it’

I believe that this characterization, despite being descriptively correct, misses an important generalization: **argument focus constructions are (pseudo-)clefts²⁹**. Concretely, I propose that these sentences have the following syntax (315a). The first part is a headless/null-headed relative clause³⁰, followed by a deictic marker (DIST/PROX), and finally the focused argument is actually a nominal predicate. As an illustration, (315b) shows the same sentence in (314a) annotated according to this analysis.

- (315) a. $[\emptyset \text{ [RC ...]}] = \text{DEIC} \quad [\text{Pred DP}]$

b. **Cleft analysis of (314a):**

- $[\emptyset \text{ [RC } ku-mo \text{ ngâ nuumä]}] = ke \quad [\text{Pred } iumu]$
 IPFV-stay in village=PROX 2MIN
 ‘[(The one) who stays at home] is [you]’

This analysis accounts for both surface-level properties of argument focus constructions described above and by Næss. The focused argument is sentence-final rather than in its ordinary position because it’s a predicate, not an argument of the clause. The verb lacks ordinary agreement with the focused argument because this is not, in fact, an argument of the verb at all; rather, a null 3MIN pronoun is (which has no overt agreement marker). Concretely for the purposes of this chapter, the fact that focus constructions are clefts means that there is no separate Ä-dependency related to focus; it just reduces to relative clause formation.

In support of the cleft analysis, I present the following arguments, in order: (i) argument focus constructions have the syntax of clauses with nominal predicates (or “copular clauses”); (ii) argument focus constructions are biclausal, with a matrix portion being a copular clause and a RC-portion; (iii) argument focus constructions are compatible with overt relativizers; (iv) argument focus constructions follow the Ä-extraction restriction found with relativization; (v) rather than just lack of agreement, the RC-part of argument focus constructions always have the syntax of a clause with a 3MIN argument in the place of the focused argument, including changes in word order.

First, let’s consider what clauses with nominal predicates look like. Äiwoo has no overt copula. However, the subject and predicate of such a sentence must be separated by a deictic particle =Câ or =Ce (the former seems to be the default choice)³¹.

29 The same analysis is proposed for DP-focus constructions in Tagalog in Hsieh (2020).

30 Relative clauses without an overt head are independently possible in Äiwoo:

- | | | | |
|--|----------|--|----------|
| (i) a. Headless subject RC: | (230622) | b. Headless object RC: | (230622) |
| $[\emptyset \text{ [RC } i\text{-veve}]] = kâ \quad \text{mekivaavee}$ | | $[\emptyset \text{ [RC } i\text{-ve-}\emptyset^n]] = nâ \quad mi=olo-mana$ | |
| ASP-buy.AV=DIST teacher | | ASP-buy.UV-3MIN=DIST REL=big-very | |
| ‘The one who bought it is a teacher’ | | ‘The one s/he bought is very big’ | |

31 The nature of this restriction is not entirely clear. Both in elicitation contexts and in the corpus, we find cases where there is no =Câ/=Ce, but there is some other demonstrative material separating the two parts:

- (316) *Jane**(=kâ) *nurse* (231012)
*Jane**(=DIST) *nurse*
‘Jane is a nurse’ (ungrammatical without =kâ)

In cases of argument focus, we similarly find a deictic particle before the nominal predicate (317), just like for copular clauses. Like with copular clauses, here too the particle is necessary (though see fn. 31).

- (317) [Ø [RC *i-vängä nubole*]]* (=kâ) *Mary ngâpo* (231130)
ASP-eat.AV *taro** (=DIST) *Mary only*
‘Only Mary ate taro’ (lit. ‘[Who ate taro] is [only Mary]’)

Second, focus constructions contain two separate clausal domains, as is expected under the cleft analysis. To prove this, we can observe that these constructions contain two independent loci for negation (318). The matrix nominal predicate can be negated (318a), or the RC portion of the pseudo-cleft can be negated (318b), or even both at once (318c). The intended readings are hard to convey in English with the standard focus intonation, so I use more literal paraphrases involving pseudo-clefts for clarity.

- (318) a. **Negation in the matrix clause:** (241219)
[Context: someone told me that Mary yesterday cooked crab, but I know they’re wrong, she didn’t cook crab, she cooked something else.]
[Ø [RC *i-epavi Mary bugulo*]] =kâ *ba nulei=gu*
ASP-cook.UV Mary yesterday=DIST NEG crab=NEG
‘What Mary cooked yesterday is **not** crab’
- b. **Negation inside the RC:**
[Context: yesterday Mary cooked many different things, but the only thing she didn’t cook was the crab.]
[Ø [RC *ba i-epavi Mary=gu bugulo*]] =kâ *nulei*
NEG ASP-cook.UV Mary=NEG yesterday=DIST crab
‘What Mary did **not** cook yesterday is crab’
- c. **Both at once:**
[Context: someone told me that Mary yesterday cooked many different things,

-
- (i) *buk eângâ(=kâ) eobulou-mana* (231214)
book that(=DIST) long-very
‘That book is very long’ (=kâ is optional)

Moreover, one can omit any deictic/demonstrative material when the subject is non-referential (in this case, a generic/kind argument):

- (ii) a. **About snakes in general:** (231214) b. [Context: you are pointing at a snake]
nyingidowe(=kâ) *ba pâko=gu* *nyingidowe**(=kâ) *ba pâko=gu*
snake(=DIST) NEG good=NEG snake*(=DIST) NEG good=NEG
‘Snakes are not good’ (=kâ is optional) ‘The/that snake is not good’
Comment: “Without =kâ it means snakes in general.”

but the only thing she did not cook was crab. But I know they're wrong, the only thing she didn't cook is turtle.]

- [∅ [RC **ba** *i-epavi* *Mary=gu* *bugulo*] = *kâ* **ba** *nulei=gu*
NEG **ASP-cook.UV** *Mary=NEG* *yesterday=DIST* **NEG** *crab=NEG*
'What Mary did **not** cook yesterday is **not** crab'

Third, if argument focus constructions are clefts, this means their left portion is a relative clause. Therefore, we should expect them to be compatible with overt relativizers, at least optionally. Although this is not attested in the corpus, and so it is probably rare in usage, it is indeed possible:

- (319) [(*de=*) [RC *ki-epavi* *Mary* *bugulo*] = *kâ* *nulei* (241219)
REL:thing= **IPFV-cook.UV** *Mary* *yesterday=DIST* **crab**
'Mary was cooking CRAB yesterday',
lit. '[The thing that Mary was cooking yesterday] is crab'

Fourth, if focus constructions contain relative clauses, we should expect to find the usual Ā-extraction restriction, that is, the voice in the extraction site should depend on what argument is being focused. This is also borne out. Just like for ordinary relativization, subject focus requires AV (320), and object focus requires UV (321):

- (320) Subject focus: ✓ AV, ✗ UV (241219)
- a. [∅ [RC *i-epave* *nulei* *bugulo*] = *kâ* **Mary**
ASP-cook.AV *crab* *yesterday=DIST* **Mary**
'MARY cooked crab yesterday' (lit. '[Who cooked crab yesterday] is [Mary]')
 - b. * [∅ [RC *nulei* *i-epavi* *bugulo*] = *kâ* **Mary**
crab **ASP-cook.UV-3MIN** *yesterday=DIST* **Mary**
Intended: 'MARY cooked crab yesterday'³²

- (321) Object focus: ✓ UV, ✗ AV (241219)
- a. [∅ [RC *i-epavi* *Mary* *bugulo*] = *kâ* **nulei**
ASP-cook.UV *Mary* *yesterday=DIST* **crab**
'Mary cooked CRAB yesterday' (lit. '[What Mary cooked yesterday] is [crab]')
 - b. * [∅ [RC *Mary* *i-epave* *bugulo*] = *kâ* **nulei**
Mary **ASP-cook.AV** *yesterday=DIST* **crab**
Intended: 'Mary cooked CRAB yesterday'

We also find the same exceptions to the Ā-extraction restriction in the domain of focus constructions as in that of relativization. For example, UV-only verbs allow subject focus despite their being UV (322), unlike ordinary voice-alternating transitive verbs. Moreover,

32 This string is grammatical under an irrelevant parse, where *nulei* 'crab' is the head of an object RC:

(i) [**nulei** [RC *i-epavi*-∅ⁿ *bugulo*] = *kâ* *Mary* (241219)
crab **ASP-cook.UV-3MIN** *yesterday=DIST* *Mary*
'The crab that s/he_i cooked yesterday is Mary_j' (i.e., the crab's name is Mary)

non-canonical “UV_{gu}” clauses allow subject relativization despite being UV; this will be discussed in chapter 6, §6.4. In the same way, these clauses also allow subject focus (323).

- (322) Subject focus is grammatical with UV-only verbs³³: (250116)
- [Ø [RC lopwâ eângâ i-kää-päko-i-Øⁿ]] =nâ Mary, ba Sam=gu
 story that ASP-know.UV-good-UV-3MIN=DIST Mary NEG Sam=NEG
 ‘MARY knows that story well, not Sam’
- (323) Subject focus is grammatical from UV_{gu} clauses: (241219)
- [Ø [RC Ø_{12AUG} i-tu-usi-kâ-gu-de]=kâ ngä skul]]=kâ to school=DIST
 ASP-bring.UV-back.UV-DIR3-OBJ-12AUG
mekivaavee
teacher
 ‘THE TEACHER brought us back to school’

Finally, because the focused argument is not part of the same clause where the verb is, indeed the verb will not agree with it. However, we can push this further. As we know from our Word Order Puzzle, Äiwoo shows complex word order alternations depending on whether the subject and object are pronouns or lexical DPs, and what φ-features they have. The relevance of this is that focus constructions not only lack agreement with the focused argument, but their RC portion always looks like as if the focused argument was 3MIN. The details of the word order alternations are covered in chapter 6); for now, the following contrast will suffice. In (324a) we see an ordinary UV clause. In (324b), we see that the word order is different if the object is a 12AUG pronoun; this is a “UV_{gu}” type of clause, cf. chapter 6. Now, the subject (‘teacher’) is to the right of the future marker, and the object is also indexed by a suffixal marker on the verb (-gu-de).

- (324) a. Two 3MIN arguments: (250728)
- devalili** ku-potaa **mekivaavee**=kaa **bulaape**
 child IPFV-search.UV teacher=FUT tomorrow
 ‘The teacher will look for the child tomorrow’
- b. 3MIN subject, 12AUG object: different word order
- (**iude**) ku-potaa-**gu-de**=ngaa **mekivaavee** **bulaape**
 12AUG IPFV-search.UV-**OBJ-12AUG**=FUT teacher tomorrow
 ‘The teacher will look for us tomorrow’

33 There seems to be some degree of mixed behavior in this respect. Unlike with UV-only kää ‘know’ (322), subject focus was judged as impossible with the UV-only verbs *te* ‘see’ (ia) and *låwâle* ‘help’ (ib). Further research is needed to understand the nature of this discrepancy.

- (i) a. * [Ø [RC kuli i-te-kää-Øⁿ]] =nâ Mary, ba Sam=gu (250116)
 dog ASP-see.UV-DIR3-3MIN=DIST Mary NEG Sam=NEG
 Intended: ‘MARY saw the dog, not Sam’
- b. * [Ø [RC iso-mu ki-låwâle-kää-Øⁿ]=naa] =kâ Mary, ba Sam=gu
 mother-2MIN IPFV-help.UV-DIR3-3MIN=FUT=DIST Mary NEG Sam=NEG
 Intended: ‘MARY will help your mother, not Sam’

Crucially, if we want to focus the pronominal object in (324b), the structure we get looks quite different (325a). In fact, the RC portion of this sentence looks identical to (324a), and using the word order in (324b) is ungrammatical (325b). This only makes sense if there is no 12AUG pronominal argument in the RC-portion of this clause at all, and the object argument in this portion of the clause is a 3MIN nominal.

(325) **Focusing a 12AUG object: identical to sentences with two 3MIN arguments (324a)**

- a. [Ø [RC ku-potaa **mekivaavee**=kaa bulape]]=kâ **iude**
IPFV-search.uv teacher=FUT tomorrow=DIST **12AUG**
'The teacher will look for us tomorrow', (240919)
lit. '[Who the teacher will look for tomorrow] is [us]'
- b. * ku-potaa-**gu-de**=ngaa **mekivaavee** bulape=kâ **iude**
IPFV-search.uv-**OBJ-12AUG**=FUT teacher tomorrow=DIST **12AUG**
Intended: 'The teacher will look for us tomorrow'

4.C VERBS OSCILLATING BETWEEN UV-ONLY AND VOICE-SYNCRETIC: AN ACQUISITION PROBLEM?

We saw in §4.4.3 that in addition to UV-only verbs and voice-syncretic verbs, Äiwoo also has a small handful of verbs (at least *potaa* 'search, look for', *komaa* 'invite', *weevä* 'visit') that seemingly live a double life, showing traits of both classes. Like voice-syncretic verbs, these do have an AV form, identical to their UV one. However, like UV-only verbs, these verbs are allowed to remain in UV even in the context of subject extraction. I speculate that this kind of behavior might be the result of a poverty of the stimulus problem in the acquisition phase. The reasoning at a glance is the following. Telling apart UV-only verbs from voice-syncretic ones is a hard task, and it requires rather specific kind of evidence in the input. For more frequent verbs, a child learner has enough evidence in their input to settle this question, and will learn that certain verbs are UV-only (*kää* 'know', *te* 'see', etc.), and others exist in both voices but are morphologically syncretic (*nu* 'drink', etc.). For less-frequent verbs, the input available to a learner is too poor to settle the question, and as a result, speakers end up oscillating in how they have analyzed these verbs (see e.g. Han et al. 2007, 2016 for a similar proposal about the acquisition of string-vacuous head movement in Korean). I will now explore this idea in more detail.

Let us imagine a child learner of Äiwoo, who hears a single verb stem *V*, has learned its meaning, and somehow knows that there is no alternative stem *V'* spelling out a different voice. The learner is now tasked with settling the question of whether *V* is a UV-only verb, or if it is a voice-syncretic one. This can be also framed as a slightly a different question: does *V* have an AV, or not? If it does not have one, then clearly *V* is a UV-only verb (by definition). If it does have one, then the AV form of *V* must be identical to the UV form of *V*, so *V* is a voice-syncretic verb. However, it is not trivial to find an answer to the question

of whether an AV form exists or not. Let us consider now what kind of input a learner would need to settle this question.

4.C.1 VOICE-SYNCRETIC VERBS: HOW TO ESTABLISH THAT AN AV FORM EXISTS

First, and independently from what follows, note that UV is much more common in Äiwoo natural speech than AV, approximately 85 % vs. 15 % (Holmen 2020, Holmen & Næss 2025). As a result, the number of AV sentences in their input is already going to be rather low in the first place. Referring to chapter 3, §3.3, remember that to know whether a given verb form is in AV or UV, one can rely on three indicators: word order, prefixal φ -agreement, and voice concord on modifiers. The main issue is that due to independent facts about the language, even these morphological cues will largely be absent from a lot of natural speech data, thus leaving the question often unsettled. In other words: in the most usage-frequent contexts, AV and UV forms (and therefore, UV-only verbs and voice-syncretic ones) will look exactly identical, and it's only in rarer cases that the two cases will show a surface-visible difference.

The concrete reasons for this frequent morphological ambiguity are: (i) 3rd person arguments, especially 3MIN ones, are most often null, so that word order is not evident from the surface string; (ii) 3MIN subjects are more common than non-3MIN subjects, and 3MIN arguments have no overt verbal agreement marker; (iii) verb forms with no adverbial modifiers are more common than modified ones. Essentially, when a child is trying to determine whether the AV form of any verb exists, the only kind of evidence that is going to be definitely informative will need to be sentences with overt arguments, and/or non-3MIN subjects, and/or containing adverbial modifiers.

Concrete examples that illustrate this problem are given in the table in (326). For each sentence, the surface form of the whole clause is boxed in the first line. In the left column, I show the more common kind of sentences, consisting of only one word (the verb), with all null 3MIN arguments. In the right column, the sentences are richer, with overt arguments, plural subjects triggering agreement in AV, and an adverbial modifier (*eke* 'quickly'). Here, we can see that in the more common contexts, a verb like *nu* 'drink' looks exactly identical in both voices. Since all arguments are null, all φ -affixes are null, and there are no adverbs, both the AV and UV forms are just *inu* (326a,b). In this kind scenario, given that UV is so much more frequent than AV, it is perhaps not unreasonable to assume that both of these forms are UV, and the existence of an AV form is still uncertain. Instead, morphologically richer contexts provide sufficient information to see that this verb does indeed have both voices. Once enough additional material is present, the learner will know that there clearly exists an AV form of this verb *ilunueke* (326c), which is visibly different from its UV form *inuekenyii* (326d).

(326) Morphological ambiguities in voice-syncretic verbs:

	Common (poor) contexts: no overt evidence of AV	Rarer (rich) contexts: evidence of AV
AV:	a. <i>inu</i> $\emptyset_{\text{Subj}} \ i-nu \quad \emptyset_{\text{Obj}}$ ASP-drink.AV 'S/he drank (something)'	b. <i>pedevalili ilunueke nuwoi</i> $pedevalili \ i-lu-nu-eke \quad nuwoi$ children ASP-3AUG-drink.AV water 'The children drank water quickly'
UV:	c. <i>inu</i> $\emptyset_{\text{Obj}} \ i-nu-\emptyset^{\text{n}}_{\text{Subj}}$ ASP-drink.UV-3MIN 'S/he drank it'	d. <i>nuwoi inuekenyii pedevalili</i> $nuwoi \ i-nu-eke-nyii \quad pedevalili$ water ASP-drink.uv-quick-uv children 'The children drank the water quickly'

For more frequent lexical items, we can probably assume that the kind of sentences containing richer morphological clues are present in the input. Thus, the child will observe clear undisputed AV forms, and that in and on itself settles the question: this is a voice-syncretic verb.

4.C.2 UV-ONLY VERBS: HOW TO ESTABLISH THAT AN AV FORM DOES NOT EXIST

Even for frequent verbs, however, how could the child ever settle the question in the opposite direction, that is, establish that some frequent verb is a UV-only verb and not just a syncretic one? Conceivably, since AV is infrequent, they could simply not have heard the AV usage of that verb yet. To reach the intended conclusion, they would need to observe a form that is unambiguously UV (because the AV form would look different) in a syntactic context that would otherwise require the use of AV. Concretely, the only definitive evidence for analyzing a verb as a UV-only one will come from subject relativization contexts where at least some arguments are overt, the subject is plural, and/or there are adverbial modifiers on the verb inside the RC. Here, I assume that the learner has already acquired the Ā-extraction restriction, that is, AV is required under subject extraction and UV is required under object extraction³⁴.

To observe how it could work, consider the following examples. In the more frequent contexts with poor morphological clues, both subject and object extraction look exactly identical if the verb is voice-syncretic (326). The RC portion of these clauses (underlined in the surface string) is completely string-identical, thereby providing no information whatsoever to the learner about whether the verb *inu* 'drank' is AV or UV in either case.

³⁴ This is likely not an entirely innocent assumption, since we don't know anything about the timing of acquisition of different syntactic phenomena in Äiwoo.

- (326) a. Subject relativization:

devalili inu kunudâ
 [devalili [RC i-nu \emptyset_{Obj}]] ku-nudâ
 child ASP-drink IPFV-thirsty

'The child that drank (something) was thirsty'

- b. Object relativization:

nuwoi inu ba pâkogu
 [nuwoi [RC i-nu- \emptyset^n]] ba pâko=gu
 water ASP-drink-3MIN NEG good=NEG

'The water that he/she/it drank wasn't good'

As earlier, once the context contains richer material we can be sure that we are indeed looking at an AV form (*ilunueke* 'they drank quickly') in the case of subject extraction, and at a UV form (*inuekenyii* 'they drank quickly') in the case of object extraction:

- (327) a. Subject relativization:

pedevalili ilunueke nuwoi kilinudâ
 [pedevalili [RC i-lu-nu-eke nuwoi]] ki-li-nudâ
 children ASP-3AUG-drink.AV-quick water IPFV-3AUG-thirsty

'The children that drank water quickly were thirsty'

- b. Object relativization:

nuwoi inuekenyii pedevalili ba pâkogu
 [nuwoi [RC i-nu-eke-nyii pedevalili]] ba pâko=gu
 water ASP-drink.uv-quick-uv children NEG good=NEG

'The water that the children drank quickly was not good'

Only from these richer kind of examples a learner can ascertain that *nu* 'drink' does indeed follow the \bar{A} -extraction restriction, and that it thereby has both voices. Conversely, to determine that *luwa* 'take, grab' is a UV-only verb, a morphologically poorer example of subject extraction will not be enough, as this could also potentially be analyzed as a syncretic AV form:

- (328) Subject relativization (ambiguous between UV-only and voice-syncretic):

devalili iluwa kigiââ

'The child that grabbed it was happy'

- a. Parse if
- iluwa*
- is a UV form (exceptional non-VIA extraction
- \Rightarrow
- UV-only):

[devalili [RC \emptyset_{Obj} i-luwa [- \emptyset^n]] ki-giââ
 child ASP-take.UV-3MIN IPFV-happy

'The child that grabbed it was happy'

- b. Parse if
- iluwa*
- was a voice-syncretic AV form:

[devalili [RC i-luwa \emptyset_{Obj}] ki-giââ
 child ASP-take.AV IPFV-happy

'The child that grabbed it was happy'

Only richer data will let the learner establish that *luwa* is indeed a UV-only verb. In (329), we see what cannot be anything else than a UV form, and yet subject extraction is happening; therefore, an AV form must not exist.

- (329) **Subject relativization (morphologically unambiguous: UV-only verb)**

pedevalili buk iluwaekenyii kiligiââ

'The children that grabbed the book quickly were happy'

[*pedevalili* [RC *buk* *i-luwa-eke-nyi*-i]] *ki-li-giââ* (250728)

children book ASP-take.uv-quick-UV-3AUG IPFV-3AUG-happy

'The children that grabbed the book quickly were happy'

I assume that the number of sentences with these properties in the child input cannot be particularly high (although, to be fair, the learner does not need sentences containing *all* types of clues at the same time; even only one will do, presumably). Precisely because this is a matter of input data, we can expect that lexical frequency will have an effect. For more frequent verbs, the child will be provided with enough informative examples, so that they will reliably be able to acquire that 'know' and 'see' are UV-only, whereas 'drink' is voice-syncretic. On the other hand, for less frequent verbs, the input data will be too scarce to make this decision, and as a result, verbs like 'search', 'invite', and 'visit' will oscillate between the two classes.

5

CHAPTER

THE φ -INDEXING SYSTEM

5.1 INTRODUCTION

Throughout chapters 3–4, we have addressed some parts of our Word Order Puzzle and Extraction Puzzle. The general overview of different clause types and the \bar{A} -extractability of their arguments – indicated by superscripts – is repeated in (330)¹. Specifically, we have established a derivation that accounts for the word order and \bar{A} -extraction properties of AV, UV_{plain} and UV_{only} clauses (330a–c). The proposed syntactic argument positions are indicated by labelled brackets in the table header. The empirical focus of this chapter is the system that governs how φ -features are indexed on the Äiwoo verb. To introduce this, in this table I include two additional columns, reporting for each clause type (i) where φ -affixes occur on the verb, and (ii) what argument(s) they index.

(330) Overview of clausal word orders and \bar{A} -extractability profiles:

Clause type:	Word order:			Position of φ -affix:	Indexed argument:
	[CP	[TP	[vP		
a. AV:	S [✓]	φ_S -V.AV	=TAM	O ^X	prefix S
b. UV _{plain} :	O [✓]	V.UV	S ^X	=TAM	suffix S
c. UV _{only} :	O [✓]	V.UV	S [✓]	=TAM	suffix S
d. UV _{inā} :	O ^{NA}	V.UV	S [✓]	=TAM	suffix S
e. UV _{gu} :	O ^{NA}	V.UV	- π_O	=TAM	S [✓] O
f. UV _{SVO} :	S ^{NA}	V.UV	- π_S	=TAM	O ^{NA} suffix S
g. UV _{1>2} :	S ^{NA}	V.UV	- π_S - π_O ^{NA}	=TAM	suffix S+O

(✓/X: can/cannot be \bar{A} -extracted. NA: cannot be \bar{A} -extracted, but for orthogonal reasons.)

1 This iteration of the table includes an extra row, labelled “UV_{1>2}” (330g), that has not been shown before. This will be shown to be a subtype of UV_{SVO} (syntactically) in the next chapter.

(The presence of subject-indexing φ -suffixes in UV_{plain} , UV_{only} , and $UV_{in\hat{a}}$ clauses is not apparent from the word order schema in the table; we will get to this in due time.)

This chapter takes a temporary step back from directly trying to solve the two larger puzzles, and is largely descriptive instead. In order to precisely understand the word order of the different types of clauses in (330), we must first ascertain in what syntactic positions the subject and object are in each type. To do so, a necessary precondition is to determine the *syntactic nature* of the different φ -affixes we observe. For example, if we want to build a derivation for UV_{gu} clauses (330e), we must understand whether the “ π_O ” morpheme between the verb and the TAM particles is an agreement marker (and thus not too informative about word order), or some kind of pronominal clitic, or a full copy of the object in spec,TP before moving up to spec,CP.

This chapter both adds to and amends the currently available descriptive literature on this aspect of Äiwoo grammar (Næss 2006, 2015a,b, 2021b, 2024, Ross & Næss 2007, Næss & Boerger 2008, Roversi 2019, 2020, 2025b, a.o). The analysis of Äiwoo’s complex φ -indexing system proposed in this chapter will both inform, and be informed by, a global analysis of Äiwoo clausal syntax – something which earlier analyses did not integrate fully. Because Äiwoo is an understudied language, I take the time to empirically motivate my analyses when they diverge from the available description.

For the readers who are not interested in the fine morphological details of φ -indexing in Äiwoo, a cursory reading of this chapter should suffice. A very concise summary of the main claims is given at the end of the next subsection.

5.1.1 DOMAIN OF DISCUSSION

Some properties of Äiwoo’s φ -indexing system were already seen in the previous chapters. Just to offer a first-glance illustration of the variety and complexity of this system, consider the examples in (331). We can observe subject-indexing prefixes in two different positions (331a,b), but also subject-indexing suffixes combined with both OV(S) and SVO word order (331c,d), object-indexing suffixes (331e), and both at once (331f). For each clause, in the right margin I label what word order/clause type it exemplifies.

- (331) Examples of φ -indexing suffixes: (250728)
- a. (*iude*) ***de***-*ku-tou-mä=kaa* *sii* (AV)
12AUG **12AUG**-IPFV-bring.AV-DIR1=FUT fish
‘**We.INCL** will bring fish’
 - b. (*ijii*) *ku-**lu**-tou-mä=kaa* *sii* (AV)
3AUG IPFV-**3AUG**-bring.AV-DIR1=FUT fish
‘**They** will bring fish’
 - c. *sii ku-tu-mä-**i**=laa* (UV_{plain})
sii IPFV-bring.UV-DIR1-**3AUG**=FUT
‘**They** will bring the fish’

- d. (ijii) *ku-tu-mä***(-i)**=laa *iude* (UV_{SVO})
 3AUG IPFV-bring.UV-DIR1-**3AUG**=FUT 12AUG
 ‘They will bring us’
- e. (iude) *ku-tu-mä***(-gu-de)**=ngaa *John* (UV_{gu})
 12AUG IPFV-bring.UV-DIR1-**OBJ-12AUG**=FUT John
 ‘John will bring us’
- f. (iu) *ku-tu-mä***(-nee-mu)**=waa (UV_{1>2})
 1MIN IPFV-bring.UV-DIR1-**1MIN-2MIN**=FUT
 ‘I will bring you’

The second half of this introductory section (§5.1.2) is dedicated to presenting some theoretical grounding for the issues at matter: what φ -indexers are and can be, and what care we must take when distinguishing between morphophonology and morphosyntax (§5.1.2.1). Then, I confirm that all Äwoo φ -indexers are *morphophonologically* affixes (§5.1.2.2), and I discuss what kind of evidence we would need to determine the syntax of these affixes (§5.1.2.3). The following sections present the full paradigms (§5.2), and then I proceed to discuss how the *syntactic* properties of the prefixes and the suffixes are different. *Contra* the earlier literature cited above, I will argue that the various affixes in (331) are, despite their surface similarities, not syntactically homogenous. The prefixes (331a,b) are agreement markers, that is, the spell-out of φ -features copied by C via agreement (§5.3). The suffixes (331c–f), in contrast, do not instantiate agreement, but are actually pronouns in spec,TP, which get later phonologically reduced in the post-syntax (§5.4). Finally, §5.5 accounts for when pronouns are realized in their full vs. reduced forms.

5.1.2 AGREEMENT MARKERS, PRONOUNS, AND ALL THAT'S IN BETWEEN

Throughout this chapter, the goal will be to determine the *syntactic* nature and properties of the various forms boxed in (331). However, this task is often far from trivial when it comes to morphemes whose main role is to index the φ -features of an argument. For better-studied languages, the syntactic evidence is robust enough to make us confident in calling ‘we’ in English a pronoun (332a) and the suffix *-iamo* in Italian an agreement marker (332b), although they both index a 1PL subject.

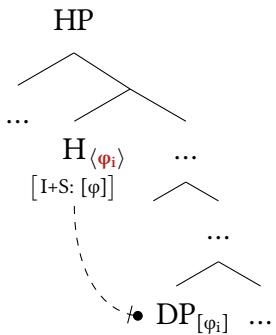
- (332) a. **[we]** *often eat fish*
 b. *mang***(-iamo)** *spesso il pesce* (Italian)
 eat-1PL often the fish
 ‘We often eat fish’

Even in familiar languages, of course, things are not always as straight-forward. For example, in both examples in (333), the form *lo* indexes a masculine 3sg direct object. However, in Italian it cannot co-occur with a direct object DP (333a), whereas in Spanish it can (333b). (See the vast literature about clitic doubling in Spanish; Jaeggli 1982, 1986 et seq.)

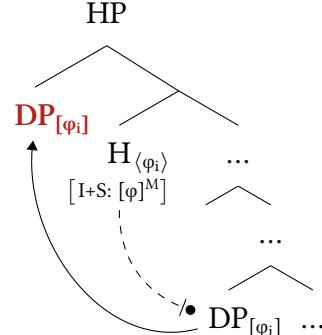
- (333) a. *lo=ved-iamo sempre (*lui)* (Italian)
 3SG.M=see-1PL always him
 'We always see him'
- b. *siempre lo=ve-mos a él* (Spanish)
 always 3SG.M=see-1PL DOM him
 'We always see him' (Juan Vásquez, p.c.)

The morphemes highlighted in (332)–(333) are generally held to reflect three possible underlying syntactic configurations. Following Akkus et al. (2025) I will use the umbrella term ‘ φ -indexer’ to neutrally subsume all three, which I proceed to discuss below. The two most clear-cut ones are ‘agreement markers’ (334a) and ‘pronouns’ (334b); in both trees, the element that gets spelled out as the surface form is highlighted in red. In the first case (334a), the φ -indexer we see on the surface is the spell-out of features that have been copied onto a functional head by a probe (often *v*, *T*, *C*, etc.) from a nominal. In the second case (334b), the φ -indexer is simply a fully phrasal nominal constituent, occupying a specifier position (I represent it here as having moved to its surface position, but this is immaterial, and the same constituent in its base-generated position would still be a pronoun). Notationally, I represent features inherently present on a nominal with brackets ($[\varphi_i]$), and features copied onto a probe via agreement in angle brackets (as elements in an ordered list: $\langle \varphi_i, \varphi_j, \dots \rangle$).

(334) a. Agreement marker:



b. Pronoun:

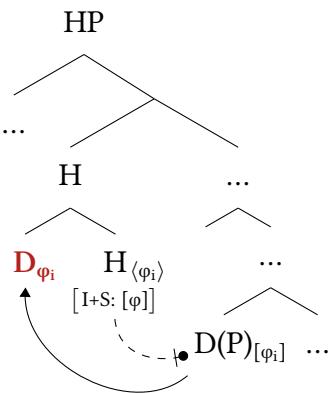


I represent pronouns here as having the label ‘DP’ for simplicity, although there is a rich literature about the categorial and/or size differences between pronominal arguments and DPs containing a lexical noun (e.g. ‘they’ vs. ‘the children’). See a.o. Cardinaletti & Starke (1999), Déchaine & Wiltschko (2002), and Sichel & Toosarvandani (2024), and the discussion in §5.5 and chapter 6 for Äiwoo pronouns specifically.

Finally, and figuratively somewhere in between the two previous options, a φ -indexer could be a (morphosyntactic) clitic. Although this term is used in at times somewhat confusing and contradictory ways across the literature (see e.g. Julien 2007b, Bermúdez-Otero & Payne 2011, a.o.), it is generally used to identify some kind of reduced nominal structure, such as a D head rather than a fully phrasal DP, often forming a complex head (at some level of the derivation) with another functional head in the clausal extended projection (e.g. *v*, *T*, *C*). The literature about the (morpho)syntax of pronominal clitics

is all too vast to be summarized here; see [Anagnostopoulou \(2017\)](#) for a recent detailed overview. What is different (among many things) between various approaches to the syntax of clitics is how one gets to this configuration, derivationally speaking. For one family of theories (see e.g. [Rezac 2008, Roberts 2010](#)), the clitic – represented as a D head in (335) – is merged directly in its surface position in the narrow syntax, adjoined to the probing head in question, as the result of a step of head-movement².

(335) Narrow-syntactic “cliticization”:

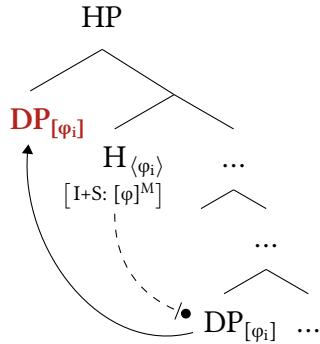


I have labelled this descriptively “narrow-syntactic cliticization”, to convey the idea that the clitic is generated as such already in the syntactic component. In an alternative approach, which we could call “post-syntactic cliticization” (see e.g. [Harizanov 2014](#), a.o.), what we have in the narrow syntax is instead a fully phrasal nominal constituent in a specifier position (334b), here repeated as (336a). It is only later, in the post-syntactic component, that this nominal is morpho(phono)logically reduced (336b), through morphological operations such as M[orphological]-merger, or Local Dislocation, or other similar concepts ([Marantz 1988, Embick & Noyer 2001, Matushansky 2006, Embick 2007](#), a.o.).

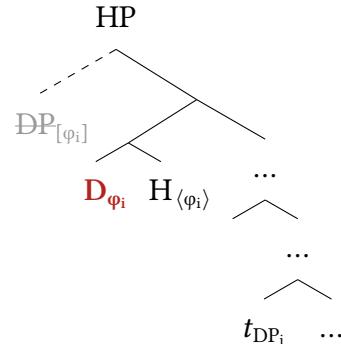
² Depending on the specific approach, the element undergoing movement/cliticization could be either the entire argument, or a smaller part of the whole argument (the “big DP hypothesis”; [Torrego 1995, Uriagereka 1995, Belletti 1999, 2005, Cecchetto 2000, Arregi & Nevins 2012](#), a.o.). I also abstract away from whether the whole DP is pronounced in its base position (thus resulting in “clitic doubling”, i.e., the simultaneous pronunciation of both a clitic and its full argument associate) or not.

(336) Post-syntactic cliticization:

a. In the narrow syntax:



b. Post-syntactic reduction:



In this chapter, I will argue that the *suffixal* φ -indexers in Äiwoo reflect precisely this chain of events: in the narrow syntax they are pronouns, occupying spec,TP, and later in the derivation they are morphologically reduced (see §5.5). However, to avoid confusion, I will refrain from using the terms ‘clitic’ and ‘cliticization’, and will instead stick to ‘reduced pronoun’, ‘reduction’, and variants thereof. In a sense, there is no clear way in which these φ -indexers are ‘clitics’: syntactically, they are fully pronouns (albeit phonologically reduced), and even morphophonologically, they are not clitics but affixes. I will now proceed to substantiating this last claim.

5.1.2.1 (MORPHO)PHONOLOGY IS NOT (MORPHO)SYNTAX

Given the space of analytical options we just saw, identifying the underlying syntax of all the various Äiwoo φ -indexers in (331) is not a straightforward matter. Indeed, a vast literature has approached this problem considering rich data from many different languages, and trying to develop diagnostics and tests that will allow us to settle this matter for any given φ -indexer (see, among others, Anagnostopoulou 2006, 2016, 2017, Woolford 2008, Nevins 2011, Kramer 2014, Harizanov 2014, Compton 2016, Baker & Kramer 2018, Yuan 2018, 2020, 2021, Taghipour & Kahnemuyipour 2021, Paparounas & Salzmann 2024, Saab 2024). However, a lot of this literature suffers from a long-recognized overarching conceptual issue: confounding (morpho)phonological properties with (morpho)syntactic ones (cf. e.g. Yuan 2021). In a non-lexicalist framework like Distributed Morphology, the various syntactic configurations showcased in (334)–(336) are not guaranteed in any way to be consistently reflected by distinct and non-overlapping morphophonological outcomes. In other words, the mapping between syntax and morphology is not one-to-one but many-to-many, allowing for various types of mismatches. Therefore, although a morpheme’s morphophonological properties may be informative as an initial heuristic, they cannot be relied on exclusively as diagnostics for syntactic structure. For more discussion of this issue, see Yuan (2021) and Akkuş et al. (2025).

One example of a classic criterion used to distinguish agreement markers from clitics is the claim that the former may show allomorphy and idiosyncratic morphological

irregularities, whereas the latter should not (Zwicky & Pullum 1983; note that they use the term ‘affix’ for what I’m calling ‘agreement marker’ here). Nevins (2011) criticizes this for identifying a frequent correlation rather than a real predictive factor, and weakens this into a one-way prediction. He considers the specific case of interactions between T and φ -indexers. For him, clitics should be tense-invariant, whereas agreement markers may show tense-conditioned allomorphy. For example, in Italian subject agreement markers show tense-conditioned allomorphy. In (337), the 1PL subject suffix is *-iamo* in the present tense (337a), but it’s *-emo* in the future (337b). The object clitic *lo*=, on the other hand, remains the same.

- | | | |
|--|--|------------|
| (337) a. <i>lo=ved-i amo</i>
<small>3SG.M=see-1PL(.PRS)</small>
<small>‘We see him/it’</small> | b. <i>lo=ved-r-e mo</i>
<small>3SG.M=see-FUT-1PL</small>
<small>‘We will see him/it’</small> | (IItalian) |
|--|--|------------|

Nevins’s (2011) prediction is one-directional in the sense that if we see allomorphy, we can conclude that we are looking at agreement, but we are not allowed to infer anything based on the lack of allomorphy. However, as pointed out in Yuan (2021), this proposal fails in the other direction too, due to the same issues that Nevins criticizes in Zwicky & Pullum’s (1983) work. Although tense-(in)variance might be a frequent correlation and thereby a useful heuristic, nothing in the theory really predicts this in a principled way. The syntactic structure of clitics (335)–(336b) *does allow* the triggering of allomorphy between the D head and e.g. T³. And indeed, Yuan (2021) points to the existence of counterexamples: in several Irish varieties, pronominal clitics adjacent to verbs may constitute triggers for allomorphy on both the clitic and/or the verb (see Bennett et al. 2019). As a further source of counterexamples, Akkuş et al. (2025) examine the complex syntax of φ -indexing in Soriani Kurdish (and other Kurdish varieties), and they show that the indexers’ phonological status (affix vs. morphophonological clitic) is frequently mismatched with their syntactic nature (agreement marker vs. a pronoun).

To reiterate, the general problem here is that determining whether a φ -indexer is an agreement marker or a pronoun (or a clitic) is a *syntactic* matter. Therefore, this question should be settled on syntactic grounds. Morphophonological considerations may be useful heuristics and clues, but given the many-to-many mapping between syntax and phonology, they cannot be relied on exclusively.

5.1.2.2 MORPHOPHONOLOGICALLY, ALL ÄIWOÖ φ -INDEXERS ARE AFFIXES

Before moving on to the discussion of the syntactic properties of the Äiwoo φ -indexing system, let us now settle the morphophonological side of the matter. This is relatively easy: all φ -indexers in Äiwoo (331) are simply affixes. To see this, it is instructive to compare them to the TAM particles, which are morphophonological clitics (which should not be

3 For discussion about the locality constraints on allomorphy, specifically in Distributed Morphology, see Bobaljik (2000, 2012), Embick (2010), Svenonius (2012), Moskal (2015), Moskal & Smith (2016), Merchant (2015), Harðarson (2018), Choi & Harley (2019), Ganenkov (2020), and Paparounas (2023), a.o.

confused with morphosyntactic clitics, as defined in (335) above). First, the TAM particles show a lower degree of “selection” (Zwicky & Pullum 1983). The future marker =Caa is shown here attaching to verbs (338a), nominals (338b), quantifiers (338c), other TAM particles (338d), and certain adverbials (338e,f), although this last part of their distribution is less well understood. Both prefixal and suffixal φ -indexers, on the other hand, can only ever attach to a verb (339)⁴.

(338) TAM particles can attach to different types of hosts:

(250728)

- a. *Anna ki-vängä =kaa sii*
Anna IPFV-eat.AV=FUT fish
'Anna will eat fish'
- b. *sii ki-ngä Anna=kaa*
fish IPFV-eat.UV Anna=FUT
'Anna will eat the fish'
- c. *sii ki-ngä Anna=dä =naa*
fish IPFV-eat.UV Anna=some=FUT
'Anna will eat some (of the) fish'
- d. *nuwopa eāngā ki-ve-no-to =waa*
house that IPFV-buy.UV-1MIN=PRF=FUT
'I will buy/will have bought that house'
- e. *sii i-tâbu-mu=waa ponu lâwâu =kaa i-ki-epave=kâ* (231109)
fish ASP-cut.UV-2MIN=FUT then ADV=FUT 1MIN-IPFV-cook.AV=DIST
'I will cook after you cut the fish'
(Perhaps more literally: 'You will cut the fish, and then I will cook')
- f. *Mary i-epave sup bugulo, eä Anna bulaape =kaa* (250213)
Mary ASP-cook.AV soup yesterday and Anna tomorrow=FUT
'Yesterday Mary cooked soup, and tomorrow Anna will'

(339) Φ -indexers can only attach to verbs:

(250728)

- a. *[de-]ki-vängä=kaa sii*
12AUG-IPFV-eat.AV=FUT fish
'We will eat fish' (any other position for *de-* is ungrammatical)
- b. *sii ki-ngä [-de]=dä=naa*
fish IPFV-eat.UV-12AUG=some=FUT
'We will eat some (of the) fish' (any other position for *-de* is ungrammatical)

Moreover, the φ -indexers show a higher degree of phonological boundedness to their host than the TAM particles, thereby supporting the idea that the former are morphophonological affixes whereas the latter are morphophonological clitics. For example, remember that certain morphemes in Äiwoo show a vowel alternation reminiscent of vowel harmony (chapter 2, §2.4). The 3rd person directional is realized with a back vowel -kâ when

4 See below for a discussion of the case where φ -suffixes are attached to possessive forms.

the following syllable contains a back vowel, and with a front vowel *-kä* otherwise. Thus, when followed by the 1MIN and 2MIN suffixes *-no* and *-mu*, the directional is realized as *-kä* (340a,b). In contrast, the 12AUG and 3AUG suffixes are *-de* and *-i*, so preceding these, the directional is realized as *-kä* (340c,d); the mismatched options are ill-formed. Crucially, however, φ -indexers obligatorily trigger this phonological process, whereas the TAM particles only optionally do so. In (341) we see *=to* and *=gu*, both containing back vowels, and in both cases the directional can be realized in its front vowel form *-kä*.

- (340) **Φ -indexers trigger vowel harmony on *-kä* DIR3:** (250728)

- a. *sii ku-tu*[-**kä-no**]=*ngaa*
fish IPFV-bring.UV-**DIR3-1MIN=FUT**
'I will bring the fish' (**kutukäno=ngaa*)
- b. *sii ku-tu*[-**kä-mu**]=*waa*
fish IPFV-bring.UV-**DIR3-2MIN=FUT**
'You will bring the fish' (**kutukämu=waa*)
- c. *sii ku-tu*[-**kä-de**]=*ngaa*
fish IPFV-bring.UV-**DIR3-12AUG=FUT**
'We will bring the fish' (**kutukäde=ngaa*)
- d. *sii ku-tu*[-**kä-i**]=*laa*
fish IPFV-bring.UV-**DIR3-3AUG=FUT**
'They will bring the fish' (**kutukäi=laa*)

- (341) **TAM particles only optionally trigger vowel harmony on *-kA* DIR3:**

- a. *i-tou*[-**kä-to**] *dekilingä* (250717)
1MIN-bring.AV-**DIR3=PRF** food
'I have brought food' (optionally also *itoukä-to*)
- b. *ba i-tou*[-**kä-gu**] *dekilingä*
NEG 1MIN-bring.AV-**DIR3=NEG** fish
'I haven't brought food' (optionally also *itoukä-gu*)

Furthermore, in certain paradigms, at least some of the suffixes show idiosyncratic allomorphic interactions with the stem, providing thus further evidence for their morphophonological nature as affixes. Roversi (2025b) shows that all possessive elements in Äiwoo are, despite their looks, UV verbs, and that the paradigm of suffixed φ -indexers we find on possessives is thus – syntactically – completely parallel to what we see on UV verbs. For example, consider the paradigms in (342); I omit the unit-augmented forms for simplicity. The suffixed paradigm on the UV verb *ngä* 'eat' is the standard one (see §5.2.1). On the inalienably possessed form 'mother' and the two possessive classifiers for food items and tools/utensils⁵, most of the suffixed exponents are the same as those found on a UV verb. However, we also see no consistent exponent for 1MIN, and a variety of stem alternation patterns conditioned by the presence of certain suffixes but not others.

5 See Roversi (2025b) for details about the possessive system of Äiwoo.

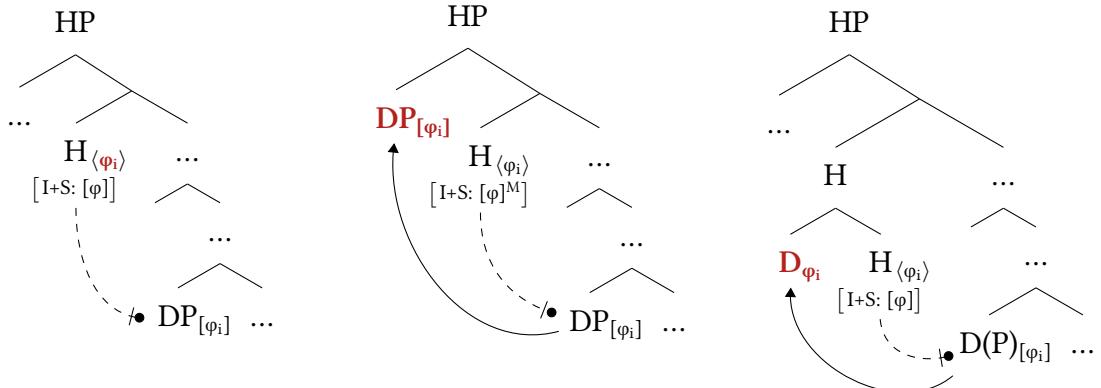
(342)	UV verb 'X is eating'	'mother'	POSS.FOOD 'X's (food)'	POSS.TOOL 'X's (tool)'
1MIN	ki- ngä-no	iso	nugo	nugu
12MIN	ki- ngä-ji	iso-ji	nä-ji	nugu-ji
2MIN	ki- ngä-mu	iso-mu	na-mu	nugu-mu
3MIN	ki- ngä- Ø ⁿ	isä-Ø ⁿ	na-Ø ⁿ	nogo-Ø ⁿ
1AUG	ki- ngä-ngopu	iso- ngopu	nugo- ngopu	nugu- ngopu
12AUG	ki- ngä-de	iso-de	nä-de	nugu-de
2AUG	ki- ngä-mi	iso-mi	nä-mi	nugu-mi
3AUG	ki- ngä-i	isä-i	na-i	nogo-i

To summarize: all φ -indexers in Äiwoo can only attach to verbs and no other class, and they show a high degree of morphophonological boundedness to their host (for example, they can trigger vowel harmony and suppletion). Therefore, all Äiwoo φ -indexers are *morphophonological affixes*.

5.1.2.3 SYNTACTIC EVIDENCE: CO-OCCURRENCE WITH ARGUMENTS

As discussed, however, these affixes' morphophonological properties can be a useful heuristic as to their *syntactic* nature, but cannot – in a modular theory with Late Insertion – unambiguously determine it. To establish what their syntax is, we need syntactic evidence. Following Akkuş et al. (2025) (but really going back at least to Rizzi 1986), I propose that a strong piece of syntactic evidence comes from patterns of co-occurrence (or lack thereof) between φ -indexers and nominal arguments in the clause. Consider again three of the structures described above, corresponding respectively to agreement markers (343a), pronouns (343b), and clitics formed in the narrow-syntax (343c). (Recall that unlike narrow-syntactic clitics, post-syntactically reduced pronouns are underlyingly the same as (343b), and only get reduced to a structure like (343c) in the post-syntax.)

- (343) a. Agreement marker: b. Pronoun: c. (Narrow-synt.) clitic:



The structural differences between these three configurations make specific predictions as to what we should expect in terms of two aspects: (i) co-occurrence between a φ -indexer

and a (coreferential, at least possibly overt) argument; (ii) whether or not the φ -indexer in question occupies a specifier position. I will argue for the breakdown in (344).

(344)	Does it co-occur with an argument?	Does it occupy a specifier position?
Agreement:	yes	no
(Narrow-syntactic) clitics:	might	no
Pronouns:	no*	yes

* *Modulo* the possibility of multiple copy spell-out.

Let us consider the first column. First, agreement markers (343a) ought to be able to co-occur with their argument associate, which (*modulo* independent factors) should in principle be able to be overt. They are, after all, only the spell-out of features copied onto a functional head, so there should be no complementary distribution between these and the nominal whose features have been copied. A pronoun (343b), on the other hand, should not co-occur with a DP argument, since the pronoun itself is the argument in question. The only scenario where a genuine pronoun could co-occur with a coreferent overt argument is in the case of multiple copy spell-out. For clitics, the landscape is slightly more complex, since they are a “nominal” in some sense, but a rather reduced one (just a D head). From the whole literature about clitic doubling (see e.g. Anagnostopoulou 2017) we know that co-occurrence should in principle be possible: the nominal head spelling out the clitic may be pronounced together with its fully phrasal DP associate.

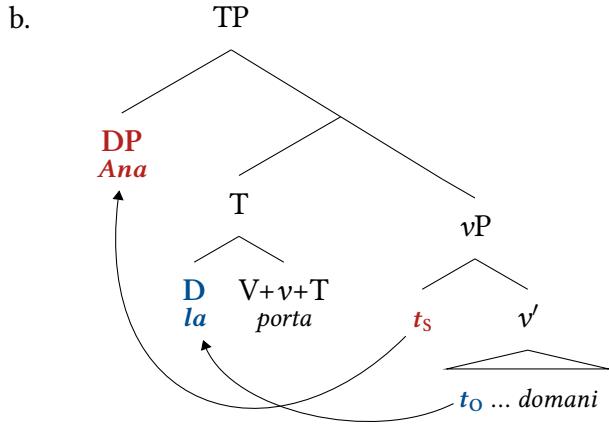
Another syntactic difference between the three kinds of φ -indexers is whether or not they occupy a specifier position. Agreement markers and (narrow-syntactic) clitics do not, while pronouns do, since they are a fully phrasal constituent (even though they might be reduced later, post-syntactically). This difference might result in different word order effects, especially in a language with rather strict word order, like Äiwoo, where certain specifier positions are required to be filled by a constituent (for example spec,CP, resulting in a V2 effect, or spec,TP, etc.). Because agreement markers and clitics don't occupy a specifier position, in principle they will allow a specifier adjacent to them to be filled by some other constituent, whereas this should be impossible with pronouns.

For example, Italian object clitics do not fill a specifier position. In (376a) the clitic *la* ‘her’ is not occupying spec,TP, and therefore, the subject can still raise to that position⁶.

(345) Italian object clitics do not occupy a specifier position:

- a. [TP *Ana* *la=porta*] [VP *ts* *to* *domani*
 Ana 3SG.F=brings] tomorrow
 ‘Ana will bring her tomorrow’

⁶ I am presenting a rather simplified view here for the sake of the argument, making the assumptions that (i) the finite verb is in T; (ii) subjects are base-generated in spec,vP; (iii) the preverbal subject position is spec,TP. This is almost certainly too simplistic, cf. the discussion in e.g. Cardinaletti (1997, 2004) and references therein. For simplicity, I am not considering the possibility of multiple specifiers, or that the site of cliticization is a lower head than the one hosting the subject.



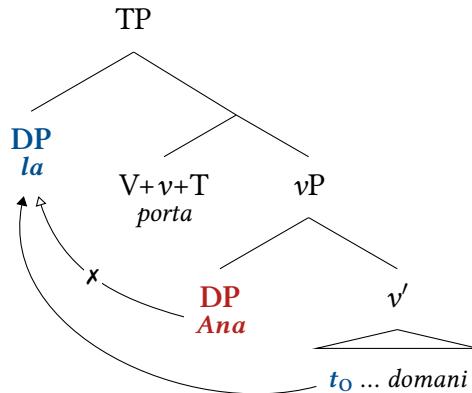
If the morpheme *la*, on the other hand, was a full pronoun, it would occupy spec,TP. We might then expect that this would block raising of the subject, contrary to fact (346)⁷.

(346) Cliticization of the object does not block raising of the subject:

- a. * [TP *la=porta* [vP *Ana* *to* *domani*
3SG.F=brings Ana tomorrow]

Intended: 'Ana will bring her tomorrow' (ungrammatical under information-structural neutral prosody)

- b. Derivation that would generate the ungrammatical string:



In the rest of this chapter, I will argue in favor of the following claims: (i) the Äiwoo φ-indexers are all morphophonological affixes, but they are *syntactically heterogenous*: (ii) the φ-prefixes are pure agreement markers; (iii) the φ-suffixes are pronouns in spec,TP, spelled out in a phonologically shorter form due to post-syntactic operations.

⁷ Note that post-verbal subjects in Italian are possible under certain discourse conditions, and with marked prosody. The VSO string in (346) is intended as ungrammatical when outside of these particular contexts, with neutral prosody.

5.2 Φ -PREFIXES AND φ -SUFFIXES

5.2.1 THE PARADIGMS

In this section I will present the two main paradigms of affixal φ -indexers: the prefixal and suffixal (subject) markers. These have been described in the present form since Næss (2006). As described in chapter 3, the prefixal markers are used in AV and for intransitive verbs, whereas the suffixal ones are used in UV (and CV), that is, whenever a subject DP would occupy spec,TP – the position between the verb and the TAM markers. In (347)–(348) I illustrate the complete person/number paradigms, using the voice-syncretic verb *potaa* ‘search, look for’ (§4.4.4), for maximal minimality between the paradigms.

A few morphological details are worthy of comment. 1st person exclusive and 3rd person forms are different between the two paradigms, whereas 1st+2nd (1st person inclusive) and 2nd person forms have identical exponents – *modulo* the different position, of course. 3MIN is null in both paradigms, but the existence of a 3MIN suffix is revealed by the fact that the immediately following future particle =*Caa* takes its /n/-initial allomorph, instead of the default /k/-initial form (348g); cf. AV *ku-potaa=kaa* vs. UV *ku-potaa-∅=naa*⁸. It is impossible to tell whether or not a prefixal 3MIN marker exists, and what its position would be (347g). Finally, as for 3AUG, the prefixal marker (347h) is to the right of the aspect prefix, while all other prefixes are to its left. As discussed in §3.5.5, I take this to be just a shallow morphological idiosyncrasy, and not reflective of a deeper syntactic difference.

(347) Prefixes:

(250728)

- | | |
|--|---|
| <p>1st person (exclusive):</p> <ul style="list-style-type: none"> a. i-<i>ku-potaa=kaa</i> <i>sii</i>
1MIN-IPFV-search.AV=FUT fish
'I will look for fish' b. me-<i>ku-potaa=kaa</i> <i>sii</i>
1AUG-IPFV-search.AV=FUT fish
'We.EXCL will look for fish' <p>1st+2nd person (inclusive):</p> <ul style="list-style-type: none"> c. ji-<i>ku-potaa=kaa</i> <i>sii</i>
12MIN-IPFV-search.AV=FUT fish
'You and I will look for fish' d. de-<i>ku-potaa=kaa</i> <i>sii</i>
12AUG-IPFV-search.AV=FUT fish
'We.INCL will look for fish' | <p>2nd person:</p> <ul style="list-style-type: none"> e. mu-<i>ku-potaa=kaa</i> <i>sii</i>⁹
2MIN-IPFV-search.AV=FUT fish
'You.SG will look for fish' f. mi-<i>ku-potaa=kaa</i> <i>sii</i>
2AUG-IPFV-search.AV=FUT fish
'Y'all will look for fish' <p>3rd person:</p> <ul style="list-style-type: none"> g. <i>ku-potaa=kaa</i> <i>sii</i>
IPFV-search.AV=FUT fish
'S/he will look for fish' h. <i>ku-lu</i>-<i>potaa=kaa</i> <i>sii</i>
IPFV-3AUG-search.AV=FUT fish
'They will look for fish' |
|--|---|

⁸ Remember that the initial consonant of this particle varies depending on the host immediately to its left. The CV marker =*Cā* and the proximal/distal particles =*Ce*/=*Cā* follow the same pattern. See chapter 2, §2.6.3.2 and Roversi (2019: 24–25), Roversi (2020: 108) for details.

(348) Suffixes:

1st person (exclusive):

- a. *sii ku-potaa* [-**no**]=*ngaa*
fish IPFV-search.UV-1MIN=FUT
'I will look for the fish'
- b. *sii ku-potaa* [-**ngopu**]=*waa*
fish IPFV-search.UV-1AUG=FUT
'We.EXCL will look for the fish'

1st+2nd person (inclusive):

- c. *sii ku-potaa* [-**ji**]=*ngaa*
fish IPFV-search.UV-12MIN=FUT
'You and I will look for the fish'
- d. *sii ku-potaa* [-**de**]=*ngaa*
fish IPFV-search.UV-12AUG=FUT
'We.INCL will look for the fish'

For completeness, I include here the unit-augmented forms. Informally speaking, these can be thought of as the equivalent of a dual in a minimal-augmented system. Semantically, their reference is the same as the corresponding minimal form "plus one" (cf. the English translations; see chapter 2, §2.5). Morphologically, they are consistently built with the augmented form and an additional suffixal marker *-le*, for both the prefixal and the suffixal paradigm. I will not focus on these forms in what follows, and leave the development of a full model of them to future research.

(349) Prefixes:

- a. **(me-)***ku-potaa* [-**le**]=*naa*
1AUG-IPFV-search.AV-UA=FUT
'We two.EXCL will look for'
- b. **(de-)***ku-potaa* [-**le**]=*naa*
12AUG-IPFV-search.AV-UA=FUT
'We three.INCL will look for'

(250728)

2nd person:

- e. *sii ku-potaa* [-**mu**]=*waa*
fish IPFV-search.UV-2MIN=FUT
'Y'all will look for the fish'
- f. *sii ku-potaa* [-**mi**]=*aa*
fish IPFV-search.UV-2AUG=FUT
'You.PL will look for the fish'

3rd person:

- g. *sii ku-potaa* [-**Øⁿ**]=*naa*
fish IPFV-search.UV-3MIN=FUT
'S/he will look for the fish'
- h. *sii ku-potaa* [-**i**]=*laa*
fish IPFV-search.UV-3AUG=FUT
'They will look for the fish'

(250728)

- c. **(mi-)***ku-potaa* [-**le**]=*naa*
2AUG-IPFV-search.AV-UA=FUT
'You two will look for'
- d. *ku-***(lu-)***potaa* [-**le**]=*naa*
IPFV-3AUG-search.AV-UA=FUT
'They two will look for'

⁹ The 2MIN prefix oscillates between *mu-* and *mi-*; my consultant typically accepts *mu-* as a perfectly good alternative even when he produces *mi-* first himself. Both 2AUG affixes, in contrast, are always *mi-/mi*, and never **mu-/mu*. The vowel oscillation in 2MIN might be due to the process of high vowel deletion (chapter 2, §2.4), whereby both *mi-* and *mu-* end up being pronounced in a near-identical way [m^j~m^w]. As an alternative or additional factor, this oscillation might be due to a vowel-harmony-like process that also affects the prefixes *ki~ku-* IPFV and *li~lu-* 3AUG (chapter 2, §2.4). Impressionistically, the IPFV and 3AUG prefixes undergo this process fairly consistently, whereas this is much less the case for the 2MIN prefix. I leave it to future research to determine the exact nature of this alternation. Note that the 2MIN suffix (348e), on the contrary, is always realized as *-mu*, and never as **-mi*.

- (350) **Suffixes:** (250728)

 - a. *ku-potaa* **-ngo-le** =naa
IPFV-search.UV-1AUG-UA=FUT
'We two.EXCL will look for (it)'
 - b. *ku-potaa* **-de-le** =naa
IPFV-search.UV-12AUG-UA=FUT
'We three.INCL will look for (it)'
 - c. *ku-potaa* **-mi-le** =naa
IPFV-search.UV-2AUG-UA=FUT
'You two will look for (it)'
 - d. *ku-potaa* **-i-le** =naa
IPFV-search.UV-3AUG-UA=FUT
'They two will look for (it)'

5.2.2 PREFIXES AND SUFFIXES ARE SYNTACTICALLY DIFFERENT: A PREVIEW

Beyond the morphological differences between the two paradigms (position and exponents), I will argue that there is an important *syntactic* difference between them. As anticipated, the core argument relies on whether or not these markers can co-occur with a corresponding overt subject argument. The generalization is stated in (351).

- (351) **Co-occurrence patterns:**

 - a. The **prefixal** φ -indexers **must** co-occur with a subject argument, which may optionally be overt.
 - b. The **suffixal** φ -indexers **can't** co-occur with an (optionally) overt subject argument [to be revised].

In §5.3 I will show the evidence for the first part of this generalization (351a). In §5.4 I will do the same for (351b). We will then see how this generalization, although useful, is not precise enough, and we will revise it accordingly.

5.3 THE φ -PREFIXES: OBLIGATORY CO-OCCURRENCE

5.3.1 THE DATA

To show co-occurrence (or lack thereof) between a verbal φ -prefix and an overt subject, only certain person/number categories will be useful. Specifically, we cannot use 3MIN (either pronouns or lexical DPs), because there's no overt verbal prefix. In contrast, 3AUG is informative. Here, we can see that when the subject is plural – either a lexical DP (352a) or a pronoun (352b) – the 3AUG prefix *lu-* is obligatory. When the subject is pronominal (352b), a null form is the most frequent realization for the subject pronoun, but an overt pronoun can be used under particular discourse conditions. In either case, if the verbal agreement prefix is absent, the sentence is not acceptable (352c).

- c. * *mikilitei/ijii/Ø_{3AUG}* *ku-* *tou-mä=kaa* *sii*
 fishermen/3AUG IPFV-bring.AV-DIR1=FUT fish
 Intended: ‘The fishermen/they will bring fish’

The same pattern replicates for non-3rd person subjects. Like the subject pronoun in (352b) above, the 12AUG subject pronoun in (353a) can be optionally realized (although it will most frequently be null). The prefixal marker, however, cannot be dropped under any circumstance (353b).

- (353) a. *Ø_{12AUG}/iude de-ki-vängä=kaa sii* (250728)
 12AUG 12AUG-IPFV-eat.AV=FUT fish
 ‘We.INCL will eat fish’
- b. * *Ø_{12AUG}/iude* *ki-vängä=kaa sii*
 12AUG IPFV-eat.AV=FUT fish

5.3.2 AN ARGUMENT FOR THE PRESENCE OF NULL PRONOUNS

In the examples above, I have based my analysis on the assumption that when we don’t see an overt pronoun in the preverbal position (spec,CP), there actually is a null one present; that is, Äiwoo has “pro-drop”, at least in this position. A brief description of null argumenthood in Äiwoo was given in chapter 2, §2.5.4. Since Äiwoo is a underresearched language, and the available descriptive literature does not consider the possibility of null arguments (Næss 2006 et seq.), at this juncture I want to motivate this carefully. .

5.3.2.1 SHOWING THE EXISTENCE OF NULL PRONOUNS IN SPEC,CP

One “useful” aspect of Äiwoo grammar in this respect is what I have claimed to be its V2 property (chapter 3): one nominal argument – and only one – must be present before the verb. However, one reason why Äiwoo was never described as V2 in earlier literature is that descriptively, verb-*initial* strings do occur – and in fact extremely frequently so, e.g. (353a) in the version without *iude* ‘12AUG’. We should then ask the question of whether our V2 analysis is simply off track, or whether there is a null pronoun filling the spec,CP position and thus “counting” for the V2 effect. I will argue for the second answer.

The crucial argument is based on how Äiwoo syntax behaves when the preverbal position *cannot* be filled by something. The main piece of evidence comes from reflexive sentences. Although a full analysis of reflexivity and anaphors in Äiwoo lies outside the scope of this work, I will use some of their word order properties as an argument. Äiwoo does not have morphologically dedicated anaphors, and simply uses the standard 3MIN pronoun *inä* (or more generally, the ordinary pronoun for any φ -category, i.e. *iu* 1MIN for ‘myself’, *iumu* 2MIN for ‘yourself’, etc.). In this respect, Äiwoo is like other languages where anaphors and (non-reflexive) pronouns are not morphologically distinct, such as Frisian, Old English, etc. (see e.g. Reuland & Reinhart 1995, van Gelderen 2000). However, despite this pronoun’s morphology being ordinary, its syntax is not. Unlike other

UV objects, this pronoun must be post-verbal to be interpreted as an anaphor (354a)¹⁰. In contrast, if this same pronoun is fronted to the pre-verbal position (354b) – where UV objects usually are – the sentence is grammatical, but only with a non-reflexive reading. Presumably, the anaphor needs to be c-commanded by the subject to be bound and interpreted correctly, and thus must remain low¹¹.

(354) *Inâ* must be postverbal when used as an anaphor:

(250728)

- a. *John* *ki-lâbu-* $\emptyset^n=naa$ **(inâ)** go *nuwoli eângâ*
John IPFV-cut.UV-3MIN=FUT **3MIN** with knife that
 ‘John will cut himself with that knife’
- b. **(inâ)** *ki-lâbu* **John=kaa** go *nuwoli eângâ*
3MIN IPFV-cut.UV **John=FUT** with knife that
 ✗ ‘John will cut himself with that knife’
 ✓ ‘John_i will cut him/her_{j/*i} with that knife’

Pay attention now to the position of the *subject*, ‘John’, in (354a). This sentence is in UV, as indicated by the verb stem *lâbu* ‘cut.UV’ instead of *lâbonge* ‘cut.AV’. Nonetheless, we see that the subject is in spec,CP (the preverbal position) instead of the object¹². Crucially, the subject is *not* left in its normal UV position, between the verb and the TAM particles (355). From there, it would presumably still be able to c-command and thus bind the anaphor, and yet, the subject in this position is actually ungrammatical.

(355) VSO is impossible: the preverbal position must be filled

(250728)

- * *ki-lâbu* **John=kaa** **inâ** go *nuwoli eângâ*
 IPFV-cut.UV **John=FUT** **3MIN** with knife that
 Intended: ‘John will cut himself with that knife’

I interpret this as a consequence of Äiwoo’s V2 effect. By V2 rules, spec,CP *must* be filled by a nominal. These sentences contain two nominals: ‘John’ and the anaphor *inâ*. The anaphor is not a viable candidate for spec,CP, as it would be in the wrong position to be bound and interpreted correctly. Therefore, something else will have to plug the preverbal position to satisfy the V2 requirement. Given the absence of other viable candidates, that

10 The same also holds for other φ -categories than 3MIN:

(i) **(iu)** *ki-lâbu-no=ngaa* **iu** go *nuwoli eângâ* (250728)
1MIN IPFV-cut.UV-1MIN=FUT **1MIN** with knife that
 ‘I will cut myself with that knife’

11 This judgment is plausibly explained by the anti-cataphora ban on CP-fronted constituents in non-AV clauses; see chapter 3, fn. 43. However, I don’t have a theory of how it might come to be that an anaphoric *inâ* is not raised to spec,CP, but a non-anaphoric one is. The model presented in chapter 3 would wrongly predict that the anaphoric *inâ* should be raised just like any other object, resulting in the word order in (354b), so it needs an amendment. Given the modular framework assumed here, we cannot directly state a condition of the type “C raises XP, unless this would result in XP not being interpreted correctly”. Therefore, we would need to rather assume that anaphoric and non-anaphoric *inâ*, despite being morphologically identical, are structurally/featureally different, so that only the non-anaphoric one can be raised by C. I leave this issue to future research.

12 Other cases of UV clauses with SVO word order will be discussed in depth in chapter 6.

will – exceptionally – have to be the subject. We can also make sure that there is no problem *per se* with the subject being in spec,TP (between the verb and =TAM), and in fact this provides further support to our argument. If we add a third nominal argument by using CV (356) (see Appendix A for details on this construction), now we have filled spec,CP and satisfied the V2 requirement, and the subject is allowed to stay in its canonical position, from where it can bind the anaphor.

- (356) If the preverbal position is plugged by another DP, the subject can stay low:
nuwoli eāngâ ki-lâbu John=kaa=kä inâ (250728)
 knife that IPFV-cut.UV John=FUT=CV 3MIN
 ‘With that knife John will cut himself’

I take the ungrammaticality of (355) to be a strong argument for the presence of null pronouns in spec,CP in sentences that are verb-initial on the surface, e.g. (352b)-(353a) above. In the case of reflexive constructions, the nominal that “should” be raised to the preverbal position (a UV object) cannot do so for independent reasons, so another nominal will have to be raised instead, seemingly just to ensure that that position is filled. If those null subject pronouns I notated in the AV sentences above were not present, we should then expect some other nominal to be raised exceptionally (i.e., the object), but this is impossible (357).

- (357) “No null subject pronouns” wrongly predicts that an AV object should raise:
 * *sii de-ku-tou-mä=kaa to* (250728)
 fish 12AUG-IPFV-bring.AV-DIR1=FUT
 Intended: ‘We will bring fish’ (only grammatical order: *dekutoumäkaa sii*)

5.3.2.2 THE POSITION OF THE SUBJECT PRONOUNS

Having argued for the presence of a null pronoun filling spec,CP in (352b)-(353a), let’s now do the same thing for the overt pronouns. We can show these are in fact in spec,CP by testing their order with respect to certain adverbials. As shown in §3.2, adverbials like ‘yesterday’, ‘tomorrow’, ‘every day’, etc. can only *precede* the preverbal argument (the VIA), and not intervene between the VIA and the verb. If an argument precedes these adverbs, then it must be marked as a topic by either a prosodic break and/or a deictic particle =Ce/=Câ (proximal/distal).

Consider now the following contrast. When the adverbial *dâbu dâuwângâ* ‘every day’ precedes the pronoun *iu* ‘I’, the latter can be marked as a topic (358a) or left bare (358b); this last sentence has at least one available structural parse where the pronoun is in spec,CP. However, when the adverbial follows the pronoun, the pronoun must be marked as a topic (359a), and not doing so is ungrammatical (359b).

- (358) Adv > pronoun: the pronoun can but does not need to be marked as a topic
 a. *dâbu dâuwângâ [iu=nge] Ø_{1MIN} i-ku-wânubo-lâoo sii*
 day every 1MIN=PROX 1MIN-IPFV-kill.AV-always fish
 ‘Every day, me here, I always catch fish’ (230707)

- b. *dâbu dâuwângâ [iu] i-ku-wânubo-lâoo sii*
 day every 1MIN 1MIN-IPFV-kill.AV-always fish
 'Every day I always catch fish'

(359) Pronoun > adv: the pronoun **must** be marked as a topic

- a. *[iu=nge] dâbu dâuwângâ Ø_{1MIN} i-ku-wânubo-lâoo sii*
 1MIN=PROX day every 1MIN-IPFV-kill.AV-always fish
 'Me here, every day I always catch fish'
- b. * *[iu] dâbu dâuwângâ i-ku-wânubo-lâoo sii*
 1MIN day every 1MIN-IPFV-kill.AV-always fish

The logic of the argument is the following. The adverbial *dâbu dâuwângâ* 'every day' cannot intervene between the VIA and the verb. Therefore, if a nominal precedes the adverbial, it must be a left-peripheral topic, and must be appropriately marked as such – that's why (359b) is unacceptable. The possibility of having an unmarked pronoun to the right of this adverbial (358b) confirms that this pronoun can be in the canonical VIA position, that is, spec,CP. (Under this analysis, (358a)–(359a) contain a $\emptyset_{1\text{MIN}}$ pronoun between the adverbial and the verb, filling spec,CP, as notated here).

In the available literature, cases of cooccurrence of a subject pronoun and a verbal prefix had already been documented on the basis of naturally attested examples (Næss 2015b: 292). However, it could not be established whether those pronouns were actual VIAs (in spec,CP) or left-peripheral topics, as controlled elicited data and negative evidence was unavailable. Moreover, it was not known that VSO order is ungrammatical (see the discussion of reflexives above), and therefore we had no concrete evidence for positing the presence of null subject pronouns.

Having showed that both null and overt subject pronouns in AV are in the canonical VIA position, the alternation between null vs. overt pronouns (352b)–(353a) is then completely identical to what we observe in a better-studied pro-drop language like Italian. The verb must always carry subject agreement (*-iamo* 1PL), and a subject pronoun is only optionally realized (360).

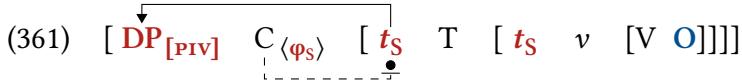
- (360) *$\emptyset_{1\text{PL}}/noi$ and-*iamo* spesso a Chicago* (Italian)
 we go-1PL often to Chicago
 'We often go to Chicago'

5.3.3 SUMMARY: THE φ -PREFIXES ARE AGREEMENT MARKERS

In the previous section I showed that the prefical series of φ -indexers is always obligatory in the relevant contexts (that is, when it can appear in the first place: AV verbs and intransitives). Even in the presence of an overt subject argument, whether a lexical DP or a pronoun, the prefixes cannot be dropped. This supports the analysis I developed/pre-figured in chapter 3, arguing that these prefixes are **agreement markers**.

Let us briefly remind ourselves again of how exactly it works. The derivation I proposed for AV clauses in chapter 3 is schematized in (361); intransitives work in the same

way, only with no object. At the last step, C copies the φ -features of the argument it raises (see §3.5.3 for how C comes to move the object and not the subject in UV). This is not really any different from what happens in e.g. Italian, although on C rather than on T.



At Vocabulary Insertion, the φ -features on C are realized as the prefixal series (362)¹³.

- | | |
|---|--|
| (362) a. $\text{C}_{\langle 1\text{MIN} \rangle} \Leftrightarrow i\text{-}$ | e. $\text{C}_{\langle 1\text{AUG} \rangle} \Leftrightarrow me\text{-}$ |
| b. $\text{C}_{\langle 12\text{MIN} \rangle} \Leftrightarrow ji\text{-}$ | f. $\text{C}_{\langle 12\text{AUG} \rangle} \Leftrightarrow de\text{-}$ |
| c. $\text{C}_{\langle 2\text{MIN} \rangle} \Leftrightarrow mu\text{-}$ | g. $\text{C}_{\langle 2\text{AUG} \rangle} \Leftrightarrow mi\text{-}$ |
| d. $(\text{C}_{\langle 3\text{MIN} \rangle} \Leftrightarrow \emptyset)$ | h. $\text{C}_{\langle 3\text{AUG} \rangle} \Leftrightarrow li\text{-}lu\text{-}$ |

The fact that prefixal agreement is not realized at all in UV will be analyzed in §5.5.2 as a result of a rule of Impoverishment, triggered by the presence of φ -features on v; see that section for the full discussion. For the idiosyncratic linear placement of the 3AUG prefix *li~lu-*, see chapter 3, §3.5.5. Moreover, for the allomorphic interactions between 1MIN *i-* and the modal prefixes *nä-* (irrealis) and *de-* (apprehensive), see chapter 2, §2.4.

5.4 THE φ -SUFFIXES

I proceed now to discuss the properties of the suffixal series of φ -indexers. The main syntactic difference between these and the prefixal markers is a near-opposite pattern of co-occurrence with arguments. The prefixes always co-occur with a coreferent nominal (which may be either overt or null). In contrast, in (§5.4.1) we will see that the suffixes *cannot* co-occur with any nominal in spec,TP – whether coreferent or not. However, a φ -suffix *can* co-occur with a coreferent argument, but only as long as this is in a higher position. I will argue that despite the fact that these markers are suffixes at the morphophonological level, their distribution indicates their syntactic nature not as agreement markers, but as phonologically reduced **pronouns** (§5.4.2).

The long-story-short version of the argument goes as follows: (i) the φ -suffixes are in complementary distribution with any nominal in the same slot, therefore they must fill a specifier position, therefore they must be pronouns; (ii) surprisingly if they are pronouns, however, they can co-occur with a coreferent argument in a higher position; (iii) therefore, in these cases, the φ -suffixes must represent the obligatory spell-out of a lower copy (in spec,TP) of the argument. In the next section (§5.5), we will see how an analysis of the morphology of Áiwoo pronominal forms will also help us account for this pattern of lower copy spell-out.

¹³ For the time being, I'm not making particularly sophisticated assumptions about how person and number are represented in the syntax. The featural notation in (362) is purely meant as a simplified descriptive shorthand. At this point, any theory of φ -features that can deal with a minimal-(unit-)augmented system could be plugged in, be it privative (Harley & Ritter 2002, McGinnis 2005, a.o.) or binary (Nevins 2007, Harbour 2016, a.o.). In chapter 6, §6.5.1.1 I'll propose a more concrete theory of φ -features to model the complex hierarchy effect connected to movement to spec,TP.

5.4.1 DISTRIBUTION: CO-OCCURRENCE OF φ -SUFFIXES AND ARGUMENTS

In this section I will describe the distribution of φ -suffixes. Their placement is constant: they are suffixes on UV verbs. However, what is interesting is when they can and cannot co-occur with different arguments in different positions. The picture we will arrive to is summarized schematically in (363)–(364). On the one hand, we will first see that φ -suffixes (represented as “ $-\varphi_{S/O}$ ”) are completely incompatible with a nominal occupying spec,TP. In this position there can be either a φ -suffix or an argument (363a–c), but not both (363d,e) – regardless of whether the two are coreferent or not (I don’t represent here every possible combination, but only the “more plausible” ones, i.e., minimal variants of actually attested structures). On the other hand, a φ -suffix can co-occur with an overt coreferent argument as long as this is in a higher position (364). This happens in two non-canonical types of UV clauses, whose syntax will be the focus of the next chapter.

- (363) A φ -suffix is incompatible with any argument in spec,TP:

- a. **Obj** V **Subj**=TAM
- b. **Obj** V- φ_S =TAM
- c. **Obj** V- φ_O =TAM **Subj**
- d. * **Obj** V- φ_S **Subj**=TAM
- e. * **Obj** V- φ_O **Subj**=TAM

- (364) A φ -suffix can co-occur with a coreferent argument in spec,CP:

- a. **Obj** V- φ_O =TAM **Subj**
- b. **Subj** V- φ_S =TAM **Obj**

NO COOCCURRENCE 1: A φ -SUFFIX AND A CO-REFERENT ARGUMENT First, let us see how a φ -suffix is in complementary distribution with a coreferent (overt) argument in the same position. In the slot between the verb and the TAM particles, one can have an overt subject DP (365a) or the suffixal marker *-i* 3AUG (365b), but crucially *not both* (365c). Having neither is also impossible (365d).

- (365) Cooccurrence of a φ -suffix and a subject DP in spec,TP is impossible: (250728)

- a. *sii ku-tu-mä* **mikilitei**=kaa
fish IPFV-bring.UV-DIR1 fishermen=FUT
‘The fishermen will bring the fish’
- b. *sii ku-tu-mä-i*=laa
fish IPFV-bring.UV-DIR1-3AUG=FUT
‘They will bring the fish’
- c. * *sii ku-tu-mä-i* **mikilitei**=kaa
fish IPFV-bring.UV-DIR1-3AUG fishermen=FUT
- d. * *sii ku-tu-mä* **Caa**
fish IPFV-bring.UV-DIR1-**□**=FUT
(Only interpretable as containing a 3MIN subject, with *=naa* as the form of the future marker: *ku-tu-mä-∅ⁿ=naa* ‘S/he will bring the fish’)

This obviously contrasts with the obligatory co-occurrence pattern we saw for the prefixal markers. The 3AUG case is repeated in (366), where the prefix *lu-* must co-occur with the overt subject *mikilitei* ‘fishermen’.

- (366) **Cooccurrence of a φ -prefix and a subject DP is obligatory:** (250728)
- mikilitei ku-^{*}(*lu-*)tou-mä=kaa sii*
 fishermen IPFV-*(3AUG-)bring.AV-DIR1=FUT fish
 ‘The fishermen will bring fish’ (only good with *lu-*)

When the subject is pronominal instead of a lexical DP, we observe that the suffixal φ -marker is obligatory (367a,b). Interestingly, we also see that using a standalone pronoun in this position is actually impossible, whether in addition to the suffixal marker or instead of it (367c). This holds across all person/number categories. Two more examples are shown for 3rd person pronominal subjects in (368)-(369), respectively 3AUG and 3MIN.

- (367) a. *sii ki-ngä-^{-de}=ngaa* (250728)
 fish IPFV-eat.UV-12AUG=FUT
 ‘We.INCL will eat the fish’
- b. * *sii ki-ngä-[□]=Caa*
 fish IPFV-eat.UV-[□]=FUT
 (Only interpretable as having a 3MIN subject, with =naa: *ki-ngä-Øⁿ=naa*)
- c. * *sii ki-ngä(-de) iude=ngaa*
 fish IPFV-eat.UV(-12AUG) 12AUG=FUT
 Intended: ‘We.INCL will eat the fish’
- (368) a. *sii ki-ngä-⁻ⁱ=laa* (250728)
 fish IPFV-eat.UV-3AUG=FUT
 ‘They will eat the fish’
- b. * *sii ki-ngä(-i) ijii=laa*
 fish IPFV-eat.UV(-3AUG) 3AUG=FUT
 Intended: ‘They will eat the fish’
- (369) a. *sii ki-ngä-^{-Øⁿ}=naa* (250728)
 fish IPFV-eat.UV-3MIN=FUT
 ‘S/he will eat the fish’
- b. * *sii ki-ngä(-Øⁿ) inä=naa*
 fish IPFV-eat.UV(-3MIN) 3MIN=FUT
 Intended: ‘S/he will eat the fish’

NO COOCCURRENCE 2: A φ -SUFFIX AND A DIFFERENT ARGUMENT A φ -suffix is incompatible with a nominal in this position even when the two realize/index different arguments. This can be observed in a particular kind of UV clauses where the φ -suffix on the verb indexes the *object*’s features, instead of the subject’s (370)¹⁴. The φ -suffix here is

¹⁴ See chapter 6, §6.3.2 for details about these clauses and the morpheme *-gu*.

obligatory, and cannot be dropped. Crucially, the subject *John* surfaces in a lower position to the right of the TAM particles (370a), and it *cannot* be in its normal UV position between the verb and the TAM particles – where the object suffix is (370b).

- (370) If an object φ -suffix is present in spec,TP, the subject must be low: (240307)

- a. **(iude)** *ku-tu-kä***(gu-de)=ngaa** **John** *ngä skul*
12AUG IPFV-bring.UV-DIR3-**OBJ-12AUG=FUT** **John** to school
‘John will bring us to school’
- b. * **(iude)** *ku-tu-kä***(gu-de)** **John=kaa** *ngä skul*
12AUG IPFV-bring.UV-DIR3-**OBJ-12AUG** **John=FUT** to school

POSSIBLE CO-OCCURRENCE: A φ -SUFFIX AND A HIGHER COREFERENT ARGUMENT A second interesting aspect of this type of UV sentences is that the object pronoun in the preverbal position can optionally be overt (370a). In that case, what we have is a φ -suffix co-occurring with a coreferent argument, but the argument in question is in a higher position (spec,CP). As mentioned, this “doubling” only takes place in non-canonical UV clauses (see chapter 6 for their syntax). It happens for objects in UV_{gu} clauses (371a) (repeated from above with different boxing), and for subjects in UV_{SVO} clauses (371b). Note that also here, the φ -suffixes cannot be dropped.

- (371) A φ -suffix can co-occur with a coreferent argument if this is higher: (250728)

- a. **((iude))** *ku-tu-kä***(gu-de)=ngaa** **John** *ngä skul*
12AUG IPFV-bring.UV-DIR3-**OBJ-12AUG=FUT** **John** to school
‘John will bring us to school’
- b. **((iji))** *ku-tu-kä***(-i)=laa** **iude** *ngä skul*
3AUG IPFV-bring.UV-DIR3-**3AUG=FUT** **12AUG** to school
‘They will bring us to school’

INTERIM SUMMARY The distribution of φ -suffixes is repeated in (372)–(373). They are in complementary distribution with *any* nominal occupying this position, even if it is a different argument (373). Descriptively, there seems to be one and only one “slot” between the verb and the TAM particles, and only one argument – whether the subject or the object – can occupy this position¹⁵. However, the φ -suffixes can co-occur with a coreferent argument, but only as long as this is in a higher position (373).

- (372) A φ -suffix is incompatible with any argument in spec,TP:

- a. **Obj** V **Subj=TAM**
- b. **Obj** V- **φ_S** =TAM
- c. **Obj** V- **φ_O** =TAM **Subj**
- d. * **Obj** V- **φ_S** **Subj=TAM**
- e. * **Obj** V- **φ_O** **Subj=TAM**

¹⁵ There will be one single very restricted exception to this generalization, where two arguments are realized in spec,TP simultaneously. This is the case of UV_{1>2} clauses, discussed in chapter 6, §6.3.4.

- (373) A φ -suffix can co-occur with a coreferent argument in spec,CP:

- a. **Obj** V- φ_O =TAM **Subj**
- b. **Subj** V- φ_S =TAM **Obj**

5.4.2 THE φ -SUFFIXES ARE PRONOUNS

Let us consider again the analytical options we have for the Äiwoo φ -suffixes (374).

(374)	Does it co-occur with an argument?	Does it occupy a specifier position?
Agreement:	yes	no
(Narrow-syntactic) clitics:	might	no
Pronouns:	no*	yes

* Modulo the possibility of multiple copy spell-out.

Given the complementary distribution facts in spec,TP (372), we can exclude the possibility that the φ -suffixes are pure agreement markers. An agreement analysis would need to stipulate that the relevant probe only agrees with null arguments (as has been proposed for similar complementarity patterns in Irish and other Celtic languages; McCloskey & Hale 1984, Stump 1984, Legate 1999, Jouitteau & Rezac 2006). This, of course, would predict that an agreed-with argument should indeed be null. However, this prediction is crucially falsified by those cases where a φ -suffix can co-occur with an overt coreferent argument as long as this is in a higher position (373)¹⁶. The analysis would need to be amended to something like “agreement can only take place with null arguments, *unless* this argument is then raised to a higher position, in which case it can (optionally) be overt again”. This is a rather odd and cumbersome description, and hard to implement within the framework adopted here. Moreover, it intuitively seems to be missing an important generalization: cooccurrence between a φ -suffix and a coreferent argument is only possible when the two are in different syntactic positions.

Having excluded an agreement analysis of the φ -suffixes, we are now left with two options: either they are pronouns, or they are (narrow-syntactic) clitics. Here is where the criterion of whether a φ -indexer occupies a specifier position becomes useful. Before we move on, let us remind ourselves that regardless of what kind of analysis we want to adopt for the φ -suffixes, it is independently true that the position between the verb and the TAM particles can host what is uncontroversially a fully phrasal nominal constituent. As shown in chapter 3, §3.5.2, an argument in this position can be of any phonological size (375). Hence, there must exist a structural specifier position that is mapped out to this linear position.

¹⁶ Interestingly, also in Irish, the complementarity between agreement suffixes and coreferent arguments is also obviated by A-movement (Perry 2025 and references therein). However, it is not obviated by Ä-movement. In Äiwoo, either kind of movement can result in the relevant kind of “doubling” pattern.

- (375) The V \square =TAM position can host a phrasal nominal argument, of any size:
- gino-mu ba ku-mangi [kuli]_{DP=gu=naa}* (250728)
son-2MIN NEG IPFV-bite.UV dog=NEG=FUT
'The dog won't bite your son'
 - gino-mu ba ku-mangi [kuli (mi=)[ki-ngoduwâ-lâoo ngä paveli eângâ]]_{DP=gu=naa}*
son-2MIN NEG IPFV-bite.UV dog REL=IPFV-shout-always in garden
that=NEG=FUT
'The dog that's always barking in that garden won't bite your son' (241015)

As presented in §5.1.2, a clitic – by definition – does not occupy a specifier position, whereas a pronoun does. This correctly predicts what happens in a language like Italian when pronominal objects cliticize. As we see in the data repeated below, because the cliticized object *la* 'her' does not occupy a specifier, this position is still available for the subject *Ana* to move to (376a). If *la* was a full pronoun, in contrast, it would fill up a specifier, and therefore – *modulo* the possibility of multiple specifiers – we might expect that cliticizing the object would force the subject to stay low, contrary to fact (376b).

- (376) Italian object clitics do not occupy a specifier position:

- [_{TP} **Ana** **la=***porta* [_{vP} **t_S** **t_O** *domani**
Ana 3SG.F=brings tomorrow
'Ana will bring her tomorrow'
- * *[_{TP} **la=***porta* [_{vP} **Ana** **t_O** *domani**
3SG.F=brings **Ana** tomorrow
(Ungrammatical with information-structurally neutral prosody; see fn. 6)

Strikingly, what is ungrammatical in Italian (376b) is precisely what we observe in Äiwoo. As we saw, when the *object* is indexed by a φ -feature on a UV verb, the subject cannot raise to its usual position (in spec,TP), and must remain low instead. The minimal pair is repeated in (377): 'John' must be to the right of the future marker, and not in its usual position (to its left).

- (377) If an object φ -suffix is present in spec,TP, the subject must be low: (240307)

- (**iude**) **ku-tu-kä-gu-de=ngaa** **John** ngä skul*
12AUG IPFV-bring.UV-DIR3-**OBJ-12AUG=FUT** **John** to school
'John will bring us to school'
- * *(**iude**) **ku-tu-kä-gu-de** **John**=kaa ngä skul*
12AUG IPFV-bring.UV-DIR3-**OBJ-12AUG** **John=FUT** to school

Thus, the diagnosis is that φ -suffixes in Äiwoo must occupy a specifier position: they are in a position where fully phrasal nominal constituents can be, and they are in complementary distribution with an argument in that same position (whether coreferent or not).

If we now consider our table summarizing the properties of agreement markers, clitics, and pronouns again (374), we see that Äiwoo φ -suffixes show a somewhat mixed behavior. On one hand, they clearly occupy a specifier position. This speaks in favor of them

being pronouns, and not narrow-syntactic clitics¹⁷. However, we also see cases where a φ -suffix co-occurs with a coreferent argument, which is not something pronouns typically do (whereas clitic doubling patterns, of course, are familiar fare). However, importantly, this kind of “doubling” only ever happens when the argument in question is in a higher position. This peculiarity gives us a way to attack the puzzle. I propose that uniformly, the φ -suffixes are pronouns: this explains why they occupy a specifier position, and thus why multiple arguments cannot fill that position. In the “doubling” cases, I will argue that the φ -suffixes are still pronouns, but they spell out a lower copy of movement (of either the subject or the object), in spec,TP. Why this lower copy must be spelled out in this case will become clear in the next section.

For the sake of explicitness, then: my analysis of the Äiwoo φ -suffixes as pronouns treats the two sentences in (378) as *syntactically* identical, and only *phonologically* different. Their syntactic structure is shown in (379). In both cases, simply, the subject is in spec,TP, even though *Lisa* contains the left edge of its own phonological word and the 12AUG prefix *-de* does not. Importantly, the phonological word spelled out as *kupotaaden-gaa* /kupotà:n̩déná:/ does not neatly correspond to any syntactic constituent.

- (378) a. *Anna* *ku-potaa* Lisa_S=kaa *t_S* *t_O*
Anna IPFV-search.UV *Lisa*=FUT
'Lisa will look for Anna'

b. *Anna* *ku-potaa* -de_S=ngaa *t_S* *t_O*
Anna IPFV-search.UV-12AUG=FUT
'We will look for Anna'

(379) Structure of (378a,b):

- a. CP

Obj
Anna

$\left(\begin{array}{c} \text{C+Asp+V+v} \\ \text{ku-potaa} \\ \text{IPFV-search.UV} \end{array} \right)$

ω

TP

Subj
Lisa

$\left(\begin{array}{c} \text{T} \\ \text{=kaa} \\ \text{=FUT} \end{array} \right)$

ω

AspP

...

b. CP

Obj
Anna

$\left(\begin{array}{c} \text{C+Asp+V+v} \\ \text{ku-potaa} \\ \text{IPFV-search.UV} \end{array} \right)$

ω

TP

Subj
-de

$\left(\begin{array}{c} \text{T} \\ \text{=ngaa} \\ \text{=FUT} \end{array} \right)$

-12AUG

ω

AspP

...

If the suffix *-de* is really a full pronoun in spec,TP, the most obvious question concerns its form: why is it *-de* and not *iude*, the usual form for a 12AUG (full) pronoun? This will be

¹⁷ This kind of analysis of agreement affixes as underlying pronouns has also been proposed for the complementarity effects in Irish and Scottish Gaelic (Anderson 1982, Adger 2000, Ackema & Neeleman 2003, Brennan 2009), Aleut (Yuan 2018), Washo (Arregi & Hanink 2022), and Sorani Kurdish (Akkus et al. 2025).

the focus of the next section, where we will zoom in on the morphophonological aspects of the mapping from the underlying syntactic structure to the surface form.

5.5 THE MORPHOLOGY OF ÄIWOOR PRONOUNS

In the previous section, I have argued that the φ -suffixes on Äiwoo verbs, syntactically, are pronouns in an argument position (spec,TP). This accounts for their complementary distribution with other nominals in spec,TP. However, two outstanding questions remain: (i) why do pronouns in this position obligatorily surface in a short/reduced suffixal form and not the full/standalone form (e.g., *-de* 12AUG in (378b) rather than the full pronoun *iude*)? (ii) for the “doubling” cases, why must a lower copy of movement of a pronoun in this position obligatorily be realized?

I propose that the answer to both questions is not syntactic, but morphological in nature: the full forms are simply the wrong spell-out for a pronoun in this position. Descriptively, Äiwoo pronouns come in two morphological shapes, a long/full one and a short/reduced one – the φ -suffix. I suggest that a violable phonological/prosodic requirement imposes that a pronoun always become part of a larger phonological word to its left whenever possible; this is when a pronoun is realized in its short form. This form of “prosodic incorporation” will then force a this particular copy of movement to be spelled out overtly, regardless of how the rest of the movement chain is pronounced. Wherever this requirement cannot be satisfied, for example due to the pronoun’s syntactic position, then the full form of the pronoun is inserted instead. All in all, the analysis I give for Äiwoo φ -suffixes is akin of that proposed in Harizanov (2014) for Bulgarian clitics: syntactically, they are a moved phrasal constituent in a specifier position, but they are post-syntactically reduced to a shorter form.

5.5.1 DECOMPOSING PRONOUNS: SHORT AND LONG FORMS

The descriptive literature (Næss 2006, Ross & Næss 2007, a.o.) has already noted how the full/standalone forms of Äiwoo pronouns are bimorphemic. All of them consist of a (near-)constant base (mostly *i~iu-*, with one exception) and almost the same paradigm of φ -suffixes that we just discussed, the one found on UV verbs (380)¹⁸. The only exceptions

¹⁸ There has been and still is some variation in the form of the “stem” of some of these full pronominal forms, not shown in (380) for simplicity. It’s not clear if these forms are in dialectal/free variation (whether diachronically or synchronically), or what – if anything – governs the alternations. The 1MIN pronoun is consistently *iu*, but when the =Ce proximal particle is attached, the result can be either *iu=nge* or, somewhat less commonly, *i=nge*. The 1AUG pronoun can be realized as either *ingo*, *ingopu*, *iungo*, *iungopu*; the suffix can either be *-ngo* or *-ngopu* (or *-ngee*, but this has a different distribution; see the table footnote). The 2AUG pronoun is consistently *imi*; however, an alternative form *iumi* was reported in Tryon & Hackman (1983: 290; ⟨yumi⟩ in the orthography used at the time). Furthermore, its unit-augmented form was listed as both *imile* and *iumile* in field notes by Even Hovdhaugen in 2003 (transcribed respectively as ⟨imle⟩ and ⟨yumle⟩, with high vowel reduction targeting the /i/ before the -*le* suffix; Næss in prep). Finally, the 3AUG

are 1MIN *iu*, where the corresponding suffix *-no* is absent, and 3AUG, which shows a different base *iji-* (for the reasons behind this segmentation, see fn. 20). Although the 3MIN pronouns *inâ/ine* (respectively distal and proximal) seem to be different, they can also be analyzed as conforming to this pattern. These are in fact trimorphemic, consisting of the base *i-*, the segmentally null 3MIN suffix *-Øⁿ*, and the distal/proximal markers *=Câ/=Ce* (which surface in their /n/-initial form because they follow the *-Øⁿ* suffix): *inâ* is thus segmentable as *i-Øⁿ=nâ* (PRON-3MIN=DIST), and *ine* as *i-Øⁿ=ne* (PRON-3MIN=PROX).

(380)	Pronoun	φ-suffix	Pronoun	φ-suffix
1MIN	<i>iu</i>	<i>-no, -nee*</i>	1AUG	<i>iu-ngo(pu)</i>
12MIN	<i>iu-ji</i>	<i>-ji</i>	12AUG	<i>iu-de</i>
2MIN	<i>iu-mu</i>	<i>-mu</i>	2AUG	<i>i-mi</i>
3MIN	<i>inâ/ine</i>	<i>-Øⁿ</i>	3AUG	<i>iji-i</i>

* The forms *-nee/-ngee* for 1MIN/1AUG are only found preceding a 2nd person object suffix; see §6.3.4.

Another – stronger – argument for these pronominal forms being bimorphemic, other than their morphological shape, is that the two hypothesized parts can actually be separated. Specifically, the morpheme *du* ‘all’ can occur in between (381). This was reported for 2AUG *imi* in (Næss 2018a: 34). With novel data, we can confirm that this behavior extends to the other pronouns as well^{19,20}.

- (381) *Du* ‘all’ can separate the two parts of a full pronoun: (231026)

Unmodified pronoun:			Modified pronoun:		
1AUG	<i>iu-ngopu</i>	‘We.EXCL’	<i>iu-du-ngopu</i>	PRON-all-3AUG	‘All of us.EXCL’
12AUG	<i>iu-de</i>	‘We.INCL’	<i>iu-du-de</i>	PRON-all-12AUG	‘All of us.INCL’
2AUG	<i>i-mi</i>	‘Y’all’	<i>iu-du-mi</i>	PRON-all-2AUG	‘All of y’all’
3AUG	<i>iji-i</i>	‘They’	<i>iji-du-i</i>	PRON-all-3AUG	‘All of them’

Of course, minimal-number pronouns are semantically incompatible with ‘all’. However, we can use other modifiers to show that these are also bimorphemic and separable, for example *eopu~epu* ‘also’:

- (382) *iu-epu-mu jises pe=Galili eângâ ku-wobii-mu*
 PRON-also-2MIN Jesus REL:people=Galilee that IPFV-follow.UV-2MIN
 ‘You too were following Jesus of Galilee’ (MT 26:69)

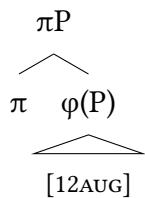
pronoun is realized as either *ijii* or just *jii*; however, Wurm (1981: 84) also reports *iu(j)ii* (⟨yudyii⟩ in that orthography), though my consultant does not use this form, and it is not attested in Næss’ corpus nor in the more modern Bible translations.

19 The fact that 2AUG has *i-mi* but *iu-du-mi* is most plausibly phonological, involving metathesis and copying of /u/; see chapter 2, §2.4.

20 The form *ijidui* ‘all of them’ is the reason behind analyzing 3AUG as having an exceptional pronominal stem *iji-*. If the stem was just *i-* like for the other pronouns, we would expect **i-du-iji*, contrary to fact.

To account for their bimorphemic character, I propose that Äiwoo pronouns have the syntactic structure in (383), consisting of a lower layer where the φ -features reside (“ $\varphi(P)$ ”; I remain agnostic as to whether this is a terminal node or branching), and a higher layer which I label πP . These specific labels are chosen for convenience, and nothing hinges too much on them. I leave as an open question how exactly these labels may map onto the projections/categories proposed by influential analyses of the inner structure of pronouns (e.g. [Cardinaletti & Starke 1999](#), [Déchaine & Wiltschko 2002](#), a.o.). The only important aspect for my analysis is the existence of two distinct structural layers²¹.

(383) Structure of an Äiwoo pronoun:



I suggest that the π head is what is spelled out as the “stem” *i~iu~iji-*, and the φ -features are consistently spelled out as the suffixal markers. In other words, the full form of a pronoun (e.g. *iu-de 12AUG*) is the spell-out of both layers, whereas the short suffixal form (*-de 12AUG*) is the spell-out of only the φ layer, with the π layer being null. The short form will be inserted when the pronoun becomes part of a larger phonological word, whereas the full form will be inserted when the pronoun cannot do so.

Let us see how this works concretely. For now, let’s just assume that pronouns in this position become part of a larger phonological word, and temporarily sidestep the issue of how or why (see §5.5.2). The π head undergoes allomorphy, conditioned by its position in the phonological word²². If it is word-initial, it is spelled out as the base *i~iu~iji-* (384a)²³. Otherwise, when π is not word-initial, it is spelled out as \emptyset (384b). Independently from how π is realized, the φ portion of the pronoun receives a consistent spell-out (385). When π is reduced to zero (when the pronoun – for some reason – becomes part of a larger phonological word), φ will then remain the only overt part. This captures the alternation between the short and long form of pronouns²⁴.

²¹ In chapter 6, it will also become important for pronouns to have some kind of feature that lexical DPs don’t share (e.g. $[\pi]$), so that pronouns are singled out as a featural natural class.

²² For now, it does not seem important that the conditioning factor for the allomorphy of π is word-initiality as opposed to, say, being next to V specifically. This will become important in the next section.

²³ This rule is a simplification. A more complex set of VI rules will be needed to account for the distribution of the three variants of the pronominal base: *iji-* before 3AUG; *iu-* before 12MIN, 2MIN, optionally 1AUG, and possibly 1MIN (see fn. 24); *i-* elsewhere (before 3MIN and 2AUG). See also fn. 18 for further morphological variation in the form of the pronominal stem.

²⁴ The only category where φ does not have a consistent morphological spell-out is 1MIN, which therefore needs more complex VI rules (i). The 1MIN suffix for objects is $-\emptyset^{\eta}$ (ia); this only surfaces when π is spelled out as *-gu*. For 1MIN subjects, the suffix *-nee* only appears when preceding a 2nd person object suffix (ib) (see chapter 6, §6.3.4), while the default suffix form is *-no* (ic).

(i) a. $\varphi_{[1\text{MIN}]} \leftrightarrow -\emptyset^{\eta} / \pi_{[\text{Acc}]}$ —

- (384) a. $\pi \Leftrightarrow i\text{-}iu\text{-}iji\text{-} / \# _$
 b. $\pi \Leftrightarrow \emptyset$ (elsewhere)

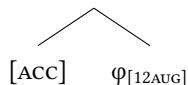
- (385) $\varphi_{[12AUG]} \Leftrightarrow -de$

The only part these VI rules do not cover is the presence of the suffix *-gu* in all and only the cases where the argument realized by a φ -suffix is an object²⁵:

- (386) (*iude*) *ku-potaa* **-gu-de**=ngaa *mekivaavee* *bulaape* (250728)
 12AUG IPFV-search.UV-**OBJ-12AUG**=FUT teacher tomorrow
 ‘The teacher will look for us tomorrow’

This is the only corner of Äiwoo grammar where we see any kind of overt morphological reflex of “case”; full forms of all pronouns are always constant (e.g. *iude* 12AUG), regardless of case or position. For concreteness, a simple implementation is to assume that an [ACC] feature on a pronoun is targeted by a morphological rule of Fission (Halle 1997 et seq.) that only applies in this context (387a)²⁶. The ACC node is then spelled out as *-gu* (387b).

- (387) a. **Fission:** $\varphi P_{[ACC, 12AUG]} \implies \varphi P _ / V _$



- b. **VI rules:**

- i. [ACC] $\Leftrightarrow -gu / V _$
- ii. $\varphi_{[12AUG]} \Leftrightarrow -de$

We can find supporting evidence for this analysis of the φ -suffixes as a morphologically shorter spell-out of full pronouns considering other environments where pronouns are not linearly adjacent to verbs, and yet still appear in their short/suffixal form. This is the case when a pronoun is the complement of a preposition. Consider (388a) as a baseline example of a PP. When the complement of the preposition is a pronoun rather than a lexical DP, only the shorter suffixal form *-de* is possible (388b), and the full form *iude*

-
- b. $\varphi_{[1MIN]} \Leftrightarrow -nee / _\varphi_{[ADDR]}$
 c. $\varphi_{[1MIN]} \Leftrightarrow -no$ (elsewhere)

The 1MIN full pronoun form *iu* could be analyzed either as an unsegmentable portmanteaux spelling out both π and φ , or – amending the VI rules above – as *iu*- \emptyset^{\dagger} (where the hyphen separates the pronominal stem from the φ -suffix), or *i-u*; see also fn. 18. This also does not cover the variety of idiosyncratic/suppletive 1MIN forms found in the possessive paradigms; see Roversi (2025: appendix A).

25 More precisely, *-gu* appears when the argument in this position is not the same clause’s subject; see the facts about CV in Appendix A.

26 I remain agnostic as to how exactly this case feature comes to be present on the pronoun, and where exactly in the pronoun’s internal structure it resides. Any theory of morphological case assignment – via Agree by functional heads (Vergnaud 1977/2008, Chomsky 2000, 2001), or Dependent Case (Yip et al. 1987, Marantz 1991) – should be compatible with this, with due adjustments.

(388c) is disallowed^{27,28}. This parallels how the subject in (378b) can only be realized as the suffix *-de*, and not as the full pronoun *iude*.

- (388) **Pronouns must surface in their short form as the complement of a preposition:**

a.	<i>ngâgo Jon</i>	b.	<i>ngâgu-de</i>	c.	* <i>ngâg{u/o} iude</i>
	to John		to-12AUG		to 12AUG
	'To John'	(25 07 28)	'To us'		'To us'

Unlike in the context of verbs and arguments, where we have more confounding factors and potential analyses (agreement, cliticization, etc.), there is no plausible *syntactic* difference between *John* in (388a) and the 12AUG pronoun in (388b); both are simply a complement to the preposition *ngâgo*. Therefore, the only reason why the pronoun occurs in its short form in (388b) must be morphological in nature, and not syntactic. This is captured by the Vocabulary Insertion rules proposed above: the pronoun ends up becoming part of a larger phonological word (though exactly how remains to be seen), and therefore, the π head is spelled out as \emptyset , and only the suffixal φ -portion remains overt.

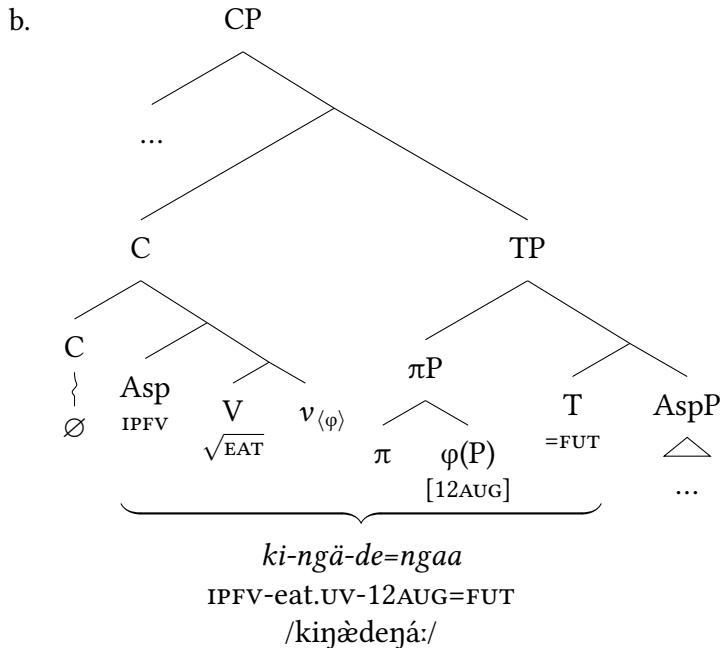
5.5.2 SPELLING OUT A NON-CONSTITUENT

As mentioned above, this analysis entails that in many cases, a morphophonological verb word in Äiwoo does not neatly correspond to any syntactic unit, but rather spells out a syntactic non-constituent (Julien 2002, 2007b, a.m.o.). To give a concrete illustration, the verb word in (389a) has the underlying syntactic representation in (389b). The whole syntactic structure comprising two heads (C and T, with C being a complex head) and the specifier between them (spec,TP) is mapped onto a single phonological word.

- (389) a. *ki-ŋä-de=ngaa*
 IPFV-eat.UV-12AUG=FUT
 'We will eat (it)'

27 The final vowel alternation between *ngâgo* and *ngâgu-de* is purely phonological, and orthogonal to the issue.

28 Here the suffixal form of the pronoun is just *-de* 12AUG, and not *-gu-de* OBJ-12AUG. This could be explained either by saying that (i) *-gu* is specifically a spell-out of accusative case, and prepositions assign a different case, which remains morphologically null; or (ii) the segmentation of *ngâgude* (393b) should actually be *ngâ-gu-de* 'to-OBJ-12AUG' (note that *ngâ~ngâ* is an existing preposition in Äiwoo). If one goes for this latter approach, one would have to explain the surface form of (388a) *ngâgo Jon* (though *go Jon* is a possible alternative, with no apparent difference in meaning). I leave this as an open issue.



We must then understand how and why exactly the πP constituent in spec, TP is reduced to its short form and *not* mapped onto its own phonological word, that is, why we don't get **ki-ngä iude=ngaa* (where *iude* is the full form of the 12AUG pronoun). For the purposes of this work, in what follows I will limit the discussion to how the (sub-)word *ki-ngä-de* is formed, to the exclusion of the phonological cliticization of the future particle $=\text{Caa}$. Although the TAM enclitics are counted as part of the phonological word for the purposes of stress assignment (see chapter 2, §2.4), they show signs of lesser morphophonological integration with their host compared to φ -suffixes: as described in §5.1.2.2, they do not obligatorily trigger vowel harmony and they don't trigger any stem allomorphy, while φ -suffixes do both. I assume that their cliticization is a more purely phonological process, and not as tightly interwoven with the morphosyntax as is the case for the φ -suffixes. Therefore, I will largely exclude them from the discussion below.

Here is a sketch of a proposal to account for this phenomenon. I argue that the reason why a pronoun in spec, TP surfaces in its short form rather than the long one is the outcome of a stipulated (violable) morphophonological/prosodic constraint, which imposes that pronouns become part of larger phonological words to their left if possible. Below, we will see how the interaction of this posited constraint and the Stray Affix Filter (Lasnik 1981, 1995, M. C. Baker 1988, Landau 2006) also helps us explain the cases of “doubling” discussed above, where a φ -suffix co-occurs with a coreferential overt argument in a higher position.

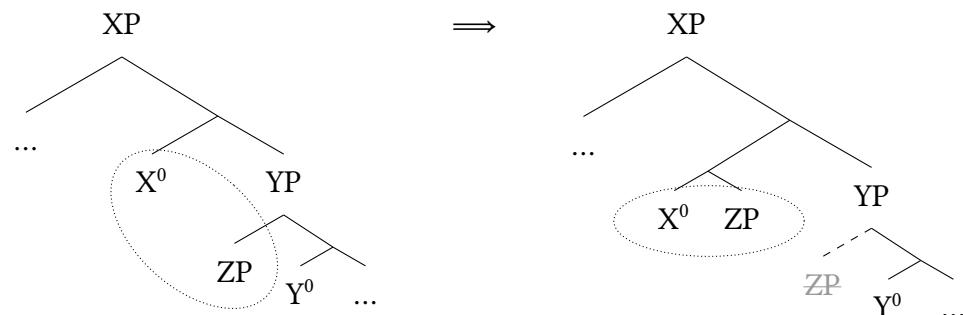
First, let us state our constraint (390). I assume this to be an Optimality Theory-style constraint operating at the interface between narrow syntax and prosody, regulating how hierarchical syntactic structures are mapped onto surface phonological strings (c.f. Bennett et al. 2016, a.m.o., or Bennett & Elfner 2019 for a recent overview).

- (390) $*(\omega \pi P)$: A πP cannot be at the left edge of a phonological word.

In the spirit of OT, I assume that this constraint is violable: it ought to be satisfied, but if for some reason it cannot, the outcome will still be a licit string. I remain rather agnostic as to how exactly the calculus should be formalized. For concreteness, I assume that the syntax can generate a variety of candidates that may or may not violate the constraint, and these then enter a OT-style competition. The other necessary assumption, which is relatively standard, is that a syntactic head, including complex ones, is what is – at least by default – mapped onto a phonological word (Embick & Marantz 2008, Bobaljik 2012, a.o.).

Adopting Harizanov's (2014) analysis of clitic doubling in Bulgarian, I propose that the strategy Äiwoo uses to avoid a violation of $*(\omega \pi P)$ is to apply a post-syntactic operation that will make sure the πP becomes part of a larger (morpho)syntactic constituent, reattaching to its left. This kind of operation could be an instance of Local Dislocation (Embick 2007), which itself was proposed as a variant of M(orphological)-Merger (Marantz 1988, Embick & Noyer 2001, Matushansky 2006, a.o.). The structural description for the kind of Local Dislocation we need is given in (391). The constituent ZP, in spec,YP, is reattached to form a complex head with the head immediately to its left (X^0).

- (391) Local Dislocation:



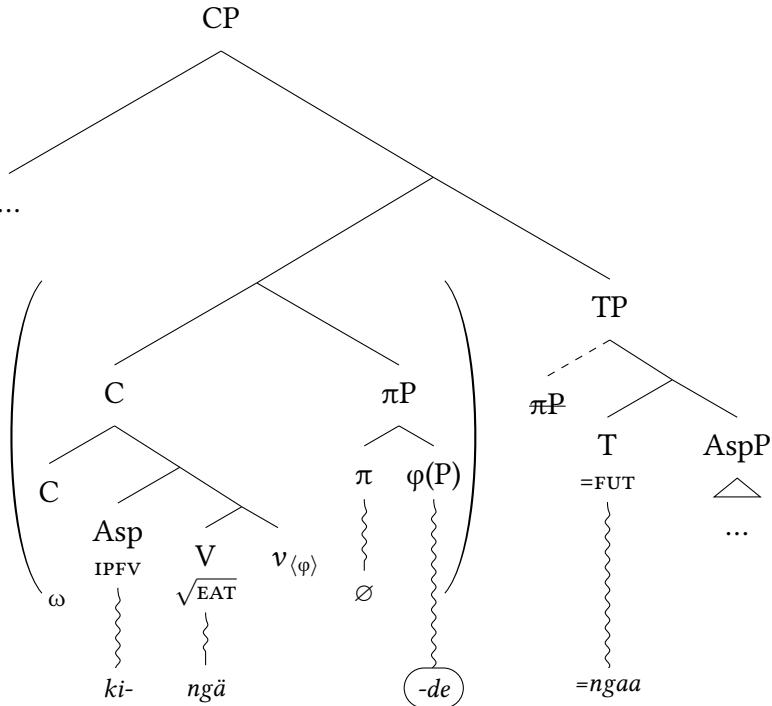
Crucially, this is a *post-syntactic* operation, different from movement/external merge. As such, it does not leave a trace/lower copy; the locally dislocated constituent is simply not present anymore in the original position (spec,YP), as indicated by the strike-out and dashed tree branch. This, in conjunction to the assumption that the so-formed X^0+ZP constituent is mapped onto one morphophonological word, correctly predicts that an Äiwoo pronoun in certain positions will be realized in its short form and not in its long form.

Before proceeding, note that for Harizanov (2014) this combination of syntactic configuration and post-syntactic Local Dislocation/M-merger is what gets spelled out in Bulgarian as clitics. However, as mentioned in the introduction to this chapter (§5.1.2), I refrain from using the term ‘clitic’ for the Äiwoo φ -suffixes, as I find it might be potentially confusing: in the narrow syntax, they are simply pronouns, and after Local Dislocation, they are spelled out as affixes, not morphophonological clitics.

The concrete illustration of how this process works for a pronoun in spec,TP is given in (397). After Local Dislocation, the πP that was in spec,TP in the underlying syntactic

structure is reattached to the complex C head; this complex constituent is then spelled out as one single morphophonological word (as shown by the parentheses)²⁹. Now, the π head is not word-initial, and therefore it is realized as null. As a result, the $\varphi(P)$ portion is the only part of the pronoun that remains overt.

(392) Applying Local Dislocation to the tree in (389b):



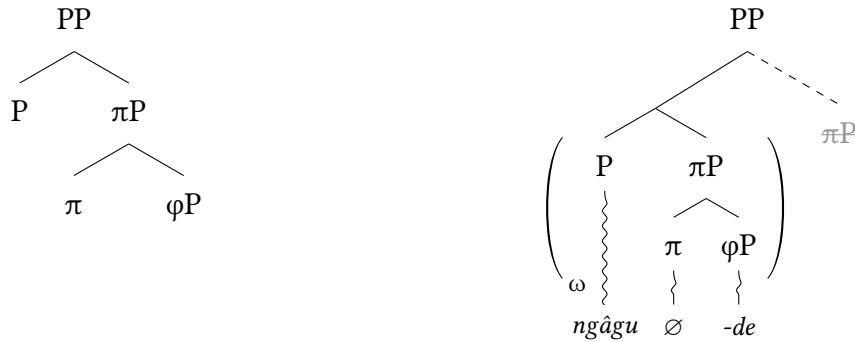
Because this is a process at the morphology/prosody interface, it can apply even if the potential host to the left of a pronoun is not a verb; for example, it could be a preposition. Remember that a pronoun in the complement of a preposition is obligatorily realized in its short form (393b), and the full form is impossible (393c). After Local Dislocation applies (394b), the π head is no longer word-initial, and therefore is realized as null.

(393) Pronouns must surface in their short form as the complement of a preposition:

- | | | |
|---------------------|--------------------|----------------------------|
| a. <i>ngâgo Jon</i> | b. <i>ngâgu-de</i> | c. * <i>ngâg{u/o} iude</i> |
| to John | to-12AUG | to 12AUG |
| 'To John' | 'To us' | 'To us' |

²⁹ As mentioned above, I assume that the future particle =*ngaa* is phonologically encliticized to its left later in the derivation, without first becoming part of a morphosyntactic constituent.

- (394) a. Underlying structure of (393b): b. After Local Dislocation:



What is going on, then, when an Äiwoo pronoun actually surfaces in its full form? I propose that these are contexts where Local Dislocation cannot apply, due to the syntactic position of the pronoun. Äiwoo pronouns surface in their full forms in two positions: for both subjects and objects in the preverbal position/spec,CP (395a,b), and for objects in the postverbal/post-TAM position of UV_{SVO} clauses (395b). I assume that the postverbal position in (395b) is the same as that of an object in AV, that is, the base-generated position of an object (complement of V; see chapter 3, §3.5, and chapter 4, §4.2.3).

- (395) a. Full pronouns in spec,CP: (250728)
- | | | |
|-------------|------------------------------|-------------------|
| <i>iude</i> | <i>ku-potaa-gu-de=ngaa</i> | <i>mekivaavee</i> |
| 12AUG | IPFV-search.UV-OBJ-12AUG=FUT | teacher |
- 'The teacher will look for us'
- b. Full pronouns in postverbal position in UV_{SVO} clauses:
- | | | |
|-------------|-------------------------|-------------|
| <i>ijii</i> | <i>ku-potaa-i=laa</i> | <i>iude</i> |
| 3AUG | IPFV-search.UV-3AUG=FUT | 12AUG |
- 'They will look for us'

I assume that these are both cases where a pronoun has nothing to its left to undergo Local Dislocation onto. For a pronoun in spec,CP, this is because there simply is no other material to its left (and if there is, it will be part of a different phasal spell-out). The same applies to a pronoun in the complement of V: the only potential material to its left would be other lower copies of movement (which we need to assume cannot be hosts for Local Dislocation, somehow), and the closest non-moved element would be T, which again is part of a higher phase. I leave a full development of an implementation of this process as an open issue for future research.

Let us now discuss the “doubling” cases, where the φ -suffix is obligatory even when the higher copy of the pronoun (in spec,CP) is pronounced. In our analysis, this means that the lower copy of the pronoun in spec,TP, for some reason, must be pronounced. I follow Yuan (2025) in assuming that Local Dislocation (and M-merger, in her proposal) can interact with the Stray Affix Filter (Lasnik 1981, 1995, M. C. Baker 1988). In its original formulation, the Stray Affix Filter required that the host of affixal material be pronounced

overtly. As developed by Bobaljik (1995, 2002), Nunes (2004), and Landau (2006), this requirement could then prevent a movement copy from being deleted, or in other words, force a (lower) copy to be pronounced overtly. Once the copy of the pronoun in spec,TP is Locally Dislocated onto C, it is then forced to be pronounced overtly despite originally being a lower copy of movement, which the algorithm governing chain resolution would typically have deleted. This can then result in the attested doubling pattern, where the copy in spec,CP may optionally be pronounced overtly³⁰, while the one in spec,TP *must* be pronounced due to the Stray Affix Filter. This is conceptually similar to cases reported by Yuan (2025) in Inuit languages where it seems that an incorporated DP is still syntactically active, and can undergo movement.

The fact that a pronoun in spec,TP ends up becoming part of the same morphological word as the verb in the post-syntax makes correct predictions with respect to two more aspects of Äiwoo verbal morphology. The first is the fact that despite being pronouns at the syntactic level, φ-suffixes are morphophonological affixes (§5.1.2.2): they can trigger vowel harmony, they count for stress assignment, and they can even trigger suppletive allomorphy on certain verbal stems. For example, in possessive constructions, 1MIN and 3MIN forms are often irregular/suppletive (§5.1.2.2). In Roversi (2025b) I argue that the possessor is the subject in spec,TP of a relative clause modifying the possessum, and the possessive classifiers are really just transitive UV verbs. Instead of showing the usual φ-suffix *-no* for 1MIN, possessive classifiers often show idiosyncratic allomorphy patterns, for example with stem alternations. For example, the food-related possessive usually surfaces as a stem *na-* followed by the relevant φ-suffix (396a), but its 1MIN form is *nugo* rather than **na-no* (396b)³¹.

- (396) a. [sii [RC *na{-mu/-Øⁿ/-i}*]] (250728)
 fish POSS.FOOD.UV{-2MIN/-3MIN/-3AUG}
 ‘{Your/his/her/their} fish’; lit. ‘The fish [that {you/s/he/they} POSS.as.food]’
- b. [sii [RC ***nugo***]]
 fish POSS.FOOD.UV.1MIN
 ‘My fish’; lit. ‘The fish [that I POSS.as.food]’

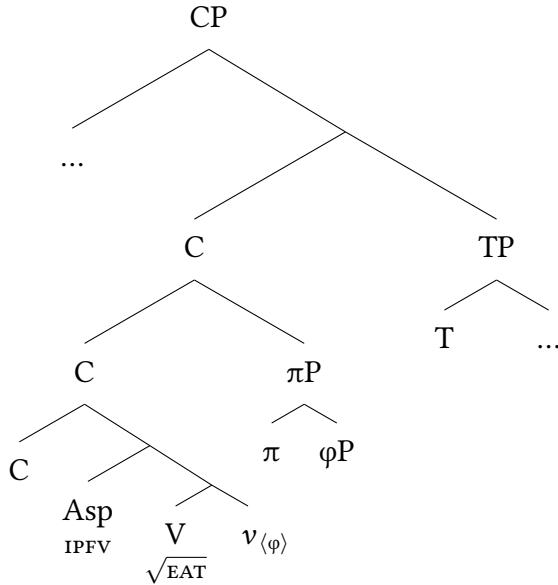
This kind of allomorphy is not immediately predicted to be possible given the underlying syntax in (389b), since the verb (in C) and the 1MIN pronoun (in spec,TP) do not form a constituent. However, Local Dislocation creates a local enough domain for allomorphy to be triggered (397), still under the assumption that the locality domain for allomorphy is the complex head (Choi & Harley 2019). I leave the development of a full model of this phenomenon to future research.

30 See chapter 2, §2.5.4 for the conditions on when pronominal arguments in Äiwoo can be null.

31 Interestingly, if the possessive verb has a modifier, the stem still shows its 1MIN allomorph, but now the suffix *-no* is optional but preferred (i). I leave an analysis of this for future research.

- (i) sii enge *nugo*, eä sii eângâ ***nugo-eopu?(-no)*** (240909)
 fish this POSS.FOOD.UV.1MIN and fish that POSS.FOOD.UV-also-1MIN
 ‘This fish is mine, and that fish is also mine’

(397) Applying m-merger to the tree in (389b):



The fact that the pronoun becomes part of a complex head together with the verb helps us account for a second, more crucial fact, something I have implicitly shown throughout, but not commented on so far: the fact that on intransitive verbs and AV verbs there is never any φ -suffix whatsoever. According to the syntactic derivation for Äiwoo clauses developed in 3, the subject moves through spec,TP in these clauses too (398); intransitives look the same, just without an object.

(398) [DP_[PIV] C_{<φ_S} [t_S] T [t_S v [V O]]]]

Given the morphological steps proposed above, it is unclear why the copy of the subject in spec,TP wouldn't undergo Local Dislocation onto the verb in C, and thus be pronounced as a φ -suffix, which is impossible (399). Instead, in AV and intransitive clauses, the linear slot I have identified with spec,TP is consistently empty.

(399) No φ -suffixes on AV verbs and intransitives:

(250728)

- a. (iude) de-ki-lâbonge (*-de)=kaa sii
12AUG 12AUG-IPFV-cut.AV-12AUG=FUT fish
'We will cut fish' (only good without -de)
- b. (iude) de-ki-obu (*-de)=kaa
12AUG 12AUG-IPFV-fall-12AUG=FUT
'We will fall' (only good without -de)

I propose that this fact may receive a morphological solution, in terms of Impoverishment. The syntax (and early post-syntax) is kept uniform across all types of clauses: a pronoun in spec,TP always undergoes Local Dislocation onto the verb in C, as described above. However, what happens next varies. First, remember that a rule of Kinyalolo-style Impoverishment was how we derived the fact that AV and intransitive verbs carry prefixal

agreement, whereas UV verbs do not (chapter 3, §3.5.5). In any kind of clause, C agrees with and copies the φ -features of the argument it moves (whichever that may be). However, only in UV and not in AV/intransitives, v also has copied φ -features. Therefore, in UV the features on C undergo Impoverishment (400a), whereas in AV and intransitives they survive, and get spelled out as prefixal agreement (400b).

- (400) a. **Undergoer Voice:** C gets impoverished \Rightarrow no φ -prefixes

- (i) Underlying syntax: $[C_{\langle \varphi \rangle} \dots [\dots v_{\langle \varphi \rangle}]]$
- (ii) Impoverishment of C: ✓ $[\emptyset \dots [\dots v_{\langle \varphi \rangle}]]$

- b. **Actor Voice:** C does not get impoverished \Rightarrow φ -prefixes

- (i) Underlying syntax: $[C_{\langle \varphi \rangle} \dots [\dots v]]$
- (ii) Impoverishment of C: ✗ $[C_{\langle \varphi \rangle} \dots [\dots v]]$

I assume that Local Dislocation precedes Impoverishment, which in turn precedes Vocabulary Insertion, and that this evaluation is done bottom-up through the complex head (Bobaljik 2012, a.o.). I suggest that after a pronoun (originally in spec,TP) is Locally Dislocated onto the verb in C, this too can undergo another round of Impoverishment of the same kind, sensitive to the presence of φ -features on C. Thus if the first round of Impoverishment applies, this will bleed the second round, as shown below. If C had been Impoverished (in UV), this will bleed Impoverishment on the pronoun, which will thus surface overtly as a φ -suffix (401a). If, however, C was not impoverished and still has φ -features on it, then it is the features on the pronoun (or the entire pronoun itself) that are deleted. This is the case in AV and intransitive verbs, and therefore, we see no φ -suffix (401b). This derives the complementary distribution of φ -prefixes and suffixes, which never co-occur.

- (401) a. **Undergoer Voice:**

C gets impoverished, φ does not \Rightarrow no φ -prefixes, yes φ -suffixes

- (i) After Local Dislocation: $[[C_{\langle \varphi \rangle} \dots [\dots v_{\langle \varphi \rangle}]] \varphi]$
- (ii) Impoverishment of C: ✓ $[[\emptyset \dots [\dots v_{\langle \varphi \rangle}]] \varphi]$
- (iii) Impoverishment of φ : ✗ $[[\emptyset \dots [\dots v_{\langle \varphi \rangle}]] \varphi]$

- b. **Actor Voice:**

C does not get impoverished, φ does \Rightarrow yes φ -prefixes, no φ -suffixes

- (i) After Local Dislocation: $[[C_{\langle \varphi \rangle} \dots [\dots v]] \varphi]$
- (ii) Impoverishment of C: ✗ $[[C_{\langle \varphi \rangle} \dots [\dots v]] \varphi]$
- (iii) Impoverishment of φ : ✓ $[[C_{\langle \varphi \rangle} \dots [\dots v]] \emptyset]$

Admittedly, the morphological story sketched here is somewhat ad-hoc, and relies on highly specific Impoverishment rules triggered within arbitrary domains. For example, the Impoverishment rule for C makes reference to v , which is not structurally or linearly adjacent to it but is in the same complex head. However, for some reason the Impoverishment rule for the pronoun is only sensitive to C, and not to v further down. For similar interactions between different Impoverishment rules within the Algonquian verb, see Sun & Grishin (2025).

5.6 CHAPTER SUMMARY

We can now take stock and remind ourselves of the conclusions reached so far. First, we have shown that all φ -indexers in Äiwoo – both prefixes and suffixes – are *morphophonological affixes*. However, the prefixes and the suffixes are *syntactically* of different nature. The former constitute “pure” agreement markers, as evidenced by their obligatory co-occurrence with overt DP arguments. The latter, on the contrary, are actually pronouns occupying spec,TP, and they are only post-syntactically reduced to suffixes. Table 5.1 gives an overview of the differences between how φ -indexing works in AV and UV. Finally, table 5.2 shows the complete paradigms for φ -prefixes, suffixal pronouns, and full pronouns.

Table 5.1: Morphosyntactic differences between φ -indexing in AV and UV.

	Actor Voice	Undergoer Voice
Position:	Prefix <i>i-ki-vängä=kaa</i> <i>sii</i> 1MIN-IPFV-eat.AV=FUT fish 'I will eat fish'	Suffix <i>sii ki-ngä-no=ngaa</i> fish IPFV-eat.UV-1MIN=FUT 'I will eat the fish'
φ -indexer + DP?	Obligatory <i>mikilitei ki-*(li-)vängä=kaa...</i> fishermen IPFV-3AUG-eat.AV=FUT 'The fishermen will eat...'	Impossible (with DP in spec,TP) <i>ki-ngä(*-li)</i> <i>mikilitei=kaa</i> IPFV-eat.UV-3AUG fishermen=FUT 'The fishermen will eat it'
Full pronouns?	Possible <i>iude de-ki-vängä=kaa...</i> 12AUG 12AUG-IPFV-eat.AV=FUT 'We will eat...'	Impossible (pronoun in spec,TP) <i>ki-ngä(-de)</i> <i>(*iude)=ngaa</i> IPFV-eat.UV-12AUG 12AUG=FUT 'We will eat it'
Syntactic nature:	Exponents of φ -agreement on C	Reduced pronouns in spec,TP

Table 5.2: Full paradigms for Äiwoo φ -indexers and pronouns.

	Agreement prefixes	Pronouns	
		Suffixal forms	Full forms
1MIN	<i>i-</i>	- <i>no</i> , - <i>nee</i> [*] , - $\emptyset^{\text{ŋ}}$ [†]	<i>iu</i>
12MIN	<i>ji-</i>	- <i>ji</i>	<i>iuji</i>
2MIN	<i>mu-</i>	- <i>mu</i>	<i>iumu</i>
3MIN	(\emptyset)	- \emptyset^{n}	<i>inâ/ine</i>
1AUG	<i>me-</i>	- <i>ngo(pu)</i> , - <i>ngee</i> [*]	<i>iungo(pu)</i>
12AUG	<i>de-</i>	- <i>de</i>	<i>iude</i>
2AUG	<i>mi-</i>	- <i>mi</i>	<i>imi</i>
3AUG	<i>li~lu-</i>	- <i>i</i>	<i>ijii</i>

* The forms *-nee* and *-ngee* only occur preceding a 2nd person object pronoun; see §6.3.4.

† The form - $\emptyset^{\text{ŋ}}$ is specific for 1MIN objects; the other two forms are for subjects.

6

CHAPTER

NON-CANONICAL UV CLAUSES

6.1 COMPLETING THE PUZZLES

In the last chapter, I spent some time arguing that the φ -suffixes found on UV verbs are not agreement, but full syntactic arguments: they are pronouns in spec,TP, although in a phonologically shorter form. Establishing this was a necessary step for me now to develop an analysis of certain kinds of UV clauses showing different word orders than the usual one we have concentrated on so far (O V S=TAM). These clauses have been mentioned several times throughout the dissertation. Often, I used their sheer existence as evidence for or against certain analytical choices. For example, in discussing some phenomenon P, I have often used rhetoric like: “*just by looking at P alone, we could entertain Hypothesis 1 or Hypothesis 2, and they would both work just as well. However, phenomenon Q also exists, and that alone excludes Hypothesis 1, so we must go with Hypothesis 2; stay tuned for what I’ll say about Q*” – where Q often was the non-canonical UV clauses discussed in this chapter. We are now finally in a position to dedicate our full attention to them, and develop a model that will derive both their word order properties and their extraction profiles.

To contextualize the new kinds of UV clauses we are about to introduce, consider the ones we have seen on so far – what I call the “canonical” types of Äiwoo clauses. As the reader will be familiar with by now, these have S V=TAM O order in AV (402a), and O V S=TAM order in UV (402b).

- (402) a. *Mary ki-veve=kaa nuwopa* (250807)
Mary IPFV-buy.**AV=FUT** *house*
‘Mary will buy a house’
- b. *nuwopa ki-ve Mary=kaa*
house IPFV-buy.**UV** *Mary=FUT*
‘Mary will buy the house’

As for AV, this is both correct and comprehensive. As for UV, however, examples like (402b) hide a considerably more complex reality; this is the core of the Word Order Puzzle. Although O V S=TAM is indeed the default/canonical order for UV clauses, this is not the whole story. In addition to (402b), three more types of UV clauses can be identified. These differ from each other in word order; that is, which argument(s) are realized in spec,CP, spec,TP, and the vP-internal position. Moreover, they differ in their Ā-extraction profiles. Consider our usual overview table in (403). In chapters 3–4 we covered the upper portion of the table (403a–c), deriving the word order and extraction properties of AV, UV_{plain}, and UV_{only} clauses. In this chapter, we will examine the bottom half (403d–g).

(403) Alternations of word order and Ā-extractability:

Clause type:	Word order:			
	[CP]	[TP]	[vP]	
a. AV:	S ✓	φ _S -V.AV	=TAM	O ✗
b. UV _{plain} :	O ✓	V.UV	S ✗	=TAM
c. UV _{only} :	O ✓	V.UV	S ✓	=TAM
<hr/>				
d. UV _{inā} :	O ^{NA}	V.UV	S ✓	=TAM
e. UV _{gu} :	O ^{NA}	V.UV	-π _O	=TAM S ✓
f. UV _{SVO} :	S ^{NA}	V.UV	-π _S	=TAM O ^{NA}
g. UV _{1>2} :	S ^{NA}	V.UV	-π _S -π _O	=TAM

✓ done (chapters 3–4)

First, in §6.2 I lay some conceptual and terminological groundwork that will be useful going forward, about what classes of nominals are treated alike or differently by the part of Äiwoo syntax that governs word order. With that in the background, §6.3 is a descriptive section where I discuss the word order properties of UV_{gu}, UV_{SVO}, and UV_{1>2} clauses in detail (403e–g), both establishing novel empirical generalizations and amending existing ones from earlier literature. Then, in §6.4 I show how all these clauses also differ from the ordinary ones in their Ā-extraction profiles. I illustrate their Ā-extraction possibilities in §6.4.1, and in §6.4.2 I show how the determining factor behind their extraction patterns cannot be word order alone by examining the case of UV_{inā} clauses (403d), which show completely canonical word order but allow subject extraction. Finally, in §6.5 I show how revising two probes in our model of the Äiwoo clause (v and T) will capture both the word order and extraction properties of all these non-canonical UV clauses. We will see that movement to spec,TP will constitute a second instance of non-local A-movement (in addition to CP-fronting).

As we can already see from the table, the data is rather intricate – especially when one starts considering the complex distribution of these four types of clauses. To aid presentation, throughout the chapter I will give frequent interim summaries, and try to represent the data in a couple different ways, in the hope that at least one of them will be congenial and intuitive to the reader. When working with such a complex dataset, it is unavoidable that a formal analysis will have some degree of complexity as well. However, I will try to make clear the difference between the strictly implementational formalisms (which may

change in the future as the field progresses) vs. what I consider to be the deeper intuitions guiding the analysis, which hopefully should be useful regardless of the specific formal implementation I choose here.

6.2 CLASSES OF NOMINALS IN ÄIWOO SYNTAX

Talking about the system of clausal alternations in Äiwoo is hard not only because the system itself is complex, but also because the classes of nominals that are grouped together in displaying one behavior or another constitute somewhat unusual classes. Throughout the rest of this chapter, we will see that Äiwoo syntax involves two phenomena, here abstractly called P and Q, that cut the general domain of nominals in two different ways. (For now, I remain silent about what exactly “Phenomenon P/Q” are; these will be the focus of the rest of the chapter.) It is convenient, then, to first establish what these groupings are. For the sake of exposition, it is also useful to not only have labels for the natural classes themselves, but also for their complement sets, just to have a convenient way to refer to both “all nominals that partake in process X” and “all nominals that do not partake in process X” – whether the latter constitutes a natural class in any other sense or not.

The relevant groupings are summarized in (404). In this table, “1/2/3AUG_π” (the first row) refers to the union of 1st person, 2nd person, and 3AUG pronominal arguments, i.e., every pronoun that is not 3MIN. Then, *inâ* is the overt 3MIN pronoun¹. The notation “∅_{3MIN}” identifies null arguments that are featurally 3MIN. Finally, “lexical DPs” refers to any nominal containing a lexical root, including proper names: ‘Mary’, ‘the children’, ‘three teachers’, ‘my dog(s)’, etc. Note that, of course, some of these classes overlap: for example, all φ⁺Ps are also πPs/pronouns (but not viceversa), and all DPs are also φ⁰Ps (but not viceversa).

(404) Classes of nominals in Äiwoo:

Nominal type	Phenomenon P	Phenomenon Q
1/2/3AUG _π	✓	✓ “φ ⁺ Ps”
<i>inâ</i> (3MIN _π)	✓	✗
∅ _{3MIN}	✗	✗ “φ ⁰ Ps”
Lexical DP	✗	✗

The first thing to notice is that across the whole language, null 3MIN arguments (∅_{3MIN}) are consistently treated the same way that lexical DPs are; in other words, they “count” as lexical DPs. This could be interpreted as signifying that these null arguments are not, in fact, a case of *pro*-drop, but rather of something more similar to Argument Ellipsis (Hoji 1998, Tomioka 2003, 2014, 2021, Saito 2007, D. Takahashi 2008a,b, a.m.o.). In other words,

¹ This also includes its proximal counterpart *ine*, but I use *inâ* as the general label since this is the default form (see chapter 5, §5.5 for details).

what is dropped is not a pronoun (in the syntactic/featural sense), but a (lexical) DP. Teasing apart cases of genuine *pro*-drop from Argument Ellipsis is a notoriously hard task, and has been the focus of a rich literature (see citations above). As for Äiwoo, I don't have concrete arguments to support this hypothesis, as the type of evidence that is typically used to elucidate this question is not as yet available (this is largely semantic/interpretive evidence: availability of strict/sloppy readings under ellipsis, "paycheck"/functional readings of pronouns, N-bar ellipsis/*one* anaphora, necessity of a linguistic antecedent, etc.).

For the purpose of this dissertation, I will simply adopt this stipulation: $\emptyset_{3\text{MIN}}$ nominals in Äiwoo are cases of Argument Ellipsis. In other words, they are elided DPs, and not null pronouns. One piece of evidence that might point in this direction is that $\emptyset_{3\text{MIN}}$ nominals have a different distribution than other null arguments (chapter 2, §2.5.4). They can be in any position: spec,CP, spec,TP, in situ, complement of P, etc., and in any grammatical relation (subject, object). In contrast, other (non-3MIN) arguments that are clearly pronominal can only ever be null in spec,CP, and must instead be overt instead anywhere else. I leave it to future research to inquire into the interpretive properties of 3MIN arguments, to shed light on their syntactic and semantic nature.

Having "unified" lexical DPs with $\emptyset_{3\text{MIN}}$ arguments, let us now look at the two different groupings Äiwoo syntax makes. The first, and easier cut to label is that between rows 1/2 vs. rows 3/4. On one hand, we have every nominal that we would reasonably call pronouns, and on the other, we have lexical DPs and $\emptyset_{3\text{MIN}}$ arguments. For simplicity, I will call the former group "pronouns" and use the notation π Ps (already used in chapter 5), and the latter group "DPs" (with the occasional reminder that this label also includes $\emptyset_{3\text{MIN}}$ arguments).

The second cut is between nominals that have "marked" φ -features (row 1), vs. those that do not (rows 2–4). The first group consists of all participant pronouns (1st and 2nd person, including 1st inclusive) plus 3AUG pronouns. The second group consists of the union of lexical DPs, 3MINS, and the 3MIN overt pronoun *inâ*. It would be confusing to call the first group "pronouns", since *inâ* is not part of it here but rather patterns with the complement set. Therefore, for the sake of exposition, I will use the labels " φ^+P " and " φ^0P " (read "phi-plus P" and "phi-zero P")². This is meant to convey the intuition that the former group has marked person/number features (PARTICIPANT, ADDRESSEE, AUGMENTED, etc.), whereas the latter group does not. For now, I will take these as purely descriptive labels. Later (§6.5.1.1), we will see how we can model the behavior of these groups of nominals in a principled way by thinking about their featural make-up.

6.3 FOUR TYPES OF UV CLAUSES AND THEIR DISTRIBUTION

Here is the core of our Word Order Puzzle. A full overview of the four UV clause types is given in (405), indicating for each type its word order, and which arguments occupy which positions. Here, UV_{plain} subsumes also clause types with the same word order but

² I thank Zhouyi Sun for helping me come up with this terminology/labels, but he is not to blame for it.

different extraction patterns (UV_{only} and $UV_{in\hat{a}}$). The notation “ $\pi_{S/O}$ ” indicates a φ -indexer from the suffixal paradigm discussed in chapter 5 – that is, a subject or object pronoun in its short form. Parentheses around an argument signify that it can optionally be null. Examples of all four types are given in (406); remember that the names/labels are purely meant as convenient mnemonics. Each type will be discussed in depth in §§6.3.1–6.3.4.

(405) Overview of UV clause types:

	“UV _{plain} ”	“UV _{gu} ”	“UV _{SVO} ”	“UV _{1>2} ”
Word order:	(O) V S=TAM	(O) V-gu- π_O =TAM S	(S) V- π_S =TAM O	(S) V- π_S - π_O =TAM
vP:	nothing	Subj	Obj	nothing
Spec,TP:	Subj	Obj	Subj	Subj & Obj
Spec,CP:	Obj	Obj	Subj	Subj

(406) a. UV_{plain}: (250728)

John ku-tu-usi-kâ-**mu**=waa ngä party
John IPFV-bring.uv-back.UV-DIR3-**2MIN**=FUT to party
 ‘You will bring John back to the party’

b. UV_{gu}:

Ø_{2MIN}/i_{umu} ku-tu-usi-kâ-**gu-mu**=waa *John* ngä party
 2MIN IPFV-bring.uv-back.UV-DIR3-**OBJ-2MIN**=FUT *John* to party
 ‘John will bring you back to the party’

c. UV_{SVO}:

Ø_{2MIN}/i_{umu} ku-tu-usi-kâ-**mu**=waa *i*_u ngä party
 2MIN IPFV-bring.uv-back.UV-DIR3-**2MIN**=FUT 1MIN to party
 ‘You will bring me back to the party’

d. UV_{1>2}:

Ø_{1MIN}/i_u ku-tu-usi-kâ-**nee-mu**=waa ngä party
 1MIN IPFV-bring.uv-back.UV-DIR3-**1MIN-2MIN**=FUT to party
 ‘I will bring you back to the party’

It is important to remember that these are not optional alternative word orders, but mutually exclusive: for any given sentence, only one of these pattern will be grammatical. What determines which type of UV clause we will get are the φ -features of both the subject and the object. No other factor plays a role: tense/aspect/modality, embedded vs. matrix status, clause force (interrogative, declarative, etc.), information structure, etc. are all completely orthogonal to this alternation. In other words: as long as we know that the subject has φ -features X and the object has φ -features Y, we will be able to fully predict which clause type we will observe.

After having glanced at what the four clause types look like, their distribution is shown in (407). I exclude the reflexive combinations (1 > 1, 2 > 2) from the discussion; all 3 > 3

combinations described here are intended as non-reflexive³. (In this table, $UV_{in\hat{a}}$ clauses are subsumed under UV_{plain} , since they share the same word order; this is because the 3MIN pronoun $in\hat{a}$ is a φ^0P .)

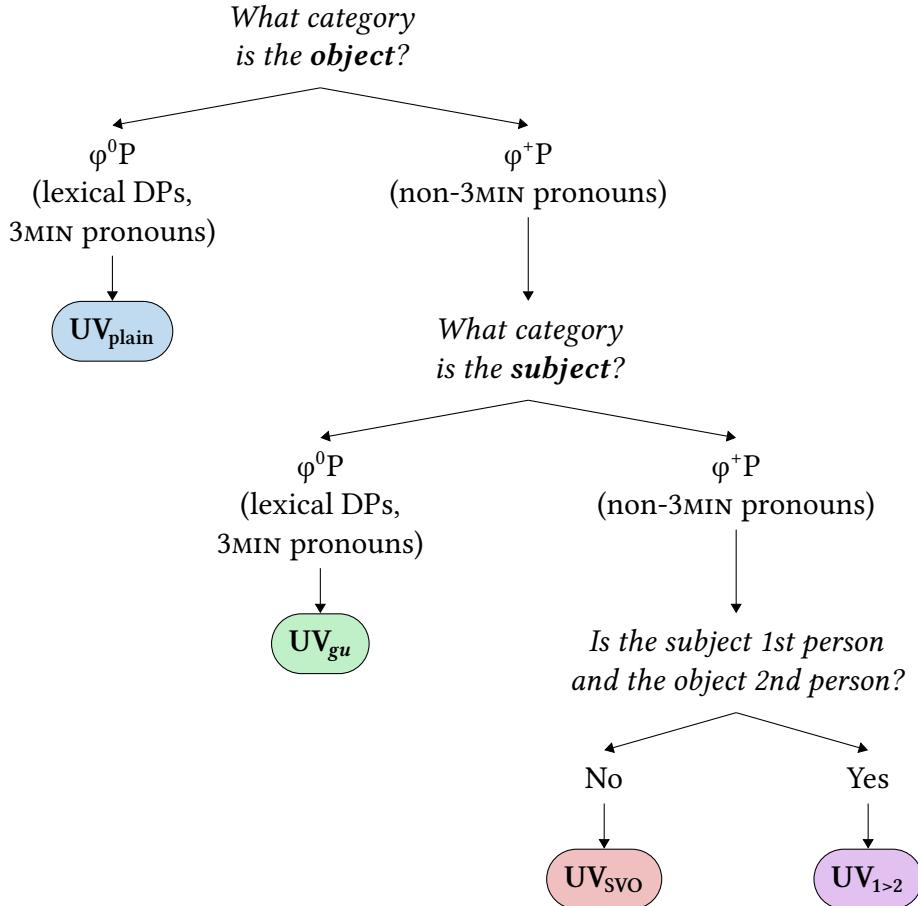
(407) Distribution of UV clause types:

$S \downarrow, O \rightarrow$	φ^+P			φ^0P
	1	2	$3AUG_\pi$	
φ^+P	1	—	$UV_{1>2}$	UV_{SVO}
	2	UV_{SVO}	—	UV_{SVO}
	$3AUG_\pi$	UV_{SVO}	UV_{SVO}	UV_{SVO}
	φ^0P	UV_{gu}	UV_{gu}	UV_{gu}

Already from this table, we can observe a fundamental aspect determining the distribution of the different clause types. The most important factor governing these alternations are the categorial features of the two arguments. The mechanism controlling this alternation is sensitive to the φ^+P vs. φ^0P distinction: (i) rightmost column: when the object is a φ^0P (lexical DP or 3MIN pronoun), we always get UV_{plain} , no matter what the subject is; (ii) bottom row: when the subject is a φ^0P and the object is a φ^+P (non-3MIN pronoun), we get UV_{gu} ; (iii) top-left square: when both arguments are φ^+Ps , we get UV_{SVO} ; $UV_{1>2}$ will be shown to be a sub-type of UV_{SVO} (§6.3.4). The same information is illustrated in a different way in the diagram in (408). This should be thought of as a (metaphorical) algorithm/flowchart for determining what kind of clause we will have depending on what the subject and object look like.

³ 1st+2nd person (1st person inclusive) arguments behave across the board in the same way as 2nd person arguments, so I simplify the table by omitting them. See a full version in Appendix 6.A.

(408) Distribution of UV clause types (flowchart):



This kind of clausal alternation in Äiwoo is reminiscent of what has been discussed under the heading of “global case splits” (Keine 2010, Georgi 2012, Bárány 2017, Yuan 2020, Bárány & Sheehan 2024, Clem & Deal 2024, a.o.). These are systems where at least descriptively, in order to calculate the case properties, agreement profile, or movement pattern of one argument in a (di-)transitive clause, it is not enough to know various properties of that argument (e.g. its base-generated position, φ -features, animacy, definiteness/specification, etc.), but one must know properties of *multiple* arguments. Abstracting away from language-specific details, descriptions of global case splits follow this general structure: “iff the subject has [such and such properties] *and* the object has [such and such properties], then [perform operation X]” (e.g., assign a certain case to the {subject/object}, or move the {subject/object} to spec,XP, or agree with the {subject/object}, etc.). Now, Äiwoo does not have any morphological case (see chapter 2, §2.5), but its clausal alternation system can be cast in the same kind of logic: “iff the subject has [properties α] and the object has [properties β], then the clause will be of [type γ]”.

Before proceeding to the full discussion below, an important caveat is in order. In what follows, I exclude plural lexical DPs (e.g. *mikilivaavee* ‘teachers’) from the analysis. The reasons behind this exclusion would be hard to understand without having seen how

the system works first, so for expository reasons, I relegate a discussion of this caveat to appendix 6.A. The reader should just bear in mind that throughout the next few sections, any mention of “(lexical) DP” is implicitly restricted to *singular* DPs.

6.3.1 UV_{plain}: CANONICAL UV CLAUSES

This is the standard type of UV clause we have seen so far (henceforth, “UV_{plain}”). The properties of these clauses should be familiar by now: the object is in spec,CP, and the subject is in spec,TP. The subject can either be any kind of nominal; if it’s a pronoun, it will surface in its shorter suffixal form rather than the full form (409b).

- (409) a. *sii ku-tu-mä* *mikilitei*=kaa (250728)
 fish IPFV-bring.UV-DIR1 **fishermen**=FUT
 ‘The fishermen will bring the fish’
- b. *sii ku-tu-mä*~~-i~~*=laa*
 fish IPFV-bring.UV-DIR1-**3AUG**=FUT
 ‘They will bring the fish’

Although I have been treating this kind of UV clauses as the default type, their distribution is effectively restricted to when the object is a φ^0 P, that is, either a lexical DP or a 3MIN pronoun. Sentence (410) confirms that as for the object, both the null and the overt 3MIN pronoun *inâ* behave identically to a lexical DP like ‘Anna’. Later (§6.4.2), we will see that clauses with *inâ* have different extraction properties from the other two types of objects.

- (410) *Ø*_{3MIN}/*inâ/Anna* *ku-tu-mä* *Lisa=kaa* (250728)
 3MIN/Anna IPFV-bring.UV-DIR1 Lisa=FUT
 ‘Lisa will bring him/her/Anna’

Whenever the object is a φ^+ P (a non-3MIN pronoun), different kinds of UV clause will obtain. These are the non-canonical types of UV clauses, which we turn to now.

6.3.2 UV_{gu} CLAUSES: OBJECTS IN SPEC,TP

In the first kind of non-canonical UV clauses, the word order is still OVS at a broader level, but with clear differences from the standard type just described. Although some of these clauses’ special properties have been mentioned in passing throughout the previous chapters, here is a complete description. In (411) we observe that the object *iude* ‘us.INCL’ is fronted to the canonical pre-verbal position, as we indeed would expect in UV. However, the object pronoun is *also* realized in the slot that normally is reserved for UV subjects, between the verb and the TAM particles (in its suffixal form *-de*). Moreover, this pronominal suffix is preceded by an extra morpheme, the namesake object marker *-gu* (see chapter 5, §5.5)⁴. Finally, the subject ‘John’ surfaces in a special low position, to the right of the

⁴ The paradigm of object-indexing pronominal suffixes found in this type of clauses is morphologically almost identical to that of subject pronouns in UV. The only difference is the 1MIN exponent (see chapter 5, fn. 24,

TAM particles (recall that in the canonical UV clauses described above, subjects are to the *left* of these particles; (410)).

- (411) *(iude)* *ku-tu-usi-kä-[gu-de]=ngaa* *John* *ngä skul*
12AUG IPFV-bring.UV-back.UV-DIR3-OBJ-12AUG=FUT John to school
‘John will bring us back to school’ (250728)

All these properties are obligatory. The subject cannot be in its ordinary UV position (between the verb and TAM), and the object pronoun in that position (including *-gu*) cannot be dropped (412). As mentioned in §5.4.2, descriptively it seems as if the position between the verb and the TAM particles has room for at most one argument. This supports our analysis of this slot as a specifier position (spec,TP), which can(/must) host one argument: if the object is in spec,TP – for whatever reason that might be – the subject cannot be there too, and must stay low instead⁵. I assume this lower position is the base-generated position of the subject, in spec,vP.

- (412) * *(iude)* *ku-tu-usi-kä(-gu-de)* *John=kaa* *ngä skul*
12AUG IPFV-bring.UV-back.UV-DIR3-OBJ-12AUG John=FUT to school
Intended: ‘John will bring us back to school’ (250728)

Most frequently, these sentences look verb-initial on the surface string (hence my parenthesizing the full pronoun *iude* above). However, I analyze this as involving a null pronominal object filling the preverbal position (spec,CP), thus counting for the V2 effect; see the argument in §5.3.2. Indeed, these fronted null pronouns can optionally be realized overtly under appropriate discourse conditions (e.g. contrastive focus). Furthermore, we can confirm that the preverbal full-form object pronoun in (411) is indeed in spec,CP, and not a left-peripheral topic, by observing its ordering possibilities with respect to sentence adverbs. In (413) that the object pronoun *imi* 2AUG must follow the adverb. This confirms that this object pronoun is in spec,CP, and not topicalized. The order pronoun-adverb is only acceptable if *imi* is marked as topicalized, by a prosodic break and/or the particle =Câ DIST.

- (413) * *{imi}* *bulaape ✓{imi}* *ku-tu-kä-gu-mi=aa* *John* *ngä skul*
2AUG tomorrow 2AUG IPFV-bring.UV-DIR3-OBJ-2AUG=FUT John to school
‘Tomorrow John will bring y’all to school’ (240307)

and §5.2). For UV 1MIN subject pronouns, the exponent is *-no* (ia), or *-nee* in UV_{1>2} clauses (§6.3.4). For 1MIN objects, instead, it is Ø^y (ib); see chapter 2, §2.5 and Roversi (2020: §3.4) for this notation. For all other categories than 1MIN, the subject and object suffixal pronouns are identical (*modulo* the presence of *-gu*).

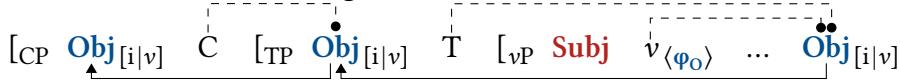
(i) 1MIN has different exponents for subject and object suffixal pronouns: (250728)

- a. *John* *ku-tu-mä-[no]=ngaa* *ngä skul*
John *IPFV-bring.UV-DIR1-1MIN=FUT* to school
‘I will bring John to school’
- b. *(iu)* *ku-tu-mä-gu[-Ø^y]=ngaa* *John* *ngä skul*
1MIN IPFV-bring.UV-DIR1-OBJ-1MIN=FUT *John* to school
‘John will bring me to school’ (**kutumä-gu-no=ngaa*)

5 In §6.3.4 we will see the only exception to this generalization, i.e. “UV_{1>2}” clauses.

At the syntactic level, as mentioned earlier these clauses show a “doubling” pattern: the object pronoun in spec,TP is obligatory, but the object is also present in spec,CP (whether overt or null). This was analyzed in §5.4 as the result of obligatory spell-out of the lower copy of the object pronoun (the one in spec,TP). Combining these observations, we get to the following syntactic “map” (414). First, *v* agrees with the object (thus giving us UV morphology), and then – exceptionally – T raises the object to spec,TP instead of the subject, which stays in situ in spec,*vP*. Finally, C raises the object as well.

- (414) Syntactic structure of UV_{gu} clauses:



Exactly how and why T comes to agree with and move the object instead of the subject will be the main focus of §6.5.1.3. To preview the analysis, I will show that this is another instance of non-local A-movement, like the one to spec,CP posited in chapter 3. In §6.5.1.3 we will revise the featural specification of the probe on T to derive this effect.

Having examined the morphosyntactic properties of UV_{gu} clauses, we can now turn to their distribution. We get a UV_{gu} clause when the subject is a $\varphi^0 P$ and the object is a $\varphi^+ P$ (415). If the object is $\varphi^0 P$ (regardless of the subject’s features), UV_{gu} is impossible (416a), and we will get a canonical UV clause instead (416b).

- (415) $\varphi^0 P$ subject > $\varphi^+ P$ object: UV_{gu}

(iude)	<i>ku-tu-kä-gu-de=ngaa</i>	$\emptyset_{3MIN}/John$	<i>ngä skul</i>
12AUG	IPFV-bring.UV-OBJ-12AUG=FUT	John	to school
‘S/he/John will bring us to school’			

- (416) If the object is a $\varphi^0 P$, UV_{gu} is impossible:

(250728)

- a. * $\emptyset_{3MIN}/inā/devalili$ *ku-tu-kä-gu-Øⁿ=naa* $John$ *ngä skul*
 $3MIN/child$ IPFV-bring.UV-DIR3-OBJ-3MIN=FUT $John$ to school
 Intended: ‘John will bring him/her/the child to school’
- b. $\emptyset_{3MIN}/inā/devalili$ *ku-tu-kä* $John=kaa$ *ngä skul*
 $3MIN/child$ IPFV-bring.UV-DIR3 $John=FUT$ to school
 ‘John will bring him/her/the child to school’

Certain properties of UV_{gu} clauses had already been noted in the descriptive literature (Næss 2006 et seq.). Specifically, this is true of (i) the presence of “object markers” or “object agreement” on the verb and of the morpheme *-gu* (although this was analyzed as a special 3MIN subject marker); (ii) the null 1MIN object exponent \emptyset^0 (again, this also wasn’t analyzed in these terms, but rather with *-gu* exceptionally being a portmanteau 3MIN>1MIN marker in this specific context). However, the other aspects discussed in this section are novel findings: (i) the fact that an overt standalone pronoun can optionally be realized in the preverbal pivot position, teaching us that these clauses also fit the V2 pattern and are essentially OV(OS); (ii) the particular low position of the subject, to the right of the =TAM slot.

6.3.3 UV_{SVO} CLAUSES: UV WITH SVO ORDER

Let us now turn to discussing the properties and distribution of UV clauses with SVO order (shortened as “UV_{SVO}”). These are particularly striking, as for the first time we see a disconnect between the VIA, i.e. the argument that the voice morphology indexes (the object), and what occupies the preverbal position (the subject). As we know, Äiwoo is normally strictly VIA-initial: AV has SVO word order, UV has OVS. However, here we have UV clauses with SVO word order. I will exclude from the discussion sentences containing reflexives/anaphors, like the ones briefly discussed in passing in §5.3.2. Although their word order and voice properties are the same as the ones under discussion here (UV with SVO order), other properties are not, such as their distribution. The SVO order of reflexive sentences seems to be connected to binding-theoretical concerns, so I will leave a full analysis of those to future research.

An example of a UV_{SVO} clause is given in (417a), repeated from above. The SVO word order is fairly glaring: *ijii* ‘they’ occupies the pre-verbal position that is normally reserved for VIA arguments (which here would be the object). However, the verbal morphology signals that we are in UV, and not in AV. We see the UV stems *tu* and *usi* for ‘bring’ and ‘back’, we don’t see any prefixal agreement like we would find in AV (*li-* 3AUG), and we also see the typical suffixal φ-indexers that we find in UV clauses. Using any type of AV-style morphology (AV stems, prefixal φ-agreement) is impossible (417b).

- (417) a. UV_{SVO} clause: (250728)
- | | | | | |
|-------------------------------------|-------------------------------------|-------------|------------|-------------|
| <i>(ijii)</i> | <i>ku-tu-usi-mä-i=laa</i> | <i>iude</i> | <i>ngä</i> | <i>skul</i> |
| 3AUG | IPFV-bring.UV-back.UV-DIR1-3AUG=FUT | 12AUG | to | school |
| ‘They will bring us back to school’ | | | | |
- b. AV morphology is not allowed:
- | | | | | |
|---|-------------------------------------|-------------|------------|-------------|
| <i>*(ijii)</i> | <i>ku-lu-tou-ute-mä=kaa</i> | <i>iude</i> | <i>ngä</i> | <i>skul</i> |
| 3AUG | IPFV-3AUG-bring.AV-back.AV-DIR1=FUT | 12AUG | to | school |
| Intended: ‘They will bring us back to school’ | | | | |

Like for UV_{gu} clauses, the preverbal pronoun will most often be null, and an overt pronoun is possible but typically only used for e.g. contrastive focus and similar information-structural effects. By using our ordering diagnostic, we confirm that the preverbal subject pronoun is in the position that is typically reserved for VIAs (spec,CP), and not a left-peripheral topic: *ijii* ‘they’ must follow *bulaape* ‘tomorrow’ (418).

- (418) *{*ijii*} *bulaape* ✓{*ijii*} *ku-potaa-i=laa* *iude* (250728)
- | | | | | |
|--|-----------------|-------------|-------------------------|-------|
| <i>3AUG</i> | <i>tomorrow</i> | <i>3AUG</i> | IPFV-search.UV-3AUG=FUT | 12AUG |
| ‘Tomorrow they will be looking for us’ | | | | |

Moreover, we can confirm that the postverbal pronominal objects in UV_{SVO} clauses are in the same position as AV objects. In both cases, they must be immediately right-adjacent to the TAM particles, and any PP or adverbial must follow them (419).

- (419) Postverbal objects in UV_{SVO} are in the same position as AV objects: (250728)

- a. (ijii) *ku-tu-mä-i=laa* ✓{*iude*} *ngä skul* *{*iude*}
 3AUG IPFV-**bring.UV**-DIR1-3AUG=FUT 12AUG to school 12AUG
 ‘They will bring us to school’
- b. (ijii) *ku-lu-tou-mä=kaa* ✓{*buk*} *ngä skul* *{*buk*}
 3AUG IPFV-3AUG-**bring.AV**-DIR1-3AUG=FUT book to school book
 ‘They will bring (a) book(s) to school’

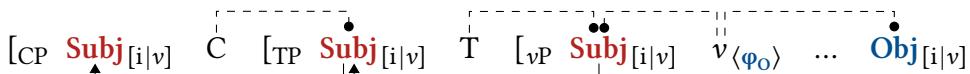
In contrast to the subject pronoun in spec,CP, the postverbal object *cannot* be null; it must be realized overtly. Similarly, and importantly, the suffixal subject pronoun is obligatory as well. Dropping *iude* 12AUG in (417a) results in ungrammaticality, and the same is true for removing *-i* 3AUG. Both these facts are illustrated in (420a,b) respectively.

- (420) Both the suffixal subject pronoun and an overt object pronoun are obligatory:

- a. * (ijii) *ku-tu-kä-i=laa* Ø_{12AUG} *ngä skul* (250728)
 3AUG IPFV-**bring.UV**-DIR1-**3AUG**=FUT to school
 Intended: ‘They will bring us back to school’
- b. * (ijii) *ku-tu-kä*□=Caa *iude* *ngä skul*
 3AUG IPFV-**bring.UV**-DIR3□=FUT 12AUG to school
 Intended: ‘They will bring us to school’

Similarly to UV_{gu} clauses, here as well we see another “doubling” pattern. The lower copy of the subject, in spec,TP, is obligatorily realized as its suffixal form *-i*, and the subject is optionally also realized in spec,CP in its full form *ijii*. Combining these observations, we arrive to the following syntactic structure (421). Again, *v* agrees with the object, as always in UV. Exceptionally, *v* here also agrees with the subject; this will be derived in §6.5.1.2. Then, again ordinarily for UV clauses, the subject raises to spec,TP. The surprising step is the last, where C raises the subject – instead of the object, as would usually happen. This happens because *v* had agreed with the subject too, thus making it the [i|v]-bearing argument closest to C.

- (421) Syntactic structure of UV_{SVO} clauses:



The distribution of UV_{SVO} clauses once again depends on the φ-features of both arguments. The overall empirical generalization is that we observe a UV_{SVO} UV clause when *both* arguments are φ⁺Ps, that is, non-3MIN pronouns⁶. The only exception to this generalization is configurations where the subject is 1st person (exclusive) and the object is second person (“1>2”), which I turn to in the next section. Once again, remember that 3MIN pronouns behave like lexical DPs and unlike other pronouns: if the object is a 3MIN

6 As mentioned earlier, this does not cover reflexive sentences, which are UV_{SVO} even when the subject is a lexical DP (e.g. “John/the teacher saw himself”). See chapter 5, §5.3.2 for an example.

pronoun, we don't get UV_{SVO} , but UV_{plain} (422). Compare this to the case of e.g. a 2MIN pronoun, which gives rise to UV_{SVO} order and forbids UV_{plain} order (423).

- (422) Object is a 3MIN pronoun/DP ($\varphi^0\text{P}$): UV_{plain} (250728)
- a. $(\text{iñâ})/\text{John} \text{ ku-tu-kä-i=laa} \text{ ngä skul}$ ✓ UV_{plain}
 $\text{3MIN}/\text{John}$ IPFV-bring.UV-DIR3-**3AUG**=FUT to school
 'They will bring him/her/John to school'
 - b. * $(\text{iji}) \text{ ku-tu-kä-i=laa} \text{ (\text{iñâ})}/\text{John} \text{ ngä skul}$ ✗ UV_{SVO}
 3AUG IPFV-bring.UV-DIR3-**3AUG**=FUT $\text{3MIN}/\text{John}$ to school
 Intended: 'They will bring him/her/John to school'
- (423) Object is a 2MIN pronoun ($\varphi^+\text{P}$): UV_{SVO} (250728)
- a. $(\text{iji}) \text{ ku-tu-kä-i=laa} \text{ iumu ngä skul}$ ✓ UV_{SVO}
 3AUG IPFV-bring.UV-DIR3-**3AUG**=FUT **2MIN** to school
 'They will bring you to school'
 - b. * $(\text{iumu}) \text{ ku-tu-kä-i=laa} \text{ ngä skul}$ ✗ UV_{plain}
 2MIN IPFV-bring.UV-DIR3-**3AUG**=FUT to school
 Intended: 'They will bring you to school'

The following properties of UV_{SVO} clauses had already been reported in the descriptive literature (Næss 2006 et seq.): (i) the special post-verbal position of the object; (ii) the fact that the object is always pronominal. This was analyzed in the opposite causal direction, however: "if the object is a pronoun, it must be postverbal". However, this framing is incompatible with the novel finding that UV_{gu} clauses also have pronominal objects: in that case, the object is clearly preverbal despite being a pronoun. The following aspects of UV_{SVO} clauses are novel findings: (i) the fact that 3MIN subjects or objects never result in a UV_{SVO} clause; (ii) the preverbal position of the subject: the VO word order was established, but we did not know if the complete word order was SVO or VSO; (iii) the possibility of overt standalone pronouns in preverbal position, doubling the suffixal marker on the verb; (iv) the fact that the object pronoun cannot be null/must be overtly realized.

6.3.4 $\text{UV}_{1>2}$ CLAUSES: A SUBTYPE OF UV_{SVO}

The final type of special UV clause ("UV_{1>2} clauses") has a rather restricted distribution, and it can be shown to be a sub-type of the UV_{SVO} clause type. This kind of clause is found only when the subject is first person (exclusive) and the object is second person; number does not matter⁷. The possible combinations are illustrated in (424).

⁷ This generalization comes with a small caveat. If the subject is 1st person unit-augmented rather than augmented, then we get a UV_{SVO} sentence (ia), not $\text{UV}_{1>2}$ (ib).

- (i) 1st person unit-augmented subjects are incompatible with $\text{UV}_{1>2}$: (250617)
- a. $(\text{iungo-le}) \text{ ku-tu-usi-kä-ngo-le=naa} \text{ iumu ngä party}$
 1AUG-UA IPFV-bring.UV-back.UV-DIR3-**1AUG-UA**=FUT **2MIN** to party
 'We two.EXCL will bring you back to the party'

- (424) a. 1MIN > 2MIN: (250617)
- (*iu*) *ku-tu-usi-kä-nee-mu=waa* *ngä party*
1MIN IPFV-bring.UV-back.UV-DIR3-**1MIN-2MIN=FUT** to party
 'I will bring you back to the party'
- b. 1AUG > 2MIN:
- (*iungopu*) *ku-tu-usi-kä-ngee-mu=waa* *ngä party*
1AUG IPFV-bring.UV-back.UV-DIR3-**1AUG-2MIN=FUT** to party
 'We will bring you back to the party'
- c. 1MIN > 2AUG:
- (*iu*) *ku-tu-usi-kä-nee-mi=aa* *ngä party*
1MIN IPFV-bring.UV-back.UV-DIR3-**1MIN-2AUG=FUT** to party
 'I will bring y'all back to the party'
- d. 1AUG > 2AUG:
- (*iungopu*) *ku-tu-usi-kä-ngee-mi=aa* *ngä party*
1AUG IPFV-bring.UV-back.UV-DIR3-**1AUG-2AUG=FUT** to party
 'We will bring y'all back to the party'

This is the only circumstance in Äiwoo where *two* arguments are realized in as spec,TP. The suffixal 1MIN/1AUG subject pronouns have special allomorphs in this context: *-nee* 1MIN instead of usual *-no*, and *-ngee* 1AUG instead of usual *-ngo(pu)*⁸. Furthermore, as in the previous cases we see that an overt standalone subject pronoun can be realized in spec,CP. Thus, the word order of these clauses is SVO; this is yet another case of "doubling". This is also a novel finding, not having been described before in the published literature. As in UV_{SVO} clauses, a fronted subject pronoun is in the canonical preverbal VIA position, despite being a UV subject (425a). Fronting the object pronoun is impossible (425b). Moreover, using a standalone object pronoun is not possible even in the postverbal position (426): the object can only be realized in spec,TP.

- (425) Spec,CP is occupied by the subject, not the object: (240404)
- a. *{*iu*} *bulaape* ✓{*iu*} *ki-lâwâle-wâ-nee-mu=waa*
1MIN tomorrow **1MIN** IPFV-help.UV-DIR2-**1MIN-2MIN=FUT**
 'Tomorrow I will help you'
-
- b. * (*iungo-le*) *ku-tu-usi-kä-ngo/ngee-le-mu=waa* *ngä party*
1AUG-UA IPFV-bring.UV-back.UV-DIR3-**1AUG-UA-2MIN=FUT** to party
 Intended: 'We two.EXCL will bring you back to the party'

In contrast, a 2nd person unit-augmented object can still give rise to UV_{1>2}, as long as the subject is 1st person minimal or augmented (ii). I leave this issue to future research.

- (ii) 2nd person unit-augmented objects are compatible with UV_{1>2}: (250617)
- (*iu/iungopu*) *ku-tu-usi-kä-{nee/ngee}-mi-le=naa* *ngä party*
1MIN IPFV-bring.UV-back.UV-DIR3-{**1MIN/1AUG**}-**2AUG-UA=FUT** to party
 'I/We.EXCL will bring you two back to the party'

8 The existence of the 1AUG suffix *-ngee* and its use in this kind of sentences was first described in Roversi (2025: appendix B). In earlier literature (e.g. Næss 2015a, 2018a, Roversi 2019), only the 1MIN > 2 cases had been reported.

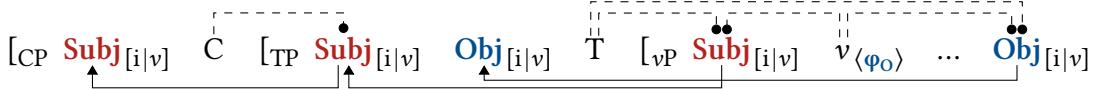
- b. * *bulaape iumu ki-lâwâle-wâ-nee-mu=waa*
 tomorrow 2MIN IPFV-help.UV-DIR2-1MIN-2MIN=FUT
 Intended: ‘Tomorrow I will help you’
 Native speaker’s comment: “That is not how Äiwoo works”

(426) The object can only in spec,TP, not in situ:

(240523)

- * *bulaape (iu) ki-lâwâle-wâ-nee-mu=waa iumu*
 tomorrow 1MIN IPFV-help.UV-DIR2-1MIN-2MIN=FUT 2MIN
 Intended: ‘Tomorrow I will help you’

Given the position of the arguments, the syntactic derivation of these clauses is previewed in (427). First, as in UV_{SVO} clauses, *v* agrees with both arguments (for reasons to be understood). In keeping with my analysis of the φ -suffixes as pronouns occupying spec,TP then, I propose that in this case both the subject and the object are raised by T to this position (I assume that the object tucks in in an inner specifier; Richards 1997). Then, as in UV_{SVO} clauses, the subject is raised further to spec,CP.

(427) Syntactic structure of UV_{1>2} clauses:

I assume that the lower copy of the object (in situ) cannot be spelled out due to the usual chain resolution mechanism, which deletes all lower copies of movement. Both pronouns in spec,TP are forced to be pronounced due to the interaction of Local Dislocation and the Stray Affix Filter, as described in 5, §5.5. For the object, this is the highest copy, which presumably would have been realized overtly regardless; Local Dislocation forces the realization of this pronoun in its short form. For the subject, Local Dislocation forces the realization of the spec,TP copy despite there being a higher copy.

6.3.5 INTERIM SUMMARY

In this section I have presented all four types of UV clauses we find in Äiwoo, finally giving the full empirical landscape of our Word Order Puzzle. Below, I repeat (i) a comprehensive overview of the four clause types (428); (ii) their distribution (429); (iii) sketch derivations, only drawing the agreement steps by *v* for simplicity (430).

(428) Overview of UV clause types:

	“UV _{plain} ”	“UV _{gu} ”	“UV _{SVO} ”	“UV _{1>2} ”
Word order:	(O) V S=TAM	(O) V-gu- π_O =TAM S	(S) V- π_S =TAM O	(S) V- π_S - π_O =TAM
vP:	nothing	Subj	Obj	nothing
Spec,TP:	Subj	Obj	Subj	Subj & Obj
Spec,CP:	Obj	Obj	Subj	Subj

(429) Distribution of UV clause types:

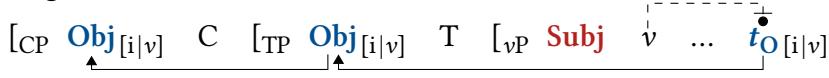
S↓, O→	φ^+P			φ^0P
	1	2	3AUG $_{\pi}$	
φ^+P	1	—	UV _{1>2}	UV _{SVO} UV _{plain}
	2	UV _{SVO}	—	UV _{SVO} UV _{plain}
	3AUG $_{\pi}$	UV _{SVO}	UV _{SVO}	UV _{SVO} UV _{plain}
	φ^0P	UV _{gu}	UV _{gu}	UV _{gu} UV _{plain}

(430) Sketch derivations:

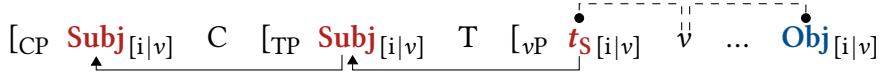
- a. UV_{plain}: S moves to spec,TP; O moves to spec,CP



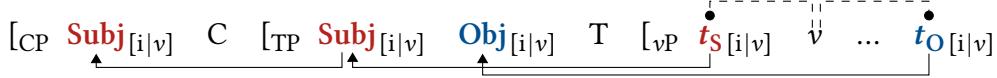
- b. UV_{gu}: O moves to spec,TP and spec,CP; S remains in situ



- c. UV_{SVO}: S moves to spec,TP and spec,CP; O remains in situ



- d. UV_{1>2}: S and O move to spec,TP; S moves to spec,CP



To solve the Word Order Puzzle and correctly generate the derivations in (430), we need to understand when which probes move which argument(s): what does v agree with, what does T agree with/move, and what does C agree with/move? From the distribution in (429) we can then draw a neat generalization that will help us answering these questions. Non-canonical word orders (UV_{gu}, UV_{SVO}, UV_{1>2}) arise whenever the object is a φ^+P , i.e., a nominal with “marked” φ -features (anything other than 3MIN). In contrast, φ^0P objects (lexical DPs and 3MIN pronouns) trigger canonical word order (UV_{plain}).

As has been pointed out throughout this section, the existence of these four types of patterns was already known in the literature. However, the available descriptions contained a series of gaps concerning several aspects of the system. This is to my knowledge the most in-depth study to date of the system of word order alternations in Äiwoo UV, and should hopefully be useful also to readers who don't necessarily subscribe to the theoretical framework and the variety of assumptions being made here (e.g., labelling the preverbal position “spec,CP”, but also the notion of movement, the generative approach at large, etc.).

Of course, all/any analyses are necessarily always theory-dependent, and “theory-neutrality” is impossible. However, throughout this chapter and the last I have tried to

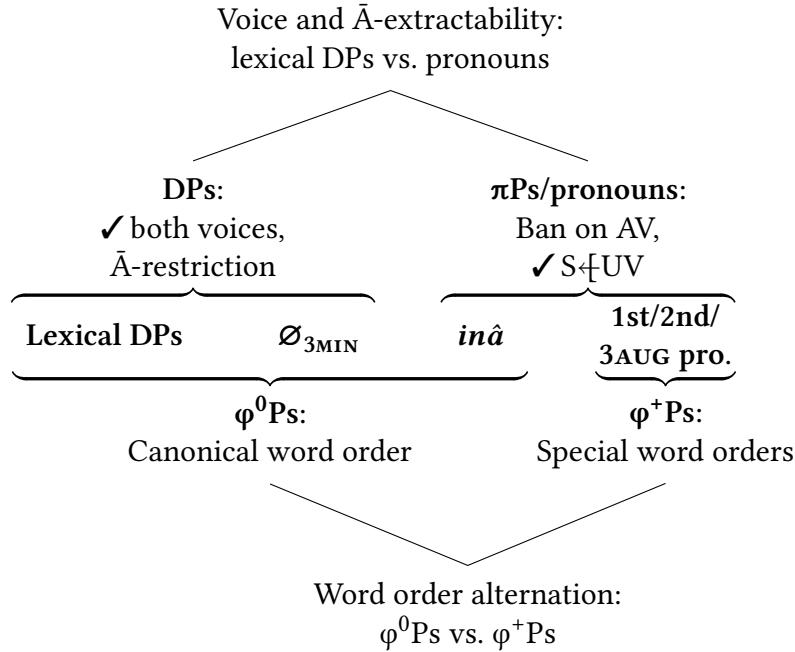
make my arguments not theory-internal, but based on empirically observable realities of the language. To make a concrete example, positing null pronouns in the preverbal position (5.3.2) was not done to make Äiwoo comply to some particular (generative) claim about the reality of null arguments, or about how every clause must have a subject (or direct object), or for some notion of theoretical/analytical elegance. Rather, I posited null pronouns in that position because hypothesizing their presence leads to correct predictions in terms of observable word order phenomena. An alternative analysis of these Äiwoo patterns without null pronouns would leave these facts and correlations unexplained, and would thus need to be supplied by extra assumptions and hypotheses to be equally descriptively and explanatorily adequate.

6.4 PRONOMINAL OBJECTS AND SUBJECT EXTRACTION FROM UV

In the previous section, we got an empirical lay of the land of the Word Order Puzzle, and observed how the φ^+P vs. φ^0P distinction is what controls the distribution of different word orders. In this section, we turn to the Extraction Puzzle, that is, how and why these various UV clause types differ in which arguments can or cannot be \bar{A} -extracted. We will now see a property that is not sensitive to the φ^+P vs. φ^0P distinction, but to the more ordinary distinction between all pronouns (including 3MIN) vs. lexical DPs. Specifically, we will see that pronominal objects not only can trigger special word orders, but they have another “superpower”: they impose UV/ban AV, and as a result, subject extraction is exceptionally possible from UV clauses (shortened to “✓S↔UV” below). One way to frame this is that metaphorically, a pronominal object automatically turns any transitive verb into a UV-only verb (§4.5).

We can now thus put names on the two phenomena that were used in §6.2 to justify the existence of these four classes of nominals. This is summarized again in (431). Whether the object is a pronoun or a DP governs \bar{A} -extractability. In contrast, whether the object is a φ^+P or a φ^0P governs the word order alternation.

(431) Classes of nominals in Äiwoo:



In the next sections, first (§6.4.1), I will demonstrate two properties of clauses with pronominal objects with respect to Ä-extractability: UV is the only option/AV is impossible, and subject extraction is allowed from UV. Then (§6.4.2), I will show that this cluster of properties is sensitive to *all pronouns*, and not just to φ^+ Ps, by looking at what happens when the object is *inā* (the 3MIN overt pronoun). We will see that despite these clauses' ordinary (UV_{plain}) word order, they have the same exceptional voice and extraction properties as the non-canonical ones. Finally (§6.4.3), I will set up a series of desiderata for a model deriving this pattern.

6.4.1 THE PARALLEL WITH UV_{ONLY} CLAUSES: OBLIGATORY UV AND FREE EXTRACTION

First, I will show how pronominal objects generate clauses with several properties in common with UV_{only} clauses: (i) AV is impossible; (ii) subject extraction is allowed despite the clause being UV.

Consider the first property (obligatory UV/impossible AV). Like in clauses built around UV-only verbs, any clause with a pronominal object can only be in UV, and AV is just not an option (432). This holds regardless of what kind of nominal the subject is. If it's a φ^0 P, we will get a UV_{gu} clause (432a); if it's a φ^+ P, we will get a UV_{SVO} clause (432b). In either case, AV is impossible (432c).

- (432) If the object is a pronoun, only UV is allowed: (250728)
- (*iude*) *ku-tu-usi-mä-gu-de=ngaa* *nurse* (\checkmark UV_{gu})
12AUG IPFV-bring.UV-back.UV-DIR1-OBJ-12AUG=FUT *nurse*
‘The nurse will bring us back’
 - (*iji*) *ku-tu-usi-mä-i=laa* *iude* (\checkmark UV_{SVO})
3AUG IPFV-bring.UV-back.UV-DIR1-3AUG=FUT 12AUG
‘They will bring us back’
 - * (*iji*)/*nurse* *ku-(lu)-tou-ute-mä=kaa* *iude* (\times AV)
3AUG/nurse IPFV-(3AUG)-bring.AV-back.AV-DIR1=FUT 12AUG
Intended: ‘They/The nurse will bring us back’

At first glance, we might imagine wanting to explain away the ban on pronominal objects in AV as just a sub-case of the general restriction found on objects in AV clauses, discussed in chapter 2, §2.5.3. Generally, an AV object must be a non-specific/narrow-scope indefinite. Definite objects (or even specific indefinites) are not usually allowed in AV. Pronouns are definite descriptions, so given this restriction we should indeed expect them to be bad objects for AV clauses. However, this cannot be the same kind of effect. As mentioned in §2.5.3, this specificity restriction only holds in the absence of Ä-extraction. If one extracts the subject of a clause with a definite (DP) object, such as *buk eāngā* ‘that book’, the usual extraction restriction applies: AV is obligatory (433a), and UV is impossible (433b). In a sense, the need to comply to the Ä-extraction restriction “trumps” the semantic restriction AV objects. Described in metaphorical OT terms, the constraint “*S-{UV” outranks the constraint “*AV-with-O_[+SPEC]”.

- (433) With definite DP objects, subject extraction forces AV: (250728)
- sime* (*mi=*)[RC *ku-tou-mä=kaa* *buk eāngā*]
person REL= IPFV-bring.AV-DIR1=FUT *book that*
‘The person who will bring that book (here)’
 - * *sime* (*mi=*)[RC *buk eāngā ku-tu-mä-*_n*=naa*]
person REL= book that IPFV-bring.UV-DIR1-3MIN=FUT
Intended: ‘The person who will bring that book (here)’

Consider now what happens if the object is not a lexical DP, but a pronoun. I will mostly use subject extraction from UV_{gu} clauses as the case study since in these, the subject can be a lexical DP, and therefore it is easy to create contexts where it is relativized⁹. Crucially,

⁹ In UV_{SVO} clauses, in contrast, the subject is typically a pronoun (φ^+P). Extracting pronouns – or rather, forming relative clauses with a pronoun as the head (“they/we [who...]”) – is often restricted or at least shows different properties from ordinary relativization (see e.g. Conrod 2019), and the facts about this phenomenon in Äiwoo are not entirely clear. However, we are able to confirm subjects can be extracted from UV_{SVO} clauses as well. Plural lexical DP subjects can sometimes generate UV_{SVO} clauses; this is the caveat discussed in §6.A. We can now observe that they too can be extracted (ia). This is perhaps less surprising under our theory of Ä-extraction, since in these clauses, the subject is the highest argument anyway, but I include it here for completeness. Just to be sure, AV here is impossible as well, because the object is a pronoun (ib).

even under subject extraction, UV is the only option (434a), and AV is still banned (434b)¹⁰. Comparing this to the case of definite DP objects, we could describe this with a three-tiered constraint ranking: “*AV-with-O_{πP}” ≫ “*S-{UV}” ≫ “*AV-with-O_[+SPEC]”.

- (434) Pronominal object: S-{UV} is possible, and AV is impossible (250728)

- a. ***mekivaavee*** (*mi=*)_{[RC} **Ø_{2MIN}** *ku-tu-usi-mä-gu-mu=waa*
teacher REL= IPFV-**bring.UV-back.UV-DIR1-OBJ-2MIN=FUT**
[*ngä skul*] to school
‘The teacher who will bring you back to school’
- b. * ***mekivaavee*** (*mi=*)_{[RC} *ku-tou-ute-mä=kaa* **iumu**
teacher REL= IPFV-**bring.AV-back.AV-DIR1=FUT** **2MIN**
[*ngä skul*] to school
Intended: ‘The teacher who will bring you back to school’

For clarity, the pattern is summarized in (435). In monoclausal environment, definite object DPs and pronominal objects pattern alike in only permitting UV, and not AV. However, they differ under subject extraction: for definite DP objects, the usual Ā-extraction restriction triumphs, and only AV is allowed; for pronominal objects, AV is still stubbornly impossible, so we can now extract a subject from UV.

-
- (i) Subject extraction from UV_{SVO} is possible: (250728)

- a. ***pedevalili*** (*mi=*)_{[RC} *ku-tu-usi-mä-i=laa* **iumu** *ngä skul*]
children REL= IPFV-**bring.UV-again.UV-DIR1-3AUG=FUT** **2MIN** to school
‘The children who will bring you back to school’
- b. * ***pedevalili*** (*mi=*)_{[RC} *ku-tou-ute-mä=kaa* **iumu** *ngä skul*]
children REL= IPFV-**bring.AV-again.AV-DIR1=FUT** **2MIN** to school
Intended: ‘The children who will bring you back to school’

10 I have only received exactly one positive acceptability judgment for a sentence like (434b), shown in (ia). This is a null-headed RC (see chapter 4). The AV version was judged as equivalent to the UV_{SVO} version (ib). All other times I have tested AV structures like (ia) with my consultant, they were rejected. I hope further empirical work with more speakers will clarify this discrepancy.

- (i) a. Subject extraction from AV with a pronominal object: (230608)

- [*mi=[RC* *li-togo iu]*]_{=ngâ li-ebulou-mana}
REL= 3AUG-**hit.AV** **1MIN=DIST** 3AUG-long-very
‘Those/the people who hit me were very tall’

- b. UV_{SVO} equivalent:

- [*mi=[RC* **togulo-i** *iu]*]_{=ngâ li-ebulou-mana}
REL= **hit.UV-3AUG** **1MIN=DIST** 3AUG-long-very
‘Those/the people who hit me were very tall’

(435) Differences between definite DP objects and pronominal objects:

Object:	Monoclausal environment:	Under subject extraction:
Def. DP:	<i>John will bring.{✓UV/XAV}</i> that book	<i>The man [who will bring.{XUV/✓AV}] that book</i>
Pronoun:	<i>John will bring.{✓UV/XAV}</i> you/us/...	<i>The man [who will bring.{✓UV/XAV} you/us/...]</i>

Having ruled out the definiteness effect for AV objects as a potential confound, we can now see that UV clauses with pronominal objects share properties with UV_{only} clauses: AV is impossible, and subject extraction from UV is exceptionally allowed. To restate our informal intuition: a pronominal object can “turn any ordinary transitive verb into a UV-only verb”.

FURTHER EVIDENCE FOR Ā-INTERVENTION: MAKING Ā-FEATURES VISIBLE In the model I propose, the exceptional possibility of subject extraction in (434a) is explained in terms of (the lack of) Ā-intervention. The core idea is that in contexts where both AV and UV are possible, in UV the highest argument (the object in spec,CP) will have an Ā-feature [PIV], and thus intervene for Ā-extraction of a lower argument. However, in other contexts (UV_{only}, UV_{gu}, etc.), the clause will look the same way regardless of where Ā-features are. The object in spec,CP in (434a) doesn't (necessarily) have Ā-features despite being in spec,CP, and therefore subject extraction across it is possible.

The prediction of this model is that if we put Ā-features on the fronted object pronoun in (434a), in principle this should create an Ā-intervention effect, and thus block subject extraction – despite the fact that such a sentence would look identical to (434a). We can test this by exploiting a peculiarity of Äiwoo grammar, that is, the distribution of null arguments. Äiwoo allows *pro*-drop, but for non-3MIN pronouns, this is restricted to arguments in spec,CP (3MIN arguments can be dropped in any position); see chapter 2, §2.5.4. In this position, however, realizing a pronoun as null is the default option, and pronouncing it overtly is only done in particular discourse/information-structural circumstances, as mentioned above; see also chapter 2, §2.5.4 about the discourse effects of *pro*-drop. Because of this fact, I assume that /Ø/ is the default pronunciation of e.g. the 12AUG pronoun in spec,CP (436a), and *iude* is the pronunciation of this pronoun when it carries some kind of Ā-feature, which I will call [FOC] for convenience (436b) (though nothing hinges on this being specifically focus, as opposed to some other Ā-feature). In other words: the presence of an Ā-feature (“[FOC]”) on a pronoun in this position forces its overt pronunciation (see chapter 5, §5.5 for an in-depth discussion of how Äiwoo pronouns get spelled out; I notate [FOC] on the π head for simplicity, though this is not crucial). See also Szabolcsi (2009) a.o. for discussion of how focus can force otherwise null elements to be pronounced overtly, and in particular Herbeck (2015) for the idea that null vs. overt pronunciation of a pronoun can be framed as allomorphy (conditioned by e.g. Ā-features) rather than an underlying syntactic difference between the two.

- (436) Spell-out rules for pronouns in spec,CP:

a. Default spell-out: \emptyset

$$\begin{array}{c} \pi P \Leftrightarrow \emptyset / C \\ \diagup \quad \diagdown \\ \pi \quad \varphi(P) \\ [12AUG] \end{array}$$

b. [FOC] forces overt spell-out:

$$\begin{array}{c} \pi P \Leftrightarrow iude / C \\ \diagup \quad \diagdown \\ \pi \quad \varphi(P) \\ [FOC] \quad [12AUG] \end{array}$$

This predicts that if we take a sentence like (434a) and minimally change it by making the object pronoun in spec,CP overt, subject extraction should become impossible. This is borne out (437). From this perspective, this otherwise somewhat puzzling fact provides support for our Ä-intervention approach to the extraction restriction in Äiwoo¹¹.

- (437) S+UV_{gu} is only possible if the object in spec,CP is null: (250728)

Mary	ki-eeu-kä=naa	go	[mekivaavee]	[RC ✓ \emptyset_{12AUG} /* $iude$]
Mary	IPFV-speak-DIR3=FUT	to	teacher	12AUG
	ku-tu-kä-gu-de=ngaa			ngä skul]
	IPFV-bring.UV-DIR3-OBJ-12AUG=FUT			to school

'Mary will talk to the teacher who will bring us to school'

6.4.2 VOICE AND EXTRACTION ARE INDEPENDENT FROM WORD ORDER

In the previous section, we established a correlation between UV clauses with pronominal objects, and the clustering of UV_{only}-like voice and extraction properties: AV is impossible, and subject extraction is exceptionally allowed from UV. However, all the UV clauses with pronominal objects we have seen so far also have special word orders, so we are left with a possible confound. Are the voice/extraction properties of these clauses caused by the pronominal objects themselves, or by the particular word orders these kind of objects trigger? That is: are the Word Order Puzzle and the Extraction Puzzle reducible to a single puzzle, or not?

Given our model, what we concretely need to know to answer this question is the following: are the voice/extraction properties also sensitive to the φ^+P/φ^0P distinction (like word order is), or are they sensitive to the DP/pronoun distinction instead? Luckily, we can tease these two alternatives apart. The evidence comes from a type of clause whose object is a *pronoun*, but not a φ^+P : the 3MIN overt pronoun *inâ*. These clauses have ordinary UV_{plain} word order (because their object is a φ^0P). Importantly, we will see that despite their ordinary word order, *inâ* being a pronoun has an effect on the voice/extraction system: here too AV is impossible, and subject extraction from UV is allowed.

¹¹ The impossibility of having an overt pronoun in spec,CP could, in principle, be analyzed in different terms. For example, one could say that in the case where subject extraction is possible, there just is no null object pronoun in spec,CP at all. Presumably, under this kind of approach spec,CP would be occupied by the extracted subject. However, to fit this kind of analysis with the rest of our model, we would need to considerably complicate the agreement/movement pattern performed by C, with no clear explanatory gains.

Let us now see the properties of these UV clauses whose object is the overt 3MIN pronoun *inâ*, henceforth “UV_{*inâ*} clauses”¹². These clauses are strikingly similar to UV_{only} ones, despite not containing UV-only verbs but ordinary, voice-alternating transitive verbs. As we can see from (438), their word order is the canonical UV_{plain} one, with the object in spec,CP and the subject in spec,TP. This follows from our generalization that special word orders are triggered by φ⁺P objects, which *inâ* is not.

- (438) UV_{*inâ*}: baseline example (231109)

<i>inâ</i>	<i>ku-tu-usi-kä</i>	<i>pedevalili</i> =kaa	<i>ngâ</i>	<i>nuwopa</i>
3MIN	IPFV- bring.uv-back.uv -DIR3	children =FUT	to	house

‘The children will bring her back home’

However, despite the canonical word order, UV_{*inâ*} clauses pattern with UV_{only} clauses and other clauses with pronominal objects (UV_{*gu*}/UV_{SVO}) in forbidding AV (439), and allowing subject extraction from UV (440a).

- (439) Monoclausal environment with *inâ* as the object: only UV is possible (231012)

* <i>pedevalili</i>	<i>ku-lu-tou-ute-mä=kaa</i>	<i>inâ</i>	<i>ngâ</i>	<i>nuwopa</i>
children	IPFV-3AUG- bring.av-back.av -DIR1=FUT	3MIN	to	house

Intended: ‘The children will bring her back home’

- (440) Subject extraction with *inâ* as the object: only UV is possible (231012)

- a. [*pedevalili* [RC *inâ* *ku-tu-usi-kä-i=laa* *ngâ*
children 3MIN IPFV-**bring.uv-back.uv**-DIR3-3AUG=FUT to
nuwopa]] = *kâ*, *nubotage i-kää-päko-i-i*
house=DIST road ASP-know.UV-good-UV-3AUG
‘The children who will bring her home, they know the road very well’
- b. * [*pedevalili* [RC *ku-lu-tou-ute-kä=naa* *inâ* *ngâ*
children IPFV-3AUG-**bring.av-back.av**-DIR3=FUT 3MIN to
nuwopa]]
house
Intended: ‘The children who will bring her home’

Note that these properties do not hold if the object is a *null* 3MIN argument, as opposed to the overt *inâ*. As described in §6.2, null Ø_{3MIN} arguments behave/are treated like DPs, not like pronouns. In this case, we get the canonical pattern: both AV and UV are allowed (*modulo* the specificity effect on objects), and subject extraction imposes AV. Concretely, if we take the sentences in (440) and replace *inâ* with its null counterpart, the judgments reverse: now UV is impossible (441a), and AV is the only option (441b).

¹² The same is true for the proximal 3MIN pronoun *ine*. The form *inâ* is distal, and the default one. Both forms are gender-neutral; I arbitrarily use she/her in the English translations for convenience.

- (441) Subject extraction with $\emptyset_{3\text{MIN}}$ object: only AV is possible (231012)
- a. * [pedevalili [RC $\emptyset_{3\text{MIN}}$ ku-tu-usi-kä-i=laa ngâ
children IPFV-bring.UV-back.UV-DIR3-3AUG=FUT to
nuwopa]]]
house=DIST
Intended: ‘The children who will bring her home’
 - b. [pedevalili [RC \square ku-lu-tou-ute-kä=naa $\emptyset_{3\text{MIN}}$
children IPFV-3AUG-bring.AV-back.AV-DIR3=FUT
ngâ nuwopa]]]
to house
‘The children who will bring her home’

We can observe that *inâ*-objects have some properties in common with φ^+P (non-3MIN) pronominal objects, and other properties in common with φ^0P objects. An *inâ* object is grouped together with the other pronouns for whatever mechanism it is that forces UV/bans AV and allows for subject extraction. However, it counts as a φ^0P for the mechanism determining word order.

6.4.3 INTERIM SUMMARY, DESIDERATA, AND PREVIEW

In keeping with our grand mission of answering both the Word Order Puzzle and the Extraction Puzzle, let us now summarize the facts just described with the following typology, once again repurposing our general overview table (442), to see how the two systems (clausal word order and \bar{A} -extraction) are only partially correlated. The notation ‘ $DP_{[\bar{A}]}$ ’ signifies a DP carrying some \bar{A} -feature(s), for example [PIV].

On one hand, we have canonical clauses, which show an AV/UV alternation. Precisely in these cases where both voices are possible, we have restricted (VIA-only) \bar{A} -extraction (442a,b). Then, we have four clause types – here subsuming $UV_{1>2}$ under UV_{SVO} – where there is no alternation (AV is impossible), and where the non-VIA subject can be extracted (442c–f). Intuitively, this seems like a meaningful correlation: \bar{A} -extraction in one voice is restricted when we actually have an alternative voice option, but if only one voice is possible, then extraction is free. For one of these restricted types (UV_{only}), the determining factor is the presence of a particular kind of verb¹³. For the other three ($UV_{inâ}$, UV_{gu} , UV_{SVO}), the determining factor is the object being a pronoun. This is then cross-cut with word order differences: UV_{gu} and UV_{SVO} have special word orders, whereas UV_{only} and

13 To be clear, this statement is implicitly restricted specifically to UV_{only} clauses with non-pronominal objects, e.g. ‘the teacher saw Mary’ (*te* ‘see.uv’ is a UV-only verb). Of course, UV-only verbs are perfectly compatible with *inâ*-objects and φ^+P objects (‘the teachers saw us’; ‘you saw me’, etc.). The resulting clause, like for every other transitive verb, will be either a $UV_{inâ}$, UV_{gu} , or UV_{SVO} (or $UV_{1>2}$) clause. Therefore, such a clause (UV-only verb + pronominal object) will be “special” for multiple reasons, and it wouldn’t allow us to isolate the fact of interest, namely, that UV_{only} clauses have special properties even with DP objects, unlike UV clauses with ordinary voice-alternating verbs.

UV_{inā} clauses have the same word order as canonical UV_{plain} clauses (what is labelled in the table as “regular word order”).

(442) Overview of Āiwoo clause types:

Clause type:	Word order:			Regular word order?	Object category?	Extract non-VIA?	Is another voice possible?
a. AV:	S✓	φ_S -V.AV	=TAM	O✗	yes	$\varphi^0 P$ DP	no ↙ yes (→ UV)
b. UV _{plain} :	O✓	V.uV	S✗ =TAM		yes	$\varphi^0 P$ DP[Ā]	no ↙ yes (→ AV)
c. UV _{only} :	O✓	V.uV	S✓ =TAM		yes	$\varphi^0 P$ DP[Ā]	yes no (*AV)
d. UV _{inā} :	O ^{NA}	V.uV	S✓ =TAM		yes	$\varphi^0 P$ πP	yes no (*AV)
e. UV _{gu} :	O ^{NA}	V.uV	-π _O =TAM	S✓	no	$\varphi^+ P$ πP	yes no (*AV)
f. UV _{SVO} :	S ^{NA}	V.uV	-π _S =TAM	O ^{NA}	no	$\varphi^+ P$ πP	yes no (*AV)

Looking at this table, we can see that our model needs to make two different cuts – namely the two distinctions we have been talking about. First, we need something in common between UV_{only} clauses and all clauses with any pronominal objects (442c–f), including *inā*: in all of these, UV is the only possibility, AV is banned, and subject extraction is allowed despite the clause being UV. Within these clause types, we then have a split between clauses with regular word order (UV_{only}, UV_{inā}; (442c,d)) and clauses with special word orders (UV_{gu}, UV_{SVO}; (442e,f)). Therefore, we need to make a different cut, and identify some property that $\varphi^+ P$ objects (nominals with “marked” φ -features, i.e. non-3MIN) have in common, not shared by $\varphi^0 P$ objects (lexical DPs and 3MIN pronouns). We can now formulate our two Puzzles in much more specific terms:

- (443) a. **The Extraction Puzzle:** Why do sentences with pronominal objects and UV_{only}-sentences forbid AV, and allow subject extraction from UV?
 b. **The Word Order Puzzle:** Why do $\varphi^+ P$ objects give rise to special word orders?

Luckily, we have already done the job of figuring out an answer to the first question, that is, how to derive clauses where AV is impossible, and subjects can be extracted from UV. This was the case of UV_{only} clauses (§4.5). For those, we pursued the following reasoning. If AV is impossible/UV is obligatory, this means that v always agrees with the object. Because object agreement always happens, clearly it is not conditioned by Ā-features like [PIV], which are syntactically free (that is, their distribution at the choice of the speaker). Moreover, we also know that C always fronts whatever v agreed with; this is something we will keep constant in deriving the alternative word orders. The only difference between ordinary voice-alternating verbs and UV-only verbs is that the latter select for v^* ; unlike the ordinary v head, v^* is specified as agreeing with *any* object. This means that in UV_{only} clauses, an object can end up being fronted to spec,CP even without any Ā-features. Therefore, such an object won’t pose an Ā-intervention problem, and that is why subjects can be extracted despite the clause being UV.

Because the voice and extraction properties of UV clauses with pronominal objects are identical to those of UV_{only} clauses, it is most parsimonious to imagine that the un-

derlying reason must be the same. Therefore, our desideratum at the implementational level is to make sure that *v* always agrees with a pronominal object (both φ^+Ps and *inâ*), regardless of whether it has \bar{A} -features or not. Like for UV-only verbs, this “obligatory object agreement” will have the desired effect. Any clause where the object is a pronoun will obligatorily be UV, whether the object carries \bar{A} -features or not. This will ultimately suspend the \bar{A} -restriction, since even if the object moves past the subject, there will not be any \bar{A} -intervention effect, so the subject can be extracted from UV. This gives us an answer to the Extraction Puzzle.

For the Word Order Puzzle, on the other hand, we will need to understand what exactly controls movement of the different arguments to their various landing sites. To preserve our answer to the Extraction Puzzle, we will keep constant our idea of what C does: C always raises the closest argument with $[i|v]$ (i.e., agreed with by *v*). Because in UV_{SVO} clauses C attracts the subject, this entails that in this case *v* somehow agrees with the subject (whether in addition to or instead of the object), flagging it with $[i|v]$. Independently, we will need to understand why it is that T generally raises the subject, but it can also raise the object (in UV_{gu} clauses), or both arguments (in UV_{1>2} clauses). To achieve these results, we will need to revise two probe specifications, that on *v* and that on T (while keeping the one on C constant).

The solution to our Word Order and Extraction Puzzles will thus lay in the complex interaction between three probes in the clausal spine (*v*, T, and C), each sensitive to particular features and not others. I give a preview of what the final analysis will look like in (444)–(445), for now remaining silent on the exact mechanical details of implementation.

- (444) **The Extraction Puzzle:** why do sentences with pronominal objects and UV_{only} sentences forbid AV, and allow subject extraction from UV?
 - a. The probe on *v* agrees with two classes of objects: those with \bar{A} -features, and all pronominal ones (φ^+P -objects and *inâ*-objects), regardless of whether or not the latter have \bar{A} -features.
 - b. This results in obligatory UV whenever the object is a pronoun, making AV impossible – exactly as for UV-only verbs.
 - c. C will then raise a *v*-flagged pronominal argument even if it doesn’t carry \bar{A} -features, thus making subject extraction from UV possible (no \bar{A} -intervention).
- (445) **The Word Order Puzzle:** why do φ^+P objects give rise to special word orders?
 - a. In addition to consistently agreeing with all pronominal objects, if both arguments are pronouns, *v* agrees with both.
 - b. The probe on T can trigger non-local A-movement, based on a φ -featural hierarchy effect. It can raise the object, skipping the closer subject, if the former has more “marked” φ -features than the latter.
 - c. This step of movement to spec,TP can in principle bring either $[i|v]$ -flagged argument closer to C, feeding CP-fronting.

We are now ready to derive the extraction and word order properties of non-canonical UV clauses, thus answering both puzzles.

6.5 DERIVING NON-CANONICAL UV CLAUSES

6.5.1 SEPARATING OUR CONCERNS: VOICE/EXTRACTION PROPERTIES AND WORD ORDER

Let us now get into the details on how exactly the probes on v , T, and C interact. We have two main aspects to focus on to derive the properties of the various types of UV clauses: voice and \bar{A} -extraction properties on one side, and word order on the other. We can thus start subdividing the labor between the probes. The voice and \bar{A} -extraction properties will be controlled by v and C: v will agree with (and flag) various classes of arguments and not others; C will raise the closest argument v agreed with, potentially creating an intervention effect for \bar{A} -extracting a lower argument (or not). The word order properties, on the other hand, will be controlled by T and C (since v just agrees, but doesn't move anything). In this, T operates according to its own logic, without really paying any attention to what v does. However, T may alter which argument is the closest $[i|v]$ -flagged one to C, thus potentially feeding CP-fronting. This is summarized in (446).

- (446) Which probes control what:
- Voice, \bar{A} -extraction: v , C
 - Word order: T, C

To provide probe specifications that will get us the desired results, we then need to know what exactly the three probes agree with (and move) in each type of clause. For T and C, this is easy to know, since they move their goal to their specifiers, and we can directly observe that. For v , the evidence is slightly more indirect. In AV clauses, we know by hypothesis that v did not agree with anything. In any UV clause, in contrast, we know that v has agreed with at least one argument (because the verb stem gets spelled out with UV morphology). Moreover, by hypothesis, we know that whatever gets fronted by C must have been agreed with by v .

Putting all this information together gives us the following landscape (447). For each clause type, this table shows what we ultimately aim to derive: (i) what kind of subject and object will result in this type of clause¹⁴; (ii) what argument(s) v , T, and C agree with

¹⁴ For simplicity, I only report in the table the combinations of subjects/objects that result in clauses with *unique* properties, not reducible to any other clause type. For example, UV-only verbs can have any kind of object: this could be either a lexical DP or a pronoun, with or without \bar{A} -features (for example, there's no restriction against UV-only verbs taking pronominal objects, or against having \bar{A} -features on pronouns). Therefore, UV_{only}-clauses can in principle have a variety of objects. However, these clauses' special properties only become evident when the object is a lexical DP without \bar{A} -features. If the object of a UV-only verb is a DP_[A], the voice and extraction properties would be indistinguishable from those of a regular UV_{plain}

(and move); (iii) the resulting word order, including non-spelled-out traces (shaded); (iv) whether the highest argument will have \bar{A} -features, and thus create an intervention effect.

(447) Overview of agreement and movement patterns across clause types:

Clause type:	Type of subject:	Type of object:	Agreement by:			Resulting word order:	\bar{A} -features on highest arg.?	\bar{A} -interv.?
			v	T	C			
a. AV:	any	DP	\emptyset	S	S	S V. AV t_S =TAM t_S O	not necessarily*	no*
b. UV _{plain} :	any	$\varphi^0 P$	DP _[A]	O	S	O V. UV S =TAM t_S t_O	yes	yes
c. UV _{only} :	any		DP	O	S	O V. UV S =TAM t_S t_O	not necessarily	no
d. UV _{inā} :	any		πP (<i>inā</i>)	O	S	O V. UV S =TAM t_S t_O	not necessarily	no
e. UV _{gu} :	$\varphi^0 P$	$\varphi^+ P$	O(+S) [†]	O	O	O V. UV - π_O =TAM S t_O	not necessarily	no
f. UV _{SVO} :	$\varphi^+ P$	$\varphi^+ P$	O+S	S	S	S V. UV - π_S =TAM t_S O	not necessarily	no
g. UV _{1>2} :	$\varphi^+ P^\ddagger$	$\varphi^+ P^\ddagger$	O+S	S+O	S	S V. UV - π_S - π_O =TAM t_S t_O	not necessarily	no

* Although in AV clauses there is no \bar{A} -intervention (at least not necessarily), object extraction is still impossible because if the object were extracted, the presence of the \bar{A} -feature [REL] on it would automatically trigger object agreement and thus UV.

† It is impossible to determine with certainty whether in a UV_{gu} clause, v agrees with the subject as well; see §6.5.2.1 below for why.

‡ The subject and object must be respectively 1st and 2nd person to generate a UV_{1>2} clause.

This table is rather information-dense, so let us break it down, only considering the sub-part that is immediately relevant for now. We will zoom in on the agreement patterns of v , T, and C, across the various clause types. These are shown in the reduced table in (448). In AV clauses, v agrees with nothing, and both T and C agree with and move the subject. In UV_{plain}, UV_{only}, and UV_{inā} clauses, v agrees with the object, T agrees with and moves the subject, and C agrees with and moves the object. In UV_{gu} clauses, all three probes agree with the object. In UV_{SVO} clauses, v agrees with both arguments, while T and C agree with the subject. UV_{1>2} are a variant of UV_{SVO}, where T agrees with and moves both arguments.

(448) Agreement and movement patterns across clause types (simplified):

Clause type:	Type of subject:	Type of object:	Agreement by:		
			v	T	C
a. AV:	any	DP	\emptyset	S	S
b. UV _{plain/only} :	any	$\varphi^0 P$	DP _[A]	O	S O
c. UV _{inā} :	any		πP (<i>inā</i>)	O	S O
d. UV _{gu} :	$\varphi^0 P$	$\varphi^+ P$	O(+S)	O	O
e. UV _{SVO} :	$\varphi^+ P$	$\varphi^+ P$	O+S	S	S
f. UV _{1>2} :	$\varphi^+ P_{(1st)}$	$\varphi^+ P_{(2nd)}$	O+S	S+O	S

clause. Similarly, if the object is a pronoun, we'll get a UV_{inā}, UV_{gu}, or UV_{SVO} (or UV_{1>2}) sentence, with the properties that follow. See also fn. 13 for the same point.

The same information is shown again in (449), in a different format. The way this table is meant to be read is: given what the subject and object of a clause are, what do the three probes agree with (and move)? Something that is easier to see from this visualization is that clause type and voice are largely a function of what the object is; the subject does not play as big of a role. The table can be “sliced” vertically according to what the object is. If the object is just a DP with no Ä-features (first column), we get AV, no matter what the subject is. If the object is a DP_[Ä] or a πP (but still a φ⁰P), we get clauses with canonical UV order: these may be UV_{plain}, UV_{only} (second column) or UV_{inā} (third column). Finally, if the object is a φ^{+P}, we get the non-canonical word orders (fourth column): UV_{gu} if the subject is a φ⁰P, or UV_{SVO} if the subject is a φ^{+P} as well (UV_{1>2} would be a sub-case of this red square).

(449) Agreement and movement patterns across subject/object types:

S↓, O→		φ ⁰ P			
		DP	DP _[Ä]	inā	φ ^{+P}
φ ⁰ P	DP	v: Ø T: S C: S	v: O T: S C: O	v: O T: S C: O	v: O T: O C: O
	DP _[Ä]	v: Ø T: S C: S	v: O T: S C: O	v: O T: S C: O	v: O(+S) T: O C: O
	inā	v: Ø T: S C: S	v: O T: S C: O	v: O T: S C: O	v: O(+S) T: O C: O
	φ ^{+P}	v: Ø T: S C: S	v: O T: S C: O	v: O T: S C: O	v: O+S T: S(+O) C: S
		AV	UV _{plain/only/inā}		UV _{gu}
					UV _{SVO/1>2}

6.5.1.1 THE FEATURAL MAKE-UP OF ÄIWOON NOMINALS

Before proceeding to giving a fully implemented revision of the probes on *v* and *T*, let us first be explicit about what features are carried by different kinds of Äiwoo nominals. I will assume the breakdown shown in (450). The goal of this featural make-up, of course, is to make sure that the correct natural classes arise. Some of these featural assumptions are somewhat non-standard, and ought to be commented on. Note that, however, much of this list is negotiable and could be reformulated in a different feature system, as long as the correct natural classes can arise. In this sense, these featural specifications should be considered convenient shorthands, or a step towards a better/more explanatory theory.

(450) Features on Äiwoo nominals:

$\varphi^0 P$	\emptyset_{3MIN} :	φ, D
	Lexical DP:	$\varphi, D, (N)$
	<i>inâ</i> :	φ, π, D
	1MIN:	$\varphi, \pi, +PART, +AUTH, -ADDR, -AUG$
	12MIN:	$\varphi, \pi, +PART, +AUTH, +ADDR, -AUG$
	2MIN:	$\varphi, \pi, +PART, -AUTH, +ADDR, -AUG$
$\varphi^+ P$	1AUG:	$\varphi, \pi, +PART, +AUTH, -ADDR, +AUG$
	12AUG:	$\varphi, \pi, +PART, +AUTH, +ADDR, +AUG$
	2AUG:	$\varphi, \pi, +PART, +AUTH, +ADDR, +AUG$
	3AUG:	$\varphi, \pi, -PART, -AUTH, -ADDR, +AUG$

All (and only) nominals are defined as a class by having the feature [φ]. Then, pronouns are singled out by a feature [π], which lexical DPs don't have; viceversa, lexical DPs have [D], and (most) pronouns don't. The only form with both [π] and [D] is the overt 3MIN pronoun *inâ* (and its proximal counterpart *ine*). Furthermore, any of these nominals can also freely be merged with Ä-features on them, so that e.g. [PIV] could be added to the list for all categories.

First, let us discuss “category” features, that is, [π] and [D]. We will see below that we need probe specifications that refer to both the class of π Ps (everything with [π]: all φ^+ Ps and *inâ*) and φ^0 Ps (everything with [D]). Crucially, *inâ* is part of both classes. We can be justified in assuming that *inâ* has [π] because, like all other pronouns, it shows the pronominal stem *i-*, which we assumed to be the spell-out of the π head (chapter 5, §5.5). Adding the feature [D], in contrast, is less empirically justified, but it will be necessary in this model to get things to add up (see §6.5.1.2 for why).

As for person and number features, I adopt here a binary system (Noyer 1992, a.o.) with [\pm PART, \pm AUTH, \pm ADDR]¹⁵. Importantly, I follow Grishin (2023, 2025) in assuming that 3rd person is a feature, *contra* e.g. Harley & Ritter (2002), a.m.o. In this case, 3rd person is represented as [$-PART$]. It will be important for me below that, perhaps somewhat oddly, only 3AUG has [$-PART$], and not 3MIN forms like *inâ*¹⁶. Perhaps, it could be that the D head in Äiwoo is incompatible with [\pm PART], so that *inâ* cannot have this, whereas other pronouns can; see Grishin (2025) for the empirical need of distinguishing between [+PART], [-PART], and [] (absence of [\pm PART]). It is less crucial for the system that [\pm AUTH, \pm ADDR, \pm AUG] be binary as opposed to privative, since Äiwoo grammar only refers to the positive value; I notate them as binary for consistency.

15 This could, presumably, be reformulated in a system like Harbour (2016). Note that I am not trying to fit the unit-augmented forms within the system; I leave this is as an open issue.

16 This oddity could be eliminated if one adopts a privative feature system where 3rd person is represented as its own feature [3], as opposed to just being the absence of PART (Grishin 2023, Bondarenko 2020, a.o.). In this case, both 3AUG and *inâ* would have [3]. This move, however, would force us to adopt a slightly more complicated probe specification on T (see §6.5.1.3 for the current proposal). As far as I can see, the two alternatives are somewhat equivalent, and I adopt the binary system purely for convenience.

We can now move on to revising the probes on v and T to get the desired behavior, that is, what they do and do not agree with (and move). The probe on C will remain the same, searching for and moving the highest/closest $[i|v]$ -carrying nominal.

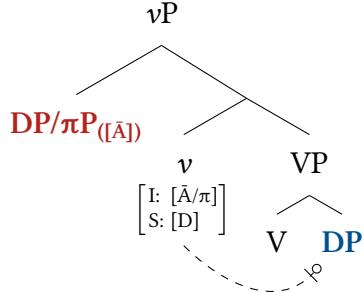
6.5.1.2 v AGREES WITH \bar{A} -MARKED DPs AND PRONOUNS

Throughout chapters 3–4 we posited that v agrees with objects carrying \bar{A} -features (“ $DP_{[\bar{A}]}$ objects”) – setting aside for now UV-only verbs and v^* . In §6.4.1 we learned that UV is consistently obligatory whenever the object is a pronoun. Therefore, this means that in addition to \bar{A} -marked objects, v also agrees with all pronominal objects (π Ps). This covers both those pronouns that have marked φ -features (φ^+ Ps) and the 3MIN pronoun *inâ*, but not $\emptyset_{3\text{MIN}}$ objects. To summarize, the intuition is that v **agrees with two classes of objects: \bar{A} -marked ones, and pronouns**. Moreover, we want the probe to agree with both arguments only when they are both pronouns (which will result in a $UV_{\text{SVO}}/UV_{1>2}$ clause). Concretely, I propose the following probe specification for $\ddot{\text{A}}\text{woo } v$ (451). Compared to the one proposed in chapter 3, the only change was adding the disjunction “or π ” to the interaction condition. (We will see below that no changes are necessary in the probe specification for v^*).

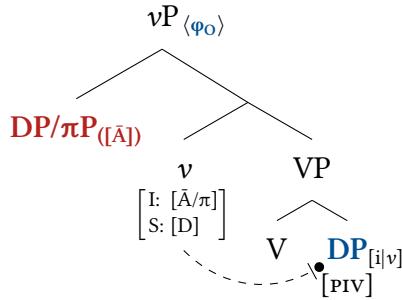
$$(451) \quad \text{Probe on } v: \begin{bmatrix} I: [\bar{A} \text{ or } \pi] \\ S: [D] \end{bmatrix}$$

First, let us see how this specification gets us the desired results, again setting aside UV-only verbs and v^* for the time being. Because of its disjunctive interaction condition, v will agree with the object if this carries either $[\bar{A}]$ or $[\pi]$; this captures the fact that all \bar{A} -marked objects and all pronominal objects trigger object agreement – that is, UV. The satisfaction condition being set as $[D]$ predicts that if the object is either a DP or *inâ*, this will also halt the probe; note that it is possible for a goal to satisfy the probe without being agreed with (this happens if the object is a bare DP, with no \bar{A} -features). However, if the probe has $[\pi]$ but not $[D]$ (like every pronoun apart from *inâ*), v will agree with the object but not be satisfied. Therefore, it will reproject (by Cyclic Agree logic; chapter 3, §3.5.3.1) and then potentially agree with the subject if it carries relevant features. The breakdown of the logically possible combinations is given in the trees in (452). I notate disjunction as “ \bar{A}/π ” for simplicity, and I also add the interaction flag-feature $[i|v]$ on all arguments that v agrees with.

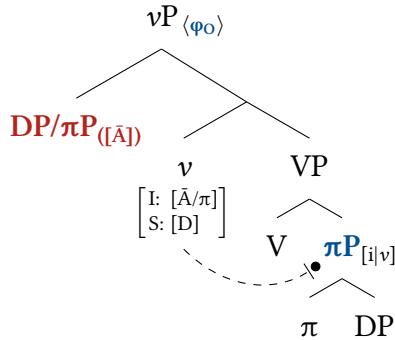
- (452) a. Object = DP:
no agr., halt; \Rightarrow AV



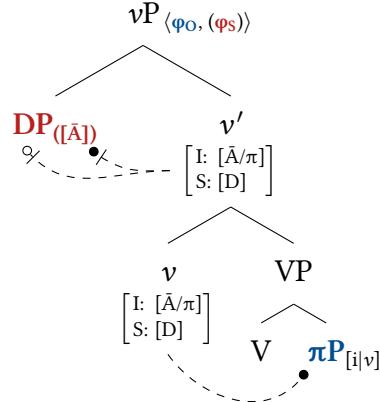
- b. Object = DP_[Ā]:
agr., halt; \Rightarrow UV_{plain}



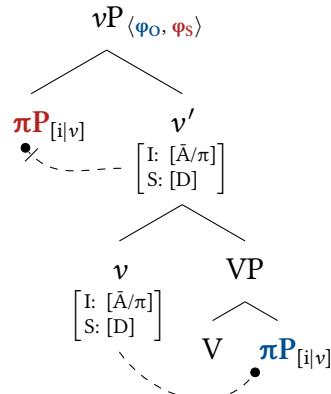
- c. Object = *inā*:
agr., halt; \Rightarrow UV_{*inā*}



- d. Object = π P ($φ^+$ P), subject = DP_([Ā]):
agr., continue; \Rightarrow UV_{gu}



- e. Both subject and object = $φ^+$ P:
agr., continue; \Rightarrow UV_{SVO}



Let us go through the space of possible derivations, depending on what the arguments are. If the object is just a DP with no Ā-features (452a), v will not interact with it (that is, there is no agreement), but it will be satisfied by it, and halt. This will ultimately give us an AV clause. If the object is a DP carrying [PIV] (452b) – or any other Ā-feature, for that matter – then v will agree with it and also halt, because the object has [D]. This will result in a UV_{plain} clause. Then, if the object is *inā* (452c), it means it has both [π] and [D]; once again, v will agree with it and halt. Crucially, [π] makes sure that object agreement will always happen *even if the object doesn't have Ā-features*: this will derive the fact that with

inā (and other pronominal objects), AV is impossible, and ultimately, subject extraction will be possible from UV.

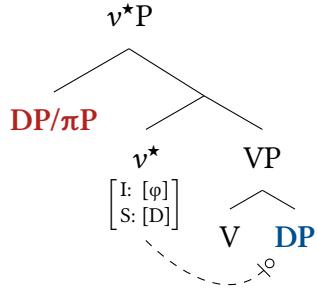
Let us now consider what happens if the object has $[\pi]$, but not $[D]$; this is the case of φ^+P objects – that is, non-3MIN pronouns (452d,e). Again regardless of whether the object has \bar{A} -features or not, v will agree with it because it has $[\pi]$ – giving us obligatory UV. In this case, however, v is not satisfied, because it hasn't found $[D]$. Therefore, it will reproject to the bar level, and look at its sister node, the subject. If the subject is a DP (452d), v will interact with it if it has \bar{A} -features and then halt, or otherwise just halt without interacting with the subject. If, however, the subject is a πP (452e), v will agree with it as well¹⁷. Note that if the subject is a φ^0P nominal with \bar{A} -features (452d), due to how the probing on T works, this step of subject agreement will effectively be completely obscured; see below.

This gives us then the correct results. With this specification on v , we will get UV when the object is either an \bar{A} -marked nominal or a pronoun. In the case of non-pronominal objects, agreement will be conditional on the presence of \bar{A} -features. In the ordinary (non-UV_{only}) case, what we get is a voice alternation correlating with the distribution of \bar{A} -features: this will ultimately cause the \bar{A} -extraction restriction (see chapters 3–4). Whenever the object is a pronoun (whether *inā* or a φ^+P), however, v will always agree with it regardless of whether or not it has \bar{A} -features, giving us obligatory UV and no extraction restriction.

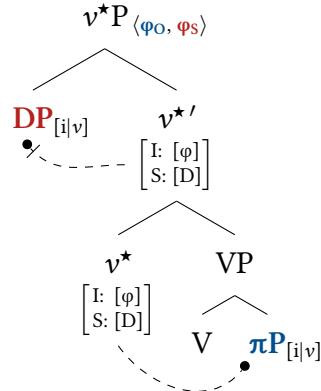
Let us now see how the probe specification proposed for v^* in chapter 4 ([INT: φ ; SAT: D]) also still gives us the correct results despite this amendment to v . Remember that UV-only verbs show the same exact set of word order alternations as all other transitive verbs in the language; their only difference from ordinary verbs is that AV is not an option, and consequently, subject extraction is allowed even with UV_{plain} word order. In the case of UV-only verbs, because \bar{A} -features don't figure in the probe specification of v^* , their distribution is essentially completely unsequential. If the object is either a DP or *inā* (453a,b), v^* will agree with it and immediately halt (due to its $[D]$ feature); this will give us the same word order as in UV_{plain} clauses. If, on the other hand, the object is a φ^+P (453c,d), v^* will agree with it without being satisfied, reproject, and agree with the subject as well. Depending on which argument T moves to spec,TP, this may result in a clause with either UV_{gu} or UV_{SVO} word order.

¹⁷ In this case too, the stem will be realized in its UV form, since the VI rule is sensitive to the presence of any φ -features on v , not just specifically the object's; see chapter 3, §3.5.1.

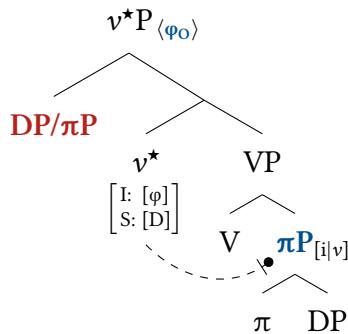
- (453) a. Object = DP:

no agr., halt; \Rightarrow UV_{only}

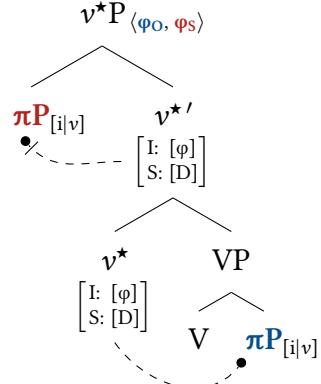
- c. Object = πP (
- $φ^+P$
-), subject = DP:

agr., continue; \Rightarrow UV_{gu}

- b. Object =
- inā*
- :

agr., halt; \Rightarrow UV_{inā}

- d. Both subject and object =
- $φ^+P$
- :

agr., continue; \Rightarrow UV_{SVO}

The mechanism proposed here is, of course, simply an implementation, and as mentioned in the introduction of this chapter, the specific mechanic formalism will (or should) likely be revised when our theory progresses. However, the conceptual underpinnings of the system help bringing Äiwoo closer to many other languages, despite its initial strangeness on the surface. On one hand, the classes of objects that *v* targets here (Ā-marked nominals and pronouns) are not necessarily a natural class in a coherent featural sense. On the other hand, they are often treated by the syntax as if they were one class: pronouns and Ā-marked objects are the typical categories of objects that in many languages show some “special” behavior. For example, they might undergo object shift (like object pronouns in Scandinavian; Holmberg 1986, Vikner 2017 a.o.), or get clitic-doubled (Anagnostopoulou 2017, a.o.), or trigger object agreement (Anagnostopoulou 2016, a.o.), or receive DOM (Comrie 1986, Aissen 2003, a.o.), etc. See also Brodin (2025) for another case of *v* (Voice in his analysis) specifically agreeing with a similar disjunction of objects, implemented in a way not too different from the one proposed here. Other than the empirical fact that these two groups of objects often pattern alike in certain respects, to my knowledge we

don't know of a deeper explanation of this. Here, I implemented this common behavior between \bar{A} -marked nominals and pronouns by means of a featural disjunction in the probing mechanism. This is purely a mechanical device to make sure that both classes receive the same treatment. Hopefully, further research will be able to shed light on why exactly these two classes of objects often receive "special attention".

6.5.1.3 T RAISES THE CLOSEST φ^+P (BUT IT HAS A PLAN B)

In chapter 3, when we only considered canonical AV and UV_{plain} clauses, we kept our story simple: T always raises the closest nominal – the subject – to spec,TP. However, we know now that this is not in fact always true. The summary of which argument(s) move(s) to spec,TP in the different kinds of clauses is shown in (454); for now, I ignore the following movement to spec,CP (shaded). In UV_{gu} clauses (454b), the *object* moves to spec,TP, and the subject stays low; note that this movement is *non-local*. In $UV_{1>2}$ clauses (454d), both arguments move to spec,TP.

(454) What raises to spec,TP, by clause type:

- a. $UV_{plain/only/in\hat{a}}$: T raises the subject



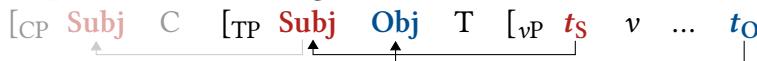
- b. UV_{gu} : T raises the object



- c. UV_{SVO} : T raises the subject



- d. $UV_{1>2}$: T raises both arguments



Putting this together with how the different clause types are distributed according to the φ -features of the two arguments, we reach the following state of affairs (455).

(455) What T agrees with and moves:

$S \downarrow, O \rightarrow$	φ^+P			φ^0P		
	1	12	2	3AUG $_\pi$	$in\hat{a}$	DP
φ^+P	1	—	—	S+O	S	S
	12	—	—	—	S	S
	2	S	—	—	S	S
	3AUG $_\pi$	S	S	S	S	S
φ^0P	$in\hat{a}$	O	O	O	S	S
	DP	O	O	O	S	S

Temporarily setting aside the $1 > 2$ combination, we can now draw a relatively simple generalization: T raises the closest φ^+P ; if there are no φ^+Ps , it raises the closest nominal. If the subject is a φ^+P (top four rows), T simply agrees with and moves the subject, and that's all; what the object is does not matter (456a,b). If the subject is a φ^0P but the object is the desirable φ^+P (bottom two rows), then T will agree with and move the object, despite the subject being closer (456c). This is another instance of *non-local A-movement*, once again motivated by the “featural priority” of the lower argument over the higher one¹⁸. Only when neither argument is a φ^+P (i.e., when both arguments are φ^0Ps), T “backtracks” onto a less specific preference, and just raises the highest/closest nominal – that is, the subject (456d).

- (456) T raises the closest φ^+P if it can find one:

- a. $\varphi^+P > \varphi^+P$: T raises **subj**
- b. $\varphi^+P > \varphi^0P$: T raises **subj**
- c. $\varphi^0P > \varphi^+P$: T raises **obj!**
- d. $\varphi^0P > \varphi^0P$: T raises **subj** (“plan B”)

Movement to spec,TP then shows two similarities to movement to spec,CP (chapter 3, §3.5.3.1): (i) it is non-local A-movement: it prefers a more specific type of nominal, and will rather move a lower such nominal over a closer, less featurally fitting one; (ii) it has a plan B: if it cannot find its preferred type of nominal, it will resort to a much more generic featural specification, and just move the closest nominal. Before we proceed to the mechanical implementation, we can verify that the non-local movement of the object to spec,TP (skipping the subject) shows at least one binding-theoretical property of A-movement: it obviates Weak Crossover. In (457), the quantified pronominal object *ijidui* ‘all of them’ moves first to spec,TP (where it’s realized as the shortened object form *-gu-i*; see §5.5) across the subject *isäi* ‘their mother’. Crucially, this sentence can have a bound reading, showing that this step of movement is not sensitive to WCO¹⁹. (The object then raises further to spec,CP, but this is irrelevant here.)

- (457) [Context: we are talking about a group of girls who are coming back from a long trip, and their mothers are missing them very much.] (250422)

<i>ijidui</i>	<i>ki-te-usi-kä</i>		<i>-gu-i</i>	=laa		<i>isä</i>		<i>-i</i>		mother-3AUG	t_{Obj}
3AUG.all	IPFV-see.UV-again.UV-DIR3	-OBJ-3AUG=FUT									

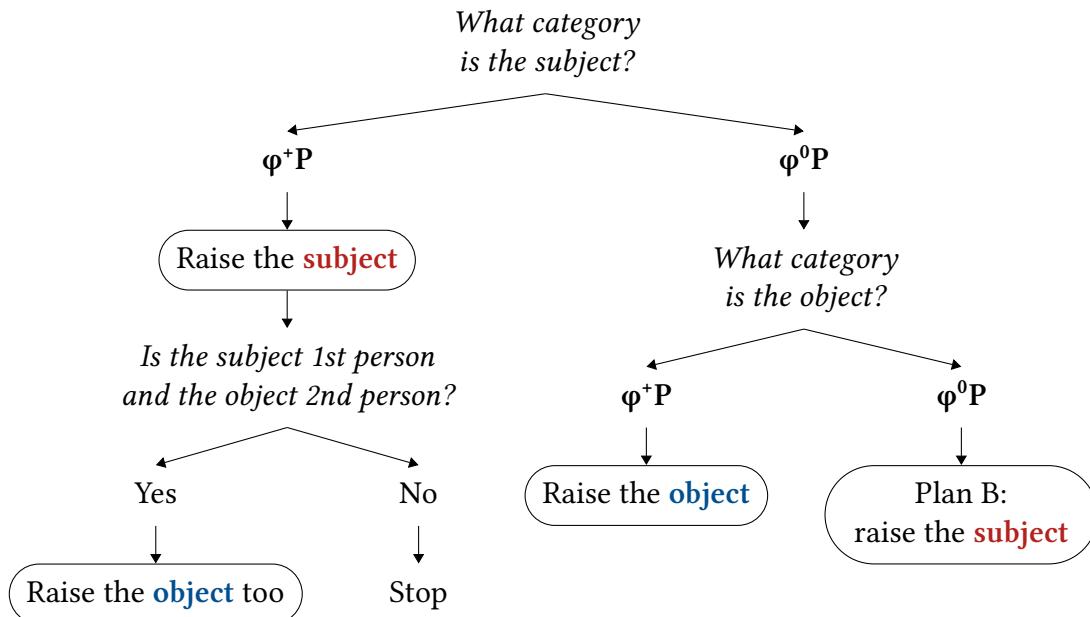
✓ Bound reading: $\forall x, x$'s mother will see x again
~ ‘Her_i mother will see every one_i of them again’

18 As a sidenote, the existence of non-local A-movement to spec,TP goes against a prediction made in Lohninger (2025) that this kind of movement – though implementationally framed in a slightly different way – should only be possible to phase edges (e.g., spec,CP or spec,vP). There is no evidence for the existence of a phase boundary in this region of the Äiwoo clause.

19 See chapter 3, fn. 45 for discussion of a potential analytical confound that arises here just as in the context of CP-fronting. Because the quantified moving element is grammatically plural, it might be that the WCO-violating reading that is available for (457) is actually not derived via genuine binding, but rather through cumulativity. I leave this possibility open for future research.

From our earlier discussion about CP-fronting, we know how to derive this kind of non-local A-movement with a plan B. T will have a primary probe that is featurally “picky”, and a secondary, more generic probe that only kicks in when the primary probe has not found anything; see chapter 3, §3.5.3 for the technical details. In the spirit of separating the analytical intuition from the weeds of the mechanical implementation, the diagram in (458) informally describes what T does, this time incorporating the 1>2 combination. A reader who is not necessarily interested in the details of a particular theory of agreement might want to focus on this diagram, and not the mechanical implementation below.

(458) Probing by T (informal):



To implement this sequence of operations, I propose that Äiwoo T hosts the following two probes (459)²⁰. Note that “3AUG” here is a shorthand notation for the list of features [−PART, −AUTH, −ADDR, +AUG]. In the trees below, for typographical reason, I will use the condensed notation on the right-hand side.

(459) Probes on T:

- a. Primary probe: $\left[\begin{array}{l} I: [\pm \text{PART} \uparrow]^M \\ S: [+ \text{ADDR} \text{ or } 3\text{AUG}] \end{array} \right] = \left[\begin{array}{l} I: [\pm \text{PART} \uparrow]^M \\ S: [\text{AD}/3\text{AUG}] \end{array} \right]$
- b. Secondary probe: $\left[\begin{array}{l} I: [\varnothing]^M \\ S: [\varnothing] \end{array} \right] = [I+S: [\varnothing]^M]$

²⁰ This effectively supersedes the analysis and proposal in Roversi (2020), which was based on partially gappy data. Specifically, it was not known at the time that 1AUG>2nd person combinations resulted in UV_{1>2} sentences rather than UV_{SVO}. This minor difference had implications for the formulation of the hierarchy effect.

Let us break down the picky primary probe, the more interesting one²¹. Its interaction condition is $[\pm\text{PART}\uparrow]$: it will only agree with and move nominals that contain either $[+\text{PART}]$ or $[-\text{PART}]$, but not those without (either value of) this feature. This means that at first pass, T is only interested in φ^+ Ps; remember that only 1st person, 2nd person, and 3AUG pronouns are specified for $[\pm\text{PART}]$, but not DPs and the 3MIN pronoun *inā* (see §6.5.1.1). The symbol \uparrow on the feature $[\pm\text{PART}]$ signifies “dynamic interaction” (Deal 2024a): after T agrees with a goal with $[+\text{PART}]$, the interaction condition becomes $[+\text{PART}]$, and viceversa for $[-\text{PART}]$ ²². The satisfaction condition is set to the disjunction of $[+\text{ADDR}]$ or $[3\text{AUG}]$; goals that lack either of these may be interacted with but they will not halt the probe, which will continue searching. Importantly, this is the case for 1st person (exclusive) arguments: they are $[+\text{PART}]$, so they get interacted with, but they are $[-\text{ADDR}]$, so they do not stop the probe.

Let us now concretely see how this complicated probe (together with the simpler non-picky probe) actually derives the attested pattern. Rather than going through every single combination, I have set this up as an algorithm written in pseudo-code (460); see e.g. Deal (to appear) for this way of using pseudo-code. The algorithm goes through different classes of subjects, at each step highlighting and “checking off” the parts of the complete pattern (455) that have been accounted for.

(460) Full algorithm for T probing:

- Primary probe. If subject has $[-\text{PART}]$ or equivalently $[3\text{AUG}]$:
 - ▷ Interact with subject, **move subject**, halt (SAT!)

S↓, O→	1	12	2	3AUG_π	<i>inā</i>	DP
1	—	—	$S+O$	S	S	S
12	—	—	—	S	S	S
2	S	—	—	S	S	S
3AUG_π	S	S	S	S	S	S
<i>inā</i>	O	O	O	O	S	S
DP	O	O	O	O	S	S

- Else, if subject has $[+\text{PART}]$ ($S \in \{\{1/12/2\}_{\text{MIN}}, \{1/12/2\}_{\text{AUG}}\}$)
 - ▷ Interact with subject, **move subject**
 - ▷ Dynamic interaction: copy $[+\text{PART}]$ onto the INT condition

²¹ This is admittedly a rather complex specification, which might seem purely ad-hoc to correctly capture the data – and it is. However, the data pattern we are trying to capture is objectively complex, so a simpler specification will not achieve descriptive adequacy. The existence of agreement/movement patterns of this complexity can be thought of as supporting evidence for a more powerful theory of agreement like Deal’s (2015) interaction/satisfaction model, over more restrictive ones. For conjunction and disjunction in probing, and specifically for person/number features in Deal’s framework, see e.g. Coon & Bale (2014), Roversi (2020), Bondarenko & Zompi (2021), Scott (2021), Oxford (2024), and Deal (2024a), a.o.

²² Note that I assume here a slightly different version of dynamic interaction than that proposed in Deal (2024a) and Deal & Royer (2025). There, being dynamic is a property of a feature on a goal, whereas here, I assume that it is a property of a feature on the probe. See 6.5.1.4 for a discussion.

- ▷ If subject has [+ADDR]: ($S \in \{\{12/2\}_{MIN}, \{12/2\}_{AUG}\}$)
 - ▷ Halt (SAT!)

$S \downarrow, O \rightarrow$	1	12	2	$3AUG_\pi$	$in\hat{a}$	DP
1	—	—	$S+O$	S	S	S
12	—	—	—	S	S	S
2	S	—	—	S	S	S
$3AUG_\pi$	S	S	S	S	S	S
$in\hat{a}$	O	O	O	O	S	S
DP	O	O	O	O	S	S

- ▷ Else: ($S \in 1_{MIN}, 1_{AUG}$)
 - ▷ If object has [+PART]: ($O \in \{2_{MIN}, 2_{AUG}\}$)
 - ▷ Interact with object, **move object**
 - ▷ Object has [+ADDR]: halt (SAT!)
 - ▷ Else: ($O \in \{3AUG.pro, in\hat{a}, DP\}$)
 - ▷ Do nothing; halt (end of c-command domain)

$S \downarrow, O \rightarrow$	1	12	2	$3AUG_\pi$	$in\hat{a}$	DP
1	—	—	✓ $S+O$	S	S	S
12	—	—	—	S	S	S
2	S	—	—	S	S	S
$3AUG_\pi$	S	S	S	S	S	S
$in\hat{a}$	O	O	O	O	S	S
DP	O	O	O	O	S	S

- Else, if subject does not have [\pm PART] ($S \in \{in\hat{a}, DP\}$):
 - ▷ If object has [\pm PART]:
 - ▷ Interact with object, **move object**, halt (end of c-command domain)

$S \downarrow, O \rightarrow$	1	12	2	$3AUG_\pi$	$in\hat{a}$	DP
1	—	—	$S+O$	S	S	S
12	—	—	—	S	S	S
2	S	—	—	S	S	S
$3AUG_\pi$	S	S	S	S	S	S
$in\hat{a}$	O	O	O	O	S	S
DP	O	O	O	O	S	S

- ▷ Else: ($O \in \{in\hat{a}, DP\}$)
 - ▷ Don't interact with anything, halt (end of c-command domain)

- **Plan B-probe.** If Plan A-probe moved any nominal:
 - ▷ Interact with that nominal, halt (SAT!)
 - (= don't do anything)

- ▶ Else, if Plan A-probe did not move anything:
 - ▷ If subject has [phi]: interact with subject, move subject, halt (SAT!)

$S \downarrow, O \rightarrow$	1	12	2	$3AUG_\pi$	<i>inā</i>	DP
1	—	—	$S+O$	S	S	S
12	—	—	—	S	S	S
2	S	—	—	S	S	S
$3AUG_\pi$	S	S	S	S	S	S
<i>inā</i>	O	O	O	O	S	S
DP	O	O	O	O	S	S

✓

We have now seen how the interaction of two probes can derive the complex hierarchy effect of what T raises to its specifier. Crucially, movement to spec,TP may alter which $[i|v]$ -flagged nominal will be closest to C, and therefore be further raised to spec,CP. For example, in a UV_{gu} sentence, the object has $[i|v]$ because it is a pronoun. Even if the subject also has $[i|v]$ (due to how v works), the object will be raised to spec,TP, and thus C will front it. In a UV_{SVO} clause, on the other hand, both arguments have $[i|v]$, but T raises the subject. Therefore, C will front the subject.

6.5.1.4 DYNAMIC INTERACTION FEATURES AS A PER-PROBE PROPERTY

In the discussion of probing by T above I briefly mentioned a departure I make in a detail of the mechanics of Agree outlined in [Deal \(2024a\)](#), [Clem & Deal \(2024\)](#), and [Deal & Royer \(2025\)](#). Because this is not necessarily an innocent move, it is worth discussing. The difference concerns the nature and distribution of *dynamic* interaction features. If an interaction feature [F] is dynamic (notated $[F\uparrow]$), it will be copied onto the interaction set of the probe upon successful agree, so that further steps of agree will be restricted to goals that also bear [F]. The question at hand concerns *where* exactly features can be dynamic, or said otherwise, what kind of syntactic objects dynamic features can be a property of. I contrast three possible views:

(461) Where are dynamic features?

- a. **Dynamicity as a property of goals.** Two sub-possibilities:
 - i. **Per feature:** across a whole grammar, every instance of a given feature [F] is dynamic $[F\uparrow]$. For example, within the same language, it is **not possible** that a 1st person pronoun has dynamic $[(+)\text{PART}\uparrow]$ while a 2nd person pronoun has non-dynamic $[(+)\text{PART}]$. ([Deal 2024a](#), [Clem & Deal 2024](#))
 - ii. **Per lexical item:** dynamicity is a property of a feature *on a particular lexical item*. For example, it is **possible** that a 1st person pronoun has $[(+)\text{PART}\uparrow]$, while 2nd person has just $[(+)\text{PART}]$. (Entertained as a possibility in [Deal & Royer 2025: 1637–1638](#))
- b. **Dynamicity as a property of probes:**
Whether a feature is dynamic or not is specified on a particular probe. Within

the same grammar, it is possible that a probe (say, on v) will have [F] but another one (say, on T) will have [F \uparrow].

As indicated by the citations, the available literature has argued that dynamicity is a property of features on agreement *goals* (461a). In contrast to this, in our discussion above I modeled dynamicity as a property of agreement *probes* (461b). This second kind of theory (461b) is strictly more powerful/expressive than the per-feature version of the first (461a-i); let us see why.

Consider a language where three probes (P1, P2, P3) all dynamically interact with, say, [PL] – that is: after they agree with a plural DP, their further search is restricted to other goals carrying [PL], and will ignore other (singular) DPs. Under a per-feature theory (461a-i), we would say that this not a coincidence: [PL \uparrow] is a dynamic feature in the language, and therefore every probe interacting with a nominal carrying [PL] will do so dynamically. Under a per-probe theory (461a), this would be a coincidence: the only reason why all three probes interact dynamically with [PL] is that all three probes just so happen to be specified as having [INT: PL \uparrow].

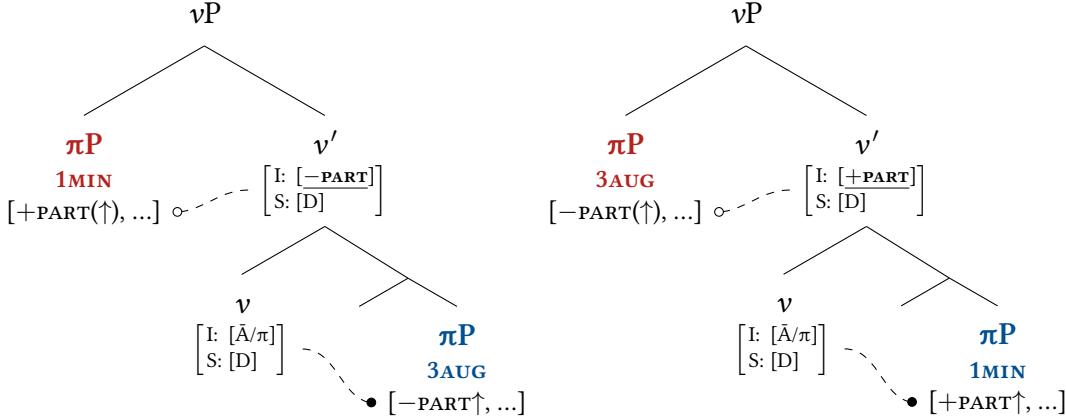
Because a per-probe theory can express everything a per-goal theory can, plus some additional cases, an argument against the per-probe theory will need to say that it is too powerful/unrestricted: the additional cases it predicts are not attested. This is what Deal & Royer (2025) do with evidence from Mayan languages, where probes both in the nominal and the clausal domain all interact dynamically with the same features in the same way. From this perspective, the per-probe theory would just have to say that the fact that these probes act alike is a coincidence, which may be inelegant or unparsimonious. In contrast, an argument in favor of the per-probe theory would be to show that those additional scenarios that it predicts to be possible (and that are impossible under a per-goal theory) actually do exist. To reiterate, these are cases where a probe P1 interacts dynamically with, for example, [PL], while another probe P2 does not. This is simply not possible under the per-goal theory (whether in the per-feature or per-item version). If [PL \uparrow] is specified as dynamic on the goals themselves, then *every* probe will have to interact with it dynamically.

I argue that this is precisely the scenario we observe in Äiwoo, and that therefore we empirically need the less restrictive per-probe theory. Specifically, I argue that T in Äiwoo interacts dynamically with [\pm PART], while v does not. For T, we know that interaction with [\pm PART] is dynamic (§6.5.1.3): after interacting with a [+PART] subject, [-PART] objects are not considered (which means [+PART] was copied onto the interaction set of the probe), and viceversa. For v , in contrast, this cannot be the case. The crucial cases are those where both arguments are φ^+P , but with differing [\pm PART] specifications, i.e., 1/2 > 3AUG or 3AUG > 1/2; let's consider the combination of 1MIN and 3AUG for concreteness (462). If [\pm PART] interacted dynamically here (or even if either only [+PART] or only [-PART] did), then we would predict that v will agree only with the object first, copy its value of [\pm PART] into its interaction set, and then fail to interact with the subject due of its opposite value. However, we know that this prediction is wrong: in *all* combinations

of $\varphi^+P > \varphi^+P$, crucially regardless of [\pm PART] specifications, v consistently agrees with both arguments (§6.5.1.2), which is what ultimately results in UV_{SVO} clauses.

- (462) v cannot interact dynamically with [\pm PART]:

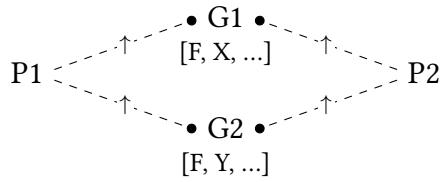
- a. 1MIN > 3AUG: X wrong prediction b. 3AUG > 1MIN: X wrong prediction



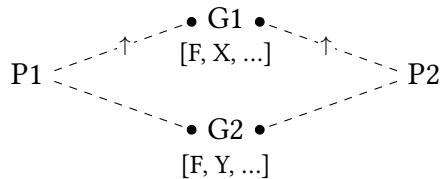
In conclusion, I argue that although a per-probe theory of dynamic interaction is less restrictive than a per-goal theory, this additional power is empirically necessary, as shown by the different probing patterns of v and T in Äiwoo. For completeness: a per-item theory, as entertained by Deal & Royer (2025), is also more expressive/less restrictive than a per-feature theory, but in different ways than a per-probe theory. Specifically, a per-item theory predicts certain scenarios to be possible that are not predicted under a per-probe theory. These would be cases where, say, a certain probe (or several probes, for that matter) interacts dynamically for [PL] with a 1PL goal, but not with a 2PL goal; Deal & Royer (2025: 1637–1638) argue that the agreement patterns in several Mayan languages might be analyzed this way. If such cases exist, and if it is true that the Äiwoo case is one that can only be modelled with a per-probe theory of dynamicity, then we might want to carefully reconsider the entire idea of dynamic interaction.

The general typology of scenarios predicted to be possible by these three theories is shown in (463). In each case, I consider an abstract situation where two probes, P1 and P2, interact with two goals, G1 and G2, each of which carries a feature [F] (and some other features); to remain notationally neutral, I put the symbol for dynamic interaction \uparrow on the dashed agreement line rather than on the goals or probes themselves. In a per-goal, per-feature theory (463a), [F] is dynamic across the board, so both P1 and P2 will interact dynamically with both G1 and G2. In a per-goal, per-item theory (463b), [F] may be dynamic on one goal but not the other: both probes will interact dynamically with G1, and neither will with G2. In a per-probe theory (463c), P1 will interact dynamically with (all instances of) [F], whereas P2 will not. Scenarios that are not predicted to be possible under any of these theories, as far as I can tell, are for example one where P1 only interacts dynamically with G1 and P2 only with G2 (463d-i), or one where P1 only interacts dynamically with G1 and not G2, and P2 with neither (463d-ii).

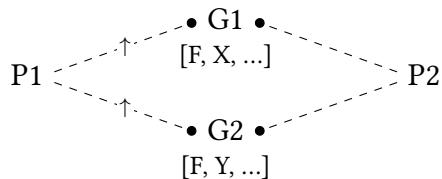
- (463) a. Per-goal, per-feature: [F] is dynamic on all goals



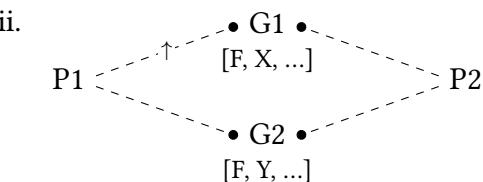
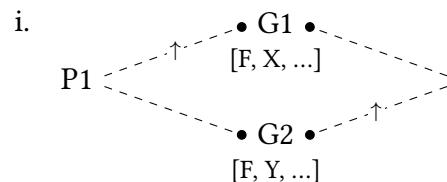
- b. Per-goal, per-item: [F] is dynamic on G1 but not on G2



- c. Per-probe: P1 interacts dynamically with [F], but not P2

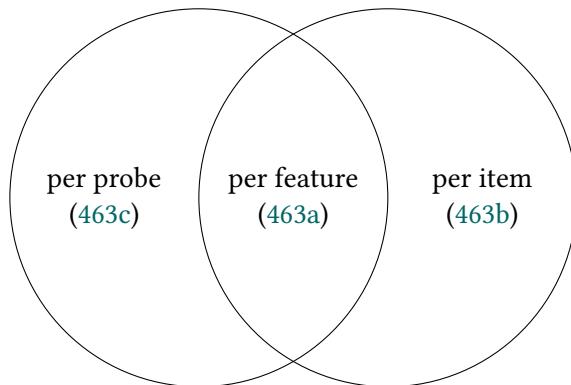


- d. Not predicted by any of these theories:



The breakdown of which theory predicts which scenarios to be possible is shown as a Venn diagram in (464). Both a per-probe theory and a per-item theory predict the across-the-board scenario in (463a) to be possible, but each of them also predicts additional scenarios that the other one does not.

- (464) Prediction of the three theories:



In this chapter, I have argued that an agreement pattern like (463c) is actually attested in Äiwoo, and that therefore a per-probe theory is necessary. I hope future research will shed light both on which empirical patterns are actually crosslinguistically attested, and also, on the theoretical side, on the precise relation between the expressive powers of these alternative theories.

6.5.2 PUTTING IT ALL TOGETHER AGAIN: STEP-BY-STEP DERIVATIONS

In this section, I put all the ingredients together, and provide full annotated derivations. First I go through the non-canonical cases of UV_{gu} , UV_{SVO} and $\text{UV}_{1>2}$ clauses (§§6.5.2.1–6.5.2.3). For these three cases I use as an example derivation one where the object does not carry [PIV], to show how the lack of an \bar{A} -extraction restriction arises. Then, as a sanity check, I reconsider the derivation of canonical UV_{plain} and AV clauses (§§6.5.2.4–6.5.2.5) to show that the amendments we have made to the original model from chapter 3 still derive the correct results. Throughout, I remain agnostic as the precise syntactic nature of the directional suffix $-mä \text{ DIR1}$, representing it as part of the complex V head; this is not crucial.

I do not also include a derivation for UV_{only} clauses, involving a UV-only verb root and v^* instead of the ordinary v head. This would proceed in the same way as either a UV_{plain} , UV_{gu} , UV_{SVO} , or $\text{UV}_{1>2}$ derivation, depending on the features of the two arguments, but with no necessity for \bar{A} -features on the object in the first case (where it looks superficially like a UV_{plain} clause), and thus no extraction restriction. See §6.5.1.2 above for a discussion of how the probe specification posited for v^* still predicts the correct results in terms of word order alternations.

6.5.2.1 DERIVING UV_{gu} CLAUSES

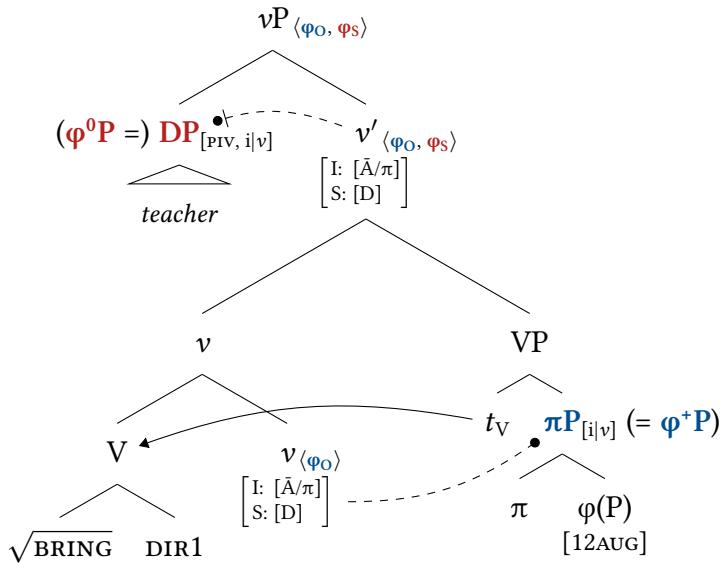
DISTRIBUTION: The subject must be a $\varphi^0\text{P}$; the object must be a $\varphi^+\text{P}$.

EXAMPLE SENTENCE

- (465) (*iude*) *ku-tu-mä-gu-de=ngaa* *mekivaavee*
 12AUG IPFV-bring.UV-DIR1-**OBJ-12AUG=FUT** **teacher**
 ‘The teacher will bring us (here)’

IN THE vP DOMAIN:

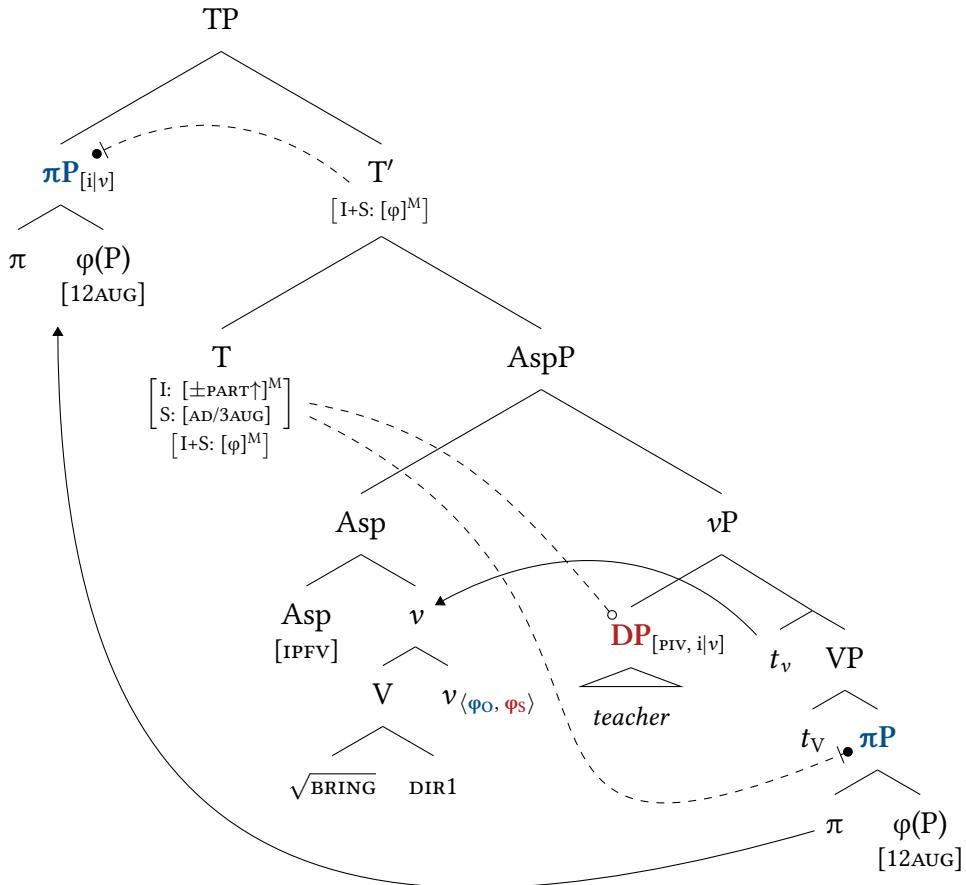
(466)



- The (complex) verb head-moves into V.
- v agrees with the object because it has $[\pi]$, whether or not it has \bar{A} -features. The object receives the interaction flag feature $[i|v]$. The object does not have $[D]$, so it does not satisfy the probe.
 - ▷ Because $[\pi]$ is present on the object, AV will be impossible.
- v reprojects to the bar level. Here I illustrate a case where the subject has $[PIV]$, so v agrees with the subject too (giving it $[i|v]$).
 - ▷ Ultimately, this won't matter: even if the subject was just an \bar{A} -less DP and v thus didn't agree with it, the rest of the derivation would be identical.

TP DOMAIN:

(467)

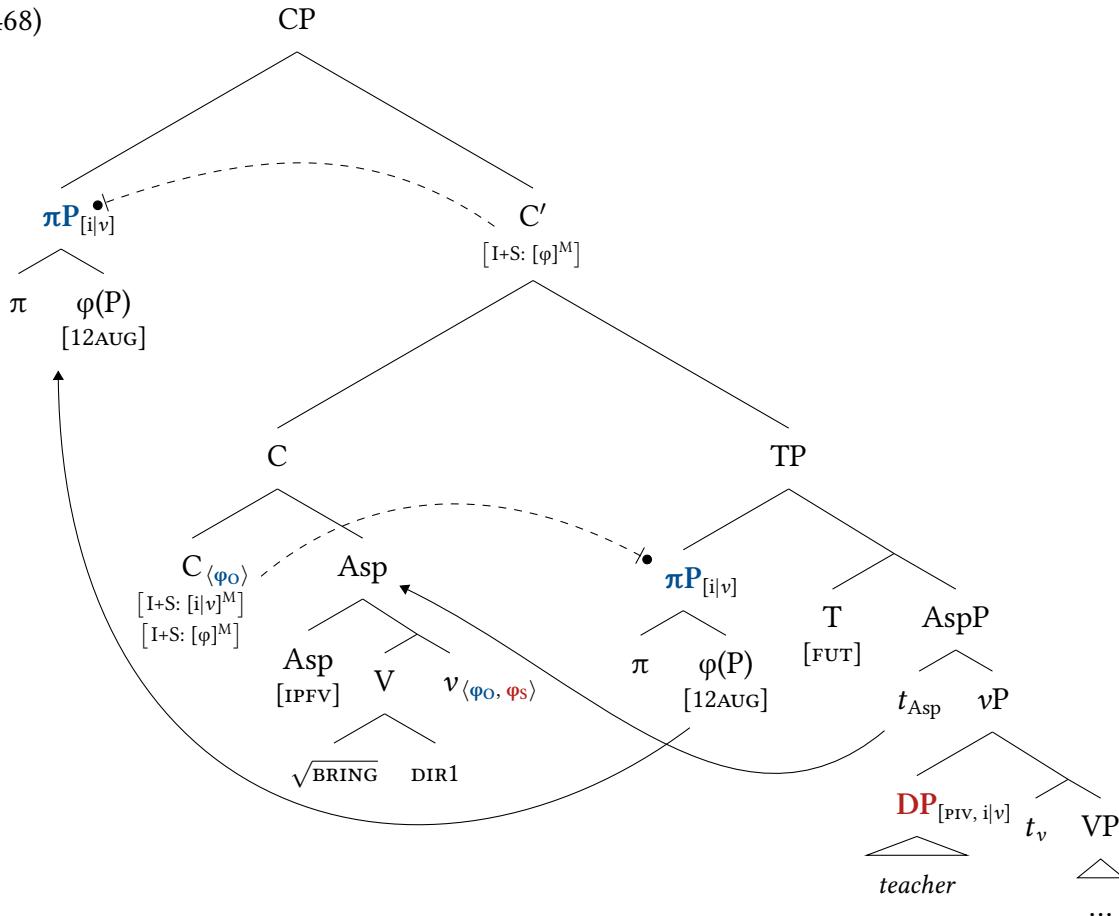


- The verb head-moves into Asp.
- T's primary probe initiates a search.
 - ▷ The subject does not have [\pm PART]; the probe does not interact with it and it is not satisfied.
 - ▷ The object also has [+PART]. The probe interacts with it and moves it to spec,TP.
 - ▷ In this case the object also has [+ADDR], so the probe is satisfied. (even if it didn't, nothing would change in the rest of the derivation).
- T's secondary probe reprojects to T', and initiates a search.
 - ▷ The closest potential goal in its c-command domain is the just-moved object in spec,TP.

- ▷ The object has $[\varphi]$, so the probe interacts with it (and perhaps moves it vacuously), and it is satisfied.

CP DOMAIN:

(468)

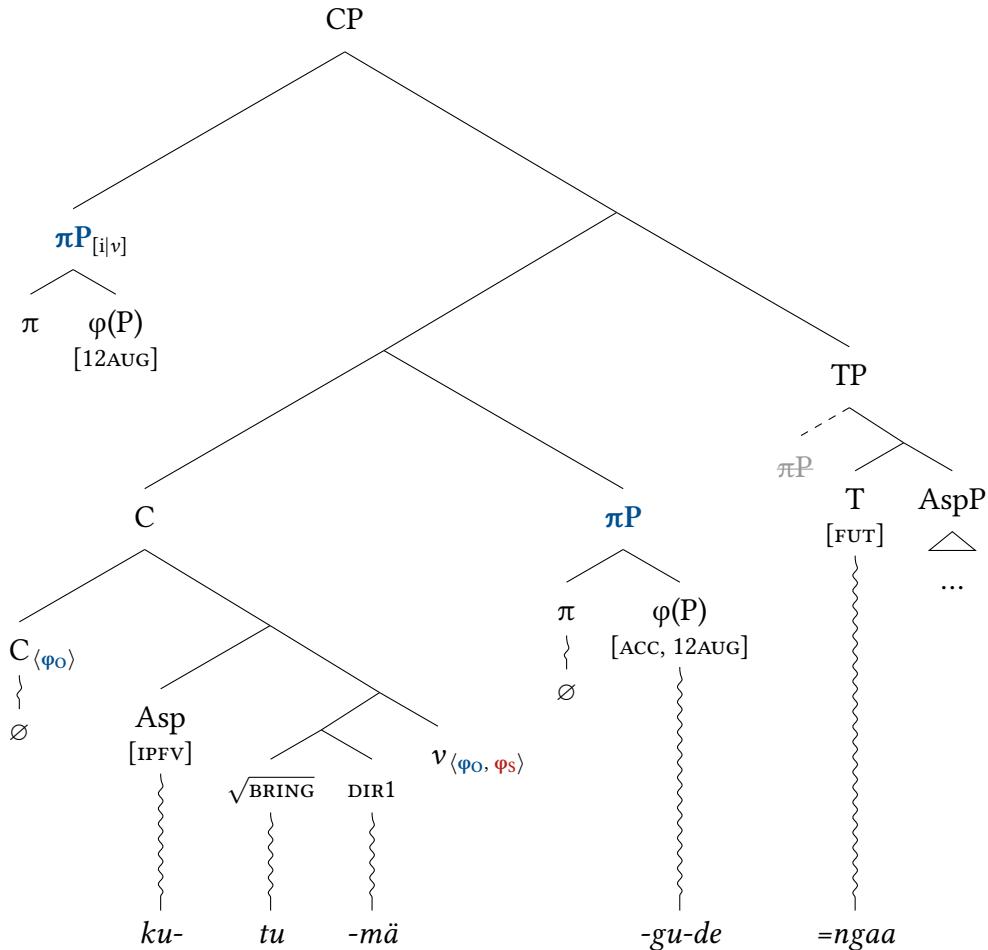
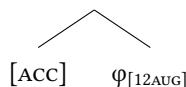


- ▶ The verb head-moves from Asp to C, skipping T.
- ▶ The primary probe on C searches for $[i|v]$. Although both arguments have it, the object is now closest to C after having been raised to spec,TP. C raises the object to spec,CP.
- ▷ The secondary probe on C reprojects, and from the bar level it agrees with the object in spec,CP again.
- ▶ The object is now in spec,CP even without having \bar{A} -features. Therefore, there will be **no intervention effect**.

VERB SPELL-OUT:

- Post-syntactic Local Dislocation applies to the πP in spec,TP, but not to the higher copy in spec,CP (§5.5.2).

(469)

(470) **Fission:** $\varphi(P)_{[ACC, 12AUG]} \Rightarrow \varphi(P) / V -$ (471) **Impoverishment:**

- C impoverishment:** applies
☞ $C_{\langle \varphi \rangle} \Leftrightarrow \emptyset / -v_{\langle \varphi \rangle}$
- $\varphi(P)$ impoverishment:** does not apply
✗ $\varphi(P) \Leftrightarrow \emptyset / C_{\langle \varphi \rangle} -$

(472) Vocabulary Insertion:

a. Stem (voice allomorphy):

$$\begin{array}{l} \cancel{\pi} \sqrt{\text{BRING}} \Leftrightarrow \text{tu} / __v\langle\varphi\rangle \\ \sqrt{\text{BRING}} \Leftrightarrow \text{tou} \text{ (elsewhere)} \end{array}$$

b. π is not word-initial, so it gets deleted:

$$\begin{array}{l} \pi \Leftrightarrow i\sim iu- / \# _ \\ \cancel{\pi} \Leftrightarrow \emptyset \text{ (elsewhere)} \end{array}$$

c. $\varphi(P)$:

- i. [ACC] $\Leftrightarrow -gu / V _$
- ii. $\varphi_{[12\text{AUG}]} \Leftrightarrow -de$

6.5.2.2 DERIVING UV_{SVO} CLAUSES

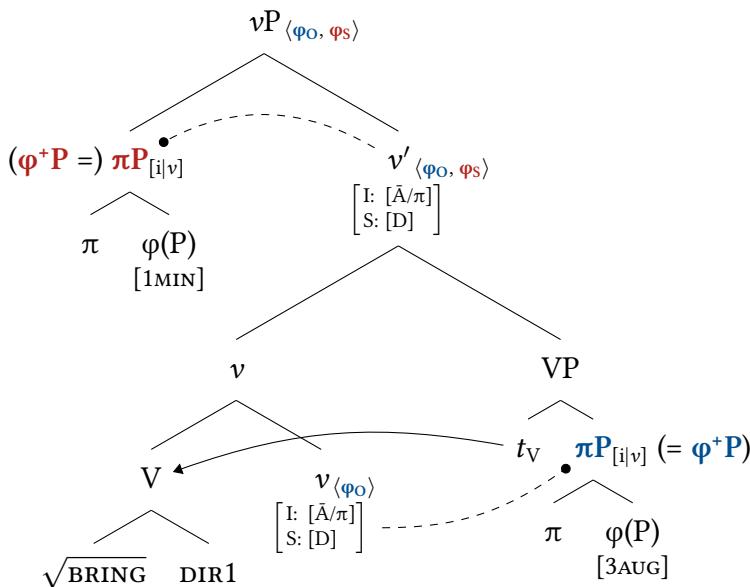
DISTRIBUTION: Both the subject and the object must be φ^+Ps .

EXAMPLE SENTENCE

- (473) (*iu*) *ku-tu-mä-no=ngaa ijii*
 1MIN IPFV-bring.UV-DIR1-1MIN=FUT 3AUG
 'I will bring them (here)'

IN THE vP DOMAIN:

- (474)

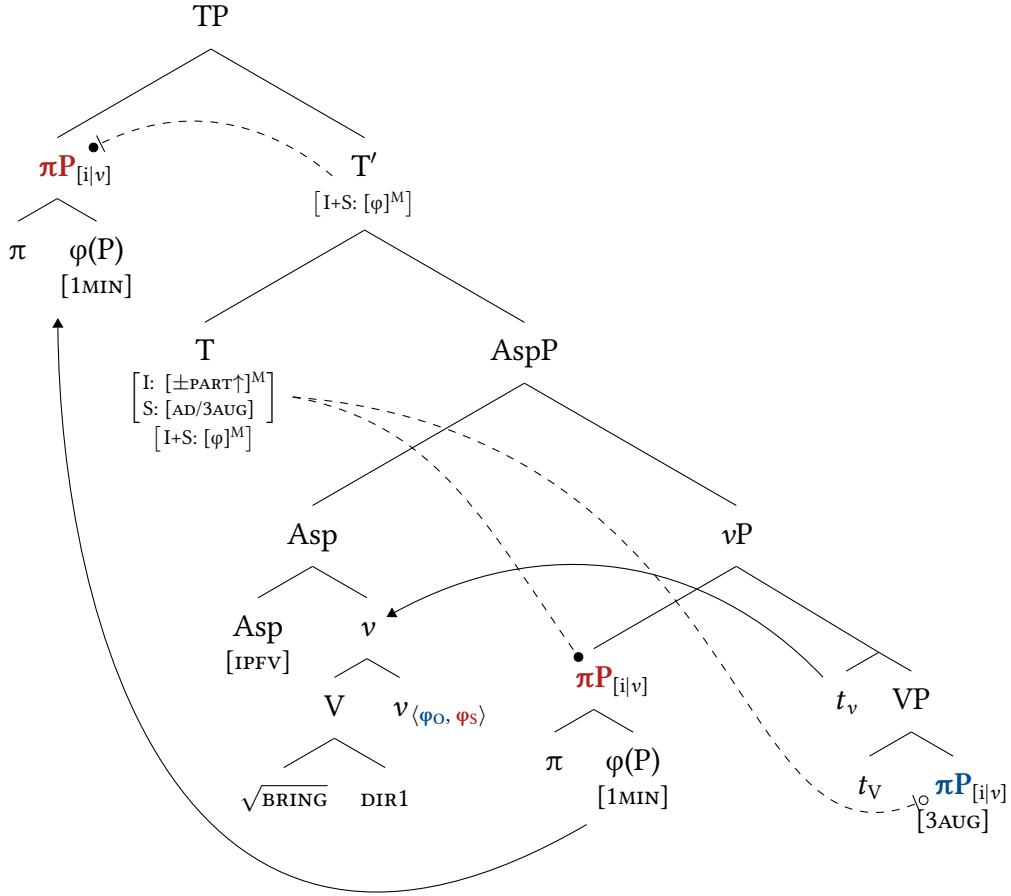


- The (complex) verb head-moves into V.
- v agrees with the object because it has $[\pi]$, whether or not it has \bar{A} -features. The object receives the interaction flag feature $[i|v]$. The object does not have $[D]$, so it does not satisfy the probe.

- ▷ Because $[\pi]$ is present on the object, AV will be impossible.
- v reprojects to the bar level. The subject has $[\pi]$, so v agrees with the subject too (giving it $[i|v]$).
- v is not satisfied, but its c-command domain has been exhausted, so v just stops.

TP DOMAIN:

(475)

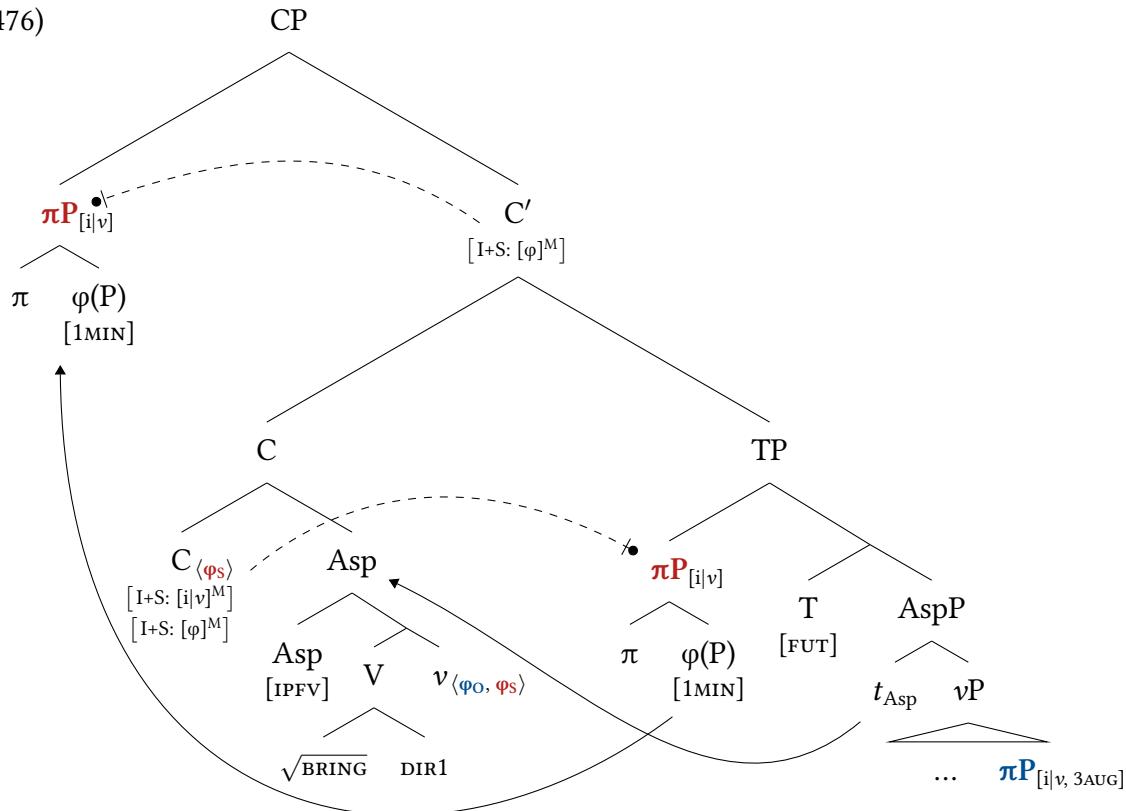


- The verb head-moves into Asp.
- T's primary probe initiates a search.
 - ▷ The subject has $[+PART]$; the probe interacts with it. The interaction condition is now $[+PART]$, because of dynamic interaction.
 - ▷ The subject does not have $[ADDR]$ nor $[3AUG]$, so the probe is not satisfied, and it keeps searching.

- ▷ The object does not have [+PART], so the probe does not interact with it. (The object does have [3AUG], so it satisfies the probe, but this is inconsequential, because the object doesn't get raised.)
- ▶ T's secondary probe reprojects to T', and initiates a search.
 - ▷ The closest potential goal in its c-command domain is the just-moved subject in spec,TP.
 - ▷ The object has [φ], so the probe interacts with it (and perhaps moves it vacuously), and it is satisfied.
- ▶ Note: the specific sequence of steps for T's primary probe is dependent on the exact combination of φ -features on the subject and the object. I chose here 1MIN > 3AUG as an example to provide a minimal contrast with 1MIN > 2MIN, which triggers UV_{1>2}; see the next section, and (460) for a breakdown of all possible combinations.

CP DOMAIN:

(476)

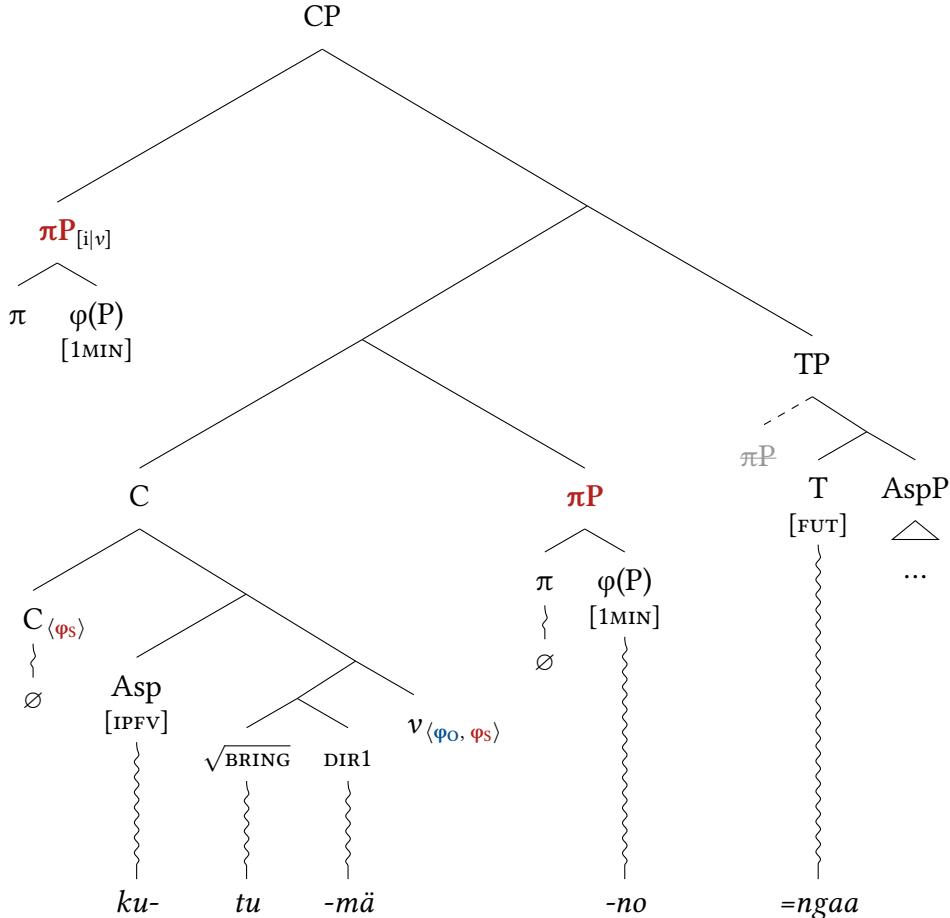


- The verb head-moves from Asp to C, skipping T.
- The primary probe on C searches for [i|v]. The closest argument with this feature is the subject in spec,TP. C agrees with and fronts the subject.
 - ▷ The secondary probe on C reprojects, and from the bar level it agrees with the subject in spec,CP again.

VERB SPELL-OUT

- Post-syntactic Local Dislocation applies to the πP in spec,TP, but not to the higher copy in spec,CP (§5.5.2).

(477)



(478) Impoverishment:

- a. **C impoverishment:** applies
☞ $C_{\langle \varphi \rangle} \Leftrightarrow \emptyset / -\nu_{\langle \varphi \rangle}$
- b. **$\varphi(P)$ impoverishment:** does not apply
✗ $\varphi(P) \Leftrightarrow \emptyset / C_{\langle \varphi \rangle} -$

(479) Vocabulary Insertion:

- a. Stem (voice allomorphy):

$\sqrt{\text{BRING}} \Leftrightarrow \text{tu} / _v\langle\varphi\rangle$
 $\sqrt{\text{BRING}} \Leftrightarrow \text{tou}$ (elsewhere)

- b. π is not word-initial, so it gets deleted:

$\pi \Leftrightarrow i\sim iu-$ / #
 $\pi \Leftrightarrow \emptyset$ (elsewhere)

- c. $\varphi(P)$: $\varphi_{[1\text{MIN}]} \Leftrightarrow -no$

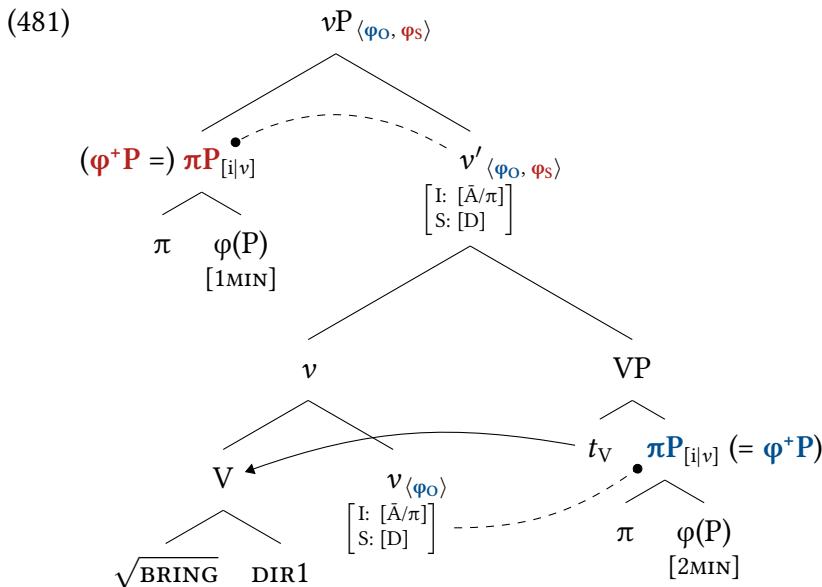
6.5.2.3 DERIVING UV_{1>2} CLAUSES

DISTRIBUTION

- A sub-case of UV_{SVO}. The subject must be 1st person (MIN or AUG), and the object must be 2nd person (MIN or AUG).

EXAMPLE SENTENCE

- (480) (*iu*) *ku-tu-mä-nee-mu=waa*
 1MIN IPFV-bring.UV-DIR1- 2MIN - 2MIN =FUT
'I will bring you (here)'

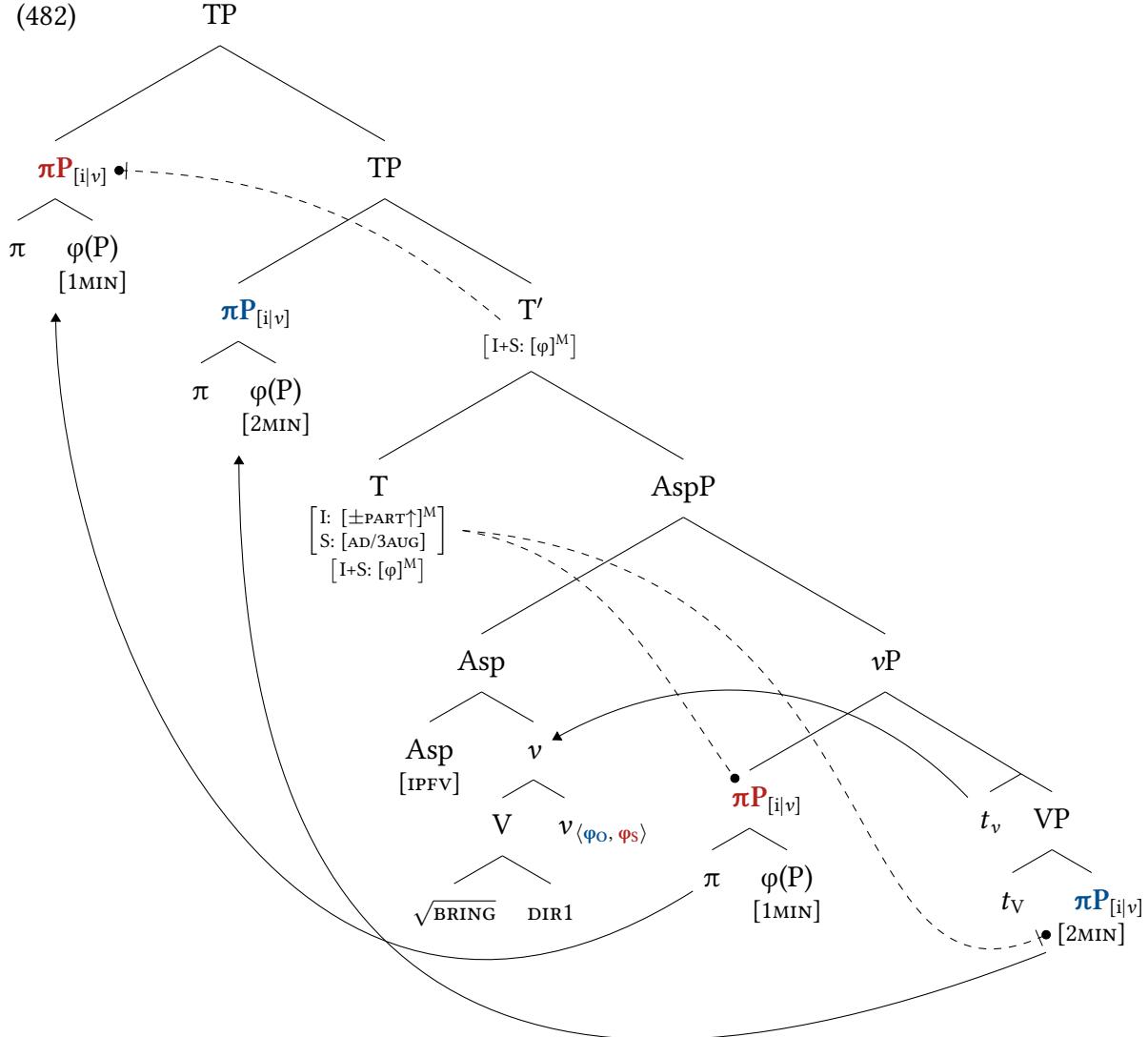
IN THE vP DOMAIN: IDENTICAL TO UV_{SVO}

- The (complex) verb head-moves into V.

- v agrees with the object because it has $[\pi]$, whether or not it has \bar{A} -features. The object receives the interaction flag feature $[i|v]$. The object does not have $[D]$, so it does not satisfy the probe.
- ▷ Because $[\pi]$ is present on the object, AV will be impossible.
- v reprojects to the bar level. The subject has $[\pi]$, so v agrees with the subject too (giving it $[i|v]$).
- v is not satisfied, but its c-command domain has been exhausted, so v just stops.

TP DOMAIN:

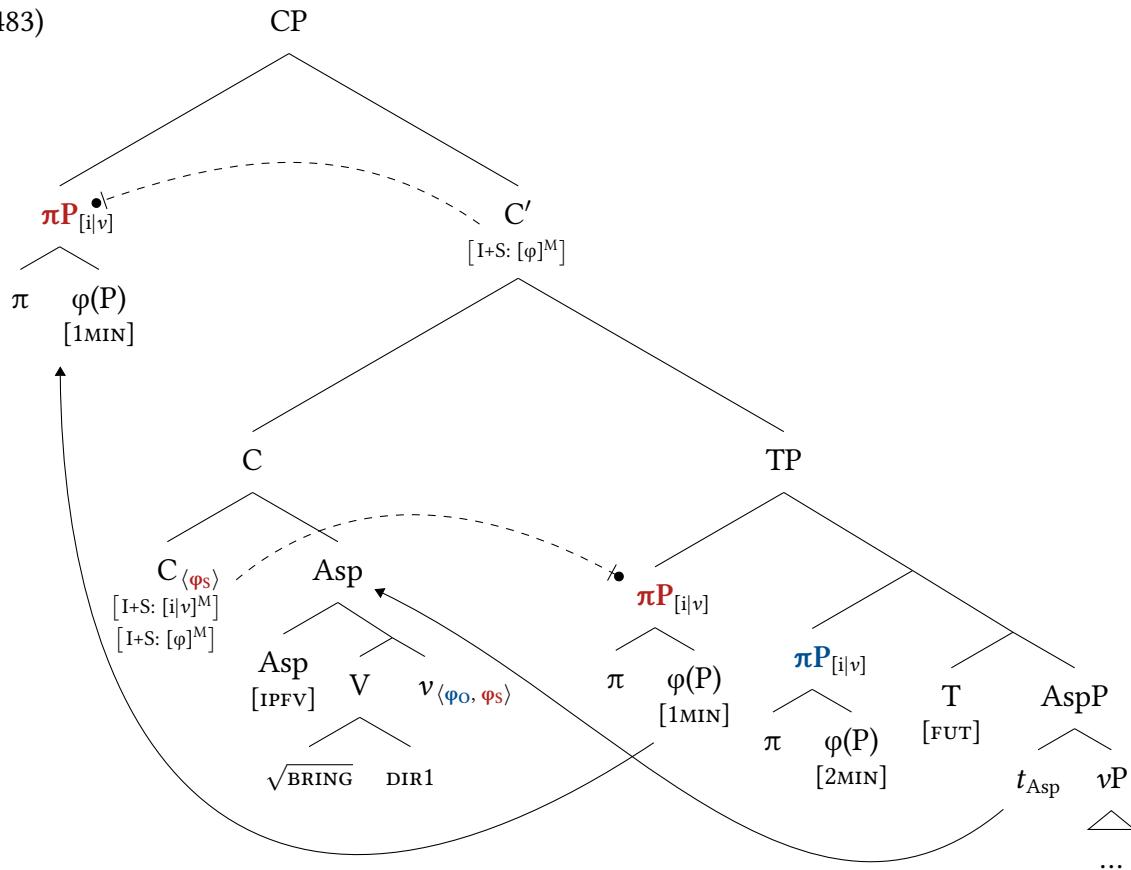
(482)



- The verb head-moves into Asp.
- T's primary probe initiates a search.
 - ▷ The subject has [+PART]; the probe interacts with it and moves it to spec,TP. The probe's interaction condition is now [+PART], because of dynamic interaction. The subject does not have [ADDR] or [3AUG], so the probe is not satisfied and keeps searching.
 - ▷ The object has [+PART], so the probe interacts with it, and raises it to spec,TP (tucking it in, under the subject). The object also has [ADDR], so the probe is satisfied.
- T's secondary probe reprojects to T', and initiates a search.
 - ▷ The closest potential goal in its c-command domain is either the subject or the object, depending on one's definition of c-command and "closest"; either way, the secondary probe is vacuously satisfied.

CP DOMAIN:

(483)

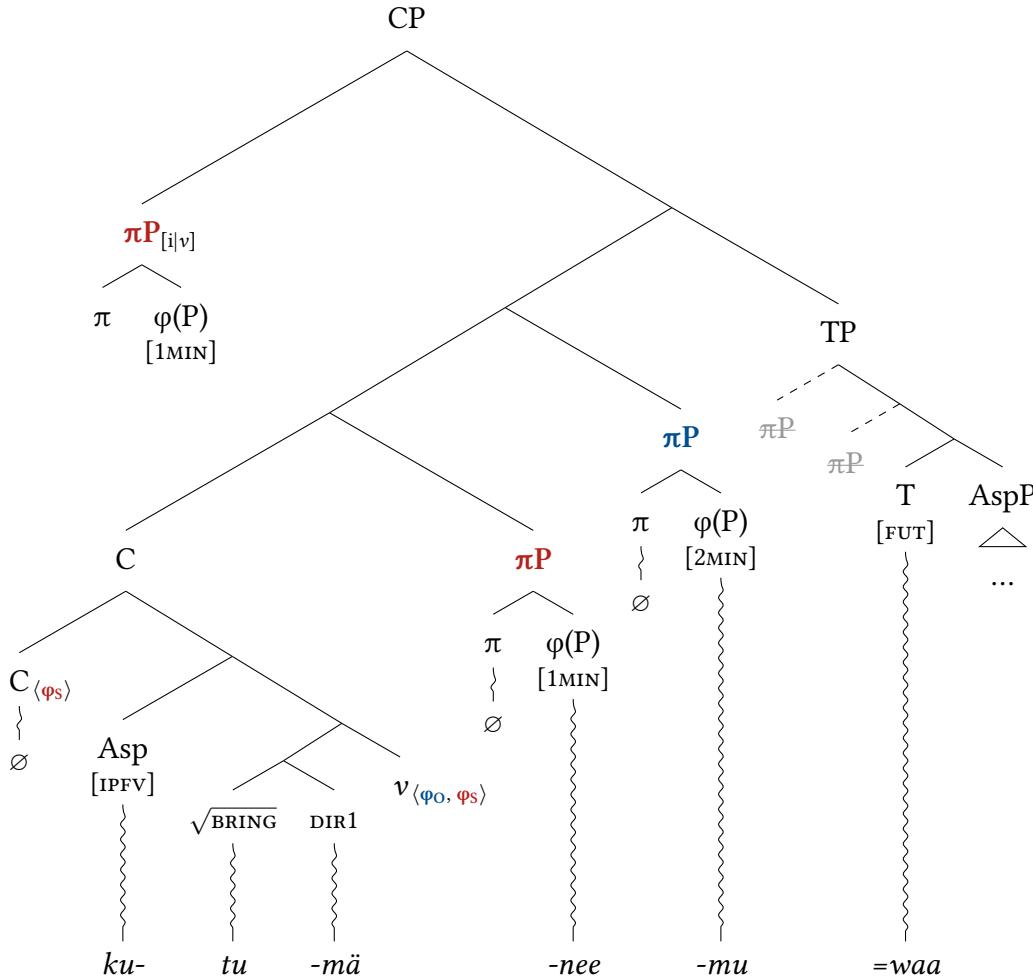


- The verb head-moves from Asp to C, skipping T.
- The primary probe on C searches for [i|v]. The closest argument with this feature is the subject in spec,TP. C agrees with and fronts the subject.
 - ▷ The secondary probe on C reprojects, and from the bar level it agrees with the subject in spec,CP again.

VERB SPELL-OUT:

- Post-syntactic Local Dislocation applies to both π Ps in spec,TP, but not to the higher copy of the subject in spec,CP (§5.5.2).
 - ▷ I represent it the constituency here as $[[C \pi P_S] \pi P_O]$ for concreteness, but it could equally well be $[C [\pi P_S \pi P_O]]$.

(484)



(485) **Impoverishment:**

- C impoverishment:** applies
 $\Rightarrow C_{\langle \varphi \rangle} \Leftrightarrow \emptyset / -v_{\langle \varphi \rangle}$
- $\varphi(P)$ impoverishment:** does not apply (to either)
 $\times \varphi(P) \Leftrightarrow \emptyset / C_{\langle \varphi \rangle} -$

(486) **Vocabulary Insertion:**

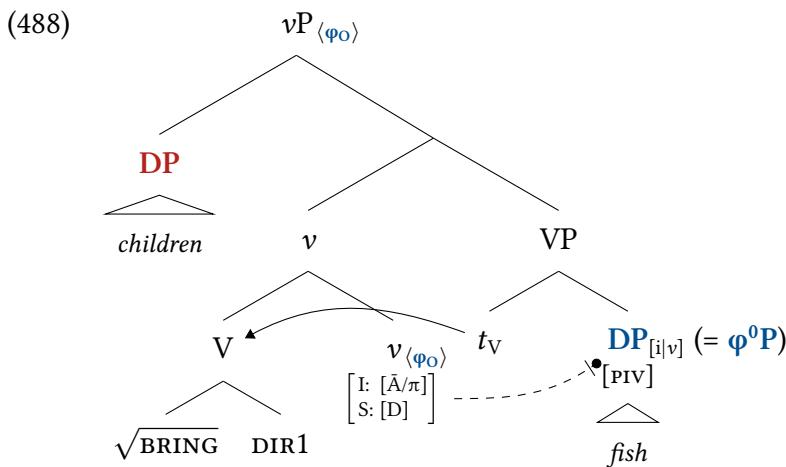
- Stem (voice allomorphy):**
 $\Rightarrow \sqrt{\text{BRING}} \Leftrightarrow \text{tu} / -v_{\langle \varphi \rangle}$
 $\sqrt{\text{BRING}} \Leftrightarrow \text{tou}$ (elsewhere)
- Both π 's are not word-initial, so they get deleted:**
 $\pi \Leftrightarrow i\sim iu- / \# _-$
 $\Rightarrow \pi \Leftrightarrow \emptyset$ (elsewhere)
- $\varphi(P)$:**
 - $\varphi_{[1\text{MIN}]} \Leftrightarrow -nee / -\varphi_{[2\text{MIN}]}$
 - $\varphi_{[2\text{MIN}]} \Leftrightarrow -mu$

6.5.2.4 DERIVING UV_{PLAIN} CLAUSES, UPDATED

DISTRIBUTION: The object must be a φ^0P ; it could be either a DP with \bar{A} -features (as shown here), or *inā*, which has both [π] and [D] features. The subject could be any category of nominal.

EXAMPLE SENTENCE:

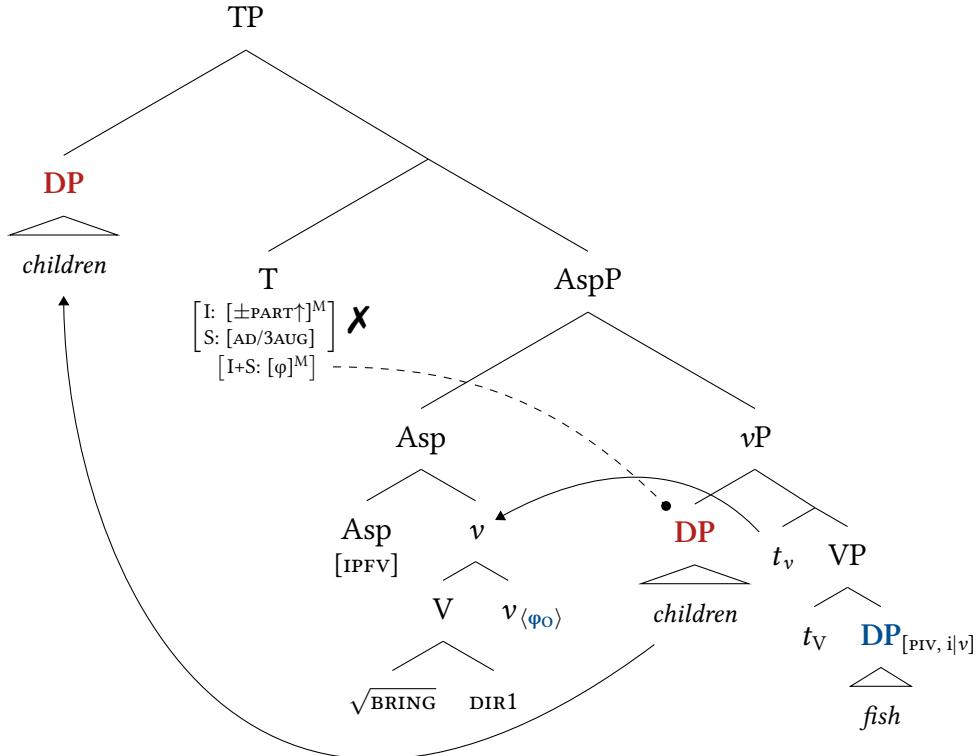
- (487) *sii ku-tu-mä pedevalili=kaa*
fish IPFV-bring.UV-DIR1 **children=FUT**
‘The children will bring the fish (here)’

IN THE vP DOMAIN:

- The (complex) verb head-moves into V.
- v agrees with the object because it has [PIV]. The object receives the interaction flag feature [i|v]. The object also has [D], so it satisfies the probe.

TP DOMAIN:

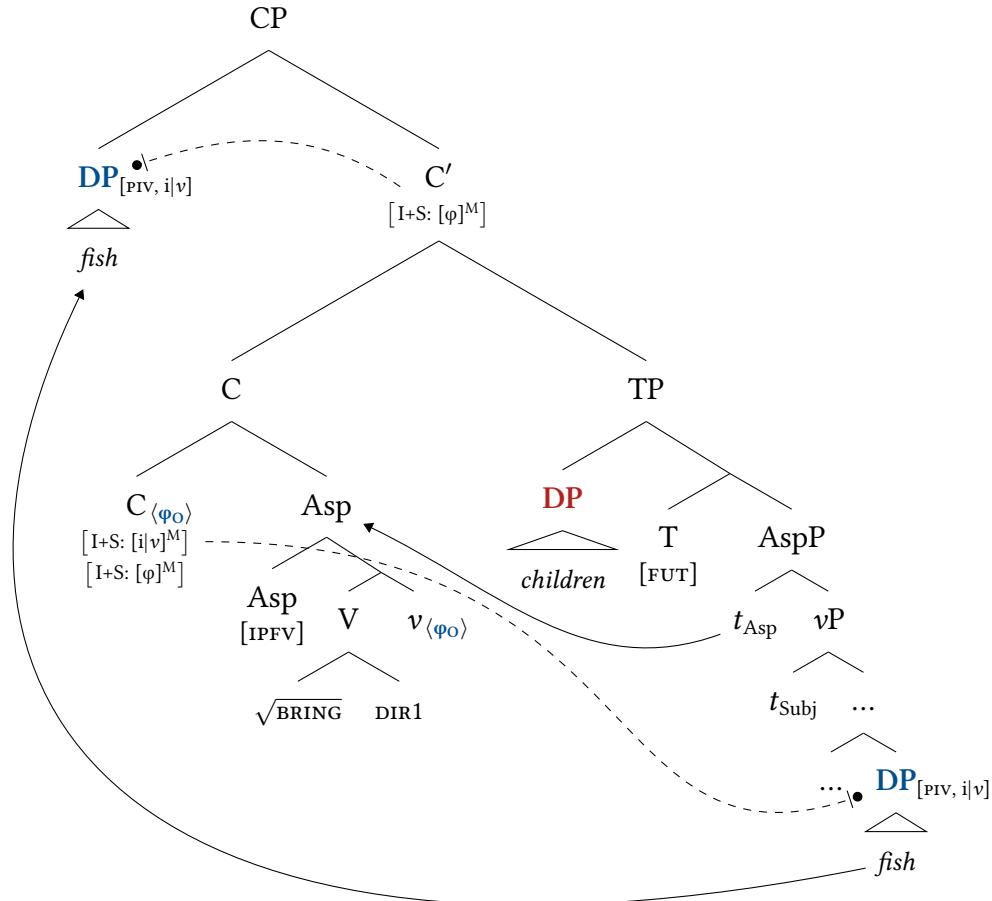
(489)



- The verb head-moves into Asp.
- T's primary probe initiates a search.
 - ▷ Neither the subject nor the object have [\pm PART]. The primary probe doesn't interact with anything and just stops (represented by X).
- T's secondary probe initiates a search.
 - ▷ The subject has [ϕ] features, so the secondary probe interacts with it, raises it to spec,TP, and stops.
- Note: if the subject was, e.g., a 1st person pronoun, the primary probe on T would raise it and the secondary probe would be automatically satisfied from the bar level. Crucially, the object will never get raised to spec,TP if it's a ϕ^0 P.

CP DOMAIN:

(490)

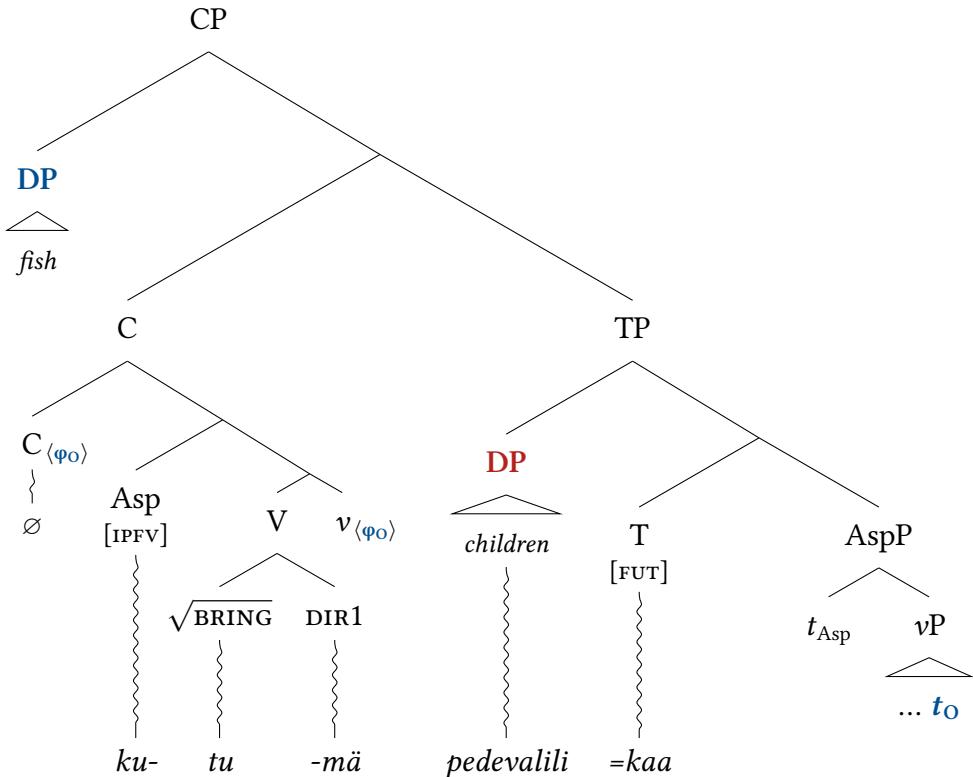


- The verb head-moves from Asp into C, skipping T.
- The $[i|v]$ -probe on C initiates a search. The closest argument with $[i|v]$ is the object, in its base position. C raises it to spec,CP, and the probe is satisfied.
 - ▷ The secondary probe on C reprojects to the bar level and it is vacuously satisfied by the just-moved object.
- The object in spec,CP carries the \bar{A} -feature [PIV], so \bar{A} -extracting the subject will be impossible due to intervention.

SPELL-OUT OF THE VERB:

- No Local Dislocation applies (because there are no π Ps).

(491)



(492) C impoverishment: applies

$$\Leftrightarrow C_{\langle \varphi \rangle} \Leftrightarrow \emptyset / -v_{\langle \varphi \rangle}$$

(493) Stem (voice allomorphy):

$$\begin{aligned} \Leftrightarrow \sqrt{\text{BRING}} &\Leftrightarrow \text{tu} / -v_{\langle \varphi \rangle} \\ \sqrt{\text{BRING}} &\Leftrightarrow \text{tou} \text{ (elsewhere)} \end{aligned}$$

6.5.2.5 DERIVING AV CLAUSES, UPDATED

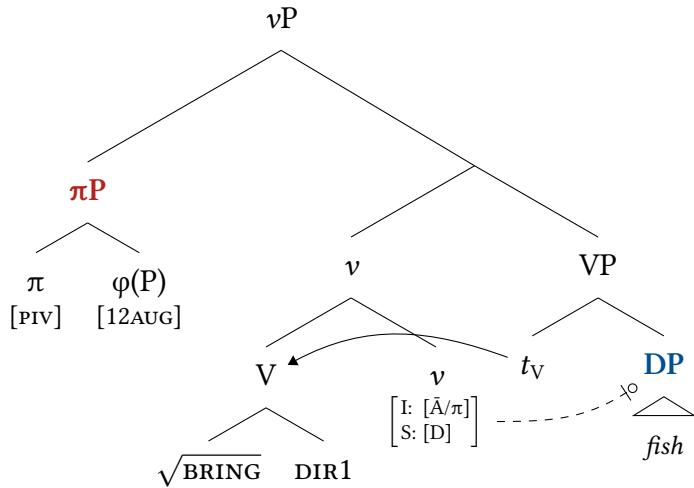
DISTRIBUTION: The object can only be a lexical DP, with no Ā-features. I represent the subject here as carrying [PIV], but this is not necessary. I use a pronominal subject as an example to show how the impoverishment mechanism works, but it could just as well be a lexical DP.

EXAMPLE SENTENCE:

- (494) (*iude*) *de-ku-tou-mä=kaa* *sii*
12AUG 12AUG-IPFV-bring.AV-DIR1=FUT *fish*
 'We will bring fish (here)'

IN THE ν P DOMAIN:

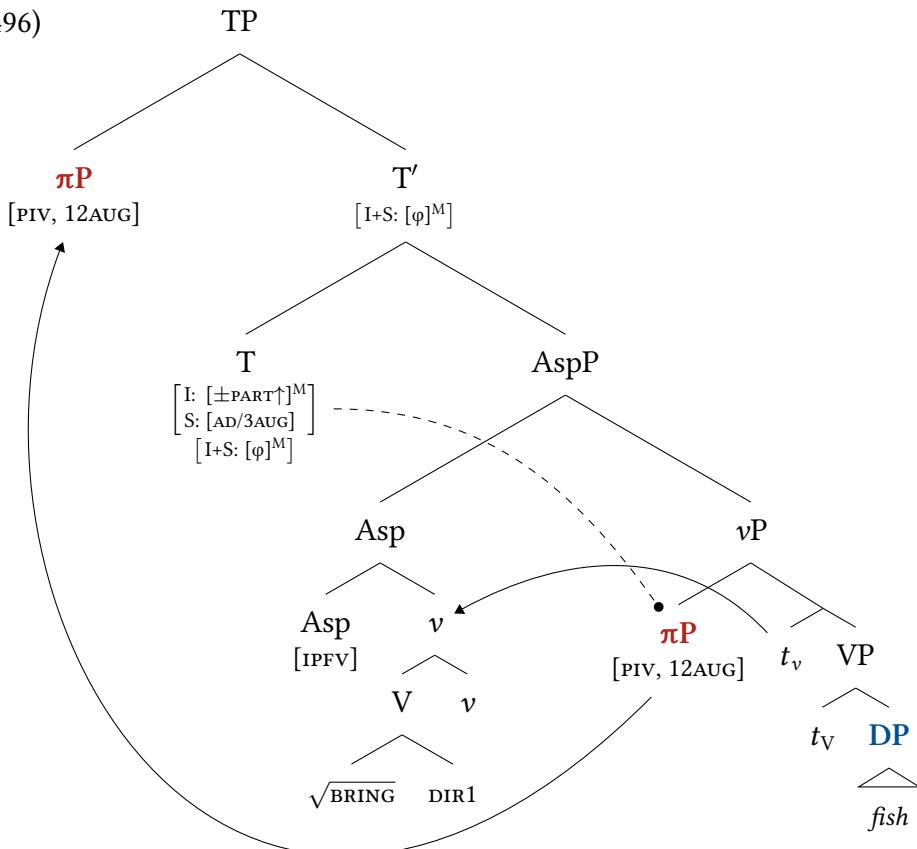
(495)



- The (complex) verb head-moves into V.
- The ν probe initiates a search. It does not interact with the object, because it doesn't have $[\bar{A}]$ nor $[\pi]$. However, the object has $[D]$, so ν is satisfied and halts.

TP DOMAIN:

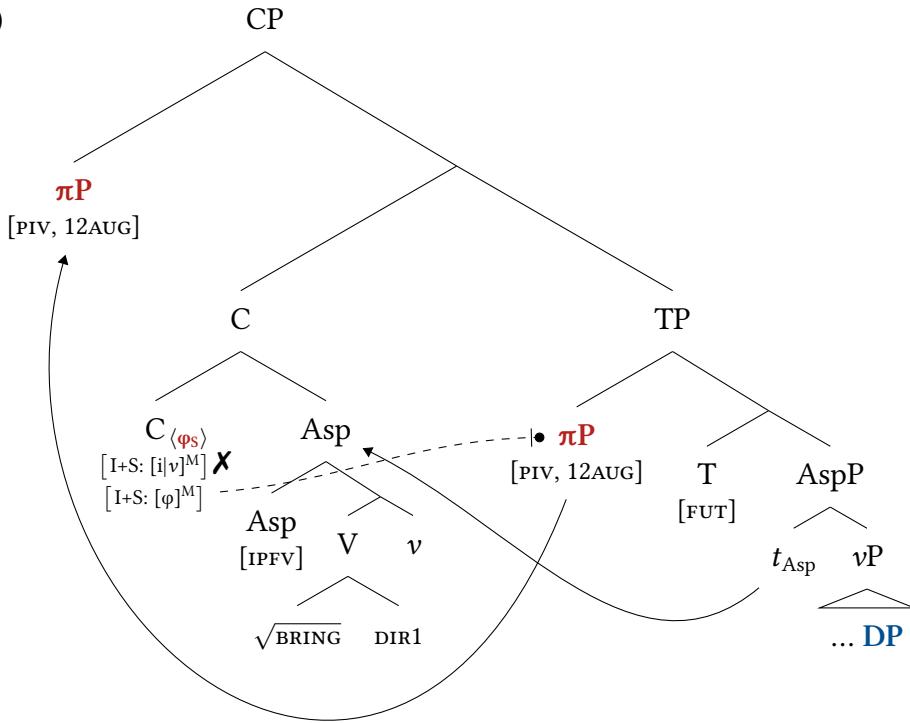
(496)



- The verb head-moves into Asp.
- T's primary probe initiates a search.
 - ▷ Neither the subject nor the object have [\pm PART]. The primary probe doesn't interact with anything and just stops (represented by \times).
- T's secondary probe initiates a search.
 - ▷ The subject has [φ] features, so the secondary probe interacts with it, raises it to spec,TP, and stops.
- Note: if the subject was a φ^0 P, the primary probe on T would not find anything, but the secondary one would move the subject anyway, as shown here, so nothing would change.

CP DOMAIN:

(497)



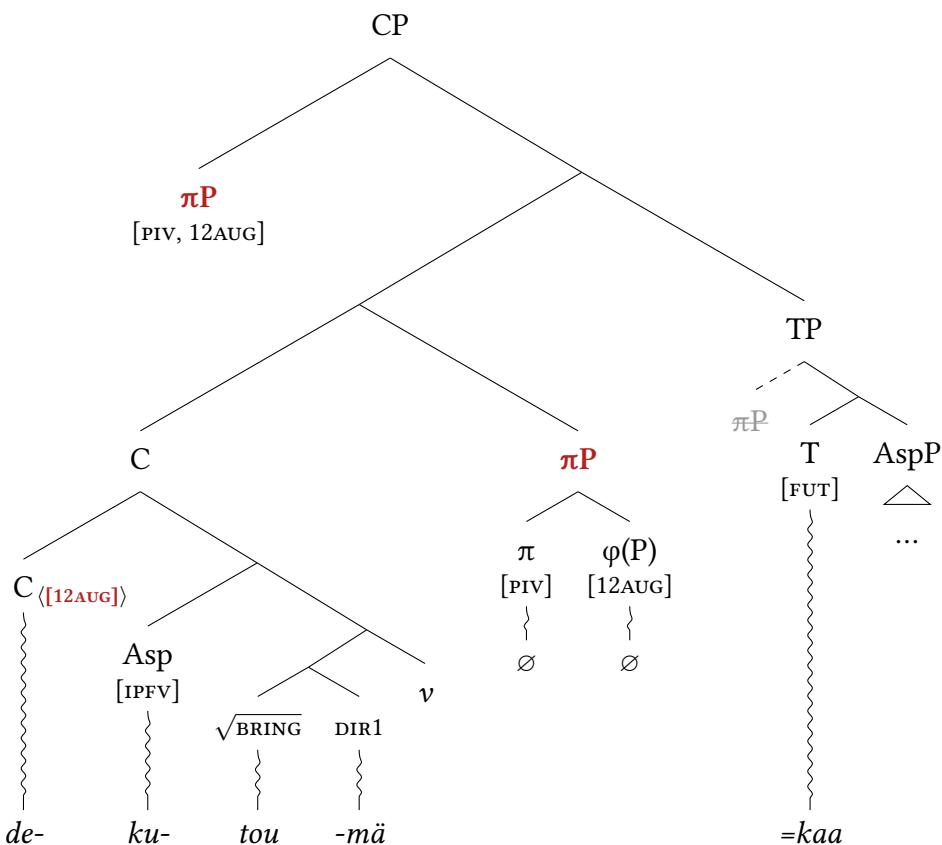
- The [i|v]-probe on C initiates a search. Nothing in its c-command domain has this feature, so this probe stops without agreeing with anything (\times).
- The secondary probe just agrees with the closest constituent with [φ]-features, that is, the subject in spec,TP. The subject is raised to spec,CP.

- The subject has Ā-features ([PIV]), so it will block Ā-extraction of a lower argument.
 - ▷ If the subject did not have Ā-features, in principle there would be no intervention effect. However, if the object were to be Ā-extracted, it would have Ā-features, which means we would never get AV to begin with.

SPELL-OUT OF THE VERB:

- Post-syntactic Local Dislocation applies to the πP in spec,TP, but not to the higher copy in spec,CP (§5.5.2).

(498)



(499) **Impoverishment:**

- C impoverishment: does not apply
✗ $C_{\langle \varphi \rangle} \Leftrightarrow \emptyset / -v_{\langle \varphi \rangle}$
- $\varphi(P)$ impoverishment: applies
☒ $\varphi(P) \Leftrightarrow \emptyset / C_{\langle \varphi \rangle} -$

(500) **Vocabulary Insertion:**

- Stem (voice allomorphy):
 - $\sqrt{\text{BRING}} \Leftrightarrow \text{tu} / -v_{\langle \varphi \rangle}$
 - ☒ $\sqrt{\text{BRING}} \Leftrightarrow \text{tou}$ (elsewhere)

b. **Agreement on C:**

$$C_{\langle [12AUG] \rangle} \Leftrightarrow de-$$

6.6 SUMMARY

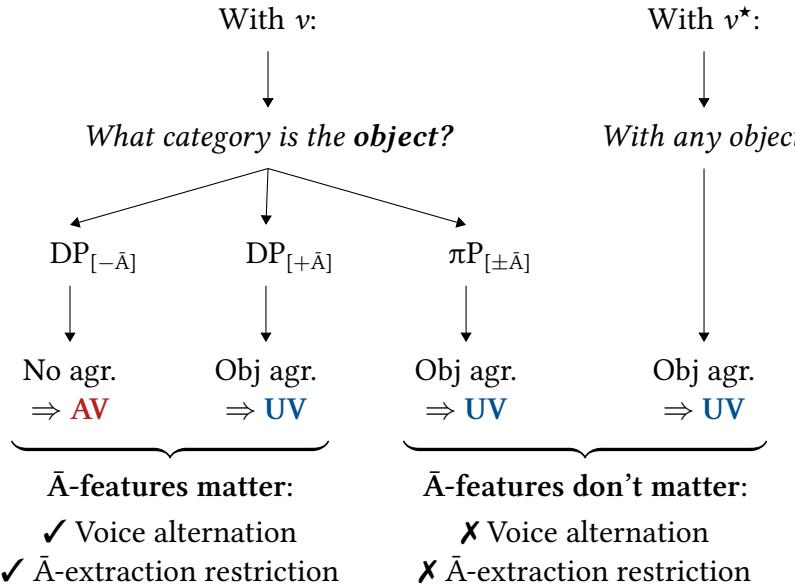
This chapter concludes the contentful part of this dissertation. We started in chapter 1 with two interconnected puzzles, the Word Order Puzzle, and the Extraction Puzzle: transitive clauses showed a variety of different word orders and voice morphology, each with its own Ā-extraction possibilities. In this chapter I have shown that this complex system of clausal alternations ultimately arises from the interplay between three probes in the Äiwoo clausal spine: *v*, *T*, and *C*. Crucially, all probe-goal interactions are strictly *local*, in featurally relativized sense of “local”. Every probe will agree with (and sometimes move) the closest goal with some property $[\alpha]$, and then either continue probing or halt. In no part of the system is there any step of “global” calculus, that is, where a probe “waits” until having examined the properties of multiple arguments to make a decision as to which one to agree with (and move). Abstracting away from a lot of the implementational/technical complexity, an informal summary of what these three heads do is shown in (501).

(501) **Three probes and their operations:**

- a. *v*: agrees with Ā-marked objects and pronominal objects.
- b. *T*: agrees with and raises the closest nominal with “marked” φ -features.
 - ▷ If there is none, plan B: raise the closest nominal.
- c. *C*: agrees with and raises the closest nominal that *v* agreed with.
 - ▷ If there is none, plan B: raise the closest nominal.

The voice and Ā-extraction properties of any transitive clause are controlled by the object, in a local interaction with *v* or *v*[★] (502). As we saw, *v* in Äiwoo shows a familiar type of behavior: it agrees with two classes of objects, namely pronouns and nominals with Ā-feaetures. We thus have a system that is only rather indirectly sensitive to the presence of Ā-features on the object. If they are present, *v* will certainly agree with it. This will give us a UV clause, and if the object ends up as the highest argument, its Ā-features will make it an intervener for Ā-extracting any lower argument. If, however, the specific lexical verb root selects for *v*[★] (which agrees with all objects), there will always be object agreement no matter what category the object is. In this case, we will have UV, but with no Ā-extraction restriction.

(502) Voice and \bar{A} -extraction properties are determined by the object and v/v^* :



The two higher heads, T and C, control the final word order that a transitive clause will have. Although the probes on these two heads are “interested” in different features, they show some mechanical similarities: they can both trigger non-local A-movement of a lower argument across a higher one, and they both have a “plan B” in case their primary type of goal is not around. T shows a hierarchy effect, raising the closest argument that has “marked” φ -features (i.e., anything other than 3MIN). This featural preference may result in raising the object to spec,TP and leaving the subject low, given the right combination of arguments. In turn, this may alter which [i|v]-flagged argument is closest to C. If the argument that C ends up raising carries \bar{A} -features ([PIV]), we will have an intervention effect, and therefore an \bar{A} -extraction restriction. Otherwise, there will be no intervention, and \bar{A} -extraction will be free.

6.A THE CAVEAT: PLURAL LEXICAL DPs

The discussion of the Word Order Puzzle, and specifically of the system of word order alternations in §6.3 largely excluded one category of nominals: plural lexical DPs (by which I simply mean lexical DPs with non-atomic reference). The reason why this exclusion was made is that plural DPs ultimately don’t fit neatly into the φ^+P vs. φ^0P dichotomy, and they behave sometimes as if they belonged to one group, sometimes to the other. Consider the table in (503), an expanded version of the original overview table (407) making more fine-grained distinctions. As above, “ π ” abbreviates “pronoun”, and DP stands for specifically lexical DPs. Here, I have highlighted the row and column for plural DPs. The left half of the 3AUG_{DP} row has a split color-coding because these combinations of arguments can result in either kind of clause. The data is rather complex, so for ease of exposition,

together with every minimal pair of sentences I will repeat the matrix table, highlighting in turn the relevant cells under comparison.

(503) Complete distribution of UV clause types:

S↓, O→	φ^+P			3AUG _{DP}	φ^0P	
	1	2	3AUG _π		3MIN _π	3MIN _{DP}
φ^+P	1	–	UV _{1>2}	UV _{SVO}	UV _{plain}	UV _{plain}
	2	UV _{SVO}	–	UV _{SVO}	UV _{plain}	UV _{plain}
	3AUG _π	UV _{SVO}	UV _{SVO}	UV _{SVO}	UV _{plain}	UV _{plain}
	3AUG _{DP}	UV _{SVO/gu}	UV _{SVO/gu}	UV _{SVO/gu}	UV _{gu}	UV _{plain}
φ^0P	3MIN _π	UV _{gu}	UV _{gu}	UV _{gu}	UV _{gu}	UV _{plain}
	3MIN _{DP}	UV _{gu}	UV _{gu}	UV _{gu}	UV _{gu}	UV _{plain}

As a note going forward, everything I say in this section only applies to human/animate DPs. Inanimate DPs are completely number-neutral, never showing any kind of plural morphology/morphosyntax in any part of the language (in other words, always behaving syntactically as if they were singular, regardless of their reference); see chapter 2, §2.5.1.

Here, we observe a complex split behavior, where plural DPs behave sometimes like φ^0P s (i.e., like other lexical DPs), and sometimes like φ^+P s (i.e., like 3AUG and other pronouns). First, consider plural DP *objects*, the highlighted column in (503). Let us first consider the upper half of the table, where the subject is a φ^+P ; for example, a 2nd person pronoun. In this case, plural DP objects behave like other φ^0P objects, so we get UV_{plain} sentences (504a). Here, plural DP objects are different from 3AUG pronoun objects, which in this case generate UV_{SVO} sentences (504b).

(504) If the subject is a φ^+P :

Objects: {plural DPs = φ^0P s} ≠ { φ^+P s}

S↓, O→	φ^+P			3AUG _{DP}	φ^0P	
	1	2	3AUG _π		3MIN _π	3MIN _{DP}
φ^+P	1	–	UV _{1>2}	UV _{SVO}	UV _{plain}	UV _{plain}
	2	UV _{SVO}	–	UV _{SVO} (504b)	UV _{plain} (504a)	UV _{plain} (504a)
	3AUG _π	UV _{SVO}	UV _{SVO}	UV _{SVO}	UV _{plain}	UV _{plain}
	3AUG _{DP}	UV _{SVO/gu}	UV _{SVO/gu}	UV _{SVO/gu}	UV _{gu}	UV _{plain}
φ^0P	3MIN _π	UV _{gu}	UV _{gu}	UV _{gu}	UV _{gu}	UV _{plain}
	3MIN _{DP}	UV _{gu}	UV _{gu}	UV _{gu}	UV _{gu}	UV _{plain}

- a. φ^+P s > {plural DPs, φ^0P s}: UV_{plain}

(250807)

John/pedevalili ku-tu-kâ-mu=waa ngä skul
John/children IPFV-bring.UV-DIR3-2MIN=FUT to school
 ‘You will bring John/the children to school’

- b. φ^+P s > {3AUG pronouns}: UV_{SVO}

(iumu) ku-tu-kâ-mu=waa ijjii ngä skul
 2MIN IPFV-bring.UV-DIR3-2MIN=FUT 3AUG to school
 ‘You will bring them to school’

However, if the subject is a φ^0P (lexical DP or 3MIN pronoun; bottom half of the table), we observe a different pattern. Now, a plural DP object patterns together with other φ^+P arguments (505a), and differently from other (singular) DPs (505b).

(505) If the subject is a φ^0P :

Objects: {plural DPs = φ^+Ps } $\neq \{\varphi^0Ps\}$

S↓, O→	φ^+P			$3AUG_{DP}$	φ^0P	
	1	2	$3AUG_\pi$		$3MIN_\pi$	$3MIN_{DP}$
φ^+P	1	UV _{1>2}	UV _{SVO}	UV _{plain}	UV _{plain}	UV _{plain}
	2	UV _{SVO}	UV _{SVO}	UV _{plain}	UV _{plain}	UV _{plain}
	$3AUG_\pi$	UV _{SVO}	UV _{SVO}	UV _{plain}	UV _{plain}	UV _{plain}
	$3AUG_{DP}$	UV _{SVO/gu}	UV _{SVO/gu}	UV _{plain}	UV _{plain}	UV _{plain}
φ^0P	$3MIN_\pi$	UV _{gu}	UV _{gu}	UV _{gu}	UV _{plain}	UV _{plain}
	$3MIN_{DP}$	UV _{gu}	UV _{gu}	UV _{gu}	UV _{plain}	UV _{plain}
			UV _{gu} (505a)	UV _{gu} (505a)	UV _{plain}	UV _{plain} (505b)
				=	≠	

- a. $\varphi^0Ps > \{\text{plural DPs, } 3AUG \text{ pronouns}\}$: UV_{gu} (250807)

$\emptyset_{3AUG}/ijii/pedevalili ku-tu-kä-gu-i=laa$ John ngä skul
 $3AUG/\text{children}$ IPFV-bring.UV-DIR3-**OBJ-3AUG=FUT** John to school
 'John will bring them/the children to school'

- b. $\varphi^0Ps > \{\text{singular DPs}\}$: UV_{plain}

devalili ku-tu-kä John=kaa ngä skul
 child IPFV-bring.UV-DIR3 John=FUT to school
 'John will bring the child to school'

To summarize: plural DP *objects* behave like φ^0Ps (like other singular DPs) if the subject is a φ^+P , but they behave like φ^+Ps (like 3AUG pronouns) if the subject is a φ^0P .

For plural DP *subjects*, the matter is even more complicated. First, if the object is a φ^+P (e.g. a 2nd person pronoun; left half of the table), we get two options – hence the split color-coding. A plural DP subject can either behave like a φ^0P (resulting in UV_{gu}), or like a φ^+P (resulting in UV_{SVO}). This seems to be optional, and the factors behind this choice (if any) are not known.

(506) If the object is a φ^+P :

Subject: {plural DPs = φ^+Ps }, OR {plural DPs = φ^0Ps }

S↓, O→	φ^+P			$3AUG_{DP}$	φ^0P	
	1	2	$3AUG_\pi$		$3MIN_\pi$	$3MIN_{DP}$
φ^+P	1	UV _{1>2}	UV _{SVO}	UV _{plain}	UV _{plain}	UV _{plain}
	2	UV _{SVO}	UV _{SVO}	UV _{plain}	UV _{plain}	UV _{plain}
	$3AUG_\pi$	UV _{SVO}	UV _{SVO} (506a)	UV _{plain}	UV _{plain}	UV _{plain}
	$3AUG_{DP}$	UV _{SVO/gu}	UV _{SVO/gu} (506a,b)	UV _{plain}	UV _{gu}	UV _{plain}
φ^0P	$3MIN_\pi$	UV _{gu}	UV _{gu}	UV _{gu}	UV _{gu}	UV _{plain}
	$3MIN_{DP}$	UV _{gu}	UV _{gu}	UV _{gu}	UV _{gu}	UV _{plain}
				=	UV _{gu}	
				=	UV _{gu}	

- a. Option 1: {plural DPs, 3AUG pronouns} $> \varphi^+Ps$: UV_{SVO} (250807)

$\emptyset_{3AUG}/ijii/mikilivaavee ku-tu-kä-i=laa$ iumu ngä skul
 $3AUG/\text{teachers}$ IPFV-bring.UV-DIR3-3AUG=FUT 2MIN to school
 'They/the teachers will bring you to school'

b. Option 2: {plural DPs, φ^0 Ps} > φ^+ Ps: UV_{gu}

(iumu) ku-tu-kä-gu-mu=waa \emptyset_{3MIN} /John/mikilivaavee ngä skul
 2MIN IPFV-bring.UV-DIR3-OBJ-2MIN=FUT John/teachers to school
 'He/she/John/the teachers will bring you to school'

However, if both the subject and the object are plural DPs, then there is no optionality, and UV_{gu} is the only possible alternative (507a). UV_{plain} and UV_{SVO} are impossible (507b,c).

(507) Plural DP > Plural DP:

(250807)

a. ✓ UV_{gu}:

pedevalili ku-tu-kä-gu-**i**=laa mikilivaavee ngä skul
 children IPFV-bring.UV-DIR3-**OBJ-3AUG**=FUT teachers to school
 'The teachers will bring the children to school'

b. ✗ UV_{plain}:

* *pedevalili* ku-tu-kä mikilivaavee=kaa ngä skul
 children IPFV-bring.UV-DIR3 teachers=FUT to school
 Intended: 'The teachers will bring the children to school'

c. ✗ UV_{SVO}:

* *mikilivaavee* ku-tu-kä-**i**=laa *pedevalili* ngä skul
 teachers IPFV-bring.UV-DIR3-**3AUG**=FUT *pedevalili* to school
 Intended: 'The teachers will bring the children to school'

At present, I don't have a proposal to explain the rather complex distribution of plural DP arguments. One potential avenue might be to consider the internal syntax of plural DPs as a possible factor in their external distribution. As discussed in chapter 2, §2.5.1, most "plural DPs" are really relativized expressions, containing the relativizers *mi*= 'the one(s) that [...]' or *pe*= 'people that [...]':

- (508) a. *mi=ki-li-vaavee*
 REL=IPFV-3AUG-show
 'Teachers', lit. 'People who show/teach'
 b. *pe=devalili*
 REL:people=child
 'Children'

A possible intuition to pursue is the following. If these "plural DP" nominals are really headless (or null-headed) relative clauses, then the head of the constituent is not trivially a lexical DP, but perhaps some kind of (null) pronominal element ("those who ..."). Maybe, the fact that these "plural DPs" have a distribution that is in between that of plural pronouns and singular DPs might at least partially derive from the syntactic nature of the head of the relative clause. However, it is not clear what would cause the split between plural DP subjects vs. objects. I leave developing a full account of this complex pattern as an open issue.

7

CHAPTER

CONCLUSION AND PROSPECTS

7.1 SUMMARY OF THE FINDINGS

This dissertation started with the promise of accounting for two intertwined puzzles: an alternation in the word order and verbal morphology of transitive clauses, and an alternation in what argument(s) can be \bar{A} -extracted from the various types of clauses. The summary of the various clause types is repeated in (509).

- (509) Alternations of word order and \bar{A} -extractability:

Clause type:	Word order:			
a. AV:	S [✓]	φ_S -V.AV	=TAM	O ^X
b. UV _{plain} :	O [✓]	V.UV	S ^X	=TAM
c. UV _{only} :	O [✓]	V.UV	S [✓]	=TAM
d. UV _{inā} :	O ^{NA}	V.UV	S [✓]	=TAM
e. UV _{gu} :	O ^{NA}	V.UV	- π_O	=TAM S [✓]
f. UV _{SVO} :	S ^{NA}	V.UV	- π_S	=TAM O ^{NA}
g. UV _{1>2} :	S ^{NA}	V.UV	- π_S - π_O	=TAM

Devising a formal model that would generate all and only the attested clause types with their specific \bar{A} -extraction profile has let us gain new insights in a number of unrelated areas of syntactic theory.

Some of these theoretical issues are more specific to the Austronesian literature. I have proposed a model of Austronesian voice where “Undergoer Voice” is really a form of object agreement, which is only partially tied to both the \bar{A} - and A-syntax of the language. Further, I have offered an account of an interesting instantiation of the classic Austronesian “pivot-only” \bar{A} -extraction restriction, since in Äiwoo this comes with a series of excep-

tions. Precisely because the restriction in Äiwoo only holds in certain contexts but disappears in others, I have modeled it as an \bar{A} -intervention effect: if the highest argument carries \bar{A} -features, extracting anything lower will be impossible; else, it will be possible. This was prompted by the novel empirical discovery of UV-only transitive verbs, which have not been reported for other Austronesian languages. Ultimately, this analysis of the voice and extraction system is somewhat different from influential analyses of these phenomena in other Austronesian languages, which have been framed as either a “highest DP-only” restriction or an effect of phasehood (see chapter 4 for references).

Other issues this dissertation bears on are much more general in their theoretical scope, and concern the notion of locality of agreement and movement. I have shown that Äiwoo bears out an implicit prediction our theory already made, that is, the possibility of featurally motivated, non-local A-movement. This should not be thought of as a different type of movement from classic A/ \bar{A} -movement, or as a form of “mixed” movement. Rather, I argued with [van Urk \(2015\)](#) that the typical “no skips” locality profile of classic A-movement is purely epiphenomenal, and that since probes can be relativized to only targeting goals with certain features and not others ([Béjar 2003](#)), it should be possible for A-movement-triggering probes to also skip certain nominals in favor of others.

Finally, the model I have built of the word order alternation system entirely revolves around the desires of probes to agree with (and move) certain types of arguments over others. Importantly, no appeal is made to any kind of need of the arguments themselves (i.e., a Greed-based analysis). Any kind of argument can ultimately end up remaining in their base position (or any position, for that matter) and never get agreed with, if the relevant probes find a better/closer goal. This is not an argument in and of itself against the concept of nominal licensing, or a claim that it is not needed as part of the theory. However, it might at least provide a sort of “proof of concept”: at least for Äiwoo, an analysis based on licensing/Greed is not only not necessary, but also not desirable.

7.2 OPEN QUESTIONS

The analysis I propose, of course, leaves a number of issues open for future research. Some of them are at a slightly more narrowly implementational level (e.g., what exactly is the featural make-up of Äiwoo pronouns/nominals, given the hierarchy effect governing raising to spec,TP?), while others have a deeper theoretical significance to them.

One such issue is the idea that C probes for [i|v], the interaction flag feature of v. On one hand, this could be thought of as a minor technical innovation. The idea of information transfer from a probe to a goal goes back to at least [Chomsky \(2000, 2001\)](#) and [Pesetsky & Torrego \(2001, 2007\)](#), and the more specific concept of goal flagging features has been used in [Deal \(2022, to appear\)](#), [Clem & Deal \(2024\)](#), and [Wu et al. \(2023\)](#) to model morphological effects. However, this is to my knowledge the first proposal where a flag feature, after being assigned, is then later manipulated by the syntax itself, making something carrying a flag feature into a possible target for movement. We could follow [Clem & Deal 2024](#)

(but also Pesetsky & Torrego 2001, 2007, anachronistically) in thinking of goal flagging as the mechanism behind case assignment. Under this view, “accusative case” or “nominative case” are not more than the descriptive labels for the flag features assigned by respectively v or T (typically, at least).

This would then bring the Äiwoo pattern of CP-fronting closer to known patterns of case discrimination, where a probe may target arguments bearing certain cases but not others. These are known for both pure agreement patterns (e.g. Hindi and Nepali; Bobaljik 2008), Ā-movement (Tongan for Otsuka 2006, 2010, Chukchi for Polinsky 2016, Deal 2016b, 2017, Nukuoro for Drummond 2023, a.o.), and also A-movement if cliticization/clitic-doubling are examples of A-movement (see Deal 2025 and references therein). For concreteness, let’s say that $[i|v]$ is what we are used to calling “accusative case”: in a classic Burzio-an way, v assigns accusative case (Burzio 1986). In this case, Äiwoo CP-fronting would constitute an example of “positive” case discrimination (Akkuş et al. 2025 call this ‘case targetting’), where a probe is specified as only targeting nominals with the more “marked” case features rather than the less marked ones, at least under standard/reasonable assumptions about the featural make-up of different cases (see Caha 2009, et seq.). This would then be a counterexample to Bobaljik (2008), i.e., exactly the opposite of the expected pattern. Any process that targets nominals with a more marked case value should also target nominals with all less-marked cases, but here, we see the reverse. Akkuş et al. (2025) argue that such patterns do in fact exist in a series of varieties of Kurdish, so Äiwoo would constitute another example from an unrelated language family. It remains to be seen whether (i) this expansion of the expressive power of the theory is actually empirically warranted or not, and (ii) goal-flagging and case are really one and the same phenomenon.

The potential relation between goal flagging and case (whether morphological case or abstract Case) is also an interesting question from the perspective of another central issue in this dissertation, namely that of the locality of movement. Building on van Urk (2015), I have supported his argument that locality is completely epiphenomenal with respect to the A/Ā-distinction. More specifically, I have argued that once one connects van Urk’s (2015) featural theory of the A/Ā-distinction and Béjar’s (2003) notion of featurally relativized probes, one automatically predicts the existence of “non-local A-movement”. I show that this kind of movement does in fact take place in Äiwoo, both to spec,TP (as determined by a complex hierarchy effect governed by φ -features) and, crucially for the issue at hand, to spec,CP (as determined by the flag feature $[i|v]$). Because raising to spec,CP has the binding-theoretical properties of A-movement, this must mean that $[i|v]$ has something in common with other features that canonically trigger this kind of movement, such as φ -features and, more importantly, case/Case features. This fact gives at least preliminary supports to idea of connecting case and goal flagging, which I hope will be a fruitful avenue for future research.

Finally, due to Äiwoo’s underresearched character, of course there still are a lot of open questions that are purely empirical. Here, just as an example, I will name three (out of many more). One such open question concerns the external syntax of plural lexical

DPs, which is highly complex; sometimes, they are treated like other (non-plural) lexical DPs, but other times as if they were pronouns. See chapter 6, appendix 6.A for a breakdown of the known empirical facts, with no attempt at a solution. Another severely under-explored area is the syntax of questions, and particularly of *wh*-questions. Unlike in other Austronesian languages where they have featured prominently in the discussion of voice and Ā-phenomena, *wh*-questions in Āiwoo seem to be not too tied to the voice distinction at all. Finally, the syntax of “Circumstantial Voice” and its argument structure, its relation the rest of the voice system, the clausal alternation system, and Ā-extraction is still rather poorly understood. I put together some notes in Appendix A.

APPENDIX A

NOTES ON CIRCUMSTANTIAL VOICE

A.1 INTRODUCTION

This appendix gives a few notes about a kind of construction that has been labelled “Circumstantial Voice” (CV) in the literature (Næss 2015b et seq.). Although I will keep this label for convenience, it will become clear that this is not a “voice” in the same way as Actor Voice and Undergoer Voice, that is, it is not in paradigmatic alternation with them. Therefore, CV in Äiwoo is different in this sense from its terminological equivalents in other Austronesian languages, such as e.g. Circumstantial Voice and Locative Voice in Tagalog (Schachter & Otanes 1972 et seq.), etc.

First, in §A.2 I will give a description of the argument structure, word order, verbal morphology, and Ā-extraction properties of CV clauses in Äiwoo. The material I discuss here contains both facts already reported in the literature and novel findings. Then, in §A.3 I discuss how integrating CV into the larger analysis of Äiwoo clauses and Ā-extraction presents some interesting challenges. I will entertain a possible analysis, and discuss where it breaks.

A.2 DESCRIPTIVE PROPERTIES

A.2.1 WORD ORDER, VERBAL MORPHOLOGY, AND ARGUMENT STRUCTURE

WORD ORDER The simplest way to describe at a glance what CV does is that it adds one argument to the existing argument structure of a verb, and simultaneously makes it the VIA (Næss 2015b et seq.). The added argument is typically some kind of “oblique”, such as a locative, instrument, etc. (see below for more details). If the base verb is intransitive, adding CV to it will result in a clause with two arguments; if it is transitive, then there will

be three arguments. This is the only way in Äiwoo to create a clause with three nominal/DP arguments (though see §A.3 below for discussion of whether the added argument is underlyingly a nominal). The general template of a CV clause is shown in (510), where ‘X’ is the additional argument contributed by CV; concrete examples will be given below.

(510) **Abstract template of CV clauses:**

X V S=TAM=Cä **(O)** (... PPs and adjuncts...)

In terms of word order, we can recognize the same three linear “slots” where arguments can go that we find in the various kinds of intransitive and (mono-)transitive clauses discussed throughout the dissertation. The preverbal VIA position (spec,CP) hosts the added argument. The subject is between the verb and the TAM particles (spec,TP), as in UV_{plain} clauses. Finally, if there is an object, this is in the postverbal position. Additional PPs and adjuncts are, as usual, linearized to the right.

VERBAL MORPHOLOGY Unlike AV and UV, CV itself is not morphologically marked by stem suppletion, but by adding the enclitic marker =Cä at the right edge of the TAM sequence¹. This shows that CV is not in paradigmatic alternation with AV and UV, but rather is “built on top” of them. To support this point, when CV is added on top of a transitive verb, the base verb can take either its AV or its UV stem. Äiwoo CV is therefore functionally similar to “Circumstantial Voice” in other Austronesian languages (e.g. Tagalog, Malagasy, etc.), seen as it adds an “oblique” argument to the existing ones and promotes it to VIA/pivot. Nonetheless, the Äiwoo case is syntactically rather different from those other languages, since it is not clearly part of the voice paradigm but rather added on top of it. In this respect, Äiwoo CV is at least on the surface more similar to the system of applicatives found in Indonesian-type languages (Himmelmann & Riesberg 2013, Næss 2015b).

The data below shows concrete examples of CV sentences built on top of an intransitive verb (511), a transitive AV verb (512), and a transitive UV verb (513). For each pair, the (a) sentence is a non-CV baseline, i.e. either an intransitive or transitive clause with a PP adjunct, and the (b) sentence is the corresponding CV version². In each case, we find that: (i) what corresponds to the adjunct PP in the baseline is now a DP (with no preposition) in the preverbal position; (ii) the enclitic CV marker =Cä is added after the future marker; (iii) if there was subject agreement in the baseline, like for intransitives and AV verbs (511a)-(512a), it disappears in the CV version (511b)-(512b).

(511) **Intransitive (+ CV):**

(250814)

- a. **kuli ki-li-ndoduwâ=kaa ngä paveli eângâ**
dog IPFV-3AUG-shout=FUT in garden that
‘The dogs will bark in that garden’

INTR + PP

1 The first consonant of this particle varies following the same allomorphy pattern as future =Caa, distal =Câ and proximal =Ce; see chapter 2, §2.6.3.2.

2 For exposition purposes, I limit the discussion for now to CV clauses where the added argument is a lexical DP. See §A.3.2 for a discussion of what happens when the added argument is a pronoun/φ⁺P.

- b. *paveli eāngâ ki-ngoduwâ kuli=kaa=kä* INTR + CV
 garden that IPFV-shout dog=FUT=CV
 'The dog(s) will bark in that garden'
- (512) Transitive, AV (+ CV): (250814)
- a. *pedevalili ki-li-vängä=kaa sii ngä täpilo enge* AV + PP
 children IPFV-3AUG-eat.AV=FUT fish in bowl this
 'The children will eat fish in this bowl'
- b. *täpilo enge ki-vängä pedevalili=kaa=kä sii* AV + CV
 bowl this IPFV-eat.AV children=FUT=CV fish
 'The children will eat fish in this bowl'
- (513) Transitive, UV (+ CV): (250814)
- a. *sii ki-ngä pedevalili=kaa ngä täpilo enge* UV + PP
 fish IPFV-eat.UV children=FUT in bowl this
 'The children will eat the fish in this bowl'
- b. *täpilo enge ki-ngä pedevalili=kaa=kä sii* UV + CV
 bowl this IPFV-eat.UV children=FUT=CV fish
 'The children will eat the fish in this bowl'

If the subject is a pronoun rather than a lexical DP, it will be realized in its short suffixal form rather than the full pronoun. For UV, a subject pronoun in this position (spec,TP) would already be realized in its short suffixal form, so nothing changes when CV is added (514). However, this creates a morphologically unique situation where an intransitive or AV verb takes φ-suffixes rather than the usual prefixal agreement (515)–(516); this is otherwise impossible outside of CV.

- (514) a. Baseline UV: φ-suffix, no φ-prefix (250814)
sii ki-[ngä-de]=ngaa ngä täpilo enge
 fish IPFV-eat.UV-12AUG=FUT in bowl this
 'We will eat the fish in this bowl'
- b. UV + CV: φ-suffix, no φ-prefix
täpilo enge ki-[ngä-de]=ngaa=kä sii
 bowl this IPFV-eat.UV-12AUG=FUT=CV fish
 'We will eat the fish in this bowl'
- (515) a. Baseline INTR: φ-prefix, no φ-suffix (250814)
∅_{3AUG} ki-[li-ngoduwâ]=kaa ngä paveli eāngâ
 IPFV-3AUG-shout=FUT in garden that
 'They will bark in that garden' (**ki(l)i*ngoduwâ-i=laa)
- b. INTR + CV: φ-suffix, no φ-prefix
paveli eāngâ ki-[ngoduwâ-i]=laa=kä
 garden that IPFV-shout-3AUG=FUT=CV
 'They will bark in that garden'

- (516) a. Baseline AV: φ-prefix, no φ-suffix (250814)
- $\emptyset_{12\text{AUG}} \quad \boxed{\text{de}-ki-\text{vängä}}=kaa \quad sii \quad ngä \quad täpilo \quad enge$
 $12\text{AUG-IPFV-eat.AV}=FUT \quad \text{fish} \quad \text{in} \quad \text{bowl} \quad \text{this}$
 ‘We will eat fish in this bowl’ (* $(de)kivängäde=ngaa$)
- b. AV + CV: φ-suffix, no φ-prefix
 $täpilo \quad enge \quad ki-\boxed{\text{vängä-de}}=ngaa=\text{kä} \quad sii$
 bowl this IPFV-eat.AV-12AUG=FUT=CV fish
 ‘We will eat fish in this bowl’

Voice concord (see chapter 3, §3.3) is also found in CV. If an adverbial modifier is added to a base UV verb in a CV construction, predictably, the voice concord morphology is obligatory (517a). If a modifier is added to an AV verb or an intransitive verb, surprisingly, the voice concord morphology is now optionally possible (517b,c), whereas it would be impossible without CV. This phenomenon has not been described in the literature, and constitutes thus a novel finding.

- (517) a. UV + CV: voice concord obligatory (230727)
- $täpilo \quad enge \quad ki-\text{ngä-låoo}^*(-\text{nyii})-\text{no}=\text{ngä} \quad sii$
 bowl this IPFV-eat.UV-always-UV-1MIN=CV fish
 ‘In this bowl I always eat fish’ (with or without CV, -nyii is obligatory)
- b. AV + CV: voice concord optional
 $täpilo \quad enge \quad ki-\text{vängä-låoo}(-\text{nyii})-\text{no}=\text{ngä} \quad sii$
 bowl this IPFV-eat.AV-always-UV-1MIN=CV fish
 ‘In this bowl I always eat fish’ (without CV, -nyii is impossible)
- c. Intransitive + CV: voice concord optional (230720)
 $paveli \quad eångå \quad ki-\text{ngoduwå-låoo}(-\text{nyii}) \quad kuli=\text{kä}$
 garden that IPFV-shout-always-UV dog=CV
 ‘The dog is always barking in that garden’ (without CV, -nyii is impossible)

The properties illustrated thus far are summarized in (518). Informally speaking, adding CV to intransitive or AV verbs makes them “more UV-like”: prefixal agreement disappears, suffixal pronouns in spec,TP arise, and voice concord becomes optionally possible.

- (518) Comparison of baseline INTR, AV and UV to their version with CV added:

	Word order			Prefixal φ-agr.?	Suffixal subj. pron.?	Voice concord?
INTR:	S	φ _S -V	=TAM	(...PPs)	yes	no
AV:	S	φ _S -V.AV	=TAM	O (...PPs)	yes	no
UV:	O	V.UV	S=TAM	(...PPs)	no	yes
INTR+CV:	X	V	S=TAM=CV	(...PPs)	no	optional
AV+CV:	X	V.AV	S=TAM=CV	O (...PPs)	no	optional
UV+CV:	X	V.UV	S=TAM=CV	O (...PPs)	no	yes

All in all, Äiwoo CV has some similarities with CV in Dinka (van Urk 2015), but also important differences. First, in Dinka the CV marker is a suffix on the raised verb (in C), while in Äiwoo it is an enclitic in a lower region of the clause (either at the very low end of the Infl/T domain, or at the very high end of the vP domain). Second, in Dinka the CV suffix can only attach to verb stems with UV morphology; in Äiwoo, CV can go on top of verb stems with either voice morphology.

ARGUMENT STRUCTURE In all the examples shown so far, the argument added by CV and promoted to the preverbal position is a locative argument; another such example is (519a). Another common type of argument introduced by CV is an instrument (519b). Moreover, other types of “oblique” arguments (in a relatively loose definition) are possible, for example a stimulus for certain psychological verbs (519c), the object of a warning/what someone is being warned about (519d), an inanimate cause (519e), a time (519f). (In the last two sentences, the CV-added argument is relativized or clefted; see chapter 4, §4.B.2 about clefting.)

(519) Possible types of arguments that can become VIAs in CV clauses:

a. Locative:

(230907)

tebol enge i-tâbuwoli gino Anna=kä sii
 table this ASP-cut.UV son Anna=CV fish
 ‘Anna’s son cut (the) fish on this table’

b. Instrument:

(240215)

nuwoli i-lâbolâ-no=ngä nenu
 knife ASP-open.UV-1MIN=CV coconut
 ‘I opened the coconut with the knife’

c. Psychological stimulus:

(250206)

muli i-bou Anna=kä
 sea.snake ASP-afraid Anna=CV
 ‘Anna is/was afraid of the sea snake’

d. Object of warning:

(240222)

pesime eângâ i-wââ-mä John=kä (ngâgu)
 people that ASP-warn-DIR1 John=CV to.1MIN
 ‘John warned me about those people’

e. Reason/inanimate cause:

(250206)

[Ø_{3MIN} [RC i-nubo Sam=kä]]=nâ covid
 ASP-die Sam=CV=DIST covid
 ‘[What Sam died of __] is covid’

f. Time:

(250220)

ilâ i-wâte=kâ ngä [me=[RC ku-mo-no=ngä Honiara]]
 DIST ASP-happen=DIST in REL:time= IPFV-stay-1MIN=CV Honiara
 ‘That happened at the time when I was living in Honiara’

One could observe that the CV marker =Cä is morphologically somewhat similar to the locative preposition *ngä*. However, the correlation is not as water-tight. Äiwoo has chiefly two prepositions: *ngä* is used for locative semantics (in, on, under, over, above, from, etc.), and *go* for ‘for, to, with, etc.’. Both of these can introduce arguments that can potentially become/correspond to CV VIAs. Above, we saw a locative PP (with the preposition *ngä*) correspond to a locative CV VIA. However, an instrument argument (519b) and the stimulus of ‘be afraid’ (519c) are introduced by the preposition *go*. Compare now the intransitive + PP sentences in (520) with their CV counterparts in (519b,c). Regardless of whether the corresponding preposition for the fronted argument is *ngä* or *go*, the CV marker is always =Cä.

- (520) a. *nenu i-lâbolâ-no go nuwoli* (240215)
 coconut ASP-open.uv-1MIN PREP knife
 ‘I opened the coconut with a/the knife’
- b. *Anna i-bou go muli* (250206)
 Anna ASP-afraid PREP sea.snake
 ‘Anna is afraid of the sea snake’

Finally, a couple clause-embedding attitude predicates always obligatorily take CV. This is the case for *kä* ‘say, think, want’ (521a,b) and *ko* ‘say, want’ (521c). Here, it could perhaps be said that the argument added/introduced by CV is the content of the attitude predicated of the attitude holder.

- (521) Two attitude predicates with obligatory CV marking: *kä* and *ko*
- a. *kä Mary=kä [CP site-∅ⁿ nâ-wâte]* (230720)
 KÄ Mary=CV sister-3MIN IRR-dance
 ‘Mary wants her sister to dance’
- b. *kä Mary=kä [CP site-∅ⁿ ku-wâte]* (230720)
 KÄ Mary=CV sister-3MIN IPFV-dance
 ‘Mary thinks/thought/said that her sister is/was dancing’
- c. *ko-kä polis=kä [CP nä-li-eeu-kä go pesingedâ]* (231109)
 want-DIR3 polis=CV IRR-3AUG-speak-DIR3 to girls
 ‘The police wants to talk to the girls’

Interestingly, certain types of arguments *cannot* become the VIA of a CV clause; this is also a novel finding. This is true for typical “dative” arguments (recipients, benefactives), e.g. with verbs like ‘give’ or ‘introduce’ (522a)–(522b). Moreover, the destination argument of ‘bring’ also can’t become a CV VIA (523a). Compare this to an instrument argument of the same verb, for which this is possible.

- (522) a. * *Jen ki-lää-kä mekivaavee=kaa=kä buk* (250813)
 Jane IPFV-give.AV-DIR3 teacher=FUT-CV book
 Intended: ‘The teacher gave Jane a book’

- b. * *Mary i-wagu-kâ-no=ngä Sam ngä party* (240721)
Mary ASP-tell.UV-DIR3-1MIN=CV *Sam* at party
 Intended: 'I introduced Sam to Mary at the party'
- (523) 'Bring' + CV: a destination cannot be a CV VIA, but an instrument can (231130)
- a. * *nyivängäna eängâ ki-tou-wâ-no=ngaa=kä dekilingä*
party that IPFV-bring.AV-DIR2-1MIN=FUT=CV food
 Intended: 'I will bring food to that party'
- b. *nyibä mi=olo enge i-tou-kâ-no=ngä dekilingä*
basket REL=big this ASP-bring.AV-DIR3-1MIN=CV food
 'I brought food in/with this big basket'

A.2.2 Ā-EXTRACTION PROPERTIES

In broad strokes, clauses with CV behave for the purposes of Ā-extraction as one would expect from an Austronesian language. From a CV clause, only the added oblique argument ("X") can be extracted (524a), and neither the subject nor the object can (524b,c). This is true regardless of the voice morphology of the base verb to which CV is aded.

- (524) Only the added argument (X) can be extracted from CV:

- a. ✓ X \nexists CV: (231214)
i-ku-mo-kä vaakä ngä [nuwopaa nyabei (mi=)]_{RC}
 1MIN-IPFV-live-DIR3 close to house.of place.sick REL=
ku-{tou/tu}-mä pesingedâ=kaa=kä mikilibei]]
 IPFV-bring.{AV/UV}-DIR1 women=FUT=CV patients
 'I live close to the hospital where the women will bring the patients'
- b. ✗ S \nexists CV: (240208)
** nâ-wâkâluwâ-kä-de [pesingedâ (mi=)]_{RC} nuwopaa nyabei*
 IRR-thank.UV-DIR3-12AUG women REL= house.of place.sick
ku-{tou/tu}-kä-i *=laa=kä mikilibei]]*
 IPFV-bring.{AV/UV}-DIR3-3AUG =FUT=CV patients
 Intended: 'We must thank the women who will bring the patients to the hospital'
- c. ✗ O \nexists CV: (231214)
** [mikilibei (mi=)]_{RC} nuwopaa nyabei ku-{tou/tu}-mä*
 patients REL= house.of place.sick IPFV-bring.{AV/UV}-DIR1
pesingedâ=kaa=kä *=nâ ki-li-päko-ute=kaa*
 women=FUT=CV =DIST IPFV-3AUG-good-again=FUT
 Intended: 'The patients that the women will bring to the hospital will get better'

The same is also true for clauses consisting of an intransitive verb and CV, both for (putative) unergatives and unaccusatives: only the added argument can be extracted (525a)–

(526a), and not the subject (525b)–(526b). To extract that argument, an intransitive clause without CV must be used instead (527).

(525) Extraction from unergative + CV:

- a. ✓ X \nsubseteq CV (230720)

[*paveli* [RC \square *ki-ngoduwâ kuli=kä*] $=nâ kâlâ ngâ nyângâ
garden IPFV-shout dog=CV=DIST there in place.that
 ‘The garden where the dog was barking is over there’$
- b. ✗ S \nsubseteq CV

* [*kuli* [RC *paveli eângâ ki-ngoduwâ-* \emptyset^n $\square=nä$] $=nâ no Mary
dog garden that IPFV-shout-3MIN =CV=DIST POSS Mary
 Intended: ‘The dog that was barking in that garden is Mary’s’$

(526) Extraction from unaccusative + CV:

- a. ✓ X \nsubseteq CV (230727)

[*numobâ* [RC \square *i-obu-to Mak=kä*] $=nâ i-woli-mana nyalo
hole ASP-fall-in Mark=CV=DIST ASP-down-very deep
 ‘The hole where Mark fell goes down very deep’$
- b. ✗ S \nsubseteq CV

* [*gilaki* [RC *numobâ eângâ i-obu-to-* \emptyset^n $\square=nä$] $=nâ
boy hole that ASP-fall-in-3MIN =CV=DIST
nyisi- \emptyset^n *ba i-ta=gu*
 body-3MIN NEG ASP-hurt=NEG
 Intended: ‘The boy who fell in that hole didn’t get hurt’ (lit. ‘[The boy [who...]], his body was not hurt’)$

(527) Extraction of subject of intransitive: no CV

- a. From an unergative: S \nsubseteq INTR (230720)

[*kuli* [RC \square *ki-ngoduwâ ngä paveli eângâ*] $=kâ no Mary
dog IPFV-shout in garden that=DIST POSS Mary
 ‘The dog that was barking in that garden is Mary’s’$
- b. From an unaccusative: S \nsubseteq INTR (230727)

[*gilaki* [RC \square *i-obu-to ngä numobâ eângâ*] $=kâ
boy ASP-fall-in in hole that=DIST
nyisi- \emptyset^n *ba i-ta=gu*
 body-3MIN NEG ASP-hurt=NEG
 ‘The boy who fell in that hole didn’t get hurt’$

Moreover, the presence of CV “overrides” the special property of UV-only verbs. If one adds CV to a UV-only verb, from the resulting clause still only the added argument can be extracted (528a), and neither of the other two can (528b,c). This starkly contrasts with the behavior of UV-only verbs without CV, since in that case they allow for extraction of either the subject or the object (cf. chapter 4).

- (528) Extraction from UV-only + CV: only the X argument (230914)

a. ✓ X \nexists CV_(UV-only):

i-wä ngä [paveli [RC] i-te-kä mekivaavee=kä Jane]]
1MIN-go to garden ASP-see.UV-DIR3 teacher=CV Jane
'I went to the garden where the teacher saw Jane'

b. ✗ S \nexists CV_(UV-only):

* me-wä-le mo [mekivaavee [RC paveli eängâ i-te-kä-Øⁿ
1AUG-go-UA with teacher garden that ASP-see.UV-DIR3-3MIN
 =nä Jen]]
=CV Jane

Intended: 'I went with the teacher who saw Jane in that garden'

c. ✗ O \nexists CV_(UV-only):

* i-eeu-kä go [singedâ [RC paveli eängâ i-te-kä
ASP-speak-DIR3 to girl garden that ASP-see.UV-DIR3
mekivaavee=kä]]
teacher=CV

Intended: 'I talked to the girl that the teacher saw in that garden'

A similarity to the situation with UV-only verbs can be seen in the contexts of those "CV-only" verbs mentioned above, e.g. the attitude predicate *kä* 'say, think, want'. Perhaps because this verb can never occur without CV, extracting its subject is exceptionally grammatical (529). (Note that this is not a case of long-distance relativization: the extracted argument is the subject of the attitude predicate, not an argument of the more deeply embedded CP.)

- (529) Extracting the subject of *kä* 'say, think, want' is grammatical despite CV:

i-eeu-kä go ... (241219)
1MIN-speak-DIR3 to ...
'I talked to ...'

- a. [pesime mi=[RC kä-i =lä [CP nuwopa tomu nä-ve-i=laa]]
people REL= KÄ-3AUG =CV house your IRR-buy.UV-3AUG=FUT
'... the people who want to buy your house'
- b. [pesime mi=[RC kä-i =lä [CP nuwopa tomu ki-ve-i=laa]]
people REL= KÄ-3AUG =CV house your IPFV-buy.UV-3AUG=FUT
'... the people who think/said they'll buy your house'

A.2.3 WHY "CIRCUMSTANTIAL VOICE" IS NOT A VOICE

Despite being evidently not in paradigmatic alternation with AV and UV, the construction involving the fronting of an oblique DP and the marker =Cä was analyzed in Næss (2015b) as a voice (hence the label "Circumstantial Voice"), and not as an applicative. Here, I want

to argue that calling this construction a “voice” is a misnomer, though purely for convenience of exposure I will retain the label “CV”. The main two arguments in that paper were (Næss 2015b: 295): (i) “the addition of =Cä neutralizes the difference between clauses with [AV] and [UV]”³; (ii) “the addition of =Cä to a clause with an [AV] verb changes person marking from prefixing to suffixing”.

As for argument (ii), I argue that this is a moot point, as it is based on a mis-analysis of the φ-suffixes found on UV (and CV) verbs. On one hand, it is true that in clauses where CV is added to either an AV or intransitive verb, the prefixal φ-agreement usually found on those verbs disappears; in (A.3) I suggest that this may be due to the category of the fronted pivot in CV clauses. Its “reappearance” as a suffix, however, is a red herring. As argued for in depth in chapter 5, these suffixes are not actually agreement markers, unlike the φ-prefixes, but rather phonologically reduced pronouns in spec,TP. Hence, their presence in CV clauses is purely a function of the position of the subject. In CV clauses, like in UV ones (UV_{plain}), the subject is in spec,TP (since spec,CP is plugged by the fronted oblique argument). Therefore, when the subject is a pronoun in this position, the morphology forces it to appear as a suffixal marker, but this does not mean that anything in the agreement system has changed.

As for point (i) (the neutralization of the difference between AV and UV clauses), on the other hand, I argue that this is empirically wrong, on the basis of novel data. In Næss (2015b) it was observed that CV could be added on top of both AV and UV verb stems, and in Roversi (2019) it was confirmed that this was true even for the same verb (e.g., ‘weave.AV + CV’ and ‘weave.UV + CV’ were both attested in the corpus). However, it was simply not known what the difference between these options was, if any. I have found at least one such difference. Specifically, the interpretation of direct objects in AV+CV vs. UV+CV clauses is different in the same way as between AV vs. UV clauses. Remember from chapter 2, §2.5.3 that bare noun objects are interpreted differently in the two voices: in AV, they are non-specific/narrow-scope indefinites (530), while in UV, they are specific/wide-scope indefinites (531).

- (530) Non-specific/narrow-scope indefinite object: ✓ AV, ✗ UV (250325)

- a. *milinurse ku-lu-potaa-ute dokta, mo ba*
nurses IPFV-3AUG-search.AV-again.AV doctor but NEG
i-te-kä-i=dä=gu
ASP-see.UV-DIR3-3AUG=some=NEG
‘The nurses are looking for a doctor again, but they haven’t found one yet’
- b. # *dokta ku-potaa-usi milinurse, mo ba*
doctor IPFV-search.UV-again.UV nurses but NEG
i-te-kä-i=dä=gu
ASP-see.UV-DIR3-3AUG=some=NEG
Intended: ‘The nurses are looking for a doctor again, but they haven’t found one yet’

3 In that paper, AV and UV verb forms were analyzed as lexical doublets, labelled “A-verbs” and “O-verbs”.

(531) Specific object: ✓ UV, ✗ UV

(250325)

- a. *dokta ku-potaa-usi milinurse, mo Ø_{3MIN} ba*
doctor IPFV-search.UV-again.UV nurses but NEG
ku-mo=gu ngâ nuwopaa nyibei elenge
 IPFV-stay=NEG in house.of place.sick today
 ‘The nurses are looking for a doctor_i again, but he_i is not at the hospital today’
- b. # *milinurse ku-lu-potaa-ute dokta, mo Ø_{3MIN} ba*
nurses IPFV-3AUG-search.AV-again.AV doctor but NEG
ku-mo=gu ngâ nuwopaa nyibei elenge
 IPFV-stay=NEG in house.of place.sick today
 Intended: ‘The nurses are looking for a doctor_i again, but he_i is not at the hospital today’

Strikingly, this interpretational difference persists when adding CV on top of respectively AV and UV verbs. When the intended reading of the object is that of a specific/wide-scope indefinite, only UV+CV is possible (532a). Conversely, when the intended reading is non-specific/narrow-scope, only AV+CV is possible (532b)⁴.

(532) a. Specific/wide-scope indefinite object: ✓ UV+CV, ✗ AV+CV (250220)

- dee nye=[RC kä Sam=kä [nâ-{\Xtou/✓tu}-mä-Øⁿ=nä nurse*
 this REL:OBL= want Sam=CV IRR-bring.{XAV/✓UV}-DIR1-3MIN=CV nurse
ngâ nuwopaa nyibei]]=kâ, mo ba ku-pole=gu bugulo
 to house.of place.sick=DIST but NEG IPFV-work=NEG yesterday
 ‘This is (the reason) why Sam wanted to bring a nurse_i to the hospital, but she_i wasn’t working yesterday’

b. Non-specific/narrow-scope indefinite object: ✓ AV+CV, ✗ UV+CV

- dee nye=[RC kä Sam=kä [nâ-{\✓tou/Xtu}-mä-Øⁿ=nä nurse*
 this REL:OBL= want Sam=CV IRR-bring.{✓AV/XUV}-DIR1-3MIN=CV nurse
ngâ nuwopaa nyibei]]=kâ, mo ba i-te-kä-Øⁿ=dä=gu
 to house.of place.sick=DIST but NEG ASP-see.UV-DIR3-Øⁿ=some=NEG
 ‘This is (the reason) why Sam wanted to bring a nurse to the hospital, but he couldn’t find any’

As of now, I don’t have a theory of the contrast in the interpretation of bare noun objects between plain AV and UV clauses (530)–(531). Accordingly, I also don’t have a theory of this contrast in the more complex AV+CV vs. UV+CV contexts. However, the fact that a

⁴ These datapoints may present a couple confounds. First, they involve relativization of an oblique argument (“the reason [RC why ...]”) to force CV, but this should not be too problematic in how the direct object is interpreted. More problematically, they involve long-distance relativization across the CV-only intensional attitude predicate *kä* (here meaning ‘want’). This means that the direct object in (532a) actually scopes out of the whole intensional predicate, rather than just scoping high in its own clause. Controlling for this will be important in future research.

contrast exists in the first place proves Næss's (2015) argument wrong: adding CV does not neutralize the difference between AV and UV clauses.

A.3 TOWARDS AN ANALYSIS OF CIRCUMSTANTIAL VOICE

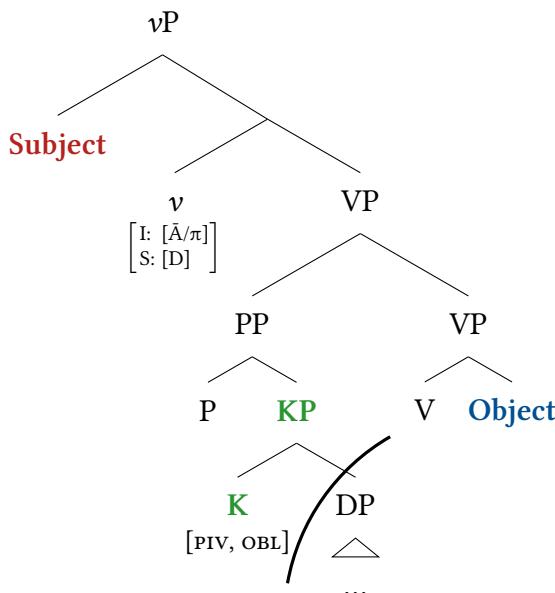
In this section I offer some promissory notes for what an analysis of Äiwoo CV might look like within the proposal in this dissertation. Some parts of the properties of CV clauses follow quite elegantly from our model of the Äiwoo clause. However, we will also see that some predictions our model makes are crucially wrong; I will leave these as open issues for future research.

A.3.1 CIRCUMSTANTIAL VOICE AS PREPOSITION STRANDING

The kind of approach I aim to explore here is one where CV is essentially a form of preposition stranding. Under this idea, “Circumstantial Voice” is what happens when a speaker decides to put the Ā-feature [PIV] not on a core argument of the clause, but on a nominal that is embedded under a PP – that is, an adjunct in the VP domain. Because this nominal is embedded under additional structure, the probes on *v*, T, and C will interact with it somewhat differently, only being able to access parts of its features but not others. Below, I will present a derivation bottom-up.

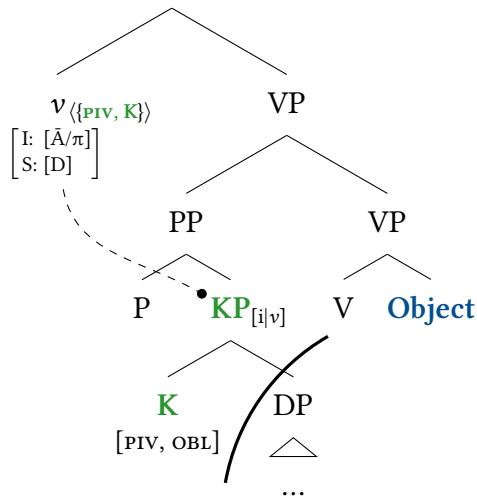
The structure of the vP domain in a CV clause is represented in (533). I will assume that prepositions in Äiwoo assign a special case to their complement, here just labelled “oblique” for simplicity; this will be morphologically null. On the technical implementation side, I will model this as such: a nominal that is the complement of a preposition in Äiwoo carries an extra KP layer on top of the DP (this layer may be either selected for by P, or countercyclically inserted, etc). Crucially, the K head is a phase head (as shown with the arc), “shielding” the inner DP from interactions from higher probes.

(533) The vP domain in a CV clause:



Let us now consider how, given this structure, the probe on v would interact with the elements in its c-command domain⁵. The nominal embedded under the PP is closer to v than the object (see e.g. Branan & Erlewine to appear for a discussion of search algorithms), so v looks at it first. The probe finds an \bar{A} -feature ([PIV]), so it interacts with it; this KP is flagged with $[i|v]$. The entire set of features from the interacted-with KP that are visible to v are copied onto the probe. However, importantly, the set that gets copied does not contain any φ -features – because these are on the DP, crucially under the KP-phase. Moreover, for the same reason, v doesn't "see" the [D] feature, and it is therefore not satisfied. After this first round of agreement, we have the state of affairs in (534).

(534) Stage 1: v interacts with the [PIV]-bearing oblique KP under the PP

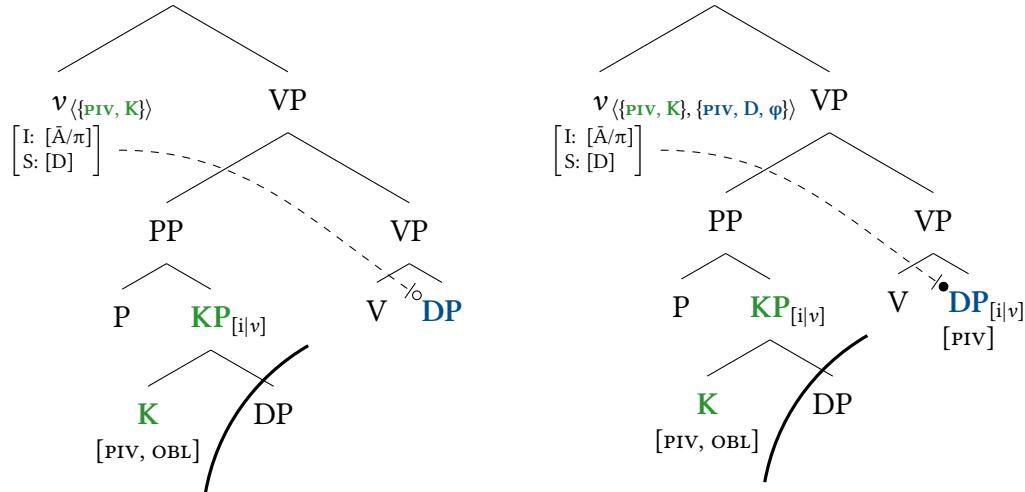


Because the probe on v has not been satisfied, it will now continue its search. The rest continues as in any other (mono-)transitive clause in Äiwoo. If the object is a DP with no \bar{A} -features (535a), v will not interact with it, but it will be satisfied by it. If, instead, the object is a DP with [PIV] (535b), v will both interact with it and be satisfied by it.

⁵ Again, for now I limit the discussion to sentences with no pronominal arguments, for simplicity. See below for discussion of those cases.

(535) Stage 2:

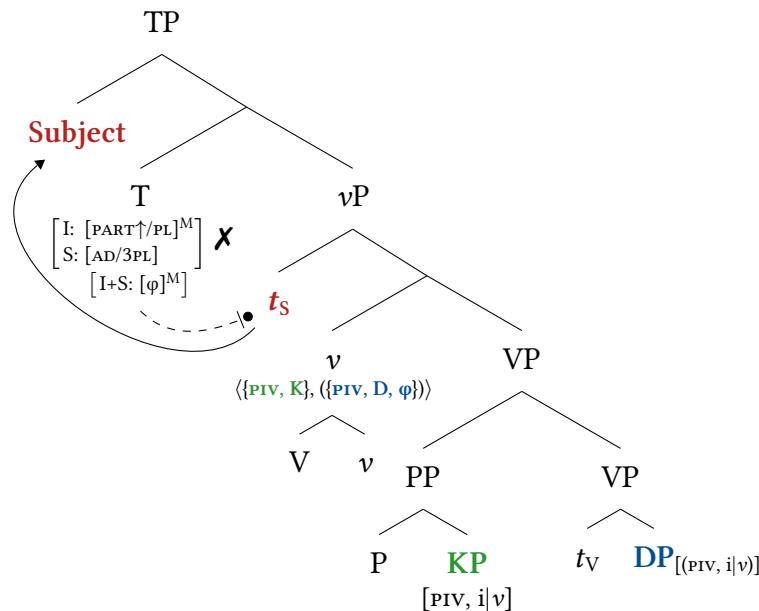
- a. If the object has no [PIV]:
no interaction, yes satisfaction
- b. If the object has [PIV]:
yes interaction, yes satisfaction



This difference in what features v has copied back in (535a) vs. (535b) will ultimately result in the difference between “AV + CV” vs. “UV + CV”. In (535b), v has ϕ -features on it, among the members of the different sets it has copied. Therefore, when later on the verb undergoes Vocabulary Insertion, the UV stem will be inserted, because the context of application of this rule is met. In contrast, (535a), v has no ϕ -features on it. Therefore, here the AV stem will be inserted.

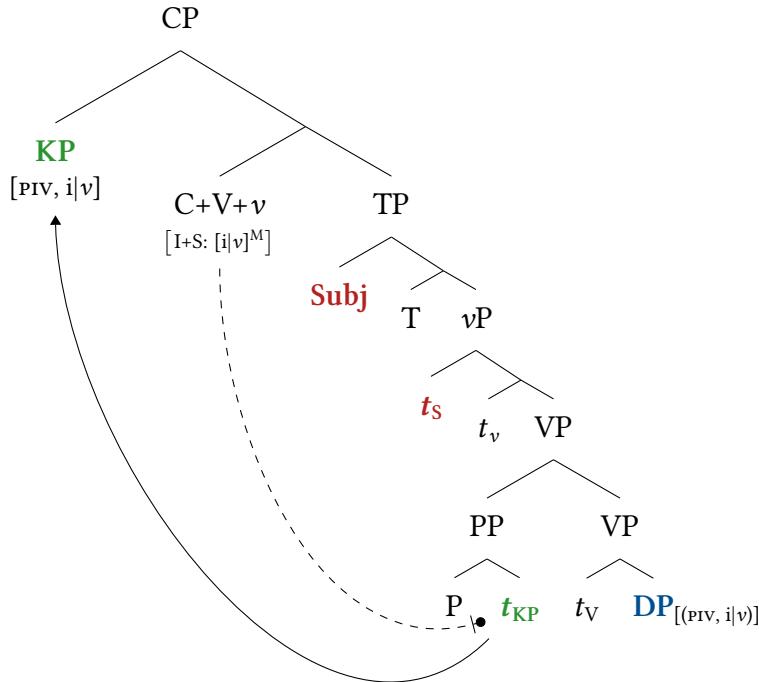
At the TP level, nothing particularly interesting goes on (536). At least for the cases where neither of the internal arguments is a pronoun/ ϕ^+P , T will follow the algorithm described in chapter 6 and just raise the subject.

(536) T raises the subject to spec,TP:



Once C is merged, its [i|v]-probe will initiate a search (537). The closest argument to C carrying this feature is the KP embedded under the preposition; this is true regardless of whether or not the object also has [i|v]. Therefore, C raises the KP to spec,CP, extracting it from under the PP, and thus stranding the preposition in situ; this is what will ultimately be spelled out as the CV marker =Cä. Like for v, because the φ-features on this nominal are buried inside the KP phase, C cannot copy them.

- (537) C raises the KP to spec,CP:



Now, the KP in spec,CP has a [PIV] feature, and therefore, it will intervene for Ä-extracting any lower argument. This correctly derives the restricted extraction profile described in §A.2.2. We can also confirm that the nominal is spec,CP is raised by non-local A-movement, just like for mono-transitive AV and UV clauses (chapter 3, §3.7). This movement step does not reconstruct for Condition C (538a), and it is not sensitive to WCO (538b).

- (538) The fronted oblique nominal in a CV clause...

(250617)

- a. ... does not reconstruct for Condition C:

nuwoli nogo Pita i-{låbonge/låbu}-Øⁿ=nä t_X sii
 knife POSS Peter ASP-cut.{AV/UV} 3MIN=CV fish
 'Peter_i cut (the) fish with his_i knife', lit. 'He_i cut (the) fish with Peter_i's knife'

- b. ... does not induce a WCO violation:

penyibe dâuwângâ i-bou-du gino -i=lä tx
 man every ASP-afraid-all son-3AUG=CV

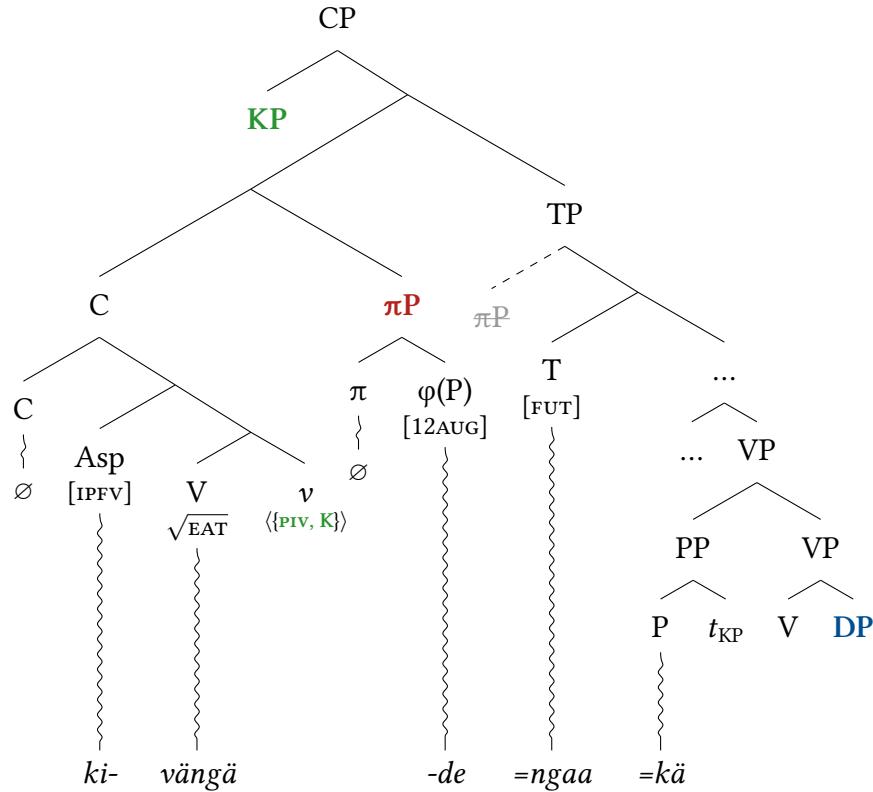
✓ Bound reading: \forall man x , x 's son is afraid of x

Lit. 'His_i son is afraid of every man_i'

Let us now consider how the different parts of this structure get spelled out onto their surface exponents, distinguishing between the case where the object was a DP without [PIV] (539) or with [PIV] (540). In either case, the KP in spec,CP is a nominal, with no preposition, and the K head itself is phonologically null; therefore, this will just be spelled out as a plain nominal. Also in either case, C has not copied any φ -features from the argument it raised, because those were rendered invisible by the KP layer. The two cases, however, differ in terms of what features v has copied: if the object is an [PIV]-less DP, v has no φ -features on itself (539), whereas if the object is a DP with [PIV], it does (540). This will prompt a differential spell-out, because the Vocabulary Insertion rule for the verb stem is sensitive to this difference: in the first case, we will insert the AV stem; in the second case, the UV stem. This gives us the difference between "AV + CV" on one hand, and "UV + CV" on the other. Moreover, if the subject in spec,TP is a pronoun, it will have to undergo Local Dislocation onto the verb (see chapter 5). Crucially, this happens regardless of whether the verb stem takes its AV or its UV. Because there are no φ -features on C, this now suffixal pronoun does not get impoverished, so we will always have φ -suffixes even if the base verb is AV or intransitive. Finally, the stranded preposition needs to be handled by a special Vocabulary Insertion rule, stating that a preposition without an overt complement must be realized as the enclitic marker =Cä rather than its normal exponent (either *ngä* or *go*; see above).

(539) Spell-out: AV + CV

a.

b. **φ (P(-impoverishment): does not apply**

$$\cancel{\varphi} \Leftrightarrow \emptyset / C_{\langle \varphi \rangle} -$$

c. VI rule for the stem (voice allomorphy):

$$\begin{aligned} \sqrt{\text{EAT}} &\Leftrightarrow \text{ngä} / -v_{\langle \varphi \rangle} \\ \cancel{\sqrt{\text{EAT}}} &\Leftrightarrow \text{vängä} \text{ (elsewhere)} \end{aligned}$$

d. VI rule for C:

$$C_{\langle \emptyset \rangle} \Leftrightarrow \emptyset$$

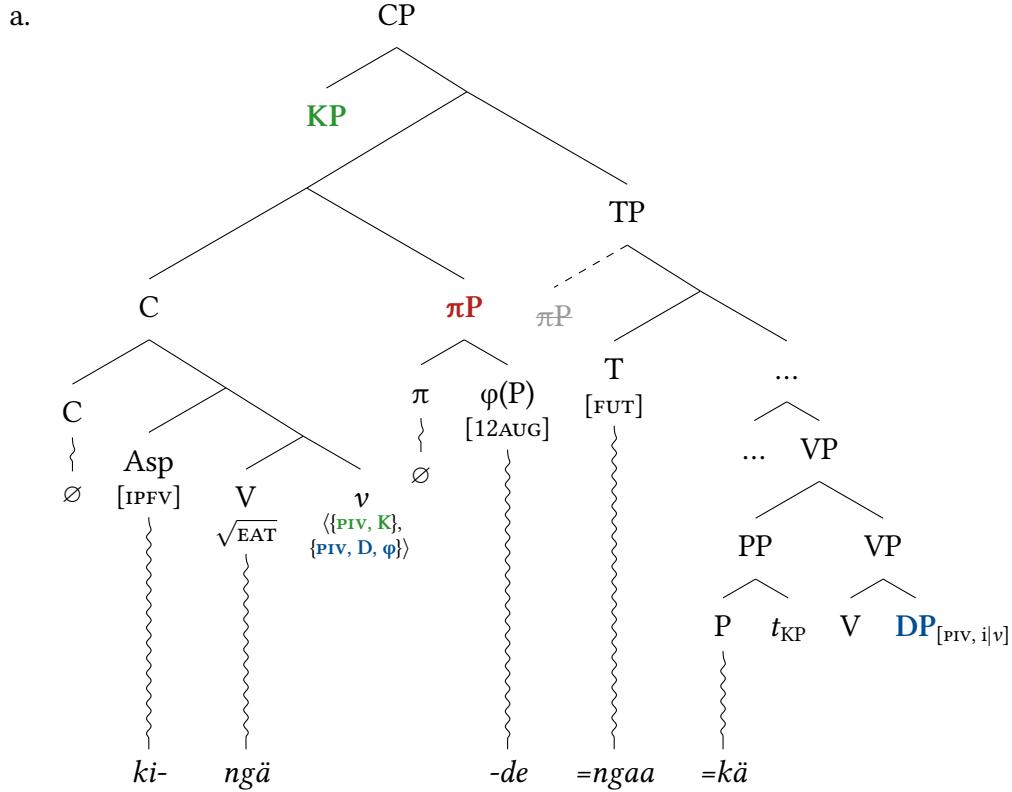
e. VI rule for φ P:

$$\varphi_{[12\text{AUG}]} \Leftrightarrow -de$$

f. VI rule for P:

$$P \Leftrightarrow =Cä / -t_{XP}$$

(540) Spell-out: UV + CV



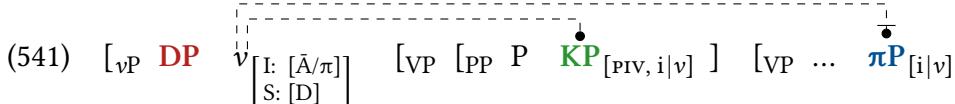
- b. **φP-impoverishment:** does not apply
✗ $\varphi \Leftrightarrow \emptyset / C_{\langle \varphi \rangle} -$
- c. **VI rule for the stem (voice allomorphy):**
☒ $\sqrt{EAT} \Leftrightarrow \text{ngä} / -v_{\langle \varphi \rangle}$
 $\sqrt{EAT} \Leftrightarrow \text{vängä}$ (elsewhere)
- d. **VI rule for C:**
 $C_{\langle \emptyset \rangle} \Leftrightarrow \emptyset$
- e. **VI rule for φP:**
 $\varphi_{[12AUG]} \Leftrightarrow -de$
- f. **VI rule for P:**
 $P \Leftrightarrow =Cä / -t_{XP}$

A.3.2 PROBLEMS AND INCORRECT PREDICTIONS

This analysis of CV unfortunately faces some challenges. A first one is the possibility of optional voice concord morphology on verbal modifiers when CV is added to a base AV or intransitive verb (517b,c). Given the analysis of voice concord I proposed in chapter 3, this shouldn't be possible here. Moreover, the optionality itself is mysterious.

A more fundamental problem concerns sentences with CV where the direct object or the applied argument is a pronoun (specifically, a φ^+P). As we know, pronominal objects in Äiwoo tend to cause word order changes, and this is true in CV clauses as well. However, the theory proposed here generates incorrect predictions. Let us see why.

Consider first the case where the direct object is a pronoun/ φ^+P , and both other arguments are lexical DPs/ φ^0Ps . We expect our probe on v to agree first with the applied KP, not be satisfied (because D is “invisible” under the KP phase boundary), and then proceed to agree with the direct object pronoun (541). Now both internal arguments have $[i|v]$.

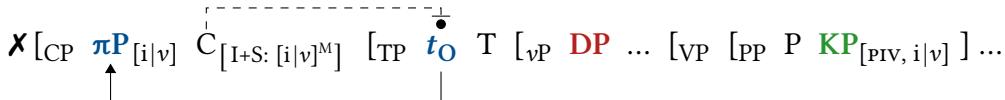


Then, the probe on T would raise the direct object pronoun across the other two arguments, since it is the preferred type of goal (542). This is the same phenomenon that we observe in UV_{gu} clauses (see chapter 6).



However, when we merge C is where things go wrong. Because of the syntactic inversion step triggered by T, the argument carrying $[i|v]$ closest to C is now the direct object. Therefore, C should raise it to spec,CP (543), and leave the applied argument in situ.

(543) Predicted (incorrectly): C fronts the object



But this is not what we observe. Instead, C raises the applied argument (544a). The predicted scenario is ungrammatical (544b). Moreover, even if we somehow found a way for C to exceptionally raise the applied argument instead of the direct object in spec,TP, the position of the CV marker =Cä is problematic. If it really was simply a stranded preposition left in situ, first of all in this case we should not expect it to be stranded at all in the first place, since its complement never gets moved anywhere. Moreover, even if it did get stranded somehow, we should expect it to be to the right of the low subject. Instead, we see that it surfaces to its left.

- (544) a. C fronts the applied argument across the object in spec,TP (250311)
- nuwopa to ki-te-kä-gu-i=laa=kä Mary t_X t_O*
house POSS.1MIN IPFV-see.UV-DIR3-OBJ-3AUG=FUT=CV Mary
 ‘Mary will see them in my house’

b. Predicted surface form corresponding to (543):

* (*ijii*) *ki-te-kä-gu-i=laa* *Mary{=kä / ngâ}* *nuwopa*
 3AUG IPFV-see.UV-DIR3-OBJ-3AUG=FUT Mary{=CV PREP} house
to *to*
POSS.1MIN

Intended: 'Mary will see them in that house'

This problem cannot be amended by changing our assumptions about the underlying argument structure of CV, for example, by positing that the PP adjunct is actually base-generated higher than the subject. We can show that this cannot be the case, by examining what happens when the applied argument itself is a pronoun (φ^+P). First, remember that we modelled the hierarchy effect in T, simplifying coarsely, to achieve the effect in (545). In prose: T raises the closest φ^+P , and will only raise a φ^0P if no φ^+P is available. This description only makes sense if the probe on T sees the subject first and then the object, as it is reasonable to assume. Therefore, rather unsurprisingly, we know that the subject is base-generated above the object.

(545) T-raising pattern (subject vs. direct object):

- a. $\varphi^+P > \varphi^+P$: move **subject**
- b. $\varphi^+P > \varphi^0P$: move **subject**
- c. $\varphi^0P > \varphi^+P$: move **object!**
- d. $\varphi^0P > \varphi^0P$: move **subject**

We can now use this to confirm that the subject is also base-generated above the applied argument in a CV clause, because the same exact pattern obtains. By manipulating the φ^0P vs. φ^+P category of the subject and the applied argument, we can recreate the same paradigm with combinations of subjects and applied arguments (546) as with subjects and direct objects (545). The concrete examples are given in (547).

(546) T-raising pattern (subject vs. applied argument):

- a. $\varphi^+P > \varphi^+P$: move **subject**
- b. $\varphi^+P > \varphi^0P$: move **subject**
- c. $\varphi^0P > \varphi^+P$: move **applied arg.!**
- d. $\varphi^0P > \varphi^0P$: move **subject**

(547) a. (*iumu*) *i-bou*  *-mu=wä* *t_S* *iu* (25.02.20)
 2MIN ASP-afraid-2MIN=CV 1MIN

'You are afraid of me'

b. *Sam* *i-bou*  *-no=ngä* *t_S* *t_X*
 Sam ASP-afraid-1MIN=CV

'I am afraid of Sam'

- c. (*iude*) *i-bou*-gu-de =ngä Sam [PP P t_X] ??
- 12AUG ASP-afraid-OBJ-12AUG=CV Sam
- 'Sam is afraid of us'
- d. *muli* *i-bou* Anna=kä t_S t_X
- sea.snake ASP-afraid Anna=CV
- 'Anna is afraid of the sea snake'

This pattern confirms that the probe on T must have the subject as its closest argument, and the applied argument must be lower. Therefore, sentences like (547c) are already puzzling: why is the CV marker =Cä to the left of the subject, if it “belongs to” the applied argument, which we have shown must be lower than the subject?⁶

Moreover, the assumption we made earlier about the KP layer constituting a phase boundary, encapsulating the features under it from being seen from higher probes, now becomes a problem. Earlier, it was important that a [D] feature on the applied argument would not be visible to the probe on *v*, since we had to prevent the probe from halting immediately and thus making sure it could at least be able to interact with the direct object. However, following the same assumption, this would mean that the φ-features of the applied argument should also not be visible to T (since they, too, are under the KP-phase boundary). But in turn, this would make it impossible for T to run its attested hierarchy effect, and we should thus not expect the pattern in (546)–(547).

⁶ Note that the position of the CV marker under this analysis should be to the right of the subject trace, not to its left as represented in (547). However, at least in those cases where the subject raises to spec,TP, this structural difference would result in the same surface linear string, so that is less concerning.

B

APPENDIX

A “CASE-AGREEMENT” ANALYSIS

B.1 OBJECT AGREEMENT, CASE AGREEMENT, AND SECOND-CYCLE EFFECTS

B.1.1 A COMPETING THEORY OF AUSTRONESIAN VOICE

The analysis of Äiwoo voice morphology I developed in chapter 3 gives an asymmetric status to AV and UV. In this model, UV is the spell-out of object agreement by v (548a), while AV is a morphosyntactic default, i.e., what gets spelled out when no object agreement takes place. The Ā-feature [PIV] is assumed to have completely free distribution: there could be zero, one, or more instances of it per sentence. If the object has [PIV], v agrees with it (setting aside the cases where the object is pronominal); else, there is no object agreement. In either case, the subject may or may not have [PIV], but nothing would change, because the [D]-feature on the object already satisfies the probe anyway.

(548) An object agreement analysis (chapter 3):

- a. UV: object agreement b. AV: no agreement/default



As mentioned in chapter 3, this kind of model is inspired by but ultimately contrasts with those developed for Tagalog in Rackowski (2002), Rackowski & Richards (2005), and Hsieh (2020, 2025), a.o. For the sake of exposition, I am going to present a sort of analytical Frankenstein, combining certain aspects of these approaches to highlight their commonalities and ignoring others to make the analysis as easily comparable as possible to the one I develop for Äiwoo; see fn. 2 for details. However, it ought to be clear that the exact model I describe here is not proposed as such (in its letter) in any of the works cited above.

Although these approaches have various differences, what they have in common is that they are based on the idea of “case agreement” (though only [Rackowski 2002](#), [Rackowski & Richards 2005](#) commit to this explicitly, and not [Hsieh 2020, 2025](#)). The two voices¹ are on more symmetrical standing: in UV, *v* agrees with the object ([549a](#)); in AV, *v* agrees with the subject ([549b](#))².

- (549) A case-agreement analysis (a la [Rackowski 2002](#), [Rackowski & Richards 2005](#), [Hsieh 2020, 2025](#)):

a. UV: agreement with object	b. AV: agreement with subject
[Subj $v_{[ACC]}$ [... Obj _{PIV}]]	[Subj _{PIV} $v_{[NOM]}$ [... Obj]]

Even if we don’t commit to calling this “case agreement” specifically (as [Hsieh 2020, 2025](#) does not do, for example), or we don’t assume that Ā-features play a role (as [Rackowski 2002](#), [Rackowski & Richards 2005](#) don’t do), an essential difference from my approach still remains. On one hand, we have a split between object agreement vs. no agreement; on the other hand, we have a split between object agreement vs. subject agreement ([550](#)). Under this second approach, the difference in verbal morphology between AV and UV must result from a difference in which DP the verb agrees with; calling this “case” seems like a reasonable choice.

	Undergoer Voice:	Actor Voice:
Object agreement analysis:	<i>v</i> agrees with object	<i>v</i> agrees with nothing
Case agreement analysis:	<i>v</i> agrees with object	<i>v</i> agrees with subject

It is then reasonable to ask the question of whether we should follow this literature and give Äiwoo a case-agreement-style analysis, to see whether that gains us any insight compared to the object agreement one developed in chapter 3. Of course, the devil is in the details. As much as a case-agreement analysis of Äiwoo seems plausible at first, once one attempts to actually develop a fully-formalized one, a series of problems arise.

¹ Tagalog actually has four voices. I limit the discussion here to AV/UV, excluding the two applicative voices. Note that in the Tagalog literature, “UV” is traditionally labelled “Patient Voice” (PV); I re-label it here just for comparability with Äiwoo, with no theoretical differences.

² To do more justice to the works cited above, here is the breakdown of what parts of the idealized model in ([549](#)) come from where. [Rackowski \(2002\)](#) and [Rackowski & Richards \(2005\)](#) propose that a process of object shift raises either the subject or the object to an outer spec, vP. Then, *v* agrees in case with the argument in its outermost specifier: if this is the subject, we get AV morphology; if it’s the object, we get UV morphology. Ā-features do not feature in this analysis. For [Hsieh \(2020, 2025\)](#), on the other hand, exactly one (and only one) DP per clause carries the Ā-feature [PIV]. Then, *v* (or rather, an analogous head in the θ-domain) probes for [PIV], and agrees with whichever argument carries it (and raises it to its specifier, making it the highest argument; this part is not too important here). [Hsieh](#) argues that in this process, the [PIV]-carrying argument is assigned nominative (which is then spelled out as *ang* in Tagalog), but he does not commit to exactly how the verb is spelled out with either AV or UV morphology in the two cases. Despite all these differences, I am synthesizing the various approaches to hone in on the case-agreement part: across both, if *v* agrees with the subject we get AV, and if *v* agrees with the object, we get UV.

B.1.2 “CASE AGREEMENT” WITHOUT CASE?

The first, but not unsurmountable, problem comes right at the start, with invoking the concept of case (whether abstract or morphological) as the potential difference between v agreeing with the object vs. the subject. It is important in my model that the probe that ends up being spelled out as voice morphology sees the object first, and only later the subject (as Äiwoo voice is almost exclusively controlled by the properties of the object, and almost never by the properties of the subject). Therefore, this probe must be low, between the object and the subject. This is a very early point in the derivation, and it’s not clear how or whether case would already be assigned. For example: would we say that v assigns accusative to the object, and then copy this case feature back from it if the object has [PIV]? How does the subject get nominative case, and how exactly can this happen before v agrees with the subject? If we commit to the notion of case, we would need to give a concrete answer to these questions.

Fortunately, I think this particular problem can be sidestepped if we accept being non-committal enough about exactly what “case” is. Boil down the difference between the two models as in (550), we see that the crucial difference is what happens in AV. What we aim to develop is, at the core, an analysis where in UV v agrees with the object, and in AV, v agrees with the subject. I suggest that if we wish to remain agnostic about how exactly case assignment works in Äiwoo, we can redraw this same distinction without invoking the notion of case. If we give up “case” as the distinguishing feature between subjects and objects, we need to find another way to distinguish between what is otherwise just sets of features copied onto a probe, with no record of origin. To maintain a difference between these scenarios, we can use the concept of “second-cycle effect” (Béjar & Rezac 2009, et seq.). The idea is simple enough: depending on whether a probe has agreed with a goal on the first attempt or on a second one (or third, etc.), the morphological spell-out will be different.

Remember, however, that our case-agreement analysis does not only need to account for the AV/UV contrast, but ideally for the whole gamut of combinations of word order and voice found in Äiwoo. Crucially, we need to make sure we have an explanation for those cases where the verb shows UV morphology, but the argument fronted to spec,CP is the subject (UVSVO clauses). Maintaining the idea that C raises the closest argument flagged by v , the desiderata for our analysis are summarized in (551). (Note that I am excluding intransitive verbs from the analysis, holding onto the assumption that their v_{INTR} simply has no probe, as I did in chapter 3. This makes the comparison between the two competing analyses more fair.)

- (551) a. UV_{plain}, UV_{gu}:
 - i. UV morphology: v has agreed with the object
 - ii. The object is in spec,CP: the object must have [i| v]
 $\implies v$ successfully agrees with the object only
- b. AV:
 - i. AV morphology: v has agreed with the subject

- ii. The subject is in spec,CP: the subject must have $[i|v]$
 $\implies v$ successfully agrees with the subject only
- c. UV_{SVO}:
 - i. UV morphology: v has agreed with the object (at least)
 - ii. The subject is in spec,CP: the subject must have $[i|v]$
 $\implies v$ successfully agrees with both the object and the subject

We thus need to make sure that the syntax can make sure these three scenarios take place in the correct environments, and that the morphological spell-out of the verb can distinguish between them (552). (For the time being, I'm ignoring the distribution of [PIV], which arguments are DPs or pronouns, and when the probe gets satisfied.)

- (552) a. [**Subj** v [... **Obj** $[i|v]$ \Leftrightarrow UV morphology, obj. in spec,CP

b. [**Subj** $[i|v]$ v [... **Obj** $[i|v]$ \Leftrightarrow UV morphology, subj. in spec,CP

c. [**Subj** $[i|v]$ v [... **Obj** \Leftrightarrow AV morphology, subj. in spec,CP

B.2 AN ATTEMPT AT AN IMPLEMENTATION

Having seen what we would need to derive for a case-agreement analysis of Äiwoo, let us now try to implement it. Although the idea of second cycle effect has been in the literature for a while (Béjar & Rezac 2009), I am not aware of a mechanical implementation of it, at least not in the interaction/satisfaction model of Agree (whose expressive power we know we need for Äiwoo anyway, due to the complexity of the hierarchy effect found in movement to spec,TP). To distinguish whether a set of features has been copied back at the first or second (or n th) step of agree, I will make an amendment to the model of agree described in Deal (2015b, 2024a, to appear) and Deal & Royer (2025), a.o. Concretely, I will assume (553).

- (553) “Unsuccessful interaction leaves a record”:

Let \mathcal{F}_H be the interaction set of a probe H. When H examines a potential goal G:

- a. If G contains a feature $[F] \in \mathcal{F}_H$, copy all G's features onto the probe, as a set in an ordered list.
 - Result of successful interaction: $H_{\langle \{F, \dots\}, \dots \rangle}$
- b. If G does **not** contain any feature in \mathcal{F}_H , add (an instance of) the empty set to an ordered list.
 - Result of unsuccessful interaction: $H_{\langle \emptyset, \dots \rangle}$

The first part (553a) is not novel: if a probe successfully interacts with a goal, the goal's features are copied onto the probe. This is all traditional stuff. The innovation is in the

second clause (553b): if a probe *does not* successfully interact with a goal, it doesn’t just do nothing; instead, it will keep a record of the fact that it did not agree with this goal³. With this, we could get the desired distinctions (at least if we can find a plausible solution to the considerable complications described in fn. 3, which alone is a non-trivial challenge). The set of possible agreement outcomes would be the following:

- (554) a. $v\langle\{\varphi, \dots\}\rangle$: \Leftrightarrow UV morphology
- b. $v\langle\{\varphi, \dots\}, \{\varphi, \dots\}\rangle$: \Leftrightarrow UV morphology
- c. $v\langle\emptyset, \{\varphi, \dots\}\rangle$: \Leftrightarrow AV morphology

We could then make our VI rules sensitive to these distinctions. For example, we could impose that for a given root, the AV stem be inserted in the context of a v head whose ordered list starts with \emptyset (555a), and make the UV stem the default exponent (555b). (The reverse choice of marked vs. default exponent could be possible too, of course.)

(555) VI rules for stem allomorphy:

- a. $\sqrt{EAT} \Leftrightarrow \text{vängä} / -v\langle\emptyset, \dots\rangle$
- b. $\sqrt{EAT} \Leftrightarrow \text{ngä}$ (elsewhere)

A second change we would need to make to our model is a small amendment to the probe specification on v . The one defended in chapters 3–6 is [INT: \bar{A} or π ; SAT: D], and assumes that the distribution of [PIV] is syntactically completely free. Crossing the possible category of the two arguments and the possible positions of [PIV], we correctly predict the following breakdown (556)⁴. (The difference in word order between the various sub-cases of UV_{plain}, UV_{gu}, and UV_{SVO} arise from the interactions with the probes on T and C; see chapter 6.)

3 The implementation can almost certainly not work exactly as written in (553). The reason is that we have no formally defined notion of “potential goal G”. In the way the Agree algorithm is formulated in Deal (2024a, to appear), a probe checks *every single node* in its c-command domain (following some specified search procedure, e.g. Branan & Erlewine to appear) for whether it contains any of its interaction features, until it is satisfied (or until it exhausts its entire c-command domain). This means that, for example, a probe on T will not just examine the subject and the object: it will examine AspP, Asp⁰, vP, the subject, v' , v^0 , VP, V, and the object (and any other intermediate functional projections that may exist). Of course, this would result in the addition of a large number of \emptyset s to the ordered list. If we want our morphology to be able to distinguish between when v has successfully agreed only with the object vs. only with the subject, we would need to make the morphological component powerful enough to be able to *count* the number of \emptyset s in the list. Obviously, this is not ideal in the least. The only solution I can envision would be to add a notion of “potential goal” to the theory of Agree (so that only certain “relevant” \emptyset s would get added, and not all of them), which however would come with its own share of complications and ad-hocness.

4 For conciseness, I make the following simplifications. By “ πP ” here I mean specifically a $\varphi^+ P$ (a pronoun with non-3MIN features), and not a 3MIN pronoun. I represent any set of features copied by the probe simply as “ φ ”, standing as an abbreviation for the whole set of features copied from the goal (e.g. $\{\varphi, N, D, PL, \dots\}$).

(556)	Subject:	Object:	Outcome:	[i v]?	Voice:	spec,TP:	spec,CP:	Clause type:
a.	DP	$v \begin{array}{c} \\ \text{DP} \\ \\ \varnothing \end{array}$	$v\langle \rangle$	—	AV	S	S	AV
b.	DP _[PIV]	$v \begin{array}{c} \\ \text{DP} \\ \\ \varnothing \end{array}$	$v\langle \rangle$	—	AV	S	S	AV
c.	DP	$v \begin{array}{c} \\ \text{DP} \\ \\ \bullet \\ \varnothing \end{array}$	$v\langle \varphi \rangle$	O	UV	S	O	UV _{plain}
d.	DP _[PIV]	$v \begin{array}{c} \\ \text{DP} \\ \\ \bullet \\ \varnothing \end{array}$	$v\langle \varphi \rangle$	O	UV	S	O	UV _{plain}
e.	πP	$v \begin{array}{c} \\ \text{DP} \\ \\ \varnothing \end{array}$	$v\langle \rangle$	—	AV	S	S	AV
f.	πP _[PIV]	$v \begin{array}{c} \\ \text{DP} \\ \\ \varnothing \end{array}$	$v\langle \rangle$	—	AV	S	S	AV
g.	πP	$v \begin{array}{c} \\ \text{DP} \\ \\ \bullet \\ \varnothing \end{array}$	$v\langle \varphi \rangle$	O	UV	S	O	UV _{plain}
h.	πP _[PIV]	$v \begin{array}{c} \\ \text{DP} \\ \\ \bullet \\ \varnothing \end{array}$	$v\langle \varphi \rangle$	O	UV	S	O	UV _{plain}
i.	DP	$v \begin{array}{c} \\ \varnothing \\ \\ \bullet \\ \cdot \end{array}$	$v\langle \varphi \rangle$	O	UV	O	O	UV _{gu}
j.	DP _[PIV]	$v \begin{array}{c} \\ \bullet \\ \\ \cdot \\ \cdot \end{array}$	$v\langle \varphi, \varphi \rangle$	O, S	UV	O	O	UV _{gu}
k.	DP	$v \begin{array}{c} \\ \varnothing \\ \\ \cdot \\ \cdot \end{array}$	$v\langle \varphi \rangle$	O	UV	O	O	UV _{gu}
l.	DP _[PIV]	$v \begin{array}{c} \\ \bullet \\ \\ \cdot \\ \cdot \end{array}$	$v\langle \varphi, \varphi \rangle$	O, S	UV	O	O	UV _{gu}
m.	πP	$v \begin{array}{c} \\ \bullet \\ \\ \cdot \\ \cdot \end{array}$	$v\langle \varphi, \varphi \rangle$	O, S	UV	S	S	UV _{SVO}
n.	πP _[PIV]	$v \begin{array}{c} \\ \bullet \\ \\ \cdot \\ \cdot \end{array}$	$v\langle \varphi, \varphi \rangle$	O, S	UV	S	S	UV _{SVO}
o.	πP	$v \begin{array}{c} \\ \cdot \\ \\ \bullet \\ \cdot \end{array}$	$v\langle \varphi, \varphi \rangle$	O, S	UV	S	S	UV _{SVO}
p.	πP _[PIV]	$v \begin{array}{c} \\ \cdot \\ \\ \bullet \\ \cdot \end{array}$	$v\langle \varphi, \varphi \rangle$	O, S	UV	S	S	UV _{SVO}

If our aim is to develop a system where AV specifically features agreement with the subject, the best model I was able to devise that still captures the word order alternation and extraction facts is the following. First, we need the revised agreement algorithm devised above. Second, we need to change the specification of the probe on v to [INT: \bar{A} or π ; SAT: D and \bar{A}] (with an added conjunction in the satisfaction condition); why will become clear by looking at the table. Finally, we must follow Hsieh (2020) in restricting the distribution of [PIV] by stipulation; we must assume that [PIV] always occurs on exactly one argument

per sentence (not zero, and not more than one)⁵. With all of this in place, we would get the following breakdown (557).

(557)	Subject:	Object:	Outcome:	[i v]?	Voice:	spec,TP:	spec,CP:	Clause type:
a.			$v_{\langle \emptyset, \varphi \rangle}$	S	AV	S	S	AV
b.			$v_{\langle \varphi \rangle}$	O	UV	S	O	UV _{plain}
c.			$v_{\langle \emptyset, \varphi \rangle}$	S	AV	S	S	AV
d.			$v_{\langle \varphi \rangle}$	O	UV	S	O	UV _{plain}
e.			$v_{\langle \varphi, \varphi \rangle}$	O, S	UV	O	O	UV _{gu}
f.			$v_{\langle \varphi, \emptyset \rangle}$	O	UV	O	O	UV _{gu}
g.			$v_{\langle \varphi, \varphi \rangle}$	O, S	UV	S	S	UV _{SVO}
h.			$v_{\langle \varphi, \varphi \rangle}$	O, S	UV	S	S	UV _{SVO}

All in all, this kind of “case-agreement” analysis seems to me to be more complex than the “object agreement” one defended in this dissertation, with no clear gain in either empirical coverage, theoretical elegance or parsimony, or insightfulness. This kind of model needs more complicated probe specifications, an unmotivated stipulation on the distribution of Ā-features, and a revision of the agreement mechanism that faces considerable challenges once one tries to work out the details (see fn. 3).

⁵ We could abandon this assumption if we assumed that AV morphology can arise from either *v* agreeing with the subject, *or* from *v* not agreeing with anything at all. But at that point, we would be essentially reintroducing the “object agreement vs. default” idea into the picture.

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