Presumption in Karuk*

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Abstract

This paper examines obligatory resumption in Karuk, a verb-final language of Northern California, and argues that it is the result of conflicting word order requirements. Whereas postpositional phrases and the associate of focus particles must appear before the verb, clausal arguments must appear after the verb. When a clause is the complement of a postposition or the associate of a focus particle, this leads to conflicting word order requirements. This conflict is resolved by “presumption”: the use of a proform before the verb that is co-indexed with the complement clause following the verb. Similar patterns of presumption are attested in other head-final languages including Hindi-Urdo, Persian and Turkish and the final part of the paper develops a comparative perspective on the phenomena.

1 Introduction

We are extremely appreciative of the collaboration between Karuk master speakers and elders Sonny Davis, Julian Lang, Vina Smith, Nancy Super (nee Jerry), Peter Super Sr., and

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2 Presumption

Many languages make use of resumptive pronouns in establishing certain syntactic dependencies. Two important environments for resumption cross-linguistically are Contrastive Left Dislocation, illustrated with Dutch in (1), and relativization, illustrated with Irish in (2):

(1) Jan$_i$ [waar heb je die$_i$ gezien]?
    Where did you him seen
    (van Riemsdijk 1997:4)

(2) an ghireach$_i$ [ar ghoid na síogaí ı$_i$]
    the girl c stole the fairies her
    the girl who the fairies stole
    (McCloskey 2006:5)

(3) XP$_i$ [ . . . pronoun$_i$ . . .]

In each of these environments, a resumptive pronoun mediates the syntactic dependency between the left-peripheral XP and the local syntactic environment of the resumptive pronoun, as schematized in (3).

This paper examines resumption in the Karuk language of Northern California and argues that in this language resumption is deployed to resolve conflicting requirements placed on a single syntactic constituent. The Karuk construction of interest is illustrated in (4). The extraposed XP is bracketed, the proform is in italics, and the element defining the local environment is underlined.¹

¹All Karuk examples are given in the Karuk Practical Spelling System, adopted by the Karuk Tribe in 1989 (see Richardson and Burell (1993) and Bright and Gehr (2005:xi-xii) for details). Individual Karuk examples are identified by speaker and either text title or date of elicitation. If a textual example is part of ararahih’urípih, the online Karuk text database described in fn. 2, it is further tagged with text ID and line number. If not, it is tagged with the publication in which the text appears plus page number. Glossing conventions are as follows (where glossing assumes a particular analysis of a Karuk morpheme, references to relevant discussion are included): ACC = accusative, ANC = ancient past, ANT = anterior, AUX = auxiliary, BEN = benefactive, CHAR = characterized by (Bright 1957:74–5, Moorman 2014), C = complementizer, DAT = dative, DESID = desiderative, DO = object marker, DUR = durative, EMPH = emphatic particle, ERG = ergative (Bright 1957:129, Macaulay 2000), EV = evidential, FACT = factive, FUT = future, GEN = genitive, HAB = habitual, IRR = irrealis (Bright 1957:126, Peltola 2008), ITER = iterative, LOC = locative, M =
(4)  

a. xas uum vára vaa\textsubscript{i} kich u-kup\textsubscript{ı}tihanik \[p=6-o-thti-tih-anik \].  
and he EMPH that only 3G-do-DUR-ANC c=3SG-gamble-DUR-ANC  
And all that he used to do was to gamble.’ 
Fritz Hansen “Mourning Dove Young Man Gambles away his Doodle Bug Grandmother’s Dress” (JPH-KT-06:5)  

b. [ ...pronoun \(i \) ...] XP\(i\)  

In (4a) the bracketed clause serves both as the associate of the focus particle kich ‘only’ and as the complement of the matrix verb ukup\textsubscript{ı}tihanik. The focus particle requires preverbal realization of the associate, but Karuk complement clauses are barred from preverbal position, which leads to a linearization paradox: the complement clause must, but at the same time cannot, be realized in preverbal position. The proform vaa resolves this conflict: it appears immediately before the preverbal focus particle, thereby satisfying the focus particle’s requirement for preverbal realization of the associate. The complement clause appears after the verb, obeying the ban on preverbal complement clauses, and its relationship to the focus particle is mediated by the co-indexed proform.

The Karuk case of resumption in (4) is interesting because its surface characteristics are quite different from canonical instances of resumption. First, it is triggered by rightward displacement, and thus the proform precedes rather than follows the displaced XP; the term PRESCRIPTION is intended to capture this. Second, the displacement has no semantic or information structural effect, but is instead driven by linearization requirements. In contrast, Contrastive Left Dislocation serves an information-structural purpose (Altmann 1981, Frey 2004) and relativization creates a semantic predicate from a proposition. Finally, rightward displacement in and of itself is not enough to trigger presumption, the local preverbal environment of the displaced clause plays a crucial role in conditioning presumption. In particular, the focus particle functions as a trigger for presumption because it requires local phonological realization of its associate. Similar local conditioning effects have in fact been noted in the literature on resumption by Landau (2006), Sichel (2014), and van Urk (to appear), who argue that in some cases resumption serves to satisfy a phonological overtness requirement imposed by the local environment. Though it has received limited attention in the literature, it turns out that presumption of complement clauses under association with focus particles is also found in Hindi-Urdu, Persian and Turkish, three verb-final language that nonetheless place complement clauses after the verb. This suggests that we can add rightward complement clause displacement to relativization and Contrastive Left Dislocation as environments that regularly yield phonologically conditioned resumption.

The paper is organized as follows. Section 3 describes presumption in Karuk, including the environments in which it occurs, the phonological requirements associated with these environments, the word order restrictions that bring about displacement, and the obligatoriness of presumption in these environments. The presumption pattern illustrated in (4) has masculine, NEG = negation, NOM = nominalizer, PERF = perfect (Bright 1957:138–9, Carpenter 2013:13), PFV = perfective, PL = plural, PL.AC = plural action, POSS = possessive, PRES = present, PROSP = prospective (Bright 1957:124–5, Carpenter 2013), Q = polar question particle, RED = reduplication, SG = singular, VBL = verbalizer (Bright 1957:84–5, Macaulay 1989). Following Bright (1957:58–64), verbal agreement prefixes in Karuk transitive clauses are glossed for subject and object person and number, e.g. 3SG\(>\)1PL for a 3SG subject acting on a 1PL object; see Macaulay (1992) for an inverse analysis of the agreement system, and subsequent formal analysis in Béjar (2003:159–162) and Campbell (2012:135-147).
not been identified in the existing literature on Karuk, nor have the word order restrictions and phonological requirements that cause it. An independent goal of section 3 is therefore to establish these facts as carefully as I can. To that end, I draw on my own and colleagues’ fieldwork with Karuk speakers in Yreka, California from 2010 til 2017 and on the large corpus of textual material from earlier generations of Karuk speakers that was gathered, transcribed, and published by various researchers over the last century (de Angulo and Freeland 1931, Bright 1957, Harrington 1930, 1932b, 1932a, Lang 1994). A significant portion of this material (about 7000 sentences) has been digitized and linguistically annotated in an online searchable database, ararahih’urípih (Karuk language net). All claims made in this paper have been systematically checked against that corpus and against the material in Harrington (1932a) and Harrington (1932b). At this point in time, the window for grammatical elicitation is effectively closed. There are few first language speakers of Karuk and the ones involved in language work are, understandably, devoting their time and energy to language revitalization work.

This means that some of the generalizations from the corpus materials that I present below have not been confirmed through elicitation work, and in some key cases negative evidence is lacking. Section 4 documents presumption of complement clauses under focus marking in Hindi-Urdu, Persian and Turkish, and discuss further similarities, and differences, between Karuk and these better studied languages. Section 5 turns to the difficult question of what motivates rightward (dis)placement of complement clauses and suggests that prosody may place a role in Karuk. Section 6 concludes with a set of more general hypotheses about the syntax of Karuk.

3 Presumption in Karuk

The general profile of presumption in Karuk is given in (5)

(5) Karuk presumption: \([\ldots [\text{pro}, \text{TRIGGER}] \ldots V] \ldots \text{XP}\),

It involves a dependency between a preverbal proform and a fully articulated postverbal XP and the proform forms a syntactic constituent with a preverbal triggering element. Presumption is productive and robust in the language: all speakers for whom we have recorded linguistic material in which the conditions for presumption are met use it. At the same time presumption is highly circumscribed by grammatical factors, which makes it a valuable window onto parts of Karuk syntax about which very little is presently understood.

All instances of Karuk presumption involve a dependency across the verb, but differ in the category of the extrapoosed XP and the trigger. I have identified two categories that undergo obligatory rightward displacement, complement clauses and quotes, and two environments in which this displacement consistently results in presumption: when the displaced XP is the associate of a focus particle (6) and when it is the complement of a postposition (7).

2 http://linguistics.berkeley.edu/~karuk/

3 On the history of Karuk language work and current vitality of the language, see Lang (1994), Bright and Gehr (2005:i–xvi), and Sandy (2017:7–9).
In (6a) the complement clause appears to the right of the matrix verb *u'ıtapti* and the proform *vaar* appears adjacent to the preverbal focus particle *kich*. Similarly, in (6b), the quote appears to the right of the verb of saying, *wpítih*, and the proform *vaar* accompanies the focus particle in preverbal position. In (7) the clause [*pani'ıpakahaaak*] is a dependent of the postposition *kóó* ‘as much as’ and expresses the standard of comparison (i.e. how long the addressee must sit there). The postposition appears before the matrix verb *ikúuntakovish* and is accompanied by the proform *vaar*, whereas the dependent clause appears after the matrix verb.4

The idea that I will develop is that in each of the environments in (6) and (7), there is a tension between the general requirement that complement clauses and quotes appear after the verb and a specific requirement for phonological manifestation of the clause or quote preverbally. In (6) the requirement for preverbal phonological manifestation comes from the focus particle; in (7) from the postposition.

I start by establishing some basic properties of argument realization in Karuk (section 3.1). Section 3.2 describes complement clauses in Karuk, in particular their internal structure and obligatory postverbal surface position. In 3.3, I turn to focus particles and establish that they must appear preverbally, that they form a syntactic constituent with their associate, and that they require the associate to be phonologically realized. In 3.4 I show that *kóó* must appear preverbally and requires its complement to have in-situ phonological realization. In 3.5 I bring all of these observations together and show how they conspire to produce the observed patterns of presumption.

In what follows I concentrate on presumption of complement clauses, as in (6a) and (7), since they are found in both environments. Presumption of quotes is more limited, because the distribution of quotes is more limited. As far as I can tell, quotes never function as complements of postpositions, presumably because there are no postpositions of saying.

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4 *Ik* and *vúra* are second position clitics. Because the PP is clause initial in (7), *Ik* and *vúra* intervene between *vaar* and *kóó*. 
3.1 Argument realization

Karuk is a headmarking, polysynthetic language of the Klamath River of Northern California. It is an isolate within the Hokan stock (Golla 2011:82-127). Karuk phonology and morphology is thoroughly described in Bright’s (1957) grammar, which also contains a chapter on the syntax of the language (pp. 119-142).\(^5\) As Bright’s description makes clear, Karuk exhibits the three surface characteristics of a non-configurational language: arguments can be omitted, split, and freely ordered (Hale, 1983). These properties are illustrated in (8)–(10).

\(\text{(8) a. } \) púyava kári pa-’áraa pa-’urípi u-p-ithyúru-ripaa.
\[\text{you.see then the-human the-net } 3\text{SG}>3\text{-ITER-pull-out}\]
\text{You see then the Indian pulled the net out of the water.}\[\text{SOV}\]
Julia Starritt “Salmon Fishing” (WB-KL-69:16)

\(\text{b. } \) xás pa-pínmúich u-pímmi pa-mú-’aramah.
\[\text{then the-old.man } 3\text{SG}>3\text{-fall.in.love the-3SG.POSS-child}\]
\text{And the old man fell in love with his child.}\[\text{SVO}\]
Julia Starritt “Coyote Marries His Own Daughter” (WB-KL-16:3)

\(\text{c. } \) ta’itam kun-ífik-áheen pa-xuntápan pa-’asiktávaan-sa.
\[\text{so } 3\text{PL}>3\text{SG}-pick.up-ANT the-acorn the-woman-PL}\]
\text{Then the women gathered the acorns.}\[\text{VOS}\]
Mamie Offield “Coyote Gives Salmon and Acorns to Mankind” (WB-KL-17:34)

\(\text{(9) } \) xás t-u-’áv.
\[\text{then PERF-3SG}>3\text{-eat}\]
\text{Then he ate it.}\[\text{}\]
Mrs. Bennett “Screech Owl and Coyote” (ALK-14-35:16)

\(\text{(10) a. } \) púyava táay tá kun-’ùupva pa-tayíth.
\[\text{you.see much PERF } 3\text{PL}>3\text{SG-dig.roots the-brodiaea}\]
\text{So they dug a lot of brodiaeas.}\[\text{}\]
Nettie Ruben “The Story of Skunk” (WB-KL-46:14)

\(\text{b. } \) pa-vírusur íshyaav kusrah-kéem kári koovúra eeráivi-ak kúuk tá kun-pá-vyihma.
\[\text{the-bear winter sun-bad then all den-LOC to PERF } 3\text{PL-ITER-go.to.PL}\]
\text{In the winter, in December (the bad month), the bears all go into dens.}\[\text{}\]
Nettie Ruben “Bear Hunting” (WB-KL-71:1)

\(\text{c. } \) á ’iknéechhan pirishkáaarim mu-hróoha.
\[\text{falcon grizzly } 3\text{SG.POSS-wife}\]
\text{Duck Hawk’s wife was Grizzly Bear.}\[\text{}\]
Lottie Beck “Duck Hawk and His Wife” (WB-KL-25:1)

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\(^5\)Important aspects of Karuk morphosyntax have been insightfully analyzed by Monica Macaulay in a series of papers (Macaulay 1989, 1992, 1993, 2000, 2005). None of these are concerned with word order per se. To the best of my knowledge this paper, along with Maier (2015), are the only works since Bright (1957) to examine word order in the language. Sandy (2017) provides a comprehensive analysis of the accentual system and its complex interplay with morphophonology.
The examples in (8) illustrate the relatively rare case of a transitive verb with two overt DP arguments and show that there is no grammatically fixed order for subject, object and verb. (9) illustrates pro-drop of subject and object. Examples of split DPs are given in (10). In (10a) the quantified object DP táay pa-fayúth is split across the verb, so that the quantifier precedes the verb and the rest of the DP follows the verb. In (10b) a quantified subject DP is split before the verb with the determiner and noun appearing clause initially and separated from the quantifier by temporal adverbs. Finally, in (10c), a possessor is split from the possessed nominal in a non-verbal predication structure. (See Maier (2015) for detailed discussion of split DPs in Karuk.)

### 3.2 Complement clauses

Karuk complement clauses are finite and carry the same tense, aspect, mood and agreement morphology as root clauses. For instance, the complement clause in (6a), repeated below in (11), expresses agreement (3SG oo-), aspect (durative -tih), and tense (ancient past -anik). This inflection is entirely analogous to that found in the corresponding root clause in (12):

(11) \( p=\text{oo-thtii-tih-anik} \)  
\( c=3\text{SG-gamble-DUR-ANC} \)  
*that he was gambling.*

\( c=3\text{SG-gamble-DUR-ANC} \)

(12) ú-thtii-tih-anik.  
*He was gambling.*

Complement clauses are uniformly marked by the proclitic \( pa= \), which I analyze as a complementizer and gloss \( c \).\(^6\) If the complement clause contains additional pre-verbal material, the complementizer may attach to that material (13) or to the verb (14):\(^7\)

(13) naa íp ni-pasúpiichv-at [\( \text{pa=} \text{sóomvaan t-i-} \text{ipasuk} \) ]  
1SG PAST 1SG-reveal-PAST \( c= \)prospective.wife PERF-2SG-bring.back  
*I revealed that you were bringing home a new wife.*  
Mamie Offield “Duck Hawk and His Wife” (WB-KL-27:23)

(14) ni-krűunti [\( \text{jiim p=} \text{ee-mnísh-eesh} \) ]  
1SG-wait.for 2SG \( c=2\text{SG-cook-PROS} \)  
*I am waiting for you to cook.*  
Vina Smith, elicitation, 09/08/2013

As far as I can tell, there are no clausal subjects in Karuk, but clausal complements are attested with propositional attitude verbs, aspectual verbs, and verbs of communication. A exhaustive list of these are given in Table 1.\(^8\)

Adverbial clauses are formed the same way as complement clauses:

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\(^6\)If the host of the complementizer proclitic begins with a vowel, as is the case in (11), the vowel of the proclitic coalesces with the stem-initial vowel through a regular phonological process (Bright 1957:34-35).
Table 1: Karuk verbs that allow clausal complements

<table>
<thead>
<tr>
<th>Verb</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>aachichha</td>
<td>‘to be glad’</td>
</tr>
<tr>
<td>áapunma</td>
<td>‘to know’</td>
</tr>
<tr>
<td>imus</td>
<td>‘to look at’</td>
</tr>
<tr>
<td>ikruunti</td>
<td>‘to wait for’</td>
</tr>
<tr>
<td>ikyāavarihva</td>
<td>‘to try’</td>
</tr>
<tr>
<td>ipéer</td>
<td>‘to tell’</td>
</tr>
<tr>
<td>ipshinvarihva</td>
<td>‘to forget’</td>
</tr>
<tr>
<td>ítap</td>
<td>‘to know’</td>
</tr>
<tr>
<td>káriha</td>
<td>‘to be ready’</td>
</tr>
<tr>
<td>kóoha</td>
<td>‘to stop’</td>
</tr>
<tr>
<td>kúupha</td>
<td>‘to do’</td>
</tr>
<tr>
<td>mah</td>
<td>‘to do, to find’</td>
</tr>
<tr>
<td>pasúpiichva</td>
<td>‘to reveal’</td>
</tr>
<tr>
<td>piip</td>
<td>‘to say’</td>
</tr>
<tr>
<td>pikróok</td>
<td>‘to remember’</td>
</tr>
<tr>
<td>pikyaar</td>
<td>‘to finish’</td>
</tr>
<tr>
<td>táapkup</td>
<td>‘to like’</td>
</tr>
<tr>
<td>thitiv</td>
<td>‘to hear’</td>
</tr>
<tr>
<td>ûurih</td>
<td>‘to be unwilling’</td>
</tr>
<tr>
<td>víha</td>
<td>‘to dislike’</td>
</tr>
</tbody>
</table>

(15) [p-oo-ˈáaksur ] pirishkāarim sáruk u-ikyív-unih.
c-3sg-release.arrow grizzly.bear downhill 3sg-fall-down
When he released the arrow, Grizzly Bear fell downhill.
Lottie Beck “Duck Hawk and His Wife” (WB-KL-25:23)

(16) kári xás tá kun-taxíshxish [pa=t-óo msip ].
then then PERF 3PL>3SG-scrape.RED C-PERF-3SG cool.off
And they scraped it when it was cool.
Nettie Ruben “Bear Hunting” (WB-KL-71:23)

Adverbial clauses may precede the main clause, as in (15), or follow it, as in (16). This freedom of position is typical of adverbial clauses in languages with an initial subordinator (Diessel 2001:442ff). In contrast, complement clauses must follow the main verb. This re-

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7 An alternative analysis of (14) would treat the second person pronoun iim as a dependent of the matrix verb and pro drop in the complement clause. That analysis is ruled out by the agreement prefix on the matrix verb, which is sensitive to object person features (Bright 1957:60). ni- is the form used with 1sg subject and 3rd person object (or no object); nu- is used for 1sg subject and 2sg object.

8 According to Bright (1957:57, 134) verbs of emotion, like vihi ‘to dislike’ and ithóonha ‘to be eager’ may also take a bare verb root as their complement, optionally prefixed with the impersonal possessive va-. There are only a handful of examples of this construction in the corpus; in all of them the complement is postverbal. I will have nothing more to say about this construction.
striction is observed in the textual material and confirmed in elicitation. When translating English sentences with complement clauses into Karuk, speakers invariably produce structures in which the complement clause follows the main verb. Examples of such translation tasks are given in (17) and (18):

(17) naa víra ni-tapkùupi-ti [pa=ni-’uufíthvu-ti].
1SG EMPH 1SG-like-DUR C=1SG-swim-DUR
I like to swim.
Vina Smith, elicitation, 09/07/2013

(18) ni-krùunti [iim p=ee-mnísh-eesh].
1SG-wait.for 2SG C=2SG-cook-PROS
I am waiting for you to cook.
Vina Smith, elicitation, 09/08/2013

When presented with a version of the Karuk sentences in which the complement clause precedes the main verb, the speaker either rejected it as “no good” (19) or reinterpretted the complement clause as an adverbial clause and adjusted the aspectual inflection of the matrix clause accordingly (20):

1SG EMPH C=1SG-swim-DUR 1SG-like-DUR
Intended: I like to swim.
Vina Smith, elicitation, 09/07/2013

(20) [iim p=ee-mnísh-eesh] ni-krùuntih-eesh.
2SG C=2SG-cook-PROS 1SG-wait.for-PROS
If you are going to cook, I will wait.
Vina Smith, elicitation, 09/08/2013

This state of affairs is also expected on typological grounds: complement clauses tend to be positionally restricted and to favor postverbal position (Dryer 1980, Schmidtke-Bode and Diessel 2017).

Before I turn to the environments that trigger presumption, one matter deserves further attention. As the example in (16) makes clear, the complementizer proclitic is segmentally identical to the definite determiner. Bright (1957:121–2) distinguishes the two based on the morphophonological precesses they trigger, and identifies the first as a nominalizer and the second as an article. Bright doesn’t give any specific evidence that the pa= that marks subordinate clauses is a nominalizer, and it is not easy to distinguish a nominalization analysis from a complementizer analyses. One thing that makes it difficult is that Karuk subordinate clauses exhibit the full gamut of verbal inflection. So if they involve nominalization, it is very high nominalization, i.e. nominalization at the CP-level in the typology of Kornfilt and Whitman (2011). The analytic issue is thus to differentiate the nominalized structure in (21) from the plain CP structure in (22).
High Nominalization analysis of Karuk complements clauses

```
DP
  D   CP
     pα=
       C   TP
```

CP analysis of Karuk complement clauses

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CP
  C   TP
     pα=
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As far as I know there is no positive evidence for a nominalization analysis: \(\text{pα=}\)-clauses are not case-marked, they do not expone number, and they do not bear possessive marking.\(^9\) On the other hand, there is indirect evidence for the complementizer analysis of \(\text{pα=}\) from embedded questions. Karuk generally exhibits wh-movement to the left periphery in constituent questions and in embedded constituent questions the question word invariably precedes \(\text{pα=}:\(^10\)

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(23) i-pikr̂ǒok-ti hú̄m [fâat p=ee-pí-tih]?
     2SG-remember-DUR Q what C=2SG-say-DUR
     Did you remember what you said?
     Charlie Thom, Sr. “Sentences from Now You’re Speaking Karuk” (CT-01:25)
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(24) chavú̄ra pu-mah-ár̂a, [hōōy p=oo-’aramsíipriv-tih].
     finally NEG-see-NEG where C=3SG-come.from-DUR
     In the end he didn’t find where it came from.
     Chester Pepper “Coyote Tries to Reach the Sun” (WB-KL-12)
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Under the CP analysis, the relative order of the question word and \(\text{pα=}\) follows straightforwardly from wh-movement targeting Spec-CP, as shown in (25) for the embedded clause in (23):\(^11\)

\(^9\)The absence of case, number and possessive marking on \(\text{pα-}\)clauses does not amount to a direct argument against the nominalization analysis, since their absence can be explained in terms of independent restrictions. Only external arguments and instruments are ever case marked (Macaulay, 2000) and \(\text{pα-}\)clauses only function as internal, non-instrument arguments, so the opportunity for case marking of a \(\text{pα-}\)clause doesn’t arise. Similarly, only human-denoting nouns expone number and \(\text{pα-}\)clauses do not denote humans, hence no potential for number marking. Finally, \(\text{pα-}\)clauses appear to be excluded from possessive constructions, plausibly on semantic grounds.

\(^10\)Karuk question words are indeterminate pronouns in the sense of Shimoyama (2008): their interpretation depends on syntactic and semantic context: an indefinite reading is associated with in situ realization and the question interpretation with movement to the left edge. This pattern holds in root and embedded contexts.

\(^11\)Recall that \(a+i\) yields \(ee\), so \(\text{pα=} + \text{ip}̟̣t̟̣h\) yields \(\text{peep}̟̣t̟̣h}\).
Under the nominalization analysis, we expect the opposite order of \( \text{fåat} \) and \( \text{pa=} \) since \( \text{pa=} \) heads the projection above CP, and some additional movement process is required to bring the question word to a position above the nominalizer. I therefore adopt the CP analysis in (22) and analyze \( \text{pa=} \) as complementizer.\(^{12}\)

In summary: Karuk complement clauses are finite CPs and displaced to postverbal position. Next I turn to the environments for presumption of post-verbal complement clauses, starting with focus particles.

### 3.3 Focus particles

Karuk has three focus particles, \( \text{kich} \) ‘only’, \( \text{káru} \) ‘also’, \( \text{kúna} \) ‘in addition’:

(26) \[ \text{naa kich} \]
\[ 1.SG \text{only} \]
\[ \text{only me} \]

(27) \[ \text{naa káru} \]
\[ 1.SG \text{also} \]
\[ \text{me too} \]

(28) \[ \text{fåat kúna} \]
\[ \text{what in.addition} \]
\[ \text{what else} \]

These focus particles appear immediately following the element they associate with and I will argue that they are right-adjoined to the associate, as shown schematically in (29):

(29) XP
\[ \text{kich/káru/kúna} \]

The first generalization that I want to establish is that such overtly focus-marked constituents must precede the verb, though they need not be immediately preverbal as (32) shows. Representative textual examples are given in (30)–(33).

(30) \[ \text{xás [pa-únuhich kich] t-u-páth-ih.} \]
\[ \text{then the-kidney only PERF-3SG>3-throw-BEN} \]
\[ \text{Then he threw only the kidney to him.} \]
\[ \text{Mrs. Bennett “Screech Owl and Coyote” (ALK-14-35:13)} \]

---

\(^{12}\)Complementizer \( \text{pa=} \) is also used to form clefts, as discussed in Garrett and Mikkelsen (2015).
(31) [uumkun káru] kun-pakúriihva.
3PL also 3PL>3SG-sing.songs
They (the Does) were singing too. (After saying that Coyote was singing when he met the Does)
Mamie Offield “Coyote Trades Songs and Goes to the Sky” (WB-KL-09:4)

(32) [áanxus uum káru] pákuri u-thiimá-tih.
weasel 3SG also song 3SG-have-DUR
Weasel had a song. (After the Old Woman sings her song)
Lottie Beck “The Perils of Weasel” (WB-KL-18:19)

(33) [pa-mu-hróoha küna] ú-kfuukiraa.
the-3SG-wife in.addition 3SG>3-grab
He grabbed his wife in turn. (After grabbing his child.)
Lottie Beck “The Greedy Father” (WB-KL-23:67)

Postverbal placement of a focus-marked phrase is judged ungrammatical (34) and preverbal placement is invariably volunteered (35):

(34) *tá nu-ˈákih [uxnáhich kích].
PERF 1SG>2SG-feed strawberries only
Intended: All I gave you were strawberries. (Vina Smith, 16/06/2013)

(35) [uxnáhich kích] tá nu-ˈákih.
strawberries only PERF 1SG>2SG-feed
All I gave you were strawberries. (Vina Smith, 16/06/2013)

There are three indications that strict preverbal position is due to focus marking. First, as shown in section 3.1, DPs may generally precede or follow the verb, suggesting that the strict preverbal position of the focus-marked DPs in (30)-(35) is due the presence of the focus particle. Second, focus particles may associate with categories other than DP and when they do, these also must appear preverbally. This is shown for a locative adverb in (36), a temporal adverb in (37), and an adverbial clause in (38).13

(36) víri vaa kumá‘ii vaa káan kích kun-ˈáraarahi-tih-anik pirishkáarim.
so that because.of so there only 3PL-live.PL-DUR-ANC grizzly.bear
For that reason grizzly bears lived only there.
Mamie Offield “Duck Hawk and His Wife” (WB-KL-27:31)

(37) . . . axakyāanich vúra kích pa-kun-ˈíp-aam-tih.
twice EMPH only C-3PL-ITER-eat-DUR
. . . it is only twice that they eat.
Phoebe Maddux “Their Daily Life and How They Smoked” (Harrington 1932b:199)

13 The realization of 3SG u- as oo- in the subordinate clause in (38) is due to the vowel coalescence process described in fn. 6. The temporal particle mit that follows the embedded verb in (38) is part of the matrix clause and the expected position is immediately preceding the matrix verb ühruwvthat. I have no explanation for why it shows up to the left of kích in this example.
Finally, textual material and elicitation work both suggest that any focused constituent must appear preverbally in Karuk, whether it is marked by a focus particle or not. This requirement is illustrated by the elicited examples in (39). The question asks whether the addressee’s knife is dull. The addressee denies this and says that his axe is dull. In this exchange, the axe is contrasted with the knife and is thus contrastive focus. The volunteered form is (39a) where the contrastive constituent precedes the verb. The order in (39b) where the contrastive constituent follows the verb is judged infelicitous.

(39) Q: Is your knife dull?

a. púuhara, pa-nani-’akôor u-múmu-hi-tih.  
   no the-my-axe 3SG-dull-VBL-DUR  
   No, my axe is dull.  
   Sonny Davis Jr, 11/08/15

b. #púuhara, u-múmu-hi-tih  pa-nani-’akôor.  
   no 3SG-dull-VBL-DUR the-my-axe  
   Sonny Davis Jr, 11/08/15

So far we have established that focus marked constituents must appear preverbally in Karuk. Next I want to argue that the focus particle forms a syntactic constituent with the associate in support of the adjunction structure in (29), repeated here as (40).

(40) XP
   PP PPP
   XP kích/káru/kúna

The first piece of evidence that the associate and focus particle form a constituent is that they can be the target of constituent negation. Karuk has bipartite negation which consists of a proclitic pu= and a suffix -ara or -hara. In clausal negation, -(h)ara attaches to the predicate and pu= attaches at the left-edge of the scope of negation, which may be the predicate, as in (41), or some preverbal dependent of the predicate, as in (42) and (43).

(41) xás háari vúra ára pu=xú-tih-ara, víri vúra t-óo piip p-eethvuy.  
   and sometimes EMPH person NEG=think-DUR-NEG and EMPH PERF-3SG say the-name  
   Sometimes a person just wasn’t thinking, so he said the name.  
   Julia Starritt “Swearing” (WB-KL-0:6)

14Bright (1957:137–8) analyzes the two forms of the negative suffix as allomorphs: -ara occurs with verbal stems, -hara with non-verbal stems. Macaulay (1989) decomposes -hara into verbalizer -ha followed by -ara. The argument about constituency made here goes through under either analysis.
In (42) the indefinite subject ára ‘person’ appears to the left of the negative proclitic and is interpreted outside the scope of negation. In (42), pu= attaches to the adverb kúkuum ‘again’ and takes scope over the adverb: the interpretation is that it is not the case that the plants will regrow, not that again the plants will fail to grow. Similarly, in (43), pu= attaches to the indefinite subject árra ‘person’ and takes scope over it, resulting in the interpretation that no one died. If negation had narrow scope relative to the subject, the sentence would mean that some person didn’t die, analogous to the interpretation of narrow-scope negation in (41).\textsuperscript{15} When negation targets a smaller constituent, one that does not include the predicate, negation “wraps around” that constituent, as shown in (44), where negation targets the quantifier táay ‘much’.

With this much in place, consider the example in (45), where negation wraps around a focus particle and its associate:

\begin{itemize}
  \item In (42), the indefinite subject ára ‘person’ appears to the left of the negative proclitic and is interpreted outside the scope of negation.
  \item In (42), pu= attaches to the adverb kúkuum ‘again’ and takes scope over the adverb: the interpretation is that it is not the case that the plants will regrow, not that again the plants will fail to grow. Similarly, in (43), pu= attaches to the indefinite subject árra ‘person’ and takes scope over it, resulting in the interpretation that no one died. If negation had narrow scope relative to the subject, the sentence would mean that some person didn’t die, analogous to the interpretation of narrow-scope negation in (41).\textsuperscript{15} When negation targets a smaller constituent, one that does not include the predicate, negation “wraps around” that constituent, as shown in (44), where negation targets the quantifier táay ‘much’.
  \item With this much in place, consider the example in (45), where negation wraps around a focus particle and its associate:
\end{itemize}

\textsuperscript{15}It’s an accident that (43) has árra for ‘person’, where (41) has ára. Both forms occur with narrow and wide scope wrt. negation and other scope-taking elements.

\textsuperscript{16}The exact meaning and morphology of the verb stem píshuṣurishuk is uncertain. I gloss it ‘come.out’ based on the translation of the sentence in Harrington (1932b:193) and the discernable presence of the directional suffix -rishuk ‘out’.

\footnote{15}{It’s an accident that (43) has árra for ‘person’, where (41) has ára. Both forms occur with narrow and wide scope wrt. negation and other scope-taking elements.}

\footnote{16}{The exact meaning and morphology of the verb stem \textipa{píshuṣurishuk} is uncertain. I gloss it ‘come.out’ based on the translation of the sentence in Harrington (1932b:193) and the discernable presence of the directional suffix -rishuk ‘out’.}
constituent with its associate, as I propose here, a very simple and appealing generalization emerges: Karuk negation targets constituents of any size and \( pu= \) and \(-ara\) mark the edges of that constituent. Elements inside of that constituent are interpreted within the scope of negation, elements outside of that constituent are interpreted as outside the scope of negation.

A second observation in support of the structure in (40) is that the focus particles always surface right adjacent to their associate, modulo second position clitics. In this respect, Karuk focus particles differ from their English counterparts, which famously may be linearly separated from their prosodically marked associate:

(46) I only heard that the man with the green sweater was arrested.

a. I only [HEARD] that the man with the green sweater was arrested.

b. I only heard that the [MAN] with the green sweater was arrested.

c. I only heard that the man [WITH] the green sweater was arrested.

d. I only heard that the man with the [GREEN] sweater was arrested.

In Karuk, there appears to be no prosodic correlate of associated foci, nor of free focus (focus that is not associated with a focus particle). Both are characterized by preverbal position and associated foci are further identified by the position of the focus particle. The latter is straightforwardly accounted for by the adjunction structure in (40).

The third important fact is that the associate of a focus particle must be overt. Recall from section 3.1 that Karuk allows prodrop for nominal arguments. However, when a nominal argument is the associate of a focus particle it is invariably pronounced, even when the referent of the focus-marked DP is recoverable from context and/or verbal agreement. Consider the example in (31), reproced below in its narrative context, which is the beginning of a traditional story about Coyote trading songs and going to the sky.

(47) a. So Coyote was traveling, he was singing.

b. And he met two young women.

c. They were does.

d. [\textit{uumkun káru}] \textit{kun-páruiihva}.

\begin{verbatim}
3PL also 3PL-sing.songs
\end{verbatim}

\textit{They (the Does) were singing too.}

Mamie Offield “Coyote Trades Songs and Goes to the Sky” (WB-KL-09:4)

The associate of the focus particle in (47d) is the third person plural pronoun \textit{uumkun}. The verb is intransitive and the associate of the focus marker is thus unambiguously the subject of the verb. The person and number of the subject (3PL) is encoded in the agreement prefix on the verb, and given the preceding context, the subject referent is unambiguously recoverable as the does. The conditions for prodrop are clearly met and yet an overt pronoun is used. Similarly, in the text excerpt in (48), the first person pronoun \textit{naa} is dropped in the first clause of the quote (48a) and again in the last clause of the quote (48d), but not in (48c) where the pronoun is the associate of a focus particle.
I attribute the distinctive use of overt pronouns in (47d) and (48c) to a requirement that the associate of Karuk focus particles must be pronounced. Based on the adjunction structure in (29), this requirement can be stated as in (49).

I attribute the distinctive use of overt pronouns in (47d) and (48c) to a requirement that the associate of Karuk focus particles must be pronounced. Based on the adjunction structure in (29), this requirement can be stated as in (49).

(49) **P-requirement of Karuk focus particles**: The sister of a Karuk focus particle must be pronounced.

It seems plausible that this requirement could be derived from a more general principle that foci must be phonologically realized. In a language like English, where focus is marked by pitch accent, the motivation for such a requirement is obvious: if the associate is not phonologically realized at all it cannot realize the required pitch accent. In a language like Karuk that does not mark the associate prosodically, one cannot derive the obligatory overtness of the associate as straightforwardly, and here I simply state it as a requirement imposed on the associate by its sister.

Next we turn to the second trigger for presumption, which is the postposition *koo*.

### 3.4 Postpositional *koo*

The postposition *koo* is used to express the standard of comparison in comparisons of equality. Typical examples are shown below:

(50) [ishvít kóo ] t-u-uum.

half as.much.as PERF-3SG-arrive

*He arrived as far as half-way (up the tree).*

Lottie Beck “The Perils of Weasel” (WB-KL-18:15)

(51) xás xunyêep u-pûp “nâa ýâas [áachip kóo ] ni-vîîk-tih.”

and Tan.Oak.Acorn 3SG-say 1SG just middle as.much.as 1SG-weave-DUR

*And Tan Oak said, ”I’ve just woven it halfway.”*

Lottie Beck “The Story of Tan Oak Acorn” (WB-KL-30:10)
In each case the complement of *koo* establishes the standard of comparison — the half-way point of the tree in (50), the middle of the basket cap in (51), and tobacco in (52) — and *koo* expresses that the event in question meets this standard in the relevant dimension.

While some Karuk PPs exhibit the same freedom of position as DPs, most PPs must appear preverbally. This is true of PPs headed by *koo*. When presented with a version of (52), in which the PP appears after the verb, the speaker judged it ungrammatical (53) and then volunteered a reformulation that places the standard of comparison after the verb, but does not involve a PP (54):

(53) *u-ˈúux  [ihēeraha kóó  ]
    3sg-be.bitter tobacco as.much.as
    Intended: *It tastes as bad as tobacco.*

Vina Smith, 15/01/2014

(54) u-ˈúux, kúnish ihēeraha.
    3sg-be.bitter, sort.of tobacco
    *It is bitter, sort of like tobacco.*

Vina Smith, 15/01/2014

Karuk allows prodrop of all DP arguments to verbs (subject, direct object, indirect object, and applied object), but DP complements of postpositions are not dropped. Nor are postpositions ever stranded under extraction in question formation. Instead the postposition is pied-piped to the left edge of the clause, as illustrated for the postposition *kumá’ii* ‘because of’ in (55).

(55) kun-ˈíip  [ˈfāat kumá’ii  ]
    3pl-say what because.of the-sweathouse perf 1pl>3-iter-leave
    *They said: “What did we leave him there for in the sweathouse?”*

Yaas “How Grizzly Bear Got his Ears Burnt Off” (JPH-KT-01a:13)

This suggests that postpositions are like focus particles in requiring their sister to be phonologically realized.

### 3.5 Resolving word order conflict through presumption

Taking stock, we have arrived at the following generalizations about Karuk word order:

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The locative postposition *kuuk* ‘to(wards)’ at first glance appears to falsify this claim, as it can occur by itself with the meaning “to(wards) the contextually salient location”. However, there are good indications that *kuuk* does not take a DP complement to begin with, but rather what Bright (1957:69) calls an **adverbial noun**. Direct evidence for this comes from *kuuk* appearing with adverbial complements like *yiiv´aři* ‘rather far’, and from the observation that regular nouns bear the locative suffix -ak when serving as the complement of *kuuk*, e.g. *eerářiv-ak kíiuk* ‘den-LOC towards’ in example (10b) above. Thus the use of *kuuk* without an overt complement does not violate the generalization that DP complements to postpositions may not be dropped.

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1. DPs may appear before or after the verb.

2. Complement clauses must appear postverbally.

3. Focus particles
   (a) must appear preverbally.
   (b) cannot be separated from their associate.
   (c) require their associate to be phonologically realized.

4. The postposition *koo*
   (a) must appear preverbally.
   (b) cannot be separated from its complement.
   (c) require its complement to be phonologically realized.

When the associate of the focus particle is a DP the requirements in (3a–c) dictate that the DP appears preverbally immediately followed by the focus particle. Similarly, when the complement of *koo* is a DP the requirements in (4a–c) force the DP to appear immediately before *koo* in the preverbal field. Both are allowed given (1). However, when the associate of a focus particle is a complement clause, a conflict arises: (2) requires the complement clause to be after the verb, but the focus particle requires its associate to be preverbal in order to satisfy (3a–c). When the complement of *koo* is a clause, the exactly same conflict arises: the postposition must be preverbal (4a) and requires its complement to immediately precede it (by (4b,c) and the fact that it is a postposition), but the complement clause is not allowed to surface in preverbal position. Presumption resolves this conflict, as illustrated in (56):

(56)  [ . . . [vaa\textsubscript{\textit{q}} TRIGGER] . . . V] CP\textsubscript{i}

The proform *vaa* meets the linearization requirements of the trigger (a focus particle or the postposition *koo*) without running afoul of the requirement that complement clauses appear postverbally. The CP itself is thus free to appear after the verb, meeting the requirement for postverbal realization.

4 A comparative perspective

The previous section established that Karuk employs presumption to resolve a word order conflict that arises when an obligatorily preverbal focus particle associates with an obligatorily postverbal complement clause. A natural question to ask is whether presumption is unique to Karuk or found in other languages with similar word order properties. In this section I give evidence that three such languages — Hindi-Urdu, Persian and Turkish — all employ presumption when a postverbal complement clause associates with a preverbal focus particle. I further show that these languages have additional strategies for resolving
the word order conflict — nominalization of the complement clause, long-distance association with focus, and post-verbal focus — none of which are not available in Karuk.  

This comparison thus suggests the dimensions of a typology and situates Karuk within it.

4.1 Word order preliminaries

Hindi-Urdu, Persian and Turkish are head-final languages, which nonetheless require finite CP complements to follow the verb.  

(57) a. Man midoonam [ke zamin gerd-e ].  
I know.1SG.PRES that the.earth round-is  
*I know that the earth is round.*  
(Persian, Lotfi 2006:(3a))  

I that the.earth round-is know.1SG.PRES  

(58) a. Siita-ne kah-aa thaa [ki Mohan aay-aa thaa ].  
Sita-ERG say-PFV AUX.PAST that Mohan come-PFV AUX.PAST  
*Sita said that Mohan had come.*  
(Hindi-Urdu, Manetta 2012:2a)  

Sita-ERG that Mohan come-PFV AUX.PAST say-PFV AUX.PAST  
(Hindi-Urdu, Manetta 2012:2b)  

(59) a. sanik farket-ti [ki hakim uyuyakal-miş ].  
accused notice-PAST that judge fall.sleep-EV.PAST  
*The accused noticed that the judge had fallen asleep.*  
(Turkish, Jaklin Kornfilt, personal communication, July 9, 2017)  

accused that judge fall.sleep-EV.PAST notice-PAST  
(Turkish, Jaklin Kornfilt, personal communication, July 9, 2017)  

The relationship between word order and focus is a good deal more complex, but the important point for present purposes is that there is a robust preference for preverbal focus in all three languages. The situation is perhaps clearest in Turkish, which Işsever (2003:1028) characterizes as follows “[t]he entire pre-verbal area, including the verb itself, is the ‘focus field’ in Turkish”; whereas “[t]he post-verbal area is reserved for tails” (in the sense of Vall-duví and Engdahl (1996)). According to Adli (2010:2261-2263), the situation is similar in

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19Persian ke and Hindi-Urdu ki are cognates and Turkish borrowed ki from Persian.
Persian. Focus appears preverbally, including, but not limited to, the specifier of a designated Focus Projection. She characterizes postverbal elements as topics, though notes that adjuncts expressing destinations may appear postverbally regardless of information structural status (p. 2263). Finally, Butt and King (1996:5) conclude that in Hindi-Urdu “topics appear sentence initially, foci immediately before the verb, and backgrounded material is postverbal.”

Thus the question of how to realize focus on a CP complement arises in these three languages as well. Below I examine five strategies, starting with presumption.

### 4.2 Presumption

All three languages employ presumption of a complement clause under association with a focus particle, as illustrated in (60)–(64). In each example the focus particle is underlined and the presumptive pronoun is in italics and co-indexed with the bracketed postverbal complement clause.

(60) **Man faghat in-o, midunam [ke zamin gerd-e i].**
    
    I *only* do know.1SG.PRES that the earth round-is
    
    *I know only that the earth is round.*
    
    (Persian, Ahmad Lotfi, personal communication, July 9, 2017)

(61) **ham yeh, bhii nahii jaante [ki vah aa nahii sakaa].**
    
    we this also not know that he could not come
    
    *We did not even know it that he could not come.*
    
    (Hindi-Urdu, Subbarao 1984:146)

(62) **wo yeh, hii kah-tee haiN [ki bhaarat to match jit-ega].**
    
    3PL this also say-HAB.PL AUX.PL that India EMPH match win-FUT.M.SG
    
    *They only say that India will win the match. (They don’t say anything else.)*
    
    (Hindi-Urdu, Emily Manetta, personal communication, July 2, 2017.)

(63) **sanik sun-u, sadece farket-ti [ki hakim uuyakal-mu].**
    
    accused that-ACC only notice-PAST that judge fall.sleep-EVF.PAST
    
    *The accused only noticed this, that the judge had fallen asleep.*
    
    (Turkish, Jaklin Kornfilt, personal communication, July 9, 2017)

(64) **Sun-u, da anla-di-m [ki çabalarımız bir sonuc ver-me-yecekk].**
    
    that-ACC also understand-PAST-1SG that our.efforts a result give-NEG-FUT
    
    *I also understood that our efforts won’t produce any result.*
    
    (Turkish, Aslı Gökşel, personal communication, July 22, 2017)

This shows that presumption is not particular to Karuk, but a more wide-spread strategy for resolving a word order tension induced by focus association with a finite complement clause across the verb.
4.3 Nominalization

In addition to finite complement clauses, Hindi-Urdu, Persian and Turkish have nominalized complement clauses. Unlike regular finite complement clauses, nominalized complement clauses occur in preverbal position and may associate directly with a focus particle:

I only this-that the-earth round-is do know.1SG.PRES
I know only that the earth is round.
(Persian, Ahmad Lotfi, personal communication, July 9, 2017)

(66) mujhe [uskaa hasnaa ] hii/bhii pasand hai.
LDAT he.GEN laugh.INF only/also pleasing is
I only/also like his laughing.
(Hindi-Urdu, Veneeta Dayal, personal communication, July 15, 2017)

accused only judge.GEN fall.sleep-FACT.NOM-3SG-ACC notice-PAST
The accused noticed only that the judge had fallen asleep.
(Turkish, Kornfilt 2005:(1), p. 164)

(68) [çabalarımız-in bir sonuç ver-me-yeceg-in-i ] de anla-di-m
our.efforts-GEN a result give-NEG-FUT-3SG-ACC also understand-PAST-1SG
I also understood that our efforts won’t produce any result.
(Turkish, Sumru Özsøy, personal communication, August 6, 2017)

Thus nominalization constitutes a second strategy for associating a complement clause with a preverbal focus particle. This strategy is absent in Karuk, which I have argued lack nominalized complement clauses. These observation fit with a broader typological generalization established in Schmidtke-Bode and Diessel (2017:21–32): the morphosyntactic properties of complement clauses correlates with their position relative to the matrix verb. Finite, unreduced, non-nominalized complement clauses tend to follow the verb, whereas non-finite, reduced, nominalized complement clauses tend to precede the verb.

4.4 Long-distance association

A third strategy, found in Persian and Turkish, is long-distance association between the preverbal focus particle and a finite post-verbal complement clause. This strategy is illustrated for Persian in (69):

(69) Man faghat midoonam [ke zamin gerd-e ].
I only know.1SG.PRES that the-earth round-is
I know only that the earth is round.
(Persian, Ahmad Lotfi, personal communication, July 9, 2017)

(69) is grammatical and, as indicated in the English translation, allows a reading in which the focus particle associates with the complement clause. This long-distance association
with focus is familiar from English *only*, but absent in Karuk, where a focus particle must be adjacent to its associate.

Like presumption and nominalization, long-distance association resolves the word order conflict — the focus particle is preverbal, the complement clause postverbal — but instead of employing a resumptive pronoun or nominalizing the complement clause, it gives up on adjacency between the focus particle and its associate. Such long-distance association is also marginally possible in Turkish with the pre-associate particle *sadece* (*only*):

\[(70) \text{?sanık sadece farket-ti [ki hakim uyuyakal-miş].} \]
\[\text{accused only notice-PAST that judge fall.sleep-EV.PAST} \]
\[\text{The accused noticed only that the judge had fallen asleep.} \]
\[(\text{Turkish, Kornfilt 2005:(3), p. 165})\]

In contrast, long-distance association is not possible with Turkish *da* (71) or Hindi-Urdu *bhii* (72) or *hii* (Veneeta Dayal, personal communication, July 15, 2017).

\[(71) *da anla-di-m [ki çabalarımız bir sonuç ver-me-yeecek]. \]
\[\text{also understand-PAST-1SG that our.efforts a result give-NEG-FUT} \]
\[\text{Intended: I also understood that our efforts won't produce any result.} \]
\[(\text{Turkish, Sumru Özsoy, personal communication, August 6, 2017})\]

\[(72) *ham bhii nahii jaante [ki vah aa nahii sakaa] \]
\[\text{we also not know that he could.not.come} \]
\[\text{Intended We did not even know it that he could not come.} \]
\[(\text{Hindi-Urdu, Subbarao 1984:146, (34)})\]

While the sample is small, this distribution suggests a correlation between relative order of particle and associate and their ability to associate long-distance: particles that precede the associate allow long-distance association (Persian *faghat*, English *only*, and Turkish *sadece*), particles that follow their associate do not allow long-distance association (Turkish *da*, Hindi-Urdu *hii* and *bhii*, and Karuk *kich*). In the terminology of König (1991:10–21), the former are focus adverbials, and the latter true focus particles.

### 4.5 Postverbal focus particle

A fourth logically possible resolution is for the focus particle to surface in the post-verbal field adjacent to the complement clause it associates with. From what I have been able to learn this is not a preferred strategy in any of the three languages.\(^{20}\) It is outright impossible for Hindi-Urdu *hii* and *bhii* (Veneeta Dayal, personal communication, July 18, 2017, Emily Manetta, personal communication, July 2, 2017), and marginal for Persian *faghat* (Ahmad Lotfi, personal communication, July 9, 2017) and Turkish *sadece* (Jaklin Kornfilt, personal communication, July 22, 2017). As for *da*, at least some Turkish speakers accept *da* following a postverbal complement clause, but only under certain circumstances (Aslı Göksel, personal communication, July 22, 2017, Sumru Özsoy, personal communication, August 6, 2017)

\(^{20}\)In all three languages it is of course possible for a focus particle to occur inside a postverbal complement clause associating with some constituent of the complement clause.
4.6 Preverbal complement clause

A fifth logically possible strategy would be for a finite complement clause to exceptionally occur in preverbal position when it is the associate of a focus particle. This, however, is ungrammatical in all three languages. The relevant Persian and Turkish structures are given in (73)-(75).

(73) *Man faghat [ke zamin gerd-e] midunam. I only that the earth round-is know.1sg.pres
Intended: I know only that the earth is round.
(Persian, Ahmad Lotfi, personal communication, July 9 2017)

(74) *sanık sadece [ki hakim uyuyakal-mıs] farket-ti. accused only that judge fall.sleep-ev.past notice-past
Intended: The accused noticed only that the judge had fallen asleep.
(Turkish, (Kornfilt 2005:(3'), p. 166))

(75) *[ki çabalarımız bir sonuç ver-me-yecek] da anla-di-m. that our.efforts a result give-NEG-FUT also understand-past-1sg
Intended: I also understood that our efforts won’t produce any result.
(Turkish, Sumru Özsoy, personal communication, August 7, 2017)

4.7 The beginnings of a typology

The observations made so far are summarized in Table 2.21

Table 2: Strategies for focus association with complement clauses in Karuk, Hindi-Urdu, Persian, and Turkish

<table>
<thead>
<tr>
<th></th>
<th>Karuk</th>
<th>Hindi-Urdu</th>
<th>Turkish (de)</th>
<th>Turkish (sadece)</th>
<th>Persian</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presumption</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Nominalization</td>
<td>*</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>Long-distance association</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>?</td>
<td>√</td>
</tr>
<tr>
<td>Postverbal focus particle</td>
<td>*</td>
<td>*</td>
<td>%</td>
<td>?</td>
<td>?</td>
</tr>
<tr>
<td>Preverbal CP</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
</tbody>
</table>

Much more work is obviously needed to establish a proper typology of the possible realizations of complement clauses in association with focus particle. Nonetheless, several observations can be made on the basis of the preliminary distribution in Table 2. The first observation is that presumption is the most widely used strategy for resolving the word order tension induced by focus association of a complement clause. It is found in all four

21 √ indicates that the strategy, to the best of my knowledge, is fully and uniformly grammatical in the language in question, * indicates that the strategy is fully and uniformly ungrammatical, ? indicates that it is grammatical, but somehow degraded, and % indicates inter-speaker variation in judgments.
languages and with all of the focus particles in each of the languages. Second observation is that if a language prohibits finite complement clauses from preverbal position, a preverbal focus particle cannot override that restriction and “pull” an associated complement clause to preverbal position (bottom row). Third, the existence of nominalization as a strategy for direct association with a preverbal focus particle connects to a broader typological generalization established by Schmidtke-Bode and Diessel (2017): while non-nominalized complement clauses tend to be postverbal, nominalized complement clauses tend to be preverbal. Fourth, the possibility of long-distance association across the verb appears to correlate with the relative order of focus particle and associate: focus particles that precede their associate may associate long-distance, focus particles that follow their associate may not. Finally, we can observe that Persian is the most liberal language in that it employs all four attested strategies, Karuk is the most restrictive language in that it employs only one strategy, namely presumption, and Hindi-Urdu and Turkish fall somewhere in between.

5 Postverbal (dis)placement of complement clauses

The discussion so far has remained silent on the syntactic position occupied by postverbal complement clauses and on how they come to be in that position, specifically whether they are moved there from a preverbal position, base-generated in the postverbal position, or stranded there by ellipsis or remnant movement.

These questions are at the center of the literature on rightward scrambling in verb-final languages, but have proven very difficult to answer conclusively, even for well-studied languages like Hindi-Urdu, German, Turkish and Persian. As an indication of their difficulty, the postverbal placement of Hindi-Urdu complement clauses has been analyzed in terms of extraposition (Subbarao, 1984), base-generation in a right-adjoined position (Mahajan 1990:126-127, Dayal 1996:4-5), base-generation in right-hand complement position (Mahajan 1997:205-206), remnant VP movement (Bhatt and Dayal, 2007) and prosodic alignment with the right edge of the utterance (Manetta, 2012). The questions are even harder in the case of Karuk. Very little is understood about it clause structure and the kinds of data that has played a key role in the debate about rightward scrambling in better studied languages (variable binding, Principle C effects, quantifier scope, and extraction from the postverbal clause) are simply unavailable.

A related question is what motivates rightwards placement of complement clauses, even in otherwise verb-final languages. Proposals range from processing factors (Grosu and Thompson 1977:139ff, Dryer 1980:145–174), over abstract syntactic principles like Case Resistance (Dayal 1996:4), to semantic compositionality (Moulton, 2015) and prosodic considerations (Hartmann 2013, Manetta 2012). Again, I don’t have anything like a definitive answer for Karuk, but I would like to raise the possibility of a prosodic explanation, in particular a requirement that the Karuk verb phrase is parsed into a single intonational phrase. Such a requirement would force a complement clauses, which itself contains a verb phrase, to be realized outside of the matrix verb phrase. A clausal proform would be allowed to surface inside the verb phrase, as it may be parsed with the rest of the verb phrase into a single intonational phrase. This is what we see in cases of presumption. A prosodic account also has the potential to explain why a CP complement to a dependent of the verb, namely the
postposition *koo*, must also surface after the verb. If the PP is part of the verb phrase, an in-situ CP complement would not allow the verb phrase to be parsed as a single intonational phrase. This hypothesized prosodic constraint on the verb phrase, would also explain why in cases of multiple DP coordination (coordination of three or more DPs), only the first DP surfaces before the verb, and the others are realized after the verb, as seen in (76).

(76) asipáraz nu-átivu-ti káru múruk káru tásvaan káru
cooking.basket 1PL>3-carry.in.burden.basket-DUR also mealing.tray also spatula also
tarípaan dipper.basket
.In burden baskets we carried cooking baskets and tray baskets and soup stirrers and dippers . . .
Nettie Ruben “The Pikiawish at Katimin” (WB-KL-83:21)

It is a matter for future research to substantiate this idea within a general theory of Karuk prosody and its interface with syntax.

6 Conclusion

In this paper I have documented a systematic pattern of resumption in Karuk and argued that it occurs to resolve a word order conflict that arises when a postverbal complement clause associates with a preverbal focus particle or postposition. I gave evidence that this strategy is not particular to Karuk, but also productive in Hindi-Urdu, Persian and Turkish. These are verb-final languages, but differ from strict verb final languages, like Japanese and Korean, in requiring clausal complements to occur after the verb, and allowing DP arguments to occur after the verb, provided that they are not focus. In fact, that characterization applies equally well to Karuk, and I want to end with the suggestion that Karuk clause structure is similarly organized around a configurational verb-final VP. Nominal arguments are allowed after the verb, provided that they are not focus (section 3.3), but the unmarked word order is clearly SOV. It is the most frequent word order in texts, it is what is systematically volunteered in elicitation, and it is always accepted by speakers. Other dependents of the verb, in particular adverbial complements, most PPs, and secondary predicates, must precede the verb, transparently reflecting a verb-final structure (Mikkelsen, 2017). As in other loosely verb-final languages, complement clause go against the grain and obligatorily follow the verb, which leads to presumption when a complement clause associates with a preverbal focus particle or postposition. Existing work characterizes Karuk as a free word order language (de Angulo and Freeland 1931:194–5, Bright 1957:140–1, Macaulay 2000:479–80). While much work remains to be done, I hope to have shown that a more principled characterization is possible.

References


Richardson, N. and S. Burcell (1993). Now you are speaking Karuk! Arcata, California: Center for Indian Community Development.


