

# Forms and functions of backward resumption: The case of Karuk

Line Mikkelsen (UC Berkeley)

with †Sonny Davis (Karuk Tribe), †Alvis Johnson, †Vina Smith (Karuk Tribe),  
Nancy Super (nee Jerry; Karuk Tribe), †Peter Super Sr. (Karuk Tribe),  
†Charlie Thom Sr. (Karuk Tribe)

April 2, 2022

## 1 Introduction

Two important environments for resumption cross-linguistically are contrastive left dislocation (1) and relativization (2).

(1) Jan<sub>i</sub> [waar heb je **die**<sub>i</sub> gezien]?  
Jan where have you him seen  
‘Where did you see Jan?’ (Dutch, van Riemsdijk 1997:4)

(2) an ghirseach<sub>i</sub> [ar ghoid na síogaí **í**<sub>i</sub>]  
the girl C stole the fairies her  
‘the girl who the fairies stole’ (Irish, McCloskey 2006:5)

- resumptive pronoun mediates syntactic dependency between the left-peripheral XP and local syntactic environment of resumptive pronoun:

(3) XP<sub>i</sub> [... **pronoun**<sub>i</sub> ...]

- Dependency may also go the other way yielding BACKWARD RESUMPTION:<sup>1</sup>

(4) xas uum vúra **vaa**<sub>i</sub> **kích** u-kupí-tih-anik [p=óo-thtii-tih-anik]<sub>i</sub>.  
and he EMPH that only 3SG-do-DUR-ANC COMP=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)

(5) [... **pronoun**<sub>i</sub> ...] XP<sub>i</sub>

---

<sup>1</sup>All Karuk examples are given in the Karuk Practical Spelling System, adopted by the Karuk Tribe in 1989 (see Richardson and Burcell 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 follow the Leipzig Glossing Rules with the following additions (where glossing assumes a particular analysis of a Karuk morpheme, references to relevant discussion are included): ANC = ancient past, ANT = anterior, CHAR = characterized by (Bright 1957:74–5, Moorman 2014), DESID = desiderative, DO = object marker, EMPH = emphatic particle, ERG = ergative (Bright 1957:129, Macaulay 2000), FACT = factive, HAB = habitual, IRR = irrealis (Bright 1957:126, Peltola 2008), ITER = iterative, PRF = perfect (Bright 1957:138–9, Carpenter 2013:13), PL.AC = plural action, PROSP = prospective (Bright 1957:124–5, Carpenter 2013), RES = resumptive proform, 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, for example 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.

## Goals of talk

1. Expand our empirical understanding of backward resumption through a detailed description of Karuk.
2. Show that backward resumption can be analyzed as the result of partial deletion.
3. Argue that both regular forward resumption and backward resumption are the result of deletion of spellout domains and not phases themselves.

## Methodology

- Empirical foundation:
  - my own and colleagues’ fieldwork with Karuk speakers in Yreka, California from 2010 til 2017
  - 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).
- Window for grammatical elicitation is effectively closed; language community focus on language revitalization.

## Context

- long-term collaboration between Karuk master speakers and elders Sonny Davis, Alvis Johnson, Julian Lang, Vina Smith, Nancy Super (nee Jerry), Peter Super Sr., and Charlie Thom Sr., Karuk language learners and teachers Tamara Alexander, Robert Manuel, Crystal Richardson, Arch Super, Florraine Super, and Franklin (Frankie) Thom, and UC Berkeley linguists Andrew Garrett, Erik Maier, Line Mikkelsen, Karie Moorman, and Clare Sandy in Yreka California starting in 2010 and continuing through 2022.
- work includes language documentation, linguistic analysis, language learning, development of language curriculum, educational support, language teaching, working through texts, (re)transcribing legacy recordings, linguistic elicitation with verbal and visual stimuli, and the development of *ararahih’urípih* ((Karuk language net)), a linguistically annotated online searchable database of Karuk language materials ( $\approx$  7000 sentences)<sup>2</sup>

## 2 Backward resumption in Karuk.

- (6) Karuk backward resumption: [ ... [**pronoun**<sub>*i*</sub> TRIGGER] ... V ] ... XP<sub>*i*</sub> , where
- a. XP = complement clause (7a) or quote (7b)
  - b. TRIGGER = focus particle (7) or postposition (8)
- (7) a. uum **vaa**<sub>*i*</sub> kích u-’ítaap-ti [pa=’árah u-patum-kôo-ti kuma-’ánav]<sub>*i*</sub>.  
she this only 3SG-know-DUR COMP=person 3SG-suck-to-DUR kind-medicine  
‘She only knows how [to treat] the person with the sucking kind of medicine.’  
Nettie Ruben in conversation with Lottie Beck (LA 078, tape 1, side A, line 397 of William Bright’s transcription)
- b. xás **vaa**<sub>*i*</sub> kích kun-ipí-tih [“pu=kín-taapxuv-eesh-ara”]<sub>*i*</sub>.  
then that only 3PL-say-DUR NEG=1PL.NEG-capsize-PROSP-NEG  
‘And they said only that, “We won’t capsize”’  
Nettie Ruben “The Boy from Itúkuk” (WB-KL-57: 93)

---

<sup>2</sup> <http://linguistics.berkeley.edu/~karuk/>

- (8) xás u-pêer “**vaa**<sub>i</sub> ík víra **kóo** ôok i-kûuntakoo-vish [pa=ni-’ípak-ahaak]<sub>i</sub>, xasík i-kôoh-eesh.”  
 and 3SG-tell that must EMPH as.much.as here 2SG-sit-PROSP COMP=1SG-return-IRR then 2SG-stop-PROSP  
 ‘And he told it, “You must be sitting here like that until I come back, then you can stop.”’  
 Julia Starritt “Coyote Goes to a War Dance” (WB-KL-06:15)

HYPOTHESIS: backward resumption resolves 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.

## 2.1 Argument realization

- Karuk is a headmarking, polysynthetic language of the Klamath River of Northern California.
  - Isolate within the Hokan stock (Golla 2011:82-127).
  - Exhibits surface characteristics of a nonconfigurational language: DP arguments can be freely ordered, omitted, and split (Hale 1983).
- (9) a. púyava kári pa=’áraar pa=’urípi u-p-ithyúru-ri-paa.  
 you.see then the=human the=net 3SG>3-ITER-pull-out  
 ‘Then the Indian pulled the net out of the water.’ [SOV]  
 Julia Starritt “Salmon Fishing” (WB-KL-69:16)
- b. xás pa=pihniich u-píimni pa=mú-’aramah.  
 then the=old.man 3SG>3-fall.in.love the=3SG.POSS-child  
 ‘And the old man fell in love with his child.’ [SVO]  
 Julia Starritt “Coyote Marries His Own Daughter” (WB-KL-16:3)
- c. ta’ítam kun-ífik-ahéen pa=xuntápan pa=’asiktávaan-sa.  
 so 3PL>3SG-pick.up-ANT the=acorn the=woman-PL  
 ‘Then the women gathered the acorns.’ [VOS]  
 Mamie Offield “Coyote Gives Salmon and Acorns to Mankind” (WB-KL-17:34)
- (10) xás t-u-’áv.  
 then PRF-3SG>3-eat  
 ‘Then he ate it.’  
 Mrs. Bennett “Screech Owl and Coyote” (ALK-14-35:16)
- (11) púyava **táay** tá kun-’ûupva **pa=tayíith**.  
 you.see much PRF 3PL>3SG-dig.roots the=brodiaea  
 ‘So they dug a lot of brodiaeas.’  
 Nettie Ruben “The Story of Skunk” (WB-KL-46:14)

## 2.2 Complement clauses.

- Finite and carry the same tense, aspect, mood, and agreement morphology as root clauses.
- (12) p=óo-thtii-tih-anik  
 COMP=3SG-gamble-DUR-ANC  
 ‘that he was gambling’
- (13) ú-thtii-tih-anik.  
 3SG-gamble-DUR-ANC  
 ‘He was gambling.’

- Marked by the proclitic complementizer *pa*=<sup>3</sup>
- If the complement clause contains additional preverbal material, the complementizer may attach to that material (14) or to the verb (15).

- (14) naa íp ni-pasúpiichv-at [**pa**=sôomvaan t-i-’ípasuk].  
 1SG PST 1SG-reveal-PST COMP=prospective.wife PRF-2SG-bring.back  
 ‘I revealed that you were bringing home a new wife.’  
 Mamie Offield “Duck Hawk and His Wife” (WB-KL-27:23)
- (15) ni-krûunti [iim **p**=ee-mnísh-eesh].  
 1SG-wait.for 2SG COMP=2SG-cook-PROS  
 ‘I am waiting for you to cook.’  
 Vina Smith, September 8, 2013

- Attested with propositional attitude verbs, aspectual verbs, and verbs of communication:

aachíchha	‘to be glad’
áapunma	‘to know’
imus	‘to look at’
ikrûunti	‘to wait for’
ikyâavarihva	‘to try’
ipêer	‘to tell’
ipshinvárehva	‘to forget’
ítap	‘to know’
káriha	‘to be ready’
kôoha	‘to stop’
kúupha	‘to do’
mah	‘to see, to find’
pasúpiichva	‘to reveal’
piip	‘to say’
pikrôok	‘to remember’
pikyaar	‘to finish’
táapkup	‘to like’
thitiv	‘to hear’
ûurih	‘to be unwilling’
víiha	‘to dislike’

Table 1: Karuk verbs that allow clausal complements

- Adverbial clauses are formed the same way and may precede or follow the main verb:

- (16) [p-oo-’áaksur] pirishkâarim sáruk u-ikyív-unih.  
 COMP-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)

---

<sup>3</sup>If the host of the complementizer proclitic begins with a vowel, as is the case in 12, the vowel of the proclitic coalesces with the stem-initial vowel through a regular phonological process (Bright 1957:34-35). *a+u* yields *oo* (as in 12); *a+i* yields *ee* (as in 15 below).

- (17) kári xás tá kun-taxísh~xish [pa=t-óo msip].  
 then then PRF 3PL>3SG-scrape~ITER COMP-PRF-3SG cool.off  
 ‘And they scraped it when it was cool.’  
 Nettie Ruben “Bear Hunting” (WB-KL-71:23)

- In contrast, complement clauses invariably follow the main verb:

- (18) naa vúra ni-tapkûupi-ti [pa=ni-’uufíthvu-tih].  
 1SG EMPH 1SG-like-DUR COMP=1SG-swim-DUR  
 ‘I like to swim.’  
 Vina Smith, September 7, 2013

- (19) ni-krûunti [iim p=ee-mnísh-eesh].  
 1SG-wait.for 2SG COMP=2SG-cook-PROS  
 ‘I am waiting for you to cook.’  
 Vina Smith, September 8, 2013

- Speaker rejects (20) as “no good”
- Recasts complement clause as adverbial clause (21):

- (20) \*naa vúra [pa=ni-’uufíthvu-ti] ni-tapkûupi-ti.  
 1SG EMPH COMP=1SG-swim-DUR 1SG-like-DUR  
 Intended: ‘I like to swim.’  
 Vina Smith, September 7, 2013

- (21) [iim p=ee-mnísh-eesh] ni-krûuntih-eesh.  
 2SG COMP=2SG-cook-PROS 1SG-wait.for-PROS  
 ‘If you are going to cook, I will wait.’  
 Vina Smith, September 8, 2013

- Expected on typological grounds: complement clauses tend to be positionally restricted and to favor postverbal position (Dryer 1980, Schmidtke-Bode and Diessel 2017).

### 2.3 Focus particles

Karuk has three focus particles, *kích* ‘only’, *káru* ‘also’, and *kúna* ‘in addition’.

- (22) naa kích  
 1.SG only  
 ‘only me’

- (23) naa káru  
 1.SG also  
 ‘me too’

- (24) fâat kúna  
 what in.addition  
 ‘what else’

Three generalizations:

1. a focus particle and its associate must appear preverbally
2. a focus particles forms a constituent with its associate
3. The associate of a focus particle must be phonologically overt

### 2.3.1 Overtly focus-marked constituents must precede the verb

- (25) xás [pa=’únuhich kich] t-u-páth-ih.  
 then the=kidney only PRF-3SG>3-throw-BEN  
 ‘Then he threw only the kidney to him.’  
 Mrs. Bennett “Screech Owl and Coyote” (ALK-14-35:13)
- (26) [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)
- (27) [âanxus uum káru] pákuri u-thiiná-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)
- (28) [pa=mu-hrôoha kúna] 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 (29) and preverbal placement is invariably volunteered (30).

- (29) \*tá nu-’ákih [uxnáhich kích].  
 PRF 1SG>2SG-feed strawberries only  
 Intended: ‘All I gave you were strawberries.’  
 Vina Smith, 16/06/2013
- (30) [uxnáhich kích] tá nu-’ákih.  
 strawberries only PRF 1SG>2SG-feed  
 ‘All I gave you were strawberries.’  
 Vina Smith, 16/06/2013

### 2.3.2 A focus particle forms a constituent with its associate

- (31)
- 

Evidence

1. focus particle and associate linearly adjacent
2. focus particle and associate can be the target of constituent negation

#### Linear adjacency

- focus particles always surface right adjacent to their associate modulo 2nd position clitic

## Target of negation

- Karuk has bipartite negation which consists of a proclitic *pu=* and a suffix *-(h)ara*
- 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 (32) or a preverbal dependent of the predicate (33).

(32) xás hâari vúra ára **pu=xú-tih-ara**, víri vúra t-óo piip p-eethvuy.  
and sometimes EMPH person NEG=think-DUR-NEG and EMPH PRF-3SG say the-name  
'Sometimes a person just wasn't thinking, so he said the name.'  
NOT: 'Sometimes no one was thinking, so ...'  
Julia Starritt "Swearing" (WB-KL-0:6)

(33) víri chavúra **pu='áraar iim-tih-ara**, ...  
and finally NEG-person die-DUR-NEG  
'Finally no person died ...'  
NOT 'Finally a person didn't die ...'  
Mamie Offield "A Trip to the Land of the Dead" (WB-KL-58:56)

- In constituent negation, negation "wraps around" that constituent (34)

(34) apmáan-kam káru vúra t-u-píshusurishuk, vúra **pu=táay-hara**.  
mouth-side also EMPH PRF-3SG-come.out EMPH NEG=much-NEG  
'It (= smoke) comes out of his mouth too, but not much.'  
Phoebe Maddux "How They Take the Tobacco Smoke into the Lungs" (Harrington 1932b:193)

- in 35 negation wraps around a focus particle and its associate, indicating that they form a constituent

(35) **pu=fáthip kích-ara** p-eekôor kun-iká-ar-tih, xavish'úhraam káru vúra ikôor  
NEG-manzanita only-NEG the-stone.pipe.bowl 3PL-make-INST-DUR arrowwood also EMPH stone.pipe.bowl  
kun-iká-ar-tih.  
3PL-make-INST-DUR  
'Manzanita was not the only kind that they put stone pipe bowls onto, the arrowwood also they fitted with stone bowl pipes.'  
Phoebe Maddux "Stone Bowl Pipes" (Harrington 1932b:151)

### 2.3.3 Associate of a focus particle must be overt.

- Karuk allows prodrop of nominal arguments.
- When a nominal argument is the associate of a focus particle the argument is invariably pronounced, even when recoverable from context and/or verbal agreement.

(36) a. So Coyote was traveling, he was singing.  
b. And he met two young women.  
c. They were does. [prodrop of 'they']  
d. [**uumkun káru**] kun-pakúriihva.  
3PL also 3PL-sing.songs  
'They (the Does) were singing too.'

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

(37) P-REQUIREMENT OF KARUK FOCUS PARTICLES  
The sister of a Karuk focus particle must be pronounced.

## 2.4 Postpositional *koo*.

The postposition *koo* is used to express the standard of comparison in comparisons of equality:

(38) [ishvít kóo] t-u-'uum.  
 half as.much.as PRF-3SG-arrive  
 'He arrived as far as half-way (up the tree).'  
 Lottie Beck "The Perils of Weasel" (WB-KL-18:15)

(39) ... [ihêeraha kóo] u-'úux.  
 tobacco as.much.as 3SG-be.bitter  
 '... it tastes as bad as tobacco.'  
 Phoebe Maddux "How it tastes" (Harrington 1932b:49)

- PPs headed by *koo* must appear preverbally:

(40) \*u-'úux [ihêeraha kóo]  
 3SG-be.bitter tobacco as.much.as  
 Intended: 'It tastes as bad as tobacco.'  
 Vina Smith, January 15, 2014

(41) u-'úux, kúnish ihêeraha.  
 3SG-be.bitter, sort.of tobacco  
 'It is bitter, sort of like tobacco.'  
 Vina Smith, January 15, 2014

- While Karuk allows prodrop of DP arguments to verbs DP complements of postpositions are not dropped.<sup>4</sup>
- Postpositions are never stranded under leftward extraction but pied-piped to the left edge of the clause.

(42) kun-píip "fâat kumá'ii p=eekmaháchraam tá nu-p-sáamkir?"  
 3PL-say what because.of the=sweathouse PRF 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.

---

<sup>4</sup>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 *yivári* 'rather far', and from the observation that regular nouns bear the locative suffix *-ak* when serving as the complement of *kuuk*, for example *eerárviv-ak kúuk* 'den-LOC towards' in example 11?? above. Thus the use of *kuuk* without an overt complement does not violate the generalization that DP complements to postpositions may not be dropped.



## 2.5 Resolving word order conflict through backward resumption

We have arrived at the following generalizations about Karuk word order:

1. Complement clauses must appear postverbally.
  2. Focus particles
    - (a) must appear preverbally.
    - (b) cannot be separated from their associate.
    - (c) require their associate to be phonologically realized.
  3. The postposition *koo*
    - (a) must appear preverbally.
    - (b) cannot be separated from its complement.
    - (c) requires its complement to be phonologically realized.
- When the associate of a focus particle is a complement clause, a conflict arises:
    - (1) requires the complement clause to be after the verb, but the focus particle requires its associate to be preverbal in order to satisfy (2a-c).
  - When the complement of *koo* is a clause, the exact same conflict arises:
    - the postposition must be preverbal by 3a and requires its complement to immediately precede it (by 3b,c)
    - the complement clause is not allowed to surface in preverbal position.
  - Backward resumption resolves this conflict:

(43) [ ... [**vaa**<sub>*i*</sub> TRIGGER] ... V] CP<sub>*i*</sub>

- 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.

## 3 Backward resumption as the outcome of chain resolution

Landau 2006: syntactic movement creates chains which must be resolved for pronunciation and interpretation at the PF and LF interface

- At PF two opposing principles govern chain resolution:

(44) P-Recoverability (Landau 2006:56)

In a chain  $\langle X_1 \dots X_i \dots X_n \rangle$ , where some  $X_i$  is associated with phonetic content,  $X_i$  must be pronounced.

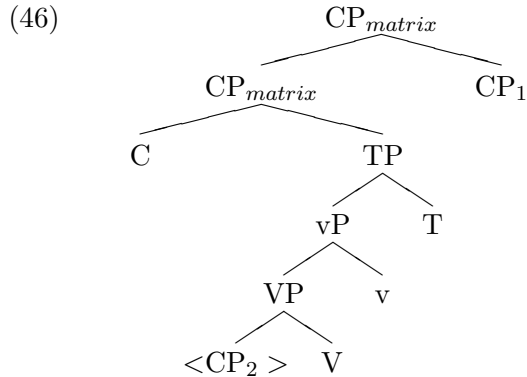
(45) Economy of Pronunciation (Landau 2006:57)

Delete all chain copies at PF up to P-recoverability

- A chain member can be associated with phonetic content by virtue of the structural position it occupies

## Structural assumptions for Karuk

- VP, vP and TP are head-final
- CP is head initial
- Clausal complements (of V or P) must move Moulton 2015



(47) Resulting chain:  $\langle CP_1, CP_2 \rangle$

(48) In Karuk the highest chain member realizes full phonetic content.

(49) vírusur pa='áama u-'áam-tih.  
 bear the=salmon 3SG-eat-DUR  
 'The bear's eating the salmon.'  
 Lucille Albers, October 24, 2010

(50) **fâat** iim i-'áv-eesh?  
 what 2SG 2SG-eat-PROSP  
 'What are you going to eat?'  
 Vina Smith, October 20, 2012

- if CP is a complement of V and no focus is involved only the highest copy ( $CP_1$ ) is pronounced.

(51) naa íp ni-pasúpiichv-at [pa=sôomvaan t-i-'ípasuk].  
 1SG PST 1SG-reveal-PST COMP=prospective.wife PRF-2SG-bring.back  
 'I revealed that you were bringing home a new wife.'  
 Mamie Offield "Duck Hawk and His Wife" (WB-KL-27:23)

This is derived as follows:

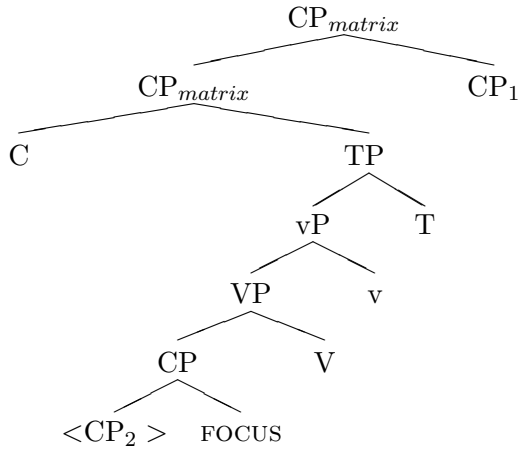
- As the highest chain member, the postverbal  $CP_1$  is pronounced in full.
- preverbal  $CP_2$  however not associated with phonetic content.
  - as the bottom of the chain not privileged by (48).
  - verb does not require the pronunciation of its sister (52)

(52) ni-'aapúnmu-tih.  
 1SG-know-DUR  
 'I know.'  
 Alvis Johnson, April 10, 2014

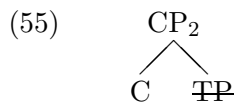
## Backward resumption

- (53) xas uum vúra **vaa<sub>i</sub>** kích u-kupí-tih-anik [p=óo-thtí-tih-anik]<sub>i</sub>.  
 and he EMPH that only 3SG-do-DUR-ANC COMP=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)

(54)



- CP<sub>1</sub>, is pronounced by (48).
- CP<sub>2</sub>, is now associated with phonetic content because Karuk focus particles require their sister to be pronounced
- Economy of Pronunciation requires it to be minimally pronounced.
- Minimal pronunciation results from partial deletion (van Urk, 2018).
- Partial deletion targets syntactic structure up to pronounceability, here deletion of TP complement of the lower C head



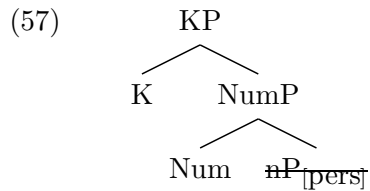
- (56)
- [C] ⇔ pa= / \_\_\_ TP
  - [C] ⇔ vaa

### 3.1 Implications

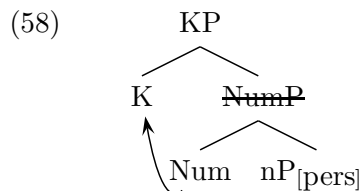
- In Karuk backward resumption target of deletion is TP, i.e. the spell-out domain of the phase head C.
- Is this true in other cases of partial deletion?
  1. partial deletion of DP in Dinka (van Urk, 2018)
  2. partial deletion of nP in Swahili (Scott, 2021)
  3. partial deletion of vP in Danish (Harizanov and Mikkelsen, 2018).

### Partial deletion of DP in Dinka

- resumptive DP show number features, but not person features
- van Urk’s analysis: partial deletion targets nP which is a phase

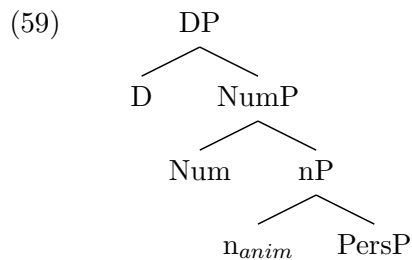


- Alternative analysis: Num moves to phase-head K and deletion targets NumP, the spell-out domain of K.



### Partial deletion of DP in Swahili (Scott, 2021)

- resumptive pronouns due to movement lack person distinctions, but show number and gender
- Scott’s analysis: partial deletion targets PersP the spell-out domain of the phasehead n.

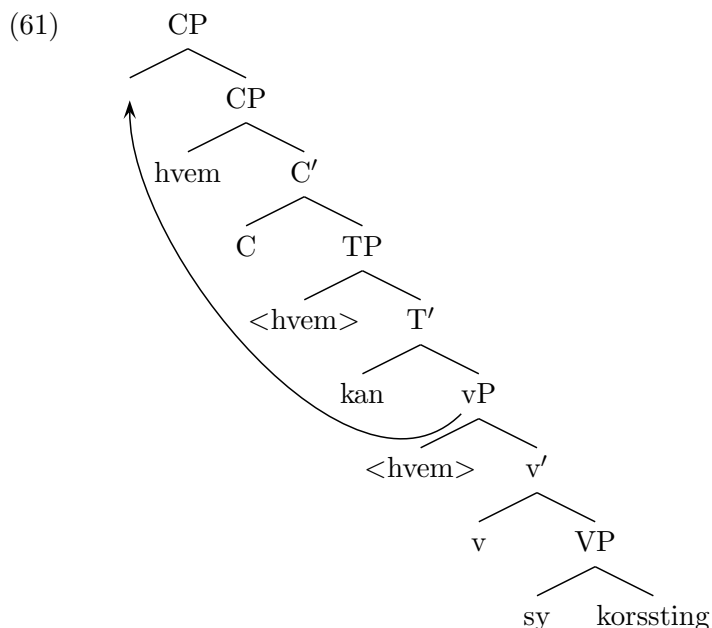


### Partial deletion of vP in Danish

- fully articulated vP moves to adjoin to CP and a resumptive *det* appears in its base position.

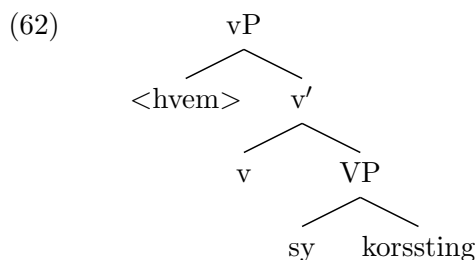
(60) [Sy korssting]<sub>i</sub> hvem kan det<sub>i</sub>?  
 sew cross.stich who can RES  
 ‘Who can do cross stitch?’

(Harizanov and Mikkelsen 2018:15)



(adapted from Harizanov and Mikkelsen 2018:19, (13))

The internal structure of the lower copy is as in 62.



- partial deletion targets VP leaving the v phase head intact.<sup>5</sup>

- (63)
- [v] ⇔ ∅ / \_\_\_ V
  - [v] ⇔ det

PHASE HEAD	SPELLOUT DOMAIN DELETED	INSTANTIATION
C	TP	Karuk backward resumption
v	VP	Danish vP left dislocation
K/D	NumP	Dinka <i>wh</i> -movement
n	PersP	Swahili relativization and clefting

Table 2: Deletion of spellout domains

<sup>5</sup>Following Gribanova and Mikkelsen's (2018) analysis of Danish vP ellipsis, I assume that V and v are unified by amalgamation in the Morphology and not by syntactic head (see Harizanov and Gribanova 2019 for this distinction). Amalgamation takes place before Vocabulary Insertion and therefore v is in the context of V when Vocabulary Insertion occurs. This means that, in the general case, v matches the vocabulary item in 63a and has zero exponence. However, deletion bleeds amalgamation and therefore deletion of VP blocks amalgamation of V and v. As a result, v no longer matches the context of 63a. Instead the elsewhere form, *det* is inserted.<sup>6</sup>

(64) DELETION OF SPELLOUT DOMAINS HYPOTHESIS  
Partial deletion of lower copies in chain resolution targets only spellout domains.

- conceptual support for the DELETION OF SPELLOUT DOMAINS HYPOTHESIS
  - Spellout domains are the units shipped off to PF for pronunciation.
  - This makes them natural targets for deletion, which is fundamentally about pronunciation.
  - Phases are natural candidates for movement.
  - deletion of the spellout domain of a moved phase is a straightforward way to ensure minimal pronunciation: deletion of the spellout domain leaves just the phase head behind for pronunciation.

## 4 Conclusion and open questions

- In Karuk backward resumption of CP applies to resolve a word order conflict: complement CPs must be postverbal while focused element and complements of postpositions must be preverbal.
- Backward resumption is the result of partial deletion
- Partial deletion targets spellout domains, not phases themselves.

Two open questions

1. Do all instances of backward resumption involve CPs?
2. Is partial deletion involved in other grammatical processes?
  - If ellipsis is also derived by deletion, does it involve the same mechanism as deletion of movement copies, as Chomsky (1995:251–253), among others, suggests?
  - If it does, ellipsis should also be restricted to spellout domains.
  - Merchant's (2001) analysis of sluicing as deletion of TP fits this pattern, as does Merchant's (2013) analysis of VP ellipsis as deletion of vP under a Voice phase head.

## References

- Béjar, S. (2003). *Phi-syntax: A Theory of Agreement*. Ph. D. thesis, University of Toronto.
- Bright, W. (1957). *The Karok Language*. Berkeley and Los Angeles: University of California Press.
- Bright, W. and S. Gehr (2005). *Karuk Dictionary*. Happy Camp, California: Karuk Tribe of California.
- Campbell, A. (2012). *The Morphosyntax of Discontinuous Exponence*. Ph. D. thesis, University of California, Berkeley.
- Carpenter, K. (2013). Prospective aspect in Karuk. Unpublished manuscript, UC Berkeley.
- Chomsky, N. (1995). *The Minimalist Program*. Cambridge, MA: MIT Press.
- de Angulo, J. and L. S. Freeland (1931). Karok texts. *International Journal of American Linguistics* 6(3/4), 194–226.
- Dryer, M. (1980). The positional tendencies of sentential noun phrases in universal grammar. *Canadian Journal of Linguistics* 25(2), 123–195.
- Golla, V. (2011). *California Indian Languages*. University of California Press.

- Gribanova, V. and L. Mikkelsen (2018). On the interaction of head movement and ellipsis in Danish. In J. Merchant, L. Mikkelsen, D. Rudin, and K. Sasaki (Eds.), *A Reasonable Way to Proceed. Essays in honor of Jim McCloskey*, pp. 104–123. Linguistics Research Center, UCSC.
- Hale, K. (1983). Walpiri and the grammar of non-configurational languages. *Natural Language & Linguistic Theory* 1(1), 5–47.
- Harizanov, B. and V. Gribanova (2019). Whither head movement? *Natural Language & Linguistic Theory* 37(2), 461–522.
- Harizanov, B. and L. Mikkelsen (2018). Resumption and chain reduction in Danish VP left dislocation. In S. Hucklebridge and M. Nelson (Eds.), *NELS 48: Proceedings of the Forty-Eighth Annual Meeting of the North East Linguistic Society*, Volume 2, pp. 15–28.
- Harrington, J. P. (1930). Karuk texts. *International Journal of American Linguistics* 6(2), 121–161.
- Harrington, J. P. (1932a). *Karuk Indian Myths*. Washington, D.C.: Bureau of American Ethnology.
- Harrington, J. P. (1932b). *Tobacco among the Karuk Indians of California*. Bureau of American Ethnology, Bulletin 94. United States Government Printing Office.
- Landau, I. (2006). Chain resolution in Hebrew V(P)-fronting. *Syntax* 9(1), 22–66.
- Lang, J. (1994). *Ararapikva. Traditional Karuk Indian Literature from Northwestern California*. Berkeley, CA: Heyday Books.
- Macaulay, M. (1989). A suffixal analysis of the Karok ‘endoclititic’. *Lingua* 78(2-3), 159–180.
- Macaulay, M. (1992). Inverse marking in Karuk: the function of the suffix *-ap*. *International Journal of American Linguistics* 58(2), 182–201.
- Macaulay, M. (2000). Obviative marking in ergative contexts: The case of Karuk *’iin*. *International Journal of American Linguistics* 66(4), 464–498.
- McCloskey, J. (2006). Resumption. In M. Everaert and H. van Riemsdijk (Eds.), *The Blackwell Companion to Syntax*, pp. 94–117. Oxford: Blackwell.
- Merchant, J. (2001). *The Syntax of Silence. Sluicing, Islands, and the Theory of Ellipsis*. Oxford: Oxford University Press.
- Merchant, J. (2013). Voice and ellipsis. *Linguistic Inquiry* 44(1), 77–108.
- Moorman, K. (2014). Polyfunctionality of *-ara* in Karuk. Honors thesis, University of California, Berkeley.
- Moulton, K. (2015). CPs: Copies and compositionality. *Linguistic Inquiry* 46(2), 305–343.
- Peltola, R. (2008). Subordination in Karuk, with special regard on the suffix *-aha:k*. Unpublished manuscript, University of Wisconsin, Madison.
- Richardson, N. and S. Burcell (1993). *Now you are speaking Karuk!* Arcata, California: Center for Indian Community Development.
- Schmidtke-Bode, K. and H. Diessel (2017). Cross-linguistic patterns in the structure, function, and position of (object) complement clauses. *Linguistics* 55(1), 1–38.
- Scott, T. (2021). Two types of resumptive pronouns in Swahili. *Linguistic Inquiry* 52(4), 812–833.
- van Riemsdijk, H. (1997). Left-dislocation. In E. Anagnostopoulou, H. van Riemsdijk, and F. Zwarts (Eds.), *Materials on left-dislocation*, pp. 1–10. John Benjamins.

van Urk, C. (2018). Pronoun copying in Dinka Bor and the copy theory of movement. *Natural Language & Linguistic Theory* 36(3), 937–990.