As Above but Below: Karuk Directional Suffixes as "Low Applicatives"[*]

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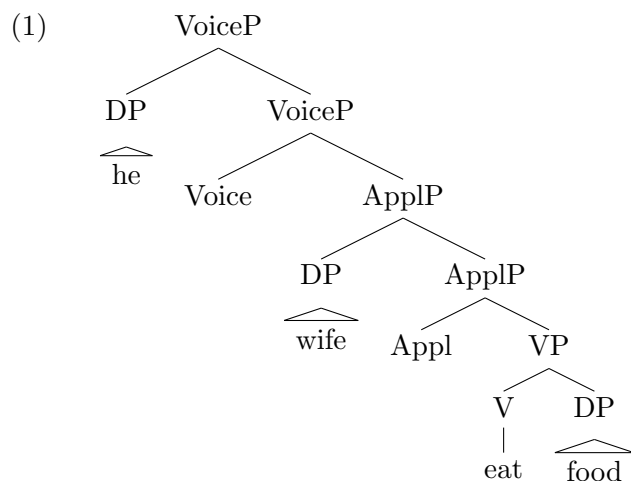October 16th, 2015

1 Overview

- Karuk directional suffixes, previously analyzed as high applicatives, have some unexpected restrictions on which roots they occur with.

    - They cannot occur with telic roots.
    - Atelic roots are split between requiring a directional suffix and only optionally appearing with one.

- The inability to occur with telic roots falls out neatly from an analysis situated in the framework of Ramchand (2008), as in that system ResP, responsible for inherent telicity, and PathP, where directionals would be located, cannot co-occur.

- As PathP is very low in the VP, Karuk directional suffixes must then be a 'low applicative,' though they express a semantic relation between an event and individual expected only for high applicatives (Pylkkänen, 2008, cf.). This type of low applicative is only licensed by Ramchand (2008)'s low PathP.
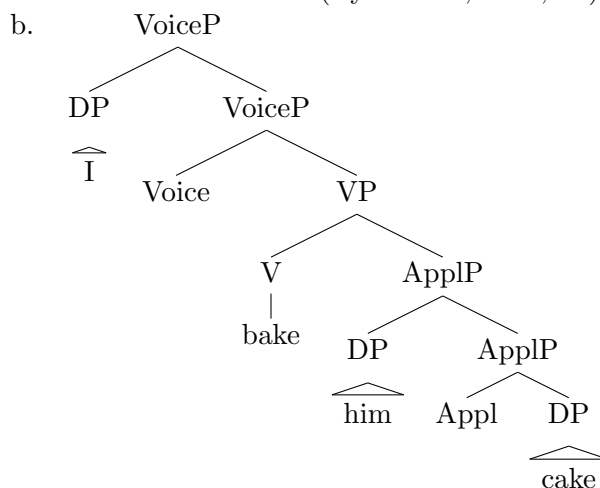
2 Theoretical Background

2.1 High vs. Low Applicatives

- High applicatives: relation between event and individual; above VP (Pylkkänen, 2008, 6a)

(1)   VoiceP
        ┌────────┴────────┐
       DP   VoiceP
        │   ┌──────┴──────┐
       he   Voice   ApplP
                         ┌───────┴───────┐
                        DP   ApplP
                         │   ┌──────┴──────┐
                       wife   Appl   VP
                                          ┌─────┴─────┐
                                          V   DP
                                          │   │
                                        eat   food

• Low applicatives: relation between two individuals, transfer-of-possession; within VP

(2)   a.   I baked him a cake (Pylkkänen, 2008, 6b)
       b.   VoiceP
            ┌────────┴────────┐
           DP   VoiceP
            │   ┌──────┴──────┐
            I   Voice   VP
                            ┌────────┴────────┐
                            V   ApplP
                            │   ┌───────┴───────┐
                          bake   DP   ApplP
                                      │   ┌──────┴──────┐
                                    him   Appl   DP
                                                             │
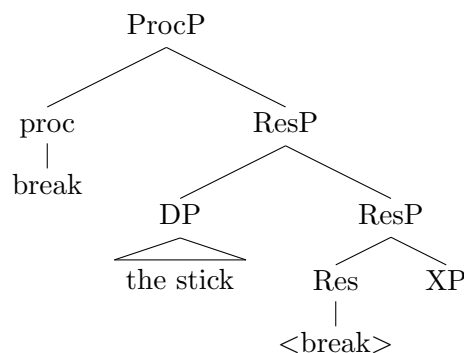   cake

• Transitivity restriction: Only high applicatives can appear with unergative verbs.

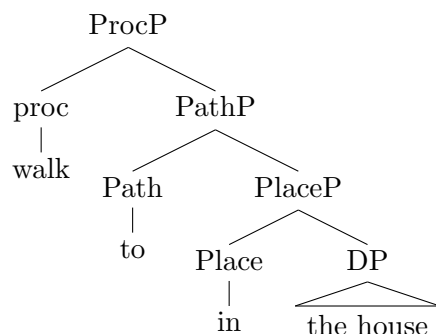## 2.2   ResP and PathP in Ramchand (2008)

• Ramchand (2008)'s decomposition of the VP allows for either a ResP or a PathP
  as complement to Proc - not both. Telic roots[1] have (at least) the structure in (3),
  while roots with directional semantics have (at least) the structure in (4)

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[1]Technically, Ramchand (2008) identifies only Achievement verbs as having ResP, owing to the fact that
she claims, in the case of an [(init), proc, res] verb, that all three events are interpreted as overlapping.

(3)   ProcP   adapted from (Ramchand, 2008, p. 114)

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(3)            ProcP                    adapted from (Ramchand, 2008, p. 114)
           /        \
        proc         ResP
         |         /      \
       break      DP        ResP
                 /  \      /     \
              the stick  Res      XP
                          |
                       <break>
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(4)            ProcP                    adapted from (Ramchand, 2008, p. 114)
           /        \
        proc         PathP
         |         /      \
       walk      Path      PlaceP
                  |       /      \
                  to    Place      DP
                         |       /    \
                         in    the house
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- Note: PathPs can be bounded or unbounded, resulting in telic or atelic verbs. The inability of ResP and PathP to combine is thus not due to both expressing telicity, as PathPs need not.

3   The Karuk Language

- Highly endangered language isolate of Northern California (first lg. speakers <6).

- Comprehensive grammar, text collection, and lexicon published in 1957 (Bright, 1957) and expanded dictionary based on Bright (1957)'s lexicon in Bright & Gehr (2004)

- Online dictionary (expanded from Bright & Gehr (2004)) and text corpus maintained by research group at UC Berkeley: around 7300 dictionary entries, around 150 'texts' (including narratives and transcribed elicitation sessions) with 23000 words in 6000 clauses (as of January 2015) (Garrett et al., 2015)

As I am unable to distinguish in a principled way between Karuk achievements and accomplishments at this time, I abstract away from this detail. The structures I give for telic Karuk roots is as if they were all achievement verbs; if some turn out to be accomplishments, they canl be given inherent PathPs instead of ResP - one cannot have two PathPs, so the complementarity between directional suffixes and telic roots can be preserved as long as one can justify the inability for the Karuk roots to underassociate. I leave that question for future work.

Relevant Grammatical Features

- Pro-drop[2]

    (5) xás ta'ítam u-'âanvath-vunaa-heen
         and then   3SG>3-paint.face-PL-ANT
         'So then he painted their faces.'
         (Julia Starritt, "Coyote Steals Fire", WB_KL-10:33, 1957)

- Highly affixing verbs; Bright (1957) describes 8 verbal derivational suffix positions.

- Optional tense morphology: verbs unmarked for tense can be interpreted as either past or present:

    (6) a. pi'êep   pa-nani-'ákah   vaa kaan u-sxáay-tih.
             long.ago the-1SG.POSS-father thus there 3SG-fish-DUR
             Years ago my father was fishing there,
         b. payêem naa   káru kaan ni-shxáay-tih.
             now   1SG.PRON also there 1SG-fish-DUR
             and now I'm also fishing there. (VS, 10/26/2014)

3.1 Karuk Directional Suffixes

- Around 50 directional suffixes, ranging from expressing only Path to expressing Path and Ground of varying specificity (Macaulay, 2004) (cf. Talmy, 1985)

    - Path only: *-sipriv* 'up'; *-iroopith* 'around'
    - Path and Ground: *-taku* 'onto a horizontal surface'; *-furuk* 'into an enclosure'; *-vara* 'in through a tubular space'; *-roovu* 'upriverward from here'; *-0vrath* 'into a sweathouse'

- Most appear in suffix position 3, with some in 2 and 4. Note that *-va* 'Plural Action', the only suffix in position 1, has variable order determined by scope; when it appears in position 1, it generally has conventionalized, noncompositional meaning (Garrett et al., 2015). It more generally prefers to follow directionals as in (7).

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[2]For the purposes of this paper I assume the PRONOMINAL ARGUMENT HYPOTHESIS (cf. Jelinek, 1984; Baker, 1991), which claims that the actual arguments of non-configurational languages are either the pronominal agreement affixes that attach to verbs (Jelinek, 1984) or null pronouns (Baker, 1991). In both, any expressed noun phrase is actually an adjunct mereley co-indexed with one of the pronominal arguments.

(7)   xás   kun-ihy-**ívraath**-va   ikmaháchraam
      then 3PL>3-shout-**into.sweathouse**-PL.ACT sweathouse
      'And they shouted into the sweathouse.'
      (Julia Starritt, "Coyote Goes to a War Dance", WB_KL-06:66, 1957)

3.2   Directional Suffixes as Applicatives

Excepting a few (e.g. *-ishrih* 'down'; *-sipriv* 'up', (cf Macaulay, 2004)), directional suffixes introduce new arguments:

(8)   a.   kári xás   ú-kvip
           and then 3SG-run
           'And he ran.'
           (Mamie Offield, "Coyote's Journey", WB_KL-05:77, 1957)

      b.   xás xôoxhirak   u-kvírip-**ma**
           then Martin's.Ferry 3SG-run-**to**
           'And he ran to Martin's Ferry.'
           (Julia Starritt, "Coyote Goes to a War Dance", WB_KL-06:58, 1957)

      c.   xás vúra   yúruk   u-kvírip-**rup**
           then INTENS downriver 3SG-run-**downriverward**
           'And so he ran downriver.'
           (Julia Starritt, "Coyote Goes to a War Dance", WB_KL-06:57, 1957)

Potential confound: Applied objects need not be expressed!

(9)   xás vúra   u-kvírip-**rup**
      then INTENS 3SG-run-**downriverward**
      'And so he ran downriver.'
      (Julia Starritt, "Coyote Goes to a War Dance", WB_KL-06:57, 1957)

(10)   xás ú-kfuuk-**furuk**.
       and 3SG-crawl-**into.an.enclosed.space**
       'So he crawled in.'
       (Julia Starritt, WB_KL-04:126, 1957)

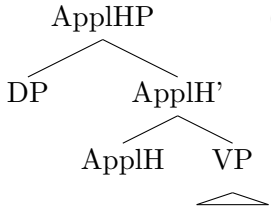These suffixes are still applicatives:

- Karuk is a pro-drop language, so arguments are expected to be dropped.

- English has a null applicative head; Karuk is just the inverse, with occasionally null applied objects.

- Interpretation of locative expressions differs when there is no applicative (Garrett & Mikkelsen, 2015):

(11)   a.   chavúra   kaanvári   u-thívruuh-**ma**
             eventually around.there 3SG-float-**to**
             'Eventually he floated to that vicinity.'
             (Chester Pepper, "Coyote's Journey", WB_KL-03:99, 1957)

       b.   káru pá-paa   úuth   u-thívruuh-tih
             and   the-boat out.in.water 3SG-float-DUR
             'And the boat is floating out in the water.'
             (Julia Starritt, "Responses to Pictures", WB_KL-92:69, 1957)

Macaulay (2004) analyzes a subset of the directional suffixes as being high applicatives (cf. Pylkkänen, 2008), because they can occur with unergative verbs:

(12)   káan ník   kun-p-ihmár-**iroopith**-va,   páy nanu'ávahkam
        there a.little 3PL>3-ITER-run.PL-**around**-PL.ACT sky
        'They ran around there in the sky.'
        (Chester Pepper, "Deer-Hunting Medicine", WB_KL-53:18, 1957)

Macaulay (2004)'s structure:

(13)   ApplHP   (Macaulay, 2004, p.91)

        DP   ApplH'

             ApplH   VP

4   Distribution of Suffixes

Unsurprisingly, the suffixes can only combine with verb roots denoting motion events or fictive motion events (generally of the emanation type, (cf. Talmy, 1999)).

Macaulay (2004)'s analysis does not predict some striking distributional properties of these suffixes. Motion or fictive motion denoting roots can be divided into three classes based on their ability to combine with the suffixes:

- V- roots: must combine with a directional suffix (around 80 roots)

- V roots: optionally combine with a directional suffix

- V# roots: never combine with a directional suffix

V-	V	V#
arih- 'go, jump, move quickly'		*ipak* 'to come back, return'
va- 'go'		*vâaram* 'leave, go away, go'
		ipvâaram 'go back, go home'
		ahoo 'arrive, walk, go'
vôor- 'crawl'	*ikfuk* 'climb, crawl'	
	ikpuh 'swim'	
	thivruh 'float'	
	ikvip 'run'	
	ikxip 'fly'	
	ishkak 'jump'	
vêeh- '(object) to stick, project'	*iihya* '(long object)	
iyur- 'to put, stick (long object)'	to stand, project'	
it- 'look'	*imus* 'see, look at'	*mah* 'find, see'

- *arih-*:

  - Described (as with other V- roots) by Bright (1957) as bound, needing to occur with derivational affixes.

  - No examples in corpus with *arih-* appearing alone; all 91 examples with directional suffix.

    (14)   xás káruk   u-'árih-roov
           and upriver 3SG-move-upriverward
           'And he traveled upriver.'
           (Nettie Ruben, "Coyote Trades Songs", WB_KL-07:2, 1957)

- *ipak*:

  - 49 examples in corpus, never with directional suffix. No derivatives in Bright (1957).

    (15)   xás mú-taat   u-'ípak
           and 3SG.POSS-mother 3SG-come.back
           'Then his mother came back.'
           (Julia Starritt, "The Bear and the Deer", WB_KL-32:52, 1957)

Trends

- All classes include transitive and intransitive roots.

- V- roots are generally semantically light verbs.

- V roots often encode Manner.

7

- **v# roots often have telic translations**

5   Testing for Telicity

Conventional tests for diagnosing telicity or achievement/accomplishment status (*For/in* time adverbials test, complement of *finish* and *stop* tests) (cf. Dowty, 1979) are inconclusive for Karuk, generally due to lack of data.

5.1   A test for Karuk

The default temporal interpretation of tenseless verbs is conditioned by their Aktionsart, such that bounded events (i.e. telic and punctual events) are interpreted as located in the past, and unbounded in the present (Smith et al., 2007; Mucha, 2013).

(16)   a.   **The Bounded Event Constraint** (Smith et al., 2007, p. 45)
              Bounded events are not located in the present.
        b.   **The Simplicity Principle of Interpretation** (Smith et al., 2007, p. 60)
              Choose the interpretation that requires the least information added or inferred.

For Smith et al. (2007), past is simpler than future, so bounded events, unable to be interpreted in the present, are interpreted in the next simplest tense, the past.

The default interpretation of Karuk tenseless clauses also exhibit a pattern whereby some verbs are interpreted in the past and some in the present. Tested motion verbs interpreted as past are also those identified as v# above:

(17)   EM: u-'ípak
              3SG-come.back
        VS: He came back.
        (11/29/2014)

(18)   EM: u-'áhoo
              3SG-walk
        VS: He came.
        (11/29/2014)

(19)   EM: u-pvâaram
              3SG-go.back
        VS: He left.
        (11/29/2014)

(20)   EM: u-mah
              3SG>3-see

VS: He seen it.
(11/29/2014)

v roots are interpreted as present:

(21) EM: u-kvip
   3SG-run
VS: He's running.
(11/29/2014)

(22) a. EM: u-mus
    3SG-look
  VS: You're looking at something.
  (11/29/2014)
 b. EM: Robert u-mus
    R.   3SG-look
  VS: Just looking.
  (11/29/2014)

And some v- roots with directional suffixes are interpreted as present:
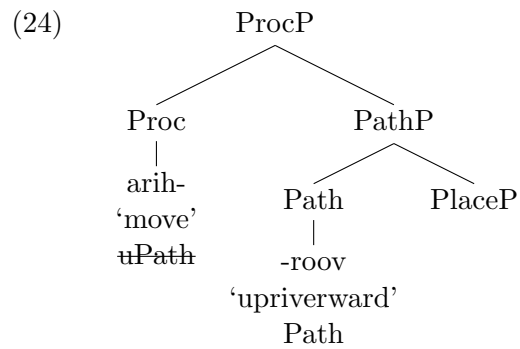
(23) EM: Crystal u-'árih-roov
    C.   3SG-move-upriverward
 VS: Crystal is walking up the river.
 (11/29/2014)

v# roots are interpreted as past, so must be telic. v roots are interpreted as present, so must be atelic. Roots with directionals can be interpreted as present; directional applicatives do not necessarily make a verb telic.
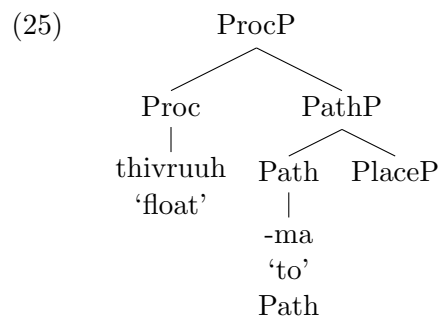
- **A high applicative analysis of the directionals offers no prediction that telic roots should be unable to combine with the suffixes.**
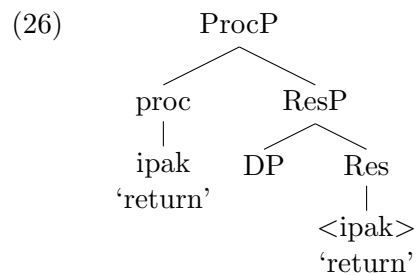
6   A Ramchandian Analysis

- Structure of v- root:

(24)   ProcP
                    /   \
              Proc   PathP
               | /   \
             arih-   Path   PlaceP
            'move' |
             uPath   -roov
                      'upriverward'
                         Path

- Having an uPath feature on the root allows for the root to necessarily combine with a directional suffix using standard downward selection[3]; a high applicative analysis would require upward selection.

- Structure of v root:

(25)   ProcP
                    /   \
              Proc   PathP
               | /   \
           thivruuh   Path   PlaceP
            'float' |
                       -ma
                       'to'
                       Path

- Structure of v# root:

(26)   ProcP
                  /   \
              proc   ResP
               | /   \
             ipak   DP   Res
            'return' |
                              <ipak>
                              'return'

_____

[3]Uninterpretable features are not used in Ramchand (2008), but neither is any way given to ensure obligatory selection of the type needed for the v- roots.

7   Conclusions

- Directional applicatives must be low, within VP, despite qualifying as high applicatives semantically (as denoting a relation between an event and individual rather than transfer-of-possession) and by appearing with unergatives.

    - Directional applicatives constitute a new type of low applicative not considered in Pylkkänen (2008) that is only licensed by the existence of PathP within VP in Ramchand (2008)'s system.

- Complementarity of ResP and PathP confirmed, despite no clear semantic justification (such as if both added telicity). Why should they not co-occur?

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8 Appendix A: Karuk High Applicatives

- Karuk also has standard high applicatives. In this discussion I focus on *-kir* 'instrumental,'[4] though there is also a benefactive *-ihi*.

  To be a true high applicative in Karuk, an applicative must not only combine with unergative verbs, but also

  - combine with V# roots
  - be unable to combine as the only affix with V- roots

- *-kir* can appear on unergative and V# verbs:

  (27) pa-pírish vúra   u-'áhoo-kir
        the-plant INTENS 3SG>3-go-INSTR
        'He just went around through the bushes.'
        (KS, 'Pygmy Owl and Wildcat')

- Of 18 attested verbal derivatives of *-kir*, not one has a V- root. Many have V roots: *imúskir* 'to admire'; *ikpúuhkir* 'to swim to'

- Note also that *-kir* is a position 4 suffix, like several of the directionals.

- Karuk thus not only has a different type of low applicative, it also contrasts that low applicative with canonical high applicatives.

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[4]The meaning of *-kir* is in fact much more general than just 'instrumental', and even includes some apparently directional uses. I leave a more full working out of its meaning and relation to the directionals to future work.