

## Aspectual Future in Karuk

### ABSTRACT

This paper seeks to clarify the function of a marker of future time reference in Karuk. Previous work by Bright (1957) has treated the suffix *-avish* as marking future tense. This description as a future tense is inconsistent with parameters for tense and aspect as advanced by Klein (1994) and Reed (2012). Reexamination of Karuk data show that rather than encoding a simple future, *-avish* has nearly the full range of future-oriented semantics uses discussed by Bybee, Perkins and Pagliuca (1994); furthermore, that *-avish* marks a time relation whereby topic time precedes time of situation irrespective of time of utterance, a time relation characteristic to prospective aspect. Further evidence for a prospective aspect analysis includes the distribution of *-avish* with other tense and aspect morphemes, time adverbials, and within bi-clausal constructions.

### 1. INTRODUCTION

This paper reanalyzes a previously noted grammatical feature of Karuk, an endangered language historically spoken along sixty or so miles of the Klamath River in Northwestern California, and classificatory isolate within the proposed Hokan phylum (Golla 2011:87). The aim of the present study is to establish that the Karuk suffix *-avish* and allomorph *-esh* are best analyzed as markers of an aspectual future, namely prospective aspect, rather than a simple future tense as previously analyzed by Bright (1957:124), de Angulo and Freeland (1931:196),

and Kroeber (1911:432). The general future-oriented semantics of *-avish* can be illustrated by the following examples<sup>1</sup>:

- 1) ní-kvaar-**eesh**                      pa-thyur  
 1SG>3OBJ-buy-**PROSP**            DET-car  
 I'm **going to** buy a car.  
 SD-VS-02, Sonny Davis, Elicitation 2010
- 2) ni-máh-**eesh**  
 1SG>3OBJ-see-**PROSP**  
 I **will** see it.  
 SD-VS-01, Sonny Davis, Elicitation 2010
- 3) vúra            chími    u-‘uum-**êesh**            kahyúras  
 Intensive    soon    3SG-arrive-**PROSP**    klamath.lakes  
 He was **about to** get to Klamath Lakes.  
 WB\_KL-01, Nettie Reuben, Narrative 1957

The English future tense constructions “going to” and “will” are used as translations of *-avish*, in (1) and (2), along with prospective aspect “about to” in (3), obscuring whether *-avish* is expressing future tense or prospective aspect morpheme.

In addition, there are particular modal uses of *-avish* translated into an English hortative *let's*, and modal verbs of *want*, *can*, and *must* as in the following:

- 4) chími pa-pufich'iish    nu-mnish-eesh  
 soon    DET-deer.meat    1PL-cook-**PROSP**  
**Let's** cook the deer meat.  
 VS-17, Vina Smith, Elicitation, 2010

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<sup>1</sup> Bright's (1957) grammar, lexicon and collection of text remain today the most complete description of Karuk, and I draw on it extensively in what follows. The primary source of data is Bright's (1957) grammar and texts. Recent elicitation data is also included, along with texts from J.P. Harrington (1930) and a text from A.L. Kroeber's 1903 fieldwork notebooks. Total there are 163 texts in the corpus (see appendix) available on the Karuk Dictionary and Texts website (<http://linguistics.berkeley.edu/~karuk/>). I use the practical orthography consistent with the site, along with its added interlinear morphemic translations. Examples are cited for text ID, speaker, source, and year. Recent elicitation was conducted by Andrew Garrett, Line Mikkelsen, Clare Sandy, Erik Maier or myself. Glosses utilize Leipzig glossing conventions (Comrie et. al 2008)

- 5) kúkuum hum nu-têek-**eesh**  
 again Q 1>2SG-dip(water)-**PROSP**  
 Do you **want** some more water?  
 CT-01, Charlie Thom, Elicitation 2013
- 6) manâa i-p-fíkriip-ti-haak vaa kári i-afish-hêena-ti-**heesh**  
 maybe 2SG-ITER-pick.out-DUR-when so then 2SG-feel(by touch)-DUR-**PROSP**  
 When you are sorting it, then you **can** feel it.  
 GD-MD-VSu-01, Madeline Davis, Conversation, 1989
- 7) payêem ik vúra i-‘asímchaak-tih-**eesh**  
 now must intensive 2SG-close.eyes-DUR-**PROSP**  
 This time you **must** keep your eyes closed  
 WB\_KL-05, Mamie Offield, Narrative 1957

Earlier grammatical descriptions include de Angulo and Freeland’s short sketch accompanying a collection of texts (1931), as well as texts and description by Kroeber (1911). Another important contribution to Karuk grammar is Macaulay (1989) and subsequent papers in which she reanalyzes elements of Karuk grammar and morphology. Macaulay (1989:161) shows all previously described Karuk ‘syntactic postfixes’ to be suffixes, including *-avish* which “must be treated as a suffix in order for derivations of certain complex forms to come out correctly.”

Macaulay’s description of certain Karuk suffixes is important to understanding the form of *-avish*, but not its meaning. With advances in documentation, description and linguistic theory, some elements of Karuk morphology invite further analysis. Macaulay (2005, 2000, 1996, 1993, 1992, 1989) and Macaulay and Brugman’s (2009) reanalyze other elements of Karuk; however, the function and full semantics of *-avish* have largely been unexplored.

Grammatical markers of prospective aspect are generally rare. According to Klein (1994:114), it is more common to have a category that looks backward at the completion of an event i.e. perfect aspect, than forward towards initiation. If a prospective aspect is described, it is

often analyzed as a future tense, and can still be overlooked even when multiple grammatical markers of future time reference exist in a language that invite discernment (Wolvengrey 2006).

Though *-avish* is the only apparent grammatical marker of future time reference in Karuk, I find that the term ‘future tense’ in previous characterizations of *-avish* does not sufficiently cover its functions captured by meanings of “going to”, “about to” and “will” in description, and English modal verbs in usage. Common to all instances of *-avish* however is the temporal relation of TT before TSit that encodes prospective aspect which can provide a general future reading as well. Any modal readings of *-avish* are further formed through context, namely implicature, and the absence of alternative modal constructions in Karuk.

For the remainder of the paper, I will demonstrate that *-avish* is not a simple future moreover, the exact time relations encoded by the suffix do not reflect a simple future tense, but rather an aspectual future. I begin in section two with a summary of past description of Karuk tense and aspect. In section three I discuss the parameters for future tense vs. prospective aspect according to Klein (1994) and Reed (2012), namely the differences between tense and aspectual relations offered by Klein, and characteristics of prospective aspect discussed by Reed. In this section I also review common semantics of future-oriented grammatical categories as delineated by Bybee, Perkins and Pagliuca (1994). In section four I discuss these parameters as they apply to Karuk *-avish*, along with its distribution and compatibility with other aspect markers to show that *-avish* is best characterized as prospective aspect. In section five, I discuss the distribution of *-avish* with certain time adverbials and within bi-clausal constructions as characteristic of prospective aspect according to Reed (2012)’s discussion of eventuation. In section six I consider modal uses of *-avish*, while conclusions and further considerations are given in section seven.

## 2. THE TENSE AND ASPECT SYSTEM OF KARUK

In order to understand *-avish* as aspectual morpheme, it will help to understand previous description of the overall Karuk tense and aspect system, as well as characteristics of tense and aspect within Karuk.

### 2.1. PREVIOUS DESCRIPTION

The table in (8) shows the varying terms used in description of Karuk tense and aspect, with Bright (1957) being the most exhaustive.

#### 8) Karuk Grammatical Markers of Tense and Aspect

	Kroeber (1911)	de Angulo and Freeland (1931)	Bright (1957)	Carpenter (2013)
∅	---	Indefinite	Present	Present
-at	Past	Simple past	Simple past	---
-aheen	---	Past (less formal)	Anterior past	---
-anik	---	---	Ancient past	---
-avish	Future	Future	Future	Prospective
ta	Indefinite, imperfect	---	Perfective	---
-tih	Imperfect, present	Continuative	Durative	---

The Karuk tense and aspect system has more categories for marking completed or past events than the initiation of future events, consistent with Klein's characterizations of languages having a 'liking for the past' or for 'what is done and over' (Klein 1994:114). According to Bright (1957), the Karuk present tense is unmarked, while there are three past tense suffixes. Unless noted otherwise, I largely agree with Bright's categories and terms.

Kroeber (1911) identifies a subset of Bright's categories for grammatical tense and aspect markers in his cursory grammatical outline. De Angulo and Freeland's (1931) brief grammatical sketch describes two of these three past tense suffixes, while their texts record all three in use. They regard *-at* as primary in marking past tense, and *-aheen* as perhaps "less formal than *-at*"

without making mention of *-anik* (page 196). Study by Bright (1957) yields that Karuk *-aheen* indicates a time more remote in the past than past tense *-at*, while *-anik* marks ancient past.

As for the present tense, Kroeber (1911) first termed what Bright (1957) termed durative aspect as a grammatical marker of present tense, while Bright determined that the present tense is unmarked. Conversely, de Angulo and Freeland (1931) term unmarked verb forms as indefinite.

The only future time reference marker is *-avish*, which is consistently termed a future tense across prior descriptions. With a brief description of the function of *-avish*, Bright has the least to say about *-avish* as compared to other tenses. Bright (1957) describes *-avish* as “...usually translatable by the English future form in ‘shall’ or ‘will.’ However, when used together with the past tense suffix *-at*, the translations ‘be about to’, ‘be going to’, or ‘would’ are more appropriate (Bright 1957:124). Other translations given by Karuk bilinguals involving English modals can also be observed from data but are not commented on by Bright.

Regarding form, Bright (1957) identifies future tense as marked by the suffix *-avish*, which also the allomorph *-eesh*. Bright also identifies *-heesh* as an allomorph; however, Macaulay (1989:162) reduces the number of allomorphs of *-avish* to two, *-avish* and *-eesh*, using the complex morphophonemic rules of stress assignment in Karuk to demonstrate *-heesh* is bimorphemic, with vowel contraction is responsible for allomorphy. Karuk *-avish* contracts to *-eesh* when otherwise not prevented from doing so by consonants /v/ and /y/, as in (9a), while *-avish* appears otherwise. Consonants /v/ and /y/ are lost in such cases and the remaining vowel of the stem and initial vowel of the suffix *-avish* also contract as in (9b):

- 9) a. ‘u-‘if-avish > ‘u’ifeesh [Special contraction] ‘it will grow’  
 b. ‘u-kyáv-avish > ‘ukyâvish [Special contraction] ‘he will make’

While Bright (1957:124) claims that *-heesh* is an allomorph of *-avish* that only occurs after nominal predicates, Macaulay (1989) shows the allomorph *-heesh* to be bimorphemic comprised of a denominative suffix *-hi* and *-avish* (page 170). Bright (1957:58) orders affixation in three cycles to account for *-heesh*, though Macaulay (1989:163) reduces these cycles to two, ordering suffixation before prefixation, and eliminating the need for clitics to be applied following inflection. Vowel Deletion is ordered before Accent Assignment, followed by Vowel Contraction. Macaulay in (9) gives the following example and derivation (page 170):

- 10) *yôotva*, *nani-ávanheesh*  
*yôotva*, *nani-ávan-hi-avish*  
 hurray, my-husband-DENOM-PROSP  
 ‘hurray, (He) will be my husband’

WB\_KL-51, Chester Pepper, Narrative, 1957

Derivation:

‘ávan (Fixed Accent stem<sup>2</sup>)

(i) *ávan-hi* (Progressive Accentuation<sup>3</sup>)

(ii) ‘ávan-hi-avish > ‘ávan-h-avish (Vowel Deletion, Modified Progressive Accentuation)

> *aván-h-eesh* (Special Contraction<sup>4</sup>)

(iii) *nani-ávan-h-eesh* (Prefixal Accentuation)

De Angulo and Freeland (1931) give examples of what appear to be four allomorphs that correspond to those given by Bright, as well as Macaulay (1989); however, they note differing vowel qualities where Bright and Macaulay do not. De Angulo and Freeland (1931:196) give lists of bare and “tensed” verbs forms with little analysis. De Angulo and Freeland transcribe allomorphs as *-eesh*, *-avish*, *-iish* and *-heesh*, written as *-eic*, *-avic*, *-iic* and *-heic*. These are

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<sup>2</sup> Bright (1957:45-46,48) gives two stem types. The first is fixed accent, which includes circumflex accent, or the sequence VCV with the first V having acute accent. The second is moving accent stems, which include all others.

consistent with other descriptions save for the additional allomorph possessing a long high vowel *-iish*. No other description and texts by subsequent linguists appear to make this distinction.

Kroeber (1911:432) gives two allomorphs written as *-ec* and *-ic*, the latter which may correspond to De Angulo and Freeland's *-iic*.

These discrepancies across descriptions span a number of eras in documentation, and may have arisen due to 1) language change or dialect leveling resulting in fewer allomorphs, 2) differences between linguists in transcription principles regarding phonemic and phonetic transcription, or 3) just differences between linguists in accuracy of transcription. Descriptions prior to Bright are based on brief fieldwork of the language and are cursory. Though the actual forms and number of allomorphs are not important to my analysis of the semantics of *-avish*, I understand Bright's analysis of forms as the most accurate given Bright's extensive study of Karuk, making possible further work by Macaulay and others. For the purposes of this paper I will be referring to the morph in question as *-avish*, with allomorph *-eesh*, adopting Macaulay's analysis of *-heesh* as bimorphemic.

### 3. THEORETICAL PREMISES: FUTURE TENSE, PROSPECTIVE ASPECT AND MODALITY

Tense and aspect are two grammaticalized temporal relations while modality is often described as the grammaticization of speakers' attitudes and opinions, indicating such notions as obligation, probability, and possibility (Bybee et al 1994:176). Bybee, Perkins and Pagliuca (1994:1) examine "the semantic substance" of various grammatical categories of tense, aspect and modality cross-linguistically and regard simple future to be "equivalent to a prediction on the

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<sup>4</sup> Special contraction is a coinage of Macaulay's (1989:162) for a phenomena observed by Bright. It can be conceptualized as two rules, the first being deletion of /v/, /y/or /h/, followed by regular Vowel Contraction.



part of the speaker that the situation in proposition, which refers to an event taking place after the moment speech, will hold” (page 244).

Surveying seventy-six genetically stratified languages, they found that future-oriented grammatical markers are mentioned for seventy of the seventy-six languages, making future the most widely distributed meaning in the sample (page 243). From the sample, several generalizations emerge. The first is that English, with its three futures *will*, *shall* and *be going to*, is rather typical in that it isn't unusual to find an array of constructions “sharing or competing for overlapping territories” (page 21). Secondly, futures evolve through grammaticalization from a fairly restricted range of lexical sources, namely movement verb constructions, markers of obligation, desire, ability, and temporal adverbs, the most common being movement verb constructions (page 244). Thirdly, though evolution and grammaticalization follows a path from the more specific to the more general and abstract, a future that evolves from one source such as movement does not later acquire desire or obligation uses (Bybee and Pagliuca 1985). In general, Bybee et al (1994) distinguish simple or primary futures from other more specialized or abstract future-oriented morphemes or uses, including immediate futures, aspectual futures, and imperatives. Since futures make an assertion about future time, they tend to occur in main clauses, including apodoses - the main clauses of conditionals (i.e. *I would agree* in *I would agree if you asked*), and aren't commonly used in subordinate clauses (Bybee et al 1994:274).

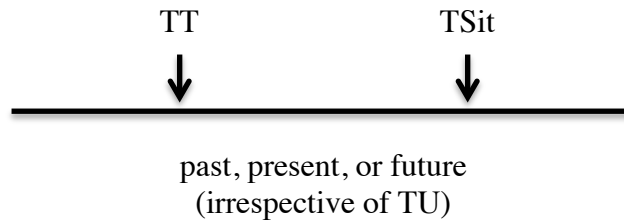
Regarding aspectual futures, Bybee, Perkins and Pagliuca (1994:275) discuss aspectual grammatical markers in which a future arises as a contextually determined use from markers of imperfective aspect, and less commonly, perfective aspect. Prospective aspect as an aspectual domain is not discussed save for perhaps the semantics of ‘immediate futures’. Instead of delineating differences, Bybee et al state that, “while in many cases the designation of

‘immediate future’ may indeed mark a temporal distinction, we suspect that in some cases other modal or aspectual nuances that are difficult to describe may be involved” (page 245). This is perhaps a consequence of utilizing temporal distinctions of predecessors such as Comrie (1985) who likewise did not give distinct parameters for future tense and prospective aspect explicitly.

Where Comrie (1985) doesn’t delineate future tense and prospective aspect, Klein (1994) utilizes three terms to distinguish them mapping temporal reference relations – time of utterance (TU), topic time (TT) and time of situation (TSit). TU is the time at which a speaker makes an utterance, usually the present moment (0) for speech. TT is the time being talked about, to which “a speaker’s claim on this occasion is confined”, while TSit corresponds to the time spanned by the eventuality itself (page 4). Prior to Klein (1994), Comrie (1985) states that tense serves to locate an event (TSit) in the past, present or future, in relation to the time of speech (TU), while a reference time point is used for ‘relative tenses.’ Instead, Klein argues TT in relation to time of TU is the relation of importance to tense, whereas the relation between TT and TSit is “the notional category of aspect” (page 121). According to Klein, aspects are “ways to relate the time of situation to the topic time: TT can precede TSit, it can follow it, it can contain it, or it can be partly or fully contained in it” (page 99). Considering this difference with respect to “future” temporal reference, we arrive at the following understanding of prospective aspect and future tense: prospective aspect is the relation between TSit and TT where TT precedes TSit, regardless of TU (page 108). In notation the relationship BEFORE (also written <) is utilized to capture this notion of precedence as in the following diagram:

11) Prospective Aspect: TT BEFORE TSit TT < TSit

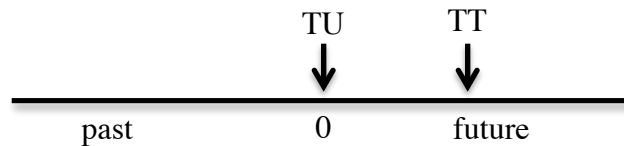
English example: "I was/am/will be about to jump."



A simple future tense places a topic time after the time of utterance, regardless of TSit, and ought not to mark time relations prior to the time of utterance if marking a true simple future; moreover, a simple future tense marker ought not to occur with past tense marking (page 124):

12) Future Tense: TU BEFORE TT TU < TT

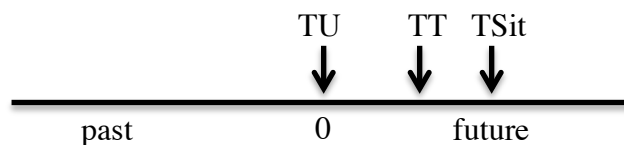
English example: "I will jump."



However future tense and prospective aspect become indistinguishable if TT precedes TSit after TU, since both precedence relations  $TT < TSit$  and  $TU < TT$  are satisfied as in (13). Which relation is the primary relation of importance requires further discernment:

13) Non-Past Prospective Aspect

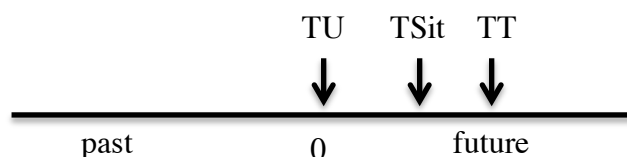
English example: "I will be about to jump."



Perfect aspect however would be the relation of  $TSit > TT$ , making it incompatible with prospective aspect as a relation. Perfect aspect is shown in the following diagram in (14):

14) Non-Past Perfect Aspect

English example: “I will have jumped.”



If a grammatical marker was a prospective aspect, and the language also possessed a grammatical marker of perfect aspect, the two markers should not be able to co-occur, as they are mirrors of the same type of relation (Reed 2012). As shown, the decisive difference between future tense and prospective aspects is “whether TT is after TU or not” (page 116). Of the two, only a prospective aspect marker may permit a TT prior to TU, as a prospective aspect can stand in any relation to TU. A future tense requires TT after TU.

With such clear temporal relations delineated by Klein and characteristics discussed by Reed, determining the status of Karuk *-avish* as future tense versus prospective aspect is nonetheless complicated by a number of factors. First, Klein notes that prospective aspects are rare, but are often described as future tense markers mistakenly (page 114). Developments in theories of tense and aspect today include clearer parameters for differentiating the two that weren’t available to Bright in 1957, de Angulo and Freeland in 1931, or Kroeber in 1911. While Bright could have recognized the prospective aspect-like functions of *-avish* in his description, he and others would have likely characterized any such morpheme as a future tense in name.

Secondly, to understand the meaning and function of *-avish*, some examination of compatibility with other tense and aspect morphemes would be revealing. If a future time

relation morpheme's status cannot be consistently determined from TT's relation to either TU and/or TSit, such inconsistency may be explainable by other uncertain aspectual or past tense markers used in combination with *-avish* in examples rather than *-avish* itself (Klein 1994:116). One would expect that if Karuk *-avish* were a tense it would not have any co-occurrence restrictions with aspectual grammatical markers. If Karuk *-avish* is aspectual, certain co-occurrence restrictions should apply; moreover, a grammatical marker of prospective aspect should not co-occur with a perfect aspect or progressive aspect according to Reed (2012:5). Determining co-occurrence restrictions between aspectual markers is a complicated task however if the status of other markers of grammatical aspect in Karuk are disputable.

In Karuk, Bright (1957:138) analyzes aspectual pre-predicate *tá* as a perfective marker, while Kroeber notes *tá* as “probably indefinite or imperfect time” (page 423). De Angulo and Freeland (1931) make no mention of *tá*. More recently Garrett (personal communication) has also speculated that *tá* could be a possible perfect aspect marker analogous to a perfect aspect marker found in neighboring, unrelated Yurok, an Algonquian language. From these possibilities, *tá* is most likely either a perfective or perfect grammatical aspect, which differ on the basis according to Reed (2012) in the type of aspectual relation they encode. Perfect grammatical aspect is a precedence relation, while perfective is a containment relation (page 3). In precedence relations, TT is in relation to TSit, either before or after. Precedence relation aspects stand in opposition to containment relation aspects such as imperfective and perfective aspects, where TT is either within or outside TSit. Klein (1994: 108) gives the following notation for perfect and perfective aspect relations:

15) Perfect and Perfective Aspects:

- |                       |               |                 |
|-----------------------|---------------|-----------------|
| a. Perfect Aspect:    | TSit AFTER TT | TT ---- [TSit]  |
| b. Perfective Aspect: | TSit AT TT    | TT ---[-- TSit] |

Importantly, aspect marks an action that has taken place before TT is reached, while perfective “is shown to reach a state within TT, at which it is over” (page 109).

16) Perfect	<i>John had slept</i>	-----	[ ]
Perfective	<i>John slept</i>	-----	[-- ]

Perfect aspect cannot occur with prospective aspect given that Reed classifies prospective aspect as the opposite precedence aspect relation. Such co-occurrence restrictions if observed in Karuk would be telling as to the function and meaning of either *-avish* or *tá*.

Thirdly, Klein discusses the existence of ‘relative tenses’ briefly as a “combination of tense and aspect” (page 131). It is possible that *-avish* is a combination of future tense and prospective aspect. Klein discusses the English perfect as an example – present perfect “*he has left*”, pluperfect “*he had left*”, and future perfect “*he will have left*”, with the relationships of tense (TT and TU) and aspect (TT and TSit):

17) The English Perfect			
c. Present perfect	TU INCLUDES TT	and	TT AFTER TSit
d. Pluperfect	TU AFTER TT	and	TT AFTER TSit
e. Future perfect	TU BEFORE TT	and	TT AFTER TSit

Bright certainly recognized the wide-ranging function of *-avish* given his translations of ‘*will*’, ‘*going to*’ and ‘*about to*’; nonetheless, he characterized *-avish* as a future tense morpheme (page 124). Newer parameters make clearer its properties as prospective aspect.

Reed (2012) considers to English *going to*, *about to* and Scottish Gaelic *a’ dol do* and *gu* and tests these constructions for prospectivity and perfecthood in several ways. She tests for either aspectual relation by looking for occurrence across tenses. As with Klein, Reed notes there should exist examples of past, present and future prospective, just as there should exist exists examples of past, present and future perfect. English *be going to* passes part of distribution across tenses tests, *while about to* passes all, as in the following in (18):

- 18) Aspectual distribution: across tenses
- a. I was going to watch “Jurassic Park.”
  - b. I am going to watch “Jurassic Park.”
  - c. \*I will be going to watch “Jurassic Park.”
  - d. I was about to watch “Jurassic Park.”
  - e. I am about to watch “Jurassic Park.”
  - f. I will be about to watch “Jurassic Park.”

Scottish Gaelic *a'dol a* and *gu* behave as English *about to*, while *going to* does displays incompatibility with English future tense *will*. Reed surmises that English *going to* isn't as far along in processes of grammaticalization as other prospective aspect markers (page 16). Karuk –*avish* may display behavior similar to English *about to* or *going to* as a prospective aspect.

Reed (2012:3) proposes another a set of diagnostics for prospective aspect and examines shared properties of perfect aspect based on the assertion that prospective aspect as the reverse of the perfect, “the way that the future could be seen as the reverse of the past.” As such Reed proposes that a prospective aspect should have incompatibility with the progressive and perfect as in (19) in the following (page 4):

- 19) Aspectual distribution: incompatible with other aspects
- a. \*John is going to running a marathon tomorrow.
  - b. \*John is going to has run(ing) a marathon tomorrow.
  - c. \*John has (is) going to run a marathon tomorrow.
  - d. \*John is about to running a marathon tomorrow
  - e. \*John is about to has run(ing) a marathon tomorrow
  - f. \*John has (is) about to run a marathon tomorrow.

Clearly English *about to* and *going to* possess co-occurrence restrictions, as all of (19) are ungrammatical. According to Reed prospective and perfect aspect form a type of aspectual marking precedence relations (page 8):

- 20) Precedence Relation Aspects:
- |                        |                |           |
|------------------------|----------------|-----------|
| a. Perfect Aspect:     | TSit AFTER TT  | TSit < TT |
| b. Prospective Aspect: | TT BEFORE TSit | TT < TSit |

Lastly Reed discusses the diagnostic that prospective aspect markers “describe eventualities which have not happened yet (in a contextually appropriate amount of time)” (page 7). Regarding “in a contextually appropriate amount of time”, there follows that prospective aspect possesses a restriction on how far away the TSit can be from TT. An utterance marked by prospective aspect could be followed by a clause beginning with “but...” such that TSit has not eventuated yet, or eventuated at all, as in the following English examples (page 5-6):

- 21) Valerie is going to write her second book next year.  
= her second book is not written yet.
- 22) Valerie is about to make dinner.  
=(tonight’s) dinner is not made yet
- 23) At 6 p.m., Valerie was going to make a quiche (but by 7p.m. she had decided to make spaghetti instead).  
= Valerie didn’t make quiche

Reed states that contextually appropriate time is determined by the semantics and pragmatics of the verb phrase. Writing a book for instance is expected for instance, to take much more considerable time than cooking dinner.

#### 4. KARUK –AVISH AS PROSPECTIVE ASPECT

Together, Klein (1994), Reed (2012) along with Bybee, Perkins and Pagliuca (1994) give diagnostics and common observations of future tense and prospective aspect, while language internally Karuk presents optionality as a characteristic of (past) tense in narrative. In what follows I apply these diagnostics to examples of Karuk *-avish*.

##### 4.1. NON-OPTIONALITY IN NARRATIVE

If *-avish* were a future tense marker, it would be reasonable to expect that appropriate Karuk tense behavior would be for *-avish* to be optional in narrative. Given that present tense is



unmarked, and Karuk past tense suffixes are optional in narrative, the suffix *-avish* as the opposite of past tense may also be optional in narrative rather than obligatory. From available texts, Karuk suffix *-avish* does not appear to optional in narrative.

To determine whether *-avish* is optional in narrative, I conducted a corpus study of recently elicited sentences, texts from Bright (1957), as well as two texts from Harrington (1929-30) and one from Kroeber (1903). I identified future temporal reference from English translations, the internal temporal structure of narratives, and occurrences of *-avish*. I found that 92 of 95 tokens of future temporal reference used *-avish* where expected. That left three exceptions. For comparison, of 713 tokens of past temporal reference, only 120 utilized a past tense suffix, while 309 had no tense or aspect marking at all. Of the remaining 189 tokens, either perfective/perfect or durative aspect marking was present. The fact that there were only three examples of future temporal reference in translation without the use of *-avish* demonstrates that among the texts available, *-avish* does not show a distribution typical of a Karuk tense marker. Of the three examples of future temporal reference without suffix *-avish* that could suggest optionality, all may be explained.

The following are the three examples of unexpected absence of *-avish* in (24), (25), and (26) given future temporal reference in the line translation. The example in (24) appears to reveal a possible TT or TSit that overlaps with TU, a state of the world being spoiled, permitting a lack of *-avish* if a relative tense marker:

24) yukun      ithivthaaneen-taaníha  
       you.see    land-be.spoiled  
       You.see, (it will be) the end of the world.

WB\_KL-56, Mamie Offield, Narrative, 1957

Bright also uses parentheses for any future temporal reference interpretation, rather than an outright future translation, making the absence of *-avish* all the more reasonable.

Example (25) is from an elicitation. It doesn't feature tense or aspect marking, but atypically, it also does not feature obligatory, or expected person marking either on the verb.

This appears to be an atypical example, regardless of tense or aspect marking involved:

25) apmáan-ak aknap  
 mouth- LOC slap  
 I'm going to slap your mouth.

LA-VS-01, Lucille Albers, Elicitation, 2010

Finally, there stands an example of future temporal reference without the suffix *-avish* in (26), which is also happens to be a quote within a narrative. It is possible that the line is a performative however, and more study is needed on what constitutes a performative in Karuk. In this, betting may begin the gambling event. The only tense or aspect marking present is perfective *tá*:

26) yakún tá ni-xraam pa-naní-'aramah  
 you.see PFV 1SG>3OBJ-bet DET-my-child  
 I'll bet my child.

WB\_KL-19, Mamie Offield, Narrative, 1957

From the above it may be concluded that *-avish* does not behave similarly to past tense markers that are more “optional”, or displaced by narrative present usage. This could be a consequence of the data given no texts appear to have been elicited regarding proposed events exclusively in the future. Such targeted elicited texts might yield *-avish* as optional, but thus far, all data including conversational data point to *-avish* as obligatory if using a future oriented temporal reference as determined from future oriented translations.

An alternative analysis to tense “optionality” is that Karuk could be employing a narrative present. According to Crane (2011), narrative present is common cross-linguistically and is used to describe past or future actions in narrative or historical present contexts, as well as planned futures such as “We leave for Antigua next Friday” (page 9). Crane also discusses tense and aspect as having such pragmatic uses as discourse markers, and notes deixis involves

pragmatic components in general (page 15). For example, it is common cross-linguistically to use perfective markers to foreground lines in narrative, and imperfective markers to background. For the purposes of this paper, I assume Bright's analysis of past tense dropping, rather than narrative present deployment, given the past tense translations by numerous Karuk bilinguals. Bright (1957:123) writes that using English simple present tense in suffix-less narrative forms would be "somewhat misleading, since in context, it would never be translated that way."

#### 4.2. DISTRIBUTION ACROSS TENSES

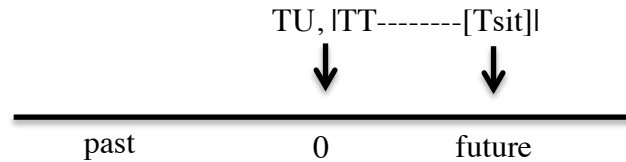
Reed (2012) offers distribution across past present and future tenses as a diagnostic for aspectual relations. Klein (1994) gives precise mapping for aspectual vs. tense relations where tense is a relation of TT to TU, and aspect a relation of TT to TSit. TT before TU is past tense, while TT after TU is future tense (page 124). TT before TSit is prospective aspect, while TT after TSit is perfect aspect. Therefore, if Karuk suffix *-avish* expresses prospective aspect, *-avish* ought to be observed across tenses with a relation TT before TSit; conversely, if *-avish* is a future tense it ought not to be observed across other tenses as a relation of TT to TU.

Reed (2012) shows that Scottish Gaelic prospective aspect Present tense is unmarked, and because the suffix *-avish* is the only grammatical marker in Karuk for future temporal reference aside from irrealis *-ahaak*, showing that *-avish* co-occurs with grammatical markers of present and future tense as, is not possible. Nonetheless Karuk suffix *-avish* can be found in both past and non-past tenses, enough to demonstrate an aspectual relation for *-avish*.

For Karuk suffix *-avish*, in single clause elicited sentences, as in (25) and (26), the relationship of TT to TSit is one in which TT is before TSit; however, these sentences as such are ambiguous, for it is indistinguishable whether the relevant relationship is between TT and TU

as in future tense, or between TT and TSit as in prospective aspect. Consider example (27), where 0 indicates time of utterance:

27) Single Clause, Elicited Sentence  
TSit = cry



naa ni-xrár-**eesh**  
1SG 1SG>3OBJ-cry-**PROSP**  
I'm going to cry.

VS-09, Vina Smith, Elicitation, 2011

If the relation were TT before TU, that would indicate that *-avish* in (27) is not future tense TT after TSit, and disambiguate prospective aspect from future tense; however, it is not, and given the English translation, TT is either inclusive of TU or after TU. Clearly the TSit of crying is in the future. It is difficult to distinguish prospective aspect from future tense in such examples.

Something like an adverbial *chí* can help determine the immediacy of an event as in (28):

28) chí ni-kráv-**eesh**  
soon 1SG>3OBJ-grind-**PROSP**  
I'm going to grind (acorns) soon.

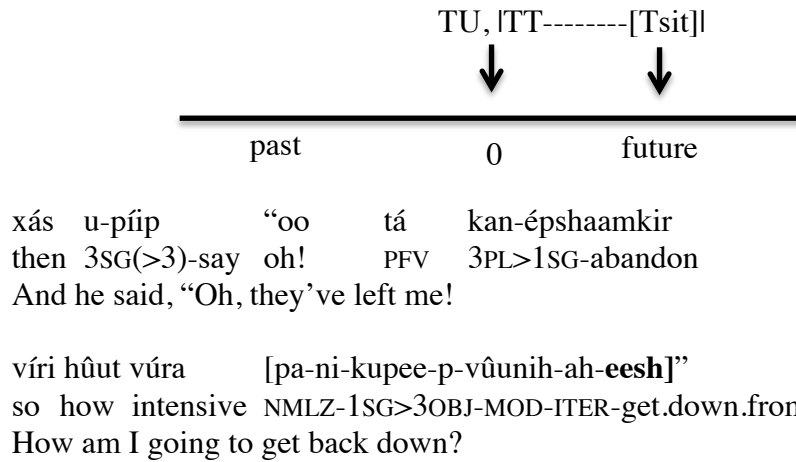
LA-02, Lucille Albers, Elicitation, 2010

However, (28) is equally ambiguous as to whether the relevant relation is between TT and TU, or TT and TSit. Further targeted elicitation where TT was set in the past could resolve such ambiguity. Given this limitation of single clause elicited data, I turn to narrative data.

Quotes from narratives are similar to elicited sentences in that the quoted speech clause has temporal relations that match elicited sentences until otherwise shifted by the tense and aspect markings of quotatives, the verb introducing the quote, or narrative context. In Karuk, quotatives introducing quotes in narrative tend not to be marked with tense and aspect. Consider

the example (29), the question posed in quoted speech from the character Coyote is found within a line of quoted speech in a story “Coyote goes to the Sky.”

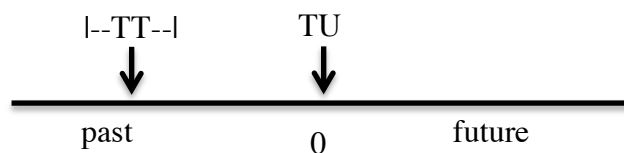
29) Prospective Aspect in the Past  
TSit = get down from uphill



WB\_KL-08, Julia Starritt, Narrative, 1957

Within just the quote of line 53, the above temporal mapping applies. Prior lines introduce the quoted speech with a quotative *u-piip* meaning “he said,” which features person marking but lacks tense or aspect marking. Here in (29) the position of TT doesn’t readily appear to be prior to TU, except through a previously established narrative background. The quotative immediately prior is unmarked for tense and aspect but is translated as past tense in the English. The story begins also, with a line marked by *-anik*, the ancient past:

30) Ancient Past  
TSit = be (live)

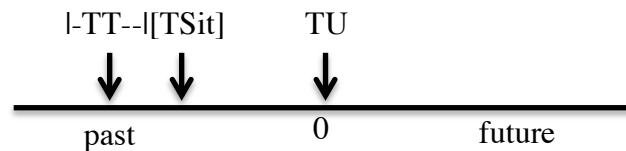


káan avansá-xiich áxak kun-‘íin-**anik**  
 there man-DIM two 3PL>3OBJ-be-ANC  
 Two boys once lived there

WB\_KL-08, Julia Starritt, Narrative, 1957

Thus for (29), TT is set prior to TU, but only through this context, demonstrating prospective aspect set in an ancient past. With this narrative pretext, the mappings in (29) are as in (31):

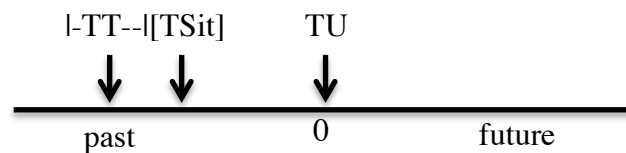
31) Quote with Narrative Pretext



Quotes such as that in (29) as embedded use first person markers and take on the perspective of the person who is being quoted. Such quotes can be thought of as resembling a present moment with 0 to be the time of utterance for the quote, and then are consequently shifted by context.

Other examples of *-avish* include those that are single clause non-quotes. In example (32) the relation of TT to TSit in (31) also holds for (32), which is a line from a narrative:

32) Single Clause Non-quote in Narrative  
TSit = dance down



axmáy ik máruk ára u-'ihunih-eesh  
suddenly must uphill person 3SG-dance.down-PROSP  
Suddenly a person was about to dance down.

WB\_KL-46, Nettie Reuben, Narrative, 1957

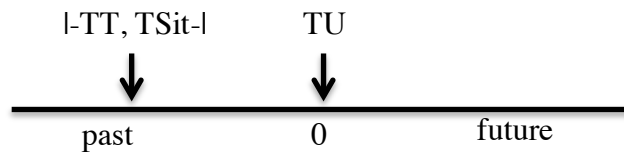
Again in line (32), though the sentence does not feature tense marking, TT is set prior to TU given the narrative context. In narrative context sans quotes, I interpret TU as set in the past by the narrative context established at the beginning of the story, with the relevant relationship marked by *-avish* being aspectual TT before TSit.

An example such as (33) is more indicative example of *-avish* being used to mark aspectual relations irrespective of a relationship between TT and TU. Example (33) features tense marking and in particular, past tense marking with the suffix *-at* and the recent past adverb *íp* in both clauses, both diagrammed in (33):

### 33) Prospective Aspect in Past

#### a. Main Clause

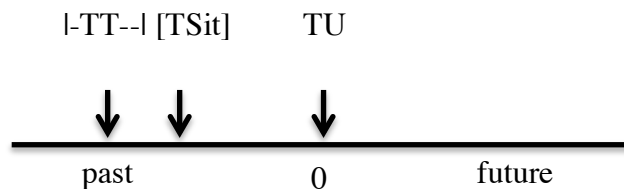
TSit = carry



xás **íp** táay áan u-sáanvu-tih-**at**  
 then **PST** much string 3SG-carry-DUR-**PST**  
 He was carrying a lot of thread,

#### b. Subordinated Clause

TSit = string beads with



[káruma vaa **íp** u-vúpar-**eesh-at** pa-mú-spuk]  
 in.fact that **PST** 3SG -string.beads.with-**PROSP-PST** DET-3SG.POSS-dentalium.shells  
 that's what he was going to string his money with.

WB\_KL-04, Julia Starritt, Narrative, 1957

In (33), verb *sáanvu* meaning ‘carry’ in the main clause and *vúpar* meaning ‘string beads with’ in the bracketed subordinate clause are marked by simple past *-at* supported further by recent past adverbs *íp*. In addition, *vúpar* “to string beads” features both the past tense suffix *-at* and *-avish*, giving the above temporal relation (33b) where TT is before TSit. Here TT is set prior to

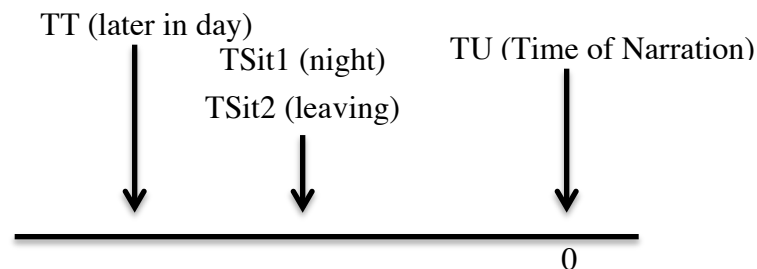
TU in both clauses, with both verbs marked by past tense *-at*, which according to Klein (1994), demonstrates a relationship that is incompatible with future tense. Instead, the relevant relationship is aspectual between TT and TSit in regards to Karuk suffix *-avish*, yielding a clear translation of English prospective aspect “about to” discussed by Reed (2012).

Observations of *-avish* marking an aspectual relation in the previous single clause examples also extend to other bi-clausal examples. With adverbial clause constructions for example, the event in the subordinate clause constitutes the circumstances (time or location) under which the matrix event is realized. In Karuk the proclitic *pa=* “marks the circumstances” functioning to subordinate the adverbial clause, while there are no particular conjunctions like English *when*, *until*, *after*, or *as* in Karuk (Peltola 2008:13). In (34) *-avish* appears in both the subordinate and main clause and takes a prospective aspect semantics “about to” in each:

34) Condition and Event Marked by *-avish*

TSit1 = be night

TSit2 = go away again



púyava kúkuum vúra kúmateech [p-oo-kxáramh-**eesh**]  
 you.see again intensive later.in.day NMLZ-3SG(>3)-be.night-**PROSP**

kúkuum vúra vaa kári kun-pávyiihshipree-**vish**  
 again intensive so then 3PL(>3)ST-go.away.again.PL-**PROSP**

Again in the evening when it was about to get dark, again they were about to leave.

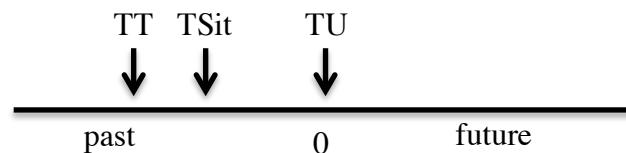
WB\_KL-02a, Nettie Reuben, Narrative, 1957



In (34), the TT is ‘later in the day’ and for that clause TSit is the subordinated verb meaning ‘be night’ marked by prospective aspect. Together the adverbial phrase constitutes the conditions and TT for another TSit marked by prospective aspect, the going or leaving. Past tense marking prior to this line and the context of it being a Coyote story situates the story in ancient myth time, with TT and TSit both prior to TU.

Another compelling example of the Karuk suffix *-avish* situated with past tense can be found in (35) which features a compliment clause in a quote. In a complement relation, an event entails that another event is additionally referred to by being either the object or subject of the clause (Cristofaro 2003 cited in Peltola 2008:7). Karuk has no subject clauses, but does have object clauses. In (35) Coyote reports his speech within a quote, and the complement predicate *ukyiim* is marked by *-avish*:

35) Complement Construction within Quote Time Relations  
TSit = fall



xás pihnêefich u-‘aachíhha                      xás u-piip                      kúnish íp  
then coyote      3SG>(3OBJ)-be.happy then 3SG>(3OBJ)-say sort.of PST

ni-pa-at                      [pa-mú-‘aan                      uum káan ú-kyiim-**eesh**]  
1SG(>3)-say-PST NMLZ-3SG.POSS-string 3SG there 3SG>(3OBJ)-fall-**PROSP**  
And Coyote was glad and he said, “I sort of said his string would reach there!”  
WB\_KL-08, Julia Starritt, Narrative, 1957

The verb meaning “say” is marked by past tense suffix *-at*, (35), producing the translation “would reach there” in the complement due to the *-avish* marking on the verb in the complement clause. The time relations within the quote can be diagrammed as follows as in (35) given

Coyote's time of utterance, and the quote could be further shifted back in time given the narrative context. Within the quote however, the time relation demonstrated is between TT and TSit prior to TU, making future tense under Klein (1994) improbable. Prospective aspect however, can be situated in the past with the time relations shown in (35) of TT before TSit.

To summarize, the examples previous in this section demonstrate a distribution of *-avish* across tenses. Importantly, *-avish* can be found in use with past tense suffixes and with past as set by a narrative context. Such uses show *-avish* to encode an aspectual relation rather than that of pure future tense, as a future tense ought not to possess a distribution across tenses. In Karuk, as *-avish* is the only marker of future temporal reference, a general future reading is not precluded in instances where a prospective aspect relation follows TU, but a simple future is not the main temporal relation encoded. All examples of *-avish* do however encode prospective aspect relation of TT before TSit, regardless of TU.

#### 4.3. COMPATIBILITY WITH OTHER TEMPORAL MARKERS

Reed (2012:6) offers incompatibility with progressive and perfect aspectual markers as a diagnostic for prospective aspect given the prospective aspect's designation as a precedence relation aspect. Perfect aspect is incompatible given that it marks TT after TSit, a relation opposite of prospective aspect that marks TT before TSit. Progressive aspect, as related to imperfective aspect, marks a TT within TSit. Bybee et al (1994:274) also notes that futures tend to occur in main clauses and are not commonly used in subordinate clauses. Karuk suffix *-avish* shows tendencies of a prospective aspect in several ways in regards to compatibility with other temporal markers.

First, Karuk suffix *-avish* is not observed as occurring on verbs with past tense markers other than simple past *-at*. Other past tense markers are anterior past *-aheen* and ancient past *-anik*. The fact that *-avish* doesn't occur on verbs with these remote pasts may relate to semantics of prospective aspect and restrictions as to contextually appropriate timeframes. Only the simple past on a verb is compatible with *-avish*. Ancient past *-anik* can be found in other clauses in sentences that feature *-avish* as shown previously in (30), and as in (36):

### 36) Prospective Aspect and Ancient Past

yukun naa ik káru vaa ni-kuph-eesh [p-oo-kúphaa-nik  
 you.see 1SG must also that 1SG(>3)-do-PROSP NMLZ- 3SG(>3)-do-ANC

p-eeknûuminveekxaréeyav]

DET-burrill.peak.spirit

You see, I must also do that way, as Burrill Peak Spirit did.

WB\_KL-54, Mamie Offield Narrative, 1957

In (36) the subordinate clause verb is marked by ancient tense suffix *-anik* while the main clause verb is marked by the suffix *-avish*, which is not unusual in the corpus; however, only *-at* is compatible with *-avish* on the same verb.

In contrast to simple past *-at*, there are no examples in the corpus of lines or verbs that feature the anterior suffix past tense *-aheen* along with suffix *-avish*. Bright defines the suffix *-aheen* as designating “a time previous to that indicated by *-at*” that can be translated by English pluperfect, “he had X-ed”. Incompatibility with perfect aspect is a diagnostic for prospective aspect according to Reed (2012:4). Perfect aspect is the relation of TT after TSit, while prospective aspect is the mirror relation of TT before TSit, making it incompatible with prospective aspect as a relation. Bright does not state that *-aheen* is a grammatical marker of perfect aspect apart from likening its translation to the English pluperfect, not can it be found

across tenses. Nonetheless, any perfect aspect qualities it possesses may explain its lack of occurrence with prospective aspect *-avish*.

Second, Karuk *-avish* appears compatible with the apparent Karuk perfective morpheme *tá*. Bright (1957:138) analyzes *tá* as a perfective marker, and the corpus shows that there are examples of *tá* occurring on same verb, in the same clause, or line as Karuk suffix *-avish*. In (37), *tá* is present with *-avish* for the same verb, as is the durative *-tih* is also present in the elicited example:

37) káruk **tá** ni-vâaram káruk va-‘ára-as **tá** ní-muus-tih-eesh  
 upriver PFV 1SG(>3)-go upriver 3SG.POSS-person-PL PFV 1SG(>3)-look.at-DUR-FUT  
 I’m going upriver and I’ll see someone (an Indian person) upriver.  
 SD-VS-02, Sonny Davis, Elicitation, 2010

From this example there appears to be no incompatibility between pre-predicate *tá* and suffix *-avish* modifying the same verb; however, there are just two examples of this in 526 sentences that feature *-avish*. These examples span two different speakers, and the years 1957 and 2010, with the second example given later in this section in (47). As the co-occurrence spans two speakers, with at least three present spanning the particular two recording sessions, and a 53 year difference, I interpret these two examples as not indicative of incompatibility. Though the combination is rare, if *-avish* is a prospective aspect, the designation of *tá* as a perfective marker is still appropriate. It is also common cross-linguistically to use such perfective markers to foreground lines in narrative (Crane 2011:15), and Bright (1984) in his translations of Karuk narrative extrapolates scenes from one use of *tá* (i.e. *tá’ittam*, ‘and so’ literally *tá* and *ítam* ‘earlier today’) and anterior tense *-aheen*. Line by line, *tá* moves narratives along, and appears the most of any aspectual or tense marker with 1621 example sentences in the corpus. Only the durative suffix *-tih* comes close to this number with 1408 example sentences. If *tá* were a perfect

marker, and *-avish* a prospective marker, the two would be incompatible as two sides to the same grammatical coin and *tá* would not likely serve the same function in narrative.

In (37) there additionally is durative aspect *-tih*, though the durative aspect with the verb root *muus* may be lexicalized. Other combinations of *tá* durative *-tih* and *-avish* are found in narrative such as in (38):

- 38) *víri pa-yaas'ára hûutva t-u-'íin-ahaak víri pa-yaas'ára kâarim*  
 so DET-rich.personsomehow PFV-3SG-exist-when so DET-rich.personbad  
  
*t-u-kúph-aak vaa kári xás ik i-chuuph-í-tih-eesh*  
 PFV-3SG-do-when so then then must 2SG-speak- DUR-FUT  
 However (long) Mankind exists, when Mankind does bad, then you will have to speak.

WB\_KL-24, Mamie Offield, Narrative, 1957

Apart from perfect aspect, Reed (2012) also offers incompatibility with the progressive aspect as a diagnostic for prospective aspect. Karuk doesn't have a grammatical marker of progressive aspect; however, durative aspect suffix *-tih* indicates continuing action over either along or short period of time (Bright 1957:113). Bybee et al (1994:126) in their cross-linguistic study of grammatical categories found that it was not uncommon to find progressives referred to as duratives or continuatives in reference grammars, with progressive marking an action as ongoing at reference time, and applying usually to dynamic as opposed to stative predicates.

Bright translates *-tih* as either English present tense habitual he “X-s all the time” or present progressive he “is X-ing (now)”; however, he notes that the durative is compatible with stative-like verbs such as ‘sit’, ‘live’, ‘be’, ‘stand’, or ‘lie’ which is cross-linguistically unusual for a progressive-like marker. Durative aspect *-tih* also occurs with *-avish* in examples like (39):

- 39) *saamvároo-k aratváraf kich i-'áam-tih-eesh*  
 creek-LOC black.mud only 2SG-eat-DUR-PROSP  
 You'll be eating nothing but mud in the creeks

WB\_KL-23, Lottie Beck, Narrative, 1957

This lack of incompatibility between *-avish* and *-tih* may be due to lexicalization of *-tih* with a particular limited set of verbs, including stative-like verbs; however, as Karuk *-tih* already displays unusual tendencies in being compatible with stative-like verbs, its compatibility with *-avish* ought not discount a proposed prospective aspect analysis. Instead, such unusual tendencies invite further study of Karuk lexical aspect in general.

Another important temporal marker that co-occurs with *-avish* is irrealis suffix *-ahaak*. Example (40) features *-ahaak* that according to Peltola (2008:19) refers to future time with no explicit temporal indications needed. In (35) the suffix *-avish* marks both verbs in matrix and subordinate clauses; however, *-avish* marks just the verb in the main clause of the quote in (40):

- 40) xás kun-píip [pa-‘avansá-xiich káan tá kun-‘íih-m-**ahaak**] ik kári  
 then 3PL(>3)-say DET-man-DIM there PFV 3PL(>3)-dance-to-**IRR** must then  
 ku-pêethkee-**vish**  
 2PL(>3)-take.back.out-**PROSP**  
 And they said, “When the boys dance to there, you people must pull them out.”  
 WB\_KL-08, Julia Starritt, Narrative, 1957

In (40) *-avish* appears in the main clause and not the subordinate clause. Such would not be atypical of a future tense if *-avish* were a future tense; moreover, main clauses can predetermine the tense, aspect and modal meaning of subordinate clauses in general, such that subordinate clauses are likely to lack tense, aspect and mood (Cristofaro 2003 cited in Peltola 2008:4). Peltola (2008) proposes that *-ahaak* “is not so much temporal as nonfactual by its meaning” and “reflects the semantics of the main clause” (page 28). Its use can be to mark generic, futuric, or irrealis, which in other languages corresponds to subjunctive forms. The suffix *-ahaak* occurs in subordinate clauses that express various irrealis events, co-occurring with prefix *pa-*. Without *-ahaak*, the prefix *pa-* that functions as a subordinator “denotes realized factual events” (page 26).

Most examples of *-ahaak* and *-avish* together in the corpus are as in (40) in that *-avish* is found in the main clause while *-ahaak* marks a subordinate clause; however, two examples exist of a subordinate clause marked both by *-ahaak* and *-avish*, including example (41):

41) [pa-yáan vúra u-‘iif-ti-haak] puxxich thúkkinkunish  
 NMLZ-recently intensive 3S-grow-DUR-IRR very.much blue.green

p-echeeraha-‘íppa [pa-chím u-imtúpp-**eesh-ahaak**] vaa kári taváttavkunish  
 DET-tobacco-tree NMLZ-soon 3SG-be.ripe-**PROSP-IRR** so then light-colored  
 When it is just growing, the tobacco plant is real green, when it is already going to get ripe, it is then light colored.

JPH\_TKIC-III.5.A.a, Phoebe Maddux, Narrative, 1932

In (41), the clause ‘when it is already going to get ripe’ is marked by subordinating *pa-*, suffix *-avish* as well as irrealis *-ahaak*. Such examples illustrate an important characteristic of *-avish* that is atypical to a simple future. Since the focal use of future is to make predictions and to make an assertion about future time, futures tend to occur in main clauses and are not commonly used in subordinate clauses (Bybee et al 1994:274). The suffix *-avish* however is used in a range of subordinate clauses, including complement clauses as in (42):

42) púyava vúra tá kun-káriha [pa-kun-kupa-vúr-ah-**eesh**]  
 you.see intensive PFV 3PL(>3)-be.ready NMLZ-3PL(>3)-MOD-jab-MOD-**PROSP**  
 And they were ready to jab him.

WB\_KL-46, Nettie Reuben, Narrative, 1957

The subordinated complement clause verb in (42) is marked by *-avish* and though contextually, the characters were “about to” jab skunk, prospective aspect semantics are not really reflected in the English translation. The English translation instead takes a non-finite verb in the complement clause, whereas the Karuk correspondent is a fully inflected finite clause, with the Karuk permitting *-avish* in the complement clause. Finite only complement clauses in general are typical of polysynthetic languages (Baker 1996).

Another construction with *pa-* as a subordinator are those which are translated as conditionals such as (43):

- 43) *ikiich vúra i-píshriivp-eesh pa-táay i-‘ám-tih*  
 Maybe intensive 2SG-FV-get.fat-PROSP NMLZ-much 2SG-eat-DUR  
 Maybe you’ll get fat if you eat too much.  
 JL-VS-01, Vina Smith, Narrative, 1957

As mentioned, the main use of a future is to make predictions. Such predictions cross-linguistically take place in apodosis - the main clause of a conditional (i.e. *I would agree in I would agree if you asked*) as opposed to the protasis, or subordinate clause (i.e. *if you asked*) where the conditions are stated (page 274). While *-avish* can be found in subordinated clauses in general, they are only found in the apodosis in the few conditionals present in the corpus. Conditionals in general however, are indistinguishable from other forms of subordination except for the translations given.

Together, examples such as (40)-(42) illustrate the ability of *-avish* to appear in both main and subordinate clauses as *-avish* is able to co-occur with the subordinating *pa-* morpheme, and though rare, it co-occurs also in clauses marked by *-ahaak*, behavior that is atypical of a future tense. Bybee et al (1994:274) in their survey observe only nine future-like grammatical morphemes of over seventy that are used in subordinate clauses. They state that diachronically, such uses must be late developments of futures based on semantics; however, they acknowledge that only three of these nine forms are affixes while the rest are auxiliaries or particles, evidence based on form that runs counter their characterization of subordinate uses as belonging to an advanced stage of grammaticization. An alternative explanation exists for *-avish* in that its semantics as a prospective aspect may allow for its use in subordinate clauses.

Example (41) features the adverbial *chim*, a shortened form of *chimi* meaning ‘soon’ which commonly occurs with *-avish*. Another common adverbial used with *-avish* is temporal



adverb *imáan*, meaning ‘tomorrow’ or ‘next day.’ Like *-avish*, the temporal reference of *imáan* means that it can be used both before TU as ‘the next day’ and after TU as ‘tomorrow’, hence the ambiguity in English translation. English lexicalizes either relation, but not both simultaneously. Karuk *-avish* appears in (44), but not (45), while temporal adverbs *imáan* appear in both:

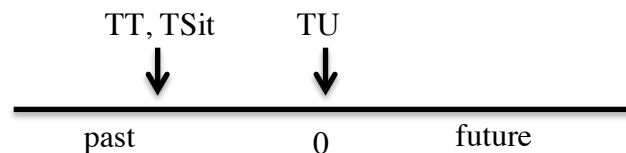
44) kúkuum **imáan** t-u-‘ákunvar  
 again **tomorrow** PFV-3SG-go.hunting  
 The next day, he went hunting again.  
 ALK-14-35, Mrs. Bennett, Narrative, 1903

45) **imáan** pa-púufich u-kúniikh-**eesh**  
**tomorrow** DET-deer 3SG-shoot.at-PROSP  
 He is going to shoot the deer tomorrow.  
 VS-14, Vina Smith, Elicitation, 2010

Why would *-avish* appear in (45) but not (44)? Example (44) lacks prospective aspect TT before TSit in (44), as the time before the hunting event is not being discussed. However, (45) does feature *-avish* as TSit, the shooting event, will take place after TT. The adverb *imáan* together with present tense context sets the topic time as simultaneous with TU. As shown previously, it is when TT and TSit are not set in the past that a general future reading is possible.

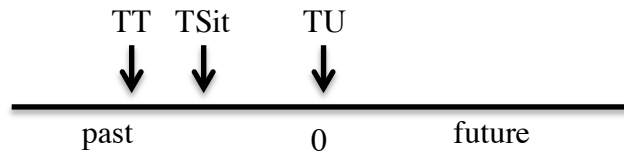
The temporal adverb *imáan* can be set in the past as in (44), and in the following (46) and (47). Example (46) features *imáan* without *-avish* while example (47) does feature *-avish*:

46) Tomorrow/The Next Day Without Prospective Aspect



Xás kúkuum vúra **imáan** t-u-músar  
 then again intensive **tomorrow** PFV-3s(3>)-go.see  
 So again the next day he went to see her.  
 WB\_KL-39, Nettie Reuben, Narrative, 1957

## 47) Tomorrow/The Next Day With Prospective Aspect



xás kári kúkuum vúra **imáan** tá kun-pithvuyrá**m-eesh**  
 then then again intensive **tomorrow** PFV 3PL-meet-**PROSP**

And again the next day they were going to meet.

WB\_KL-39, Nettie Reuben, Narrative, 1957

In (46) the verb stem meaning ‘go.see’ isn’t marked by *-avish* and the line features *imáan* meaning ‘tomorrow’. In example (46) the verb meaning ‘meet’ does feature *-avish*. While both sentences feature a seemingly future oriented adverbial, the difference is that in (46), no prospective aspect is needed as the time before their meeting isn’t being commented on, just the event itself (TT = TSit). In (47), the time before an expected meeting is being commented on, and *-avish* encodes this with TT (the time before the meeting) before TSit (the meeting).

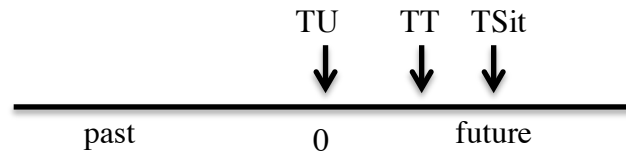
Another adverb that appears with *-avish* often is *xasik* meaning ‘then (in the future)’ (Bright 1957:397). There are 32 examples of *xasik* in the corpus and all but two co-occur *-avish*. Both are translated with hortative or self-imperative *let’s* as in (48):

48) **xasik** kahyúras ni-vâaram-**i**  
**then.FUT** Klamath.Lakes 1SG-go- **IMP**  
 Let me go to Klamath Lakes!

WB\_KL-01, Nettie Reuben, Narrative, 1957

Though *-avish* is absent in example (48), any future-like semantics is yet achieved by the imperative suffix *-i* in combination with *xasik*. Crosslinguistically, future is the most commonly occurring other use of imperatives (Bybee et al 1994:273).

For those examples that feature *-avish* and *xasik*, the adverb helps to anchor the relation TT before TSit in the future, or in other words, after TU (the time of the quote) as in (49):

49) Adverb *xasik* and Suffix *-avish*

**xasik**      pa-naní-vaas      ni-paathkúrih-**eesh**  
**then.FUT**    DET-1SG.POSS-blanket 1SG-throw.into-**PROSP**

Then I'll throw my blanket in the water.

WB\_KL-04, Julia Starritt, Narrative, 1957

Such an adverb as *xasik* can help distinguish uses of prospective aspect *-avish* that are anchored in the past from the future, for there are no examples of *xasik* appearing with any of the three past tense markers; moreover, *xasik* appears discordant with past temporal reference.

To summarize, there are no grammatical temporal relation markers among those that are the most perfect and progressive aspect-like that are incompatible with *-avish*, aside from anterior tense *-aheen* which never occurs with *-avish*. In the case of *tá*, this is expected given its analysis as a perfective aspect. The fact that *-avish* can appear in both main and subordinated clauses is atypical of a simple future, and favors a prospective aspect analysis. Lastly, a prospective aspect temporal relation of TT before TSit is maintained with other aspects and common adverbs.

## 5. MODAL USES

Karuk *-avish* has several modal uses as evidenced from English translations in stories, though Bright and others do not explicitly comment on these uses in description. In general Karuk lacks modal morphemes as compared to English, and several types of modality are often expressed with the use of *-avish*; however, any particular type of modality is not the primary

semantics of the morpheme *-avish*. Instead, the modal translations of *-avish* are dependent on context, with meaning that is formed pragmatically through implicature.

Modality is often described as the grammaticalization of speakers' attitudes and opinions, indicating such notions as obligation, probability, and possibility (Bybee et al 1994:176).

Sometimes a language has modals that do not correspond to just one particular modality type.

Deal (2011:559) discusses the Nez Perce possibility modal *o'qa* whose semantics do not contrast with necessity modality in contexts that permit; moreover, that someone can, or should do something is often expressed both by *o'qa* given further context given doesn't cancel out a particular modality reading. This is possible Deal argues, since the modal doesn't belong to a Horn scale, and its use can't be associated with a scalar implicature. With scalar implicature, scalar items like the quantifier *some* invoke alternatives in scale such as *all*, whereby *some* implies not all of an amount is being referred to with its use. With modality and the semantics of modals, the quantification achieved may be over possible worlds (page 560). With the absence of such a scalar implicature, it is possible for a modal to mean both possibility and necessity modality in particular upward entailing environments, and are quantificationally variable modals.

But what if no such modals exist for all modality types, as in Karuk? Pragmatically, the grammatical marker of prospective aspect *-avish* may allow for modal readings and translations in the range we observe for which there are lexical or morphological gaps – desire modality, and possibility/ability modality. Instead of capitalizing on the two modal morphemes that appear with *-avish* to form quantificationally variable modals as in Nez Perce, Karuk utilizes *-avish* pragmatically to fill modal gaps.

There does however exist two morphemes in Karuk that in general serve a modal function and co-occur with *-avish*. They are adverbial *ik* translated by Bright (1957) as 'must' or

‘have to’, expressing obligation or necessity (page 136) and the adverb *kíri* which according to Bright is used to express a wish (page 361). Both are what Bybee et al. (1994:254) term types of agent-oriented modality. Only three examples in the corpus feature both *kíri* and *-avish* while many more examples feature *ik* and *-avish*. Sentences which are translated with English modal verb *must* always feature Karuk modal *ik* and in general express obligation modality as in (50):

50) áxak **ik** p-ee-vik-**eesh**  
 two **must** NMLZ-2SG-weave-**PROSP**  
 you must weave two (of them).

WB\_KL-54, Mamie Offield, Narrative, 1957

At times *-avish* appears with *ik* and is translated as ‘have to’ in English as in (51):

51) vaa **ik** vúra i-‘asimchaak-tih-**eesh**  
 that **must** intensive 2SG-close.eyes-DUR-**PROSP**  
 You will have to keep your eyes closed like that.

WB\_KL-02a, Nettie Reuben, Narrative, 1957

Importantly, there are no examples of *-avish* with a modal obligation translation without *ik*.

As for *kíri*, it appears to correspond most closely with a modality of desire, used whenever one might say “I wish that...” to express a desire for some particular circumstances in the world. Bright translates *kíri* as “may...!” or “let...!” as in (52):

52) **kíri** chími áas u-xráh-**eesh**  
**I.wish** soon water 3SG-thirst.for-**PROSP**  
 Let him get thirsty!

WB\_KL-05, Mamie Offield, Narrative, 1957

Not all examples of *-avish* and a translation expressing some form of desire modality involve *kíri* however, or *-avish*. In some question constructions, *-avish* may be translated with English *want* inquiring about a subject’s desire to do something as (53):

53) i-pûunv-**eesh** hum  
 2SG-rest-**PROSP** Q  
 do you want to rest?

VS-20d Vina Smith, Elicitation, 2012

In (53), the question as translated into English as ‘do you want to rest?’ is expressed pragmatically rather than semantically. A more direct translation would be ‘will you rest, yes or no?’, but it can be implied that someone who will rest is also wanting to rest, unless otherwise stated. Karuk has no verb that means directly ‘to want’, and *-avish* can be used to express desire modality and fill the gap. Otherwise a verb *vishtar* is used to express desire and a liking specifically for food.

Some constructions with *-avish* are translated with English modal *can*, indicating either ability, or possibility as in (54) and (55):

54) xasík      i-yuuph-éesh  
 then.FUT    2SG-open.eyes-PROSP  
 Then you can open your eyes.

WB\_KL-54, Mamie Offield, Narrative, 1957

55) manâa i-p-fíkriip-ti-haak      vaa kári i-afish-hêena-ti-**heesh**  
 maybe 2SG-ITER-pick.out-DUR-IRR so then 2SG-feel.by.touching-DUR-PROSP  
 When you are sorting it, then you can feel it.

GD-MD-VSu-01, Madeline Davis, Conversation, 1989

A more literal translation of (54) and (55) would be “Then you will open your eyes”, and “When you are sorting it, then you will feel it” respectively. There appear to be no modals to express ability or possibility modality in Karuk, and again, *-avish* with fluid enough semantics permits such modal readings pragmatically. For example, in (54), it is implied that someone who will open their eyes can do so, as in its possible, and *-avish* is used to express this.

## 6. CONCLUSION AND CONSIDERATIONS FOR FUTURE STUDY

As the only grammatical marker of future time reference in Karuk, a general future reading may be available if such relation follows after TU, but *-avish* does not encode such a relationship to TU. Common to all uses of *-avish* is the temporal relation of TT before TSit that

encodes prospective aspect. Modal *ik* in combination with *-avish* provides a further modal reading of obligation. Other modal readings of *-avish* are further formed through pragmatic context, and the absence of alternative constructions in Karuk.

From diagnostics given by Klein (1994), Reed (2012), and Bybee et al (1994), *-avish* is better considered a grammatical marker of prospective aspect rather than future tense, and to be an aspectual future rather than a simple future. By definition a simple future tense description does not capture. A simple future tense analysis can be ruled out given elicitation and narrative data types, the main difference between the two data types being the obligatoriness of past tense marking. First, I discussed that Karuk suffix *-avish* from available data does not show optionality in narrative on the level of past tense optionality; moreover, that *-avish* does not behave as other overt grammatical tense markers do in Karuk. Second, the suffix *-avish* shows a relationship of TT before TSit irrespective to TU as prospective aspect should according to Klein (1994). Put differently, the suffix displays a distribution across tenses, which is a diagnostic of an aspectual relation according to Reed (2012). Thirdly, its compatibility or lack thereof with other aspectual markers does not preclude *-avish* from being a marker of prospective aspect. Instead, incompatibility with more remote past tenses, including *-aheen* which possesses perfect aspect-like semantics, points to *-avish* possessing prospective aspect semantics, as does the fact that Karuk *-avish* can appear in various subordinate clause environments and not just main clauses as would be typical of simple futures crosslinguistically (Bybee et al 1994:274). Lastly, any modal uses of *-avish* are achieved through pragmatics or the use of two co-occurring Karuk modals.

Cover (2010) documents Badiaranke, an Atlantic language, as a language in which perfective and imperfective aspects cover much of semantic space usually reserved for tense in European languages. In Karuk the semantic space of futurity is covered by an aspectual

relationship in Karuk - prospective aspect by virtue of its properties to mark eventualities that have not happened yet in a contextually appropriate amount of time. Contextually appropriate perhaps covers what appears to be a future tense relation in Karuk in function. In contrast, English has been argued to use a modal verb *will* to cover the semantic space of futurity, alongside the prospective aspect *about to* and *going to* constructions. A typology of futurity can be constructed between these three languages, as in the following table:

#### 56) Typology of Futurity

English	Badiaranke	Karuk
modal verb, prospective aspect	imperfective aspect	prospective aspect
past tense	perfective aspect	perfective, past tense (x 3)

Bybee et al (1994:279) in their survey establish four semantic ages for future-oriented grammatical markers, and observe that diachronically, there is unidirectionality in the evolution of grammatical markers. For futures, the first stage is a futures with agent-oriented uses of obligation, desire, and ability. The second stage involves later agent-oriented uses of intention, root possibility, and the specific use of immediate future. A third stage is a simple future with its only use as such. Finally, simple futures may develop epistemic, speaker-oriented modal uses, or find their uses in subordinate clauses in conditionals. Karuk *-avish* displays characteristics of stage one and two, but not stage three or four as it is neither a simple future or a later progression of a simple future, but appears to be an aspectual future.

As mentioned, futures evolve through grammaticalization from a fairly restricted range of lexical sources, namely movement verb constructions, markers of obligation, desire, ability, and temporal adverbs, the most common being movement verb constructions (page 244). Because



Karuk is a classificatory isolate and the time depth of the proposed Hokan language family is so very deep, it is difficult to determine through comparison with proposed related languages cognates for *-avish* and the exact semantic path of grammaticalization Karuk *-avish* evolved from. Because a future from one source doesn't later acquire other uses, and other modal uses of *-avish* are contextually dependent, one can hypothesize that *-avish* is on a trajectory semantically from a progressive aspect to a simple future, retaining for now other contextually dependent semantics given that it is the only future-oriented grammatical marker in Karuk currently. A possible simplification of form within the last 150 years is also possible given the various descriptions of the morpheme's form, and in general, grammaticalization involves evolution of the more specific to the more general and abstract semantically (page 13). Karuk *-avish* appears to be on just such a trajectory from its given semantics. Considerations for future research would be to determine how *-avish* would interact and occur in a narrative placed in the future, for a current gap in the corpus of text types that include future temporal reference.

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