

Polyfunctionality of *-ara* in Karuk

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INTRODUCTION

Karuk is a language isolate spoken along the Klamath River in Northern California. It is a polysynthetic agglutinative language, comprising a rich assortment of complex morphological features. William Bright, in his *Grammar of the Karuk Language* (1957), delineates two overarching word classes in Karuk: noun-themes and verb-themes. While verb-themes are afforded no further sub-class distinction, Bright defines noun-themes as a class composed of two subclasses: adverbial nouns and non-adverbial nouns. Adverbial nouns are those adjectives and adverbs that may act as adverbial satellites in a syntactic structure, such as postpositional phrases and temporal clauses, while non-adverbial nouns are those nouns that never act as an adverbial base: general nouns such as *tíik* “hand” and *aax* “blood,” and personal nouns such as *asiktávaan* “woman” and *afyiiv* “friend.” Because adjectives and nouns fall under the same overarching syntactic class, they are afforded freedom in terms of semantic construal. For both word classes, Bright (1957) offers a schematic affix template structure as a guide for identifying, categorizing, and constructing coherent form-meaning pairings in the language. Each schematic template contains a number of derivational and inflectional affix “slots” positioned on either side of the base, with derivational suffixation occurring to the right edge of the base. For example, the verb-theme *ikravaratih* “grinding (something) with (something)” shows the verb-stem *ikrav* “to grind,” followed by the derivational instrumental applicative suffix *-ara*. To the right edge of the verb base is the inflectional durative suffix *-tih*.

The purpose of this paper is to examine the uses of the derivational suffix *-ara* in both written and elicited verbal discourse using cognitive approaches to semantics (e.g. Croft 2001; Fillmore 1982; Langacker 1991; Talmy 2000). Bright (1957) defines and describes to varying degrees three distinct *-ara* morphemes: the instrumental applicative *-ara*, the resultant-state *-ara*, and the nominal *-ara*. Making use of these definitions and the template structures described above, I discuss three levels of information structure: lexical constructions—the formation of verb and noun-theme constructions in which *-ara* appears, phrasal constructions—the formation of verb and noun phrase constructions in which *-ara* occurs, and clausal/sentential constructions—the formation of clause-level constructions in which *-ara* appears. The goal of this analysis is to develop a more enriched accounting of the form, meaning, and function of each morpheme in both its prototypical and less than prototypical environments. In doing so, I will also examine the extent to which these three suffixes are polysemous in the language.

The next section offers a concise discussion of concepts within the theoretical framework of cognitive semantics relevant to this paper. Following it is a usage-based analysis of each of the *-ara* three morphemes: first, the instrumental applicative *-ara*, second, the resultant-state *-ara*, and third, the nominal *-ara*. The remaining two sections provide a discussion of the findings and a summary.

THEORETICAL BACKGROUND

Frame semantics is a theory of linguistic meaning developed by Charles Fillmore (1982) that links linguistic semantics to world knowledge via semantic framing. Any lexeme is argued to activate or evoke a semantic frame of meaning to which it refers, highlighting a gestalt of individual but related concepts and specifying a particular conceptual construal of an interactive experience, i.e., a certain viewpoint or perspective in which the frame is viewed. Frames are composed of frame elements. Frame elements are semantic roles specific to a frame: concepts such as agent, patient, theme, and instrument. Because frames are often idealized cases of recurring experiences, they can oftentimes presume larger cultural frames (Kovecses 2006).

Prototypically, nouns are frames that profile things or objects, verbs are frames that profile processes or actions, and adjectives are frames that express properties and profile non-process relationships (Croft 2001; Langacker 1987). Examples of object categories of nouns include *saw*, *chair*, *vehicle*, and *hair*, examples of verb processes or actions would be *grind*, *fly*, *destroy*, and *weave*, and examples of adjective properties would include *white*, *old*, *heavy*, and *round*. As Langacker (1987) and Croft (1991) point out, nouns, verbs, and adjectives differ not only in their semantic properties but also in their pragmatic functions, with the function of nouns being reference, the function of verbs being predication, and the function of adjectives being modification. Nouns hold perceptual information specific to those referent entities, and verbs thematic information among entities. Examples of relational categories of nouns include *widower*, *weapon*, *whiteness*, *flying*, and *gift*, examples of verbal predication include *be hungry*, *be scared*, *be a vehicle*, and *be hairy*, and examples of adjective modification include *destroyed*, *burned out*, *vehicular* and *hairy*.

Following Langacker (1987; 1991), “profiling” is a term used to describe the figure/ground orientation of a concept with respect to its more general conceptual frame. An individual concept is said to be “profiled,” “in focus,” or “foregrounded” against a conceptual frame or domain. A noun profiles a region within some broader domain, while a verb profiles a process or action within some more complex event frame. In order to understand a specific region or process, it is understood that

one must also have some knowledge of the whole domain or event in which the concept is grounded, or else the specific region or process makes no sense. A common example used to illustrate this notion is the concept of the hypotenuse. The word hypotenuse profiles a specific line on a triangle. We are only able to understand the specific region of a triangle called the hypotenuse because we also have in our minds the understanding that there are things called triangles in the world, that a triangle has different distinct parts, and that each distinct part has a name. In Karuk, an example would be the concept *átruup* “palm of the hand,” where the “palm of the hand” is in focus against the conceptual domain of *tíik* “hand.” The only way to understand *átruup* is to also have some knowledge of *tíik*. This fundamental part-whole relation gives rise to many forms of metonymy, particularly frame metonymy, where an aspect of a frame is used to evoke the frame as a whole, as well as to metaphor (Dancygier & Sweetser 2014; Panther, Thornburg & Barcelona 2009).

The theory of frame semantics has expanded beyond its original use in Case Grammar to become one of the central semantic principles of Construction Grammar. Construction Grammar is a general linguistic model of grammar that embraces the idea that a person’s functional knowledge of language is based on that individual’s systematic collection of form-content pairings, called constructions. The practice of describing grammatical patterns in conjunction with semantic purposes and pragmatic functions is viewed as both important and necessary in capturing the patterns of language (Petrucci 1996), and can range in level of abstraction from individual morphological constructions to more complex argument-structure constructions. An instantiation of a construction is called a construct. For example, as described above in the Introduction, Karuk has a General Noun construction, which consists of a non-adverbial noun-stem that is of type general. An instantiation of that construction would be the *TÍIK* construct.

APPLICATIVE *-ara*

Defining *-ara*

The applicative morpheme *-ara* is defined in Bright (1957) as a derivational suffix with a meaning of “to use ... in order to ...” or “to ... by means of ...”.¹ Morphophonemically, *-ara* conditions progressive

¹ [WB G754.3], p.106; for full-page images, see APPENDIX E

accentuation.^{2,3} Syntactically, *-ara* combines with a verb-stem and changes its valence by adding a direct object with a semantic role specification of instrument.

- (1)
- | | | | |
|------------------|---|----------------------------------|-------------|
| ikrúp “to sew” | > | ikrúpara “to sew with ” | [WB G754.3] |
| ikyav “to make” | > | ikyâara “to make with ” | |
| ikrav “to grind” | > | ikrávara “to grind with ” | |

Listed in (1) are the examples that accompany the definition provided in the *Grammar* (1957). The verbs *ikyav* and *ikrav* both display progressive accentuation conditioned by the unification of *-ara* to the verb-stem. Each of the three verb-stems reflects the notion of an integration of meaning between Applicative *-ara* and the base verb-stem in the translation provided.

Additionally, when a verb-stem to which applicative *-ara* is attached, and is immediately followed by the deverbative suffix *-a*, the semantic role of *-ara* shifts from an instrumental meaning to an agentive meaning.

Discussion

The definition provided in the *Grammar* (Bright 1957) offers no discussion regarding any syntactic or semantic constraints of the applicative form of *-ara*. It is assumed, then, that *-ara* could be added to intransitive and transitive verbs alike. The examples (1) offer a little more insight. Each verb-base in (1) is syntactically transitive. Semantically, each verb-process results in a change of state in an object referent. For these change of state events, the subject is agentive, and the object is patientive. The translation of *-ara* as meaning “with” in (1) is different from any of those meanings described in the definition itself. Given the fact that the English preposition “with” has its own polysemy structure (Farrell 2010), it becomes difficult at this point to predict the types of “instruments” *-ara* will license in specific contexts. Additionally, Bright (1957) offers no examples of those derived nouns, or deverbal noun forms, that exhibit a shift from an instrumental meaning to an agentive meaning. It is difficult to assess what Bright means exactly by an “agentive” meaning, and what types of referents he has in mind that would presumably instantiate the agentive thematic role of the action denoted by the verb-stem.

² [WB G382.2], p.46-47; for description of *Progressive Accentuation*, see APPENDIX E

³ [WB G381], p.45-46; for full description of *Fixed versus Moving Accent*, see APPENDIX E

The focus of this analysis will be centered on two themes. First concerns the uses of the Applicative *-ara*: what types of verbs can *-ara* combine with syntactically and semantically, and, what is the result of the addition of *-ara* to the verb-stem with respect to the verb-theme’s valence. Second, the uses of the Applicative *-ara* in the formation of Instrument Nouns: what types of verb-stems are selected in the formation of instrument nouns, and, what is the result of the unification of *-ara* to the verb-stem.

Instrumental Applicative Verb-Themes

Lexical Constructions: Base Verb and *-ara*

When attached to a verb-stem *-ara* can act as a simple instrumental applicative marker, having a meaning often translated as “with.” It can be described as a “true” applicative in the sense that it increases the valence of the verb-stem by one, either transitivizing an intransitive verb or adding a third core argument to a transitive verb. The list of expressions in (2) provide examples of this Instrumental Applicative Verb-Theme construction.⁴ The Applicative *-ara* morpheme attaches to verb-stems—transitive and intransitive alike—denoting accomplishments and activities.

Applicative constructions generally profile a semantically peripheral participant relative to the event

(2)

(a) Instrument:

ikchura “to grind (something)”	>	ikchú ra “to grind Y with X ”	[JPH_TKIC-95]
ikrav “to grind/pound (something)”	>	ikrá ra “to pound Y with X ”	[JPH_TKIC-97]
thimiyav “to rub good/polish (something)”	>	thimiyâ ra “to polish Y with X ”	[JPH_TKIC-162]

(b) Instrument as Material:

vik “to weave (something)”	>	vík ara “to weave Y with X ”	[JPH_TKIC-106]
inhîishrih “to tie (something) down”	>	inhîishrih ara “to tie down Y with X ”	[JPH_TKIC-271]
vup “to string beads”	>	vú para “to string beads Y with X ”	[WB_KL-01]

⁴ See Appendix A or full list of Instrumental Applicative Verb-Theme constructs

(c) **Instrument as Means:**

- ikava “to buy (something)” > ikávara “to buy Y **with X**” [TK-94.33]
 if “to grow up” > ífara “to grow up **with X**” [JPH "Grammar" 322]
 ixtíivhi “to play (athletic games)” > ixtíivhara “to play (athletic games) **with X**” [WB_KL-01]

denoted by their verb-base (Croft, 1990: 240). In this case, *-ara* introduces as its core argument a peripheral but salient frame element with the prototypical role instrument that is canonically used in the change of state process denoted by the verb. This instrument role is then realized in three ways: as an instrument, a material, or a means. Phonologically, *-ara* conditions progressive accentuation.

Phrasal Constructions

Bright (1957) provides in his *Grammar* a schematic verbal affix template, where *-ara* is classified as a Class 4 suffix. When attached to a verb-stem, its position in the information structure of the verb-theme is right-adjacent to that of the directional suffixes, and left-adjacent to the Inflectional Suffix

Table 1: Karuk Verb-Theme Suffixes Co-occurring with *-ara*

	Suffix Classes								
	1	2	3	4	5	6	7	8	9
v	-va	-chak -riv -taku	-ku/kaa -ish(rih)	-koo -uk -rih -math -vaana	-ahi	-naa	-tih	-ich	-a -eep

Class 1: *-va* ‘plural action’, Class 2: *-chak* ‘closing up’ ; *-riv* ‘at rest’ *-taku* ‘on/onto a vertical surface’, Class 3: *-ku/kaa* ‘onto a vertical surface’; *-ish(rih)* ‘down/Resultative’ *-vara* ‘through’
 Class 4: *-koo* ‘onto’ ; *-uk* ‘hither’ ; *-rih* ‘up’ ; *-math* ‘Causative’ ; *-vaana* ‘oneself’, Class 5: *-ahi* ‘Essive’, Class 6: *-naa* ‘Plural’, Class 7: *-tih* ‘Durative’, Class 8: *-ach* ‘Diminutive’, Class 9: *-a* ‘Deverbative’ ; *-eep* ‘refuse from –ing’

Classes. Considering the abundance of suffixes available to the verb-stem, *-ara* appears quite restricted in its co-occurrences with other derivational suffixes. As shown in Table 1, *-ara* appears after only those suffixes that convey the meanings of “closing up,” “on,” “onto,” “off/away,” and “down,” and is followed by only the CAUSATIVE *-math* and the REFLEXIVE *-vaana*. Beyond Suffix Class 4, *-ara* frequently co-occurs with all members of the remaining inflectional classes: ESSIVE, PLURAL, DURATIVE, and DIMINUTIVE. Bright also suggests a final suffix class: suffixes that form nouns, labeled Suffix Class 9 in Table 3. Only two suffixes are found to occur after *-ara*: the deverbative suffix *-a* and *-eep*, meaning “refuse from X-ing.”

Unlike many of the other suffixes in Class 4,⁵ *-ara* does not on any occasion denote path. Instead, any positional or postural meaning is provided by those few directional suffixes that may precede it on the verb-stem.

Clausal Constructions

For a given sentential construction, the subject is prototypically agentive, consisting of an animate, volitional entity who makes controlled use of the prototypical instrument licensed by *-ara* in order to perform the action denoted by the verb. Each transitive-instrumental event results in a change-of-state of the inanimate undergoer/patient of the action. For example, in (3(a)), the agent subjects use the instrument licensed by *-ara*, *chimchûikar*, meaning “scouring rush,” to change the

(3) Instrument:

(a) vaa kumá'ii paxuuskúnish, **chimchûikar** kunthimyâaratih [JPH_TKIC-162]
 that because.of DET-smooth-like, **scouring.rush** 3PL(:3)-polish-**with**-DUR
 "That is why it is so smooth, because they polish it **with scouring rush.**"

(b) **iknavaná'anamahach** tá kunikchúraratih [JPH_TKIC-95]
pestle-little PERF 3PL(:3)-pound-**with**-DUR
 "They pound it (tobacco) up **with a little pestle.**"

⁵ see Appendix E for complete list and description of Class 4 suffixes

exterior surface of the object denoted by the verb. In (3(b)), the instrument profiled by *-ara*, *iknavaná'anamahach* "little pestle," is used by the agentive subject to change the shape of the object denoted by the verb, "tobacco," by grinding it.

Sentences in (4) show the same subject-control relation between the agentive subject of the verb-theme and the instrument profiled by *-ara*. In these sentences, the instrument is understood as a material. For this sub-case of the archetype instrument, the material is both the instrument that facilitates the process denoted by the verb and a component part of the final product. In (4(a)), the Applicative Verb-Theme construct *víkara* "to weave with," *-ara* profiles in the WEAVING frame the object *sárip* "hazel sticks." The change of state resulting from the weaving process is the formation of a basket, of which the hazel sticks have become an integrated part.

(4) **Instrument as Material:**

(a) payváheem **sárip** vúra káakum kunvík^{ar}atih [JPH_TKIC-106]

"Nowadays people weave it [a basket] **with hazel sticks.**"

(b) **aan** unhîishrihar^{ar}atih [JPH_TKIC-271]

string 3SG(:3)-tie.down-**with**-ESS-DUR

"It **has a string** tied on it."

And, in (4(b)), *aan* "string" constitutes the applicative object of the Applicative Verb-Theme construct *inhîishrihara*, meaning "to tie down with." The undergoer of the action is promoted to subject position via the ESSIVE suffix *-ahi*, yet the action is still understood to have had an agentive causative force that, as a result of force application, has resulted in the string being tied to the object. For both applicative objects licensed by *-ara* in (4), the object has not only facilitated the change of state of the undergoer profiled by the verb, but has itself become part of the final state of that object. In this respect, it is like noun-incorporation semantically, but its opposite syntactically.

(5) **Instrument as Means:**

(a) pu'ikyáakaamhara pa'araráh^{ih}, pámit vúra voo'ífaratih^{at} **pararáh^{ih}** [JPH "Grammar" 322]

"The Indian language isn't hard if you're raised **with the Indian language.**"

(b) kári xás kúuk upáathma yítha, tá kuníxtiivhar vaa **pasah'áhup**

[WB_KL-01]

“And one threw it to (another), they played **with that driftwood.**”

For intransitive-instrumental events such as *ífara* “to grow up with” and *íxtiivhar* “to play (athletic games) with,” shown in (5), simply possessing the profiled applicative object seems to enable the event’s occurrence. Unlike the other verb-stems with which the applicative *-ara* can combine, these processes seem not to describe a change of state in an undergoer using a prototypical instrument licensed by *-ara*. Instead, these two cases could be considered instances of self-directed causation, whereby the animate being’s bodily action is itself the final and relevant state (Talmy 2000). To arrive at this final state, the instrument prototype is extended to a more general frame, to include the *means* that is causally necessary to the event’s occurrence. In this way, the *means* facilitates the occurrence of the activity or achievement. This would suggest that in (5(a)), having access to the “Indian language” allows one to learn it more easily, so being “raised with the Indian language” is the relevant change-of-state by which one is able to speak the Indian language. And in (5(b)), having the “driftwood” is necessary to the achieve in the agents’ the resultant state of “playing the athletic game.”

Because *-ara* seems to be constrained in its usage to only those base verbs-stems that denote processes or events in which the instrument is agent-controlled, this means that *-ara* will only profile entities for which force is directed. As a result, these applicative instrument entities will never be the prototypical agent. Because agentive control of an instrument is subsumed in the broader verb classes to which *-ara* may attach, it can be predicted then that *-ara* will never be used to select for an agent of the action, and so should not refer to the onset or source of an event process. Instead, event focus is expected to shift towards the endpoint, targeting the goal: either a change of state or resultant state of the argument internal to the verb, and any argument licensed by *-ara* should be central to the process. This means that potential future uses of the Instrumental-

(6) (a) ***chimchîikar** uthimyâaratih

scouring.rush 3SG(:3)-polish-**with**-DUR

intended: “The scouring rush polished the pipe.”

(b) ***ikrávara** tá ukchúraratih

pestle PERF 3SG(:3)-grind.tobacco-**with**-DUR

intended: "The pestle pounded the tobacco."

Applicative Verb-Theme construction should in theory be constrained in causal events to only those base verb-stems that are goal-oriented, denoting caused change of state. And, because the instrument licensed by *-ara* does not appear as an argument external to the verb phrase, in subject position, or it is concluded for now that these instruments are what Marantz (1984) calls "facilitating instruments." As facilitating instruments, these arguments should never hold an Agent role in a clausal construction. Sentences in (6) provide examples of such proposed ungrammatical constructions. In (6(a)), the instrument intended to be licensed by *-ara* is *chimchîikar*. However, the subject and external argument of the clause is also intended to be *chimchîikar*. Because instruments licensed by *-ara* lack agentivity, this sentence as it is intended to mean "The scouring rush polished the pipe." is proposed to be ungrammatical. Similarly, in (6(b)), *ikrávara*, the intended instrument argument licensed by *-ara*, cannot be co-indexed with the subject of the clause with the intended meaning "The pestle pounded the tobacco." Therefore, the sentence is deemed ungrammatical.

Problem Cases

The Applicative *-ara* morpheme is understood to be a "true" applicative, yet there are cases when no additional argument is overtly expressed nor implied. Two such cases are the *V-ara-riv* Construction and the *mah-ara* Construction.

V-ara-riv Construction

The first case involves the *V-ara-riv* construction. In (7(a)), *paxuñxun* "spit" fills the instrumental applicative object position licensed by *-ara*. And, in (7(b)), *táhpuus* "young fir tree" is the instrument profiled by the Applicative *-ara* and overtly expressed in the discourse. However, the sentences in (8) show no instrument object, no argument at all that would normally be

(7) (a) *paxuñxun tukíshaparariv* [JPH_TKIC-229]

DET-phlegm PERF-3SG(:3)-tie.in.a.bundle-**with**-at.rest

"It (the pain) is tied up with spit."

(b) *hâari táhpuus 'ávahkam tá kunkíshaparariv* [JPH_TKIC-88]

sometimes young.fir.tree on.top PERF 3PL(:3)-tie.up-**with**

"Sometimes they tie Douglas Fir needles outside."
(8) (a) pamúsmus utás**arariv**ahitih [Reference: KV]

DET-cow 3SG(:3)-build.a.fence-with-at.rest-ESS-DUR

"The cow is fenced in."

(b) tutatná**karariv** [Reference: WB files]

PERF-3SG(:3)-be.trapped

"He got trapped."

licensed by the Applicative *-ara*. Instead, these uses of *-ara* in (8) resemble the Resultant-state *-ara* morpheme, where the verb-stem denotes an inchoative process, and the nominal referent of the property formed by the base verb-stem and *-ara* is co-indexed with the patient or undergoer expressed by the verb-stem.

***mah-ara* Construction**

The second case involves the verb-stem *mah*, meaning "to see/find." The sentences in (9) offer three instances where the Applicative *-ara* attaches to the verb-stem, yet results in no addition of an instrumental argument.

(9) (a) vaa vúra kich pakun**máhar**atihanik Peekxaréeyavsa [JPH_TK-74]

that INTENS only NOM-3PL(:3)-find-?-DUR-ANC DET-Ikxareyav-PL

"All did the same, the way that the Ikxareyavs used to do."

(b) kitaxríhar **umáhar**atih [JPH_TKIC-222]

Kitaxrihar 3SG(:3)-find-?-DUR

"He is mocking the Kitaxrihars."

(c) vaa panímáharati naa káru, Violet vaa pay [GD-MD-VSu-01]

that NOM-1SG(:3)-find-?-DUR 1SG.PRON also, Violet that

"I copy that too, like Violet ..."

It is clear from the translations that the intended meaning of *mahara* is “to mock/copy.” What is unclear, however, is the role the Applicative *-ara* plays in these instances. The *-ara* morpheme appears to mean “like” or “as,” similar to Nominal *-ara*, making the meaning of *mahara* “to see like X.” For these two cases, I can offer no reasonable solution at this time.

Instrument Nouns

Lexical Constructions: Base Verb, *-ara*, and *-a*

Instrument nouns are formed when a base verb-stem combines with *-ara*, and is followed immediately by the deverbative marker *-a*. Here, we see an inverse relation to that of the Applicative Verb-Theme construction. Whereas the Applicative Verb-Theme construction profiled an instrument with respect to a backgrounded process, these Instrument Noun constructions reverse the relations, profiling a verb process with respect to a backgrounded instrument used in that process. Much like the Applicative *-ara*, transitivity of the verb-stem appears to be of little relevance. What seems to be of importance, and is a feature prototypically shared by each of these verbs, is that the process or action denoted by the verb be intentional and agentively controlled. The expressions in (10) provide examples of this Instrument Noun construction.⁶ The expressions in (10(a)) are formed with transitive verb-stems, while the expressions in (10(b)) are formed with

- | | | | |
|--|---|---|--------------|
| (10) (a) ikchur “to grind (by friction)” | > | ikchúr ara “pestle (for grinding tobacco)” | [WB-444.2] |
| ikrav “to grind (acorns)” | > | ikrá vara “pestle (for grinding acorns)” | [WB-481.2] |
| pikchah “to take a picture” | > | pikcháh ara “camera” | [WB-1119.2] |
| vúxich “to saw” | > | vúxich ara “saw” | [WB-1582.1] |
| ikxurik “to decorate, to write” | > | ikxurik ara “pencil” | [WB-555.2] |
| | | | |
| (b) itkáanva “to spear fish” | > | itkáan vara “fish-spear” | [WB-747.1.1] |
| ishxay “to fish with a line” | > | ishxâ ara “fishing pole” | [WB-741.1] |
| kîih “to lock a door” | > | kîih ara “key” | [WB-872.1] |
| tátuyshur “to sweep off” | > | tátuyshur ara “broom” | [WB-1340.1] |

⁶ See Appendix B for exhaustive list of Instrument Noun constructs

tharámpuk “to cook/stir acorn soup” > tharampúkara “spatula” [WB_KL-73]

intransitive verb-stems. Each construct in (10) has the general meaning “what one X-s with.” This [-ara-a] construction is in some ways comparable to the English *-er*. As Ryder (1999) observes, *-er* forms are abbreviated noun phrases that are inherently ambiguous because the referent itself is only covertly coded, being expressed indirectly by the suffix alone and so is dependent on context for interpretation. Similarly, in Karuk, each verb-frame seems to have necessarily specified within it some salient singular subordinate category of instrument, such that the referent of the nominal form of that instrumental applicative verb would have a level of distinction sufficient enough to evoke the same general process.

- (11) íhuk “to do a flower dance” > íhukara “flower dance song” [WB-416.1.2]
thivtap “to do a war dance” > thivtápára “war dance song” [WB files]
piyníknik “to do a kick dance” > piyníkníkara “kick dance song” [JPH ethno ?:280]

The Instrument Noun construction appears to be prototypically used in the naming of actual instruments, meaning that materials previously profiled by the applicative *-ara*, such as hazel twigs and buckskins, are excluded. This doesn’t seem to be attributable to any sort of narrowing of the construction. Rather, it is a case of semantic blocking that restricts this construction from expressing redundant information (Ackerman & Goldberg 1996: 21). This is not to say that there cannot be metaphorical extensions of this construction. In (11), each of the songs is construed as an instrument canonically used in each respective dance, SONGS ARE INSTRUMENTS. And, singing of the song, like using an instrument, facilitates the instantiation of the activity itself, so SINGING OF A SONG IS AGENTIVELY CONTROLLED USE OF AN INSTRUMENT.

Phrasal Constructions

Compound Constructions

The expressions in (12) through (16) provide examples of Instrument Noun constructions filling noun phrase constituents slots in compound constructions. The compound expressions in (12) through (14) have the general meaning “X-er of Y.” In (12) the head constituent of the compound construction, *ithriha* “flower,” is positioned at the left edge of the compound, and is modified by the

Instrument Noun construction, *ithxúpara* “cover” positioned to at the right edge of the compound. Together they form a compound *ithriheethxúpara* with the literal meaning “coverer of flower,” or “thing that covers a flower,” an ACTION FOR INSTRUMENT metonymy that refers to the sepal of a

- (12) *ithriheethxúpara* [JPH_TKIC-56]
 flower-to.cover-**with-DEVERB**
 “sepal”
- (13) *iheeraha’úhthaamhara* [JPH_TKIC-85]
 tobacco-to.plant-**with-DEVERB**
 “tobacco sowing formula”
- (14) *sikaah’axaychákishrihara* [JPH_TKIC-276]
 cigar-to.grab.(something)-**with-DEVERB**
 “cigar holder”
- (15) *vuxicharávuh* [JPH_TKIC-169]
 to.saw-**with-DEVERB**-tooth
 “tooth of a saw”

flower. In (13), the head of the compound construction *iheeraha’úhthaamhara* is *ihêeraha* “tobacco,” followed by the Instrument Noun construct *uhtháamhara*, meaning literally “what one sows/gardens with.” In this case the instrument used to sow tobacco is understood metaphorically to be a specific formula by which tobacco is grown. And, the compound expression *sikaah’axaychákishrihara* in (14), literally meaning “grabber of cigars,” is understood to be the “instrument used to hold cigars,” an ACTION FOR INSTRUMENT metonymy. As compound expression in (15) shows the Instrument Noun construct positioned to the left edge of the compound construction. The expression in (15) shows the exocentric compound *vuxicharávuh* “saw tooth” formed from *vuxichará* “saw,” which constitutes an ACTION FOR INSTRUMENT metonymy, that is backgrounded to focus on *vuh* “tooth,” the component part of the saw.

Problem Cases

Agentivity

Bright (1957) notes that when *-ara* attaches to a verb-stem, and is immediately followed by the deverbative suffix *-a*, the resulting nominal holds an agentive meaning. This is definitely true for

derived nominal forms that have undergone lexicalization, and have effectively lost their underlying meaning due to entrenchment (Langacker 1987: 452, 461). This may also be true in many cases where the instrument is thought of as a secondary agent: the instruments themselves aren't the initiators of the verb-action, but they do hold some initiative role in the causal action. For example, the Instrument Noun construct *pikrupv́aanara*, meaning “sewing machine,” is formed from the transitive verb-theme *pikrup* “to pierce/sew,” and translates literally to “self-sewing instrument.” A sewing machine is composed of mechanisms working in tandem to iteratively project a needle towards a material of some sort, making repeated contact with it, and producing a change of state of that material. But the recursive action a sewing machine maintains is made possible only if some primary agent acts upon it first, and so is secondary in the causal chain (Langacker 1987; 1991).

However, there are numerous instances where Instrument Noun constructs are labeled agentive, and yet *-ara* seems to be focused on the attributive relationship between the verb and its referent, not necessarily the instrument component. For example, the word for “heating stove,” *pimkúhar*, is derived from the active intransitive verb-stem *imkuh*, meaning “(air) to be warm,” and is translated in Bright (1957) to literally mean “warming-again instrument.” Applying a secondary agent reading in this instance is coherent. A heating stove is used to cause an increase in air temperature in an enclosed space, but it works only if some primary agent first starts a fire inside it. And, given the analysis of the Applicative Verb-Theme construction selecting only facilitating instruments, which themselves lack agentivity, it seems plausible to suggest another means of analysis. Consider instead an attributive reading: “(one) that is characteristically and recursively warming air.” The meaning in each case is quite similar. However, the constructions that would derive these meanings differ with respect to their syntactic structure. The instrumental reading uses the Instrument Noun construction, $[[V-ara]_V -a]_N$, while the attributive reading uses the Adjective-Nominal construction $[[[V-a]_N -ara]_{ADJ-N}]$.

The expressions in (17) provide a list of derived nouns that allow for a similar interpretation. In (16(a)) expressions are formed with a transitive base verb-stem, and in (16(b)) the expressions are formed with an intransitive base verb-stem. In (16(b)), the derived noun construct *ikreemyahváraara*, meaning “musical instrument,” is formed using the Adjective-Nominal

- (16) (a) thánkoo “to put onto; to lay on” > thankôora “warming stone” [WB-1421]
imthanúvnuv “to tap on” > imthanuvnôora “drum” [WB-603.1]
úhyanavaraa “to talk through” > uhyanaváraara “telephone” [WB-1482.2]

(b) taknih “to roll (like a log)”	>	takníhara “wheel”	[WB-1285.2]
tintíinhi “(a bell) to ring”	>	tintíinhara “bell”	[WB-1383.1]
kutrah “to bulge”	>	kutráhara “coat”	[WB 945.1]
ikréemyahva “(wind) to blow” > ikreemyahváara “musical instrument (e.g. violin, piano)” [JPH ani 06:505]			

construction, would consist of the verb-stem *ikréemyahva* “(wind) to blow” first undergoing nominalization via unification with the deverbative suffix *-a*, and forming the meaning “the active state of (wind) blowing through.” Then, the Nominal *-ara* would combine with this derived noun, forming the Adjective-Nominal construct *ikreemyahváara*, meaning literally “(thing) characterized by resembling (wind) actively blowing.” This Adjective-Nominal is then used to refer to any object that canonically mimics the sound of the wind as it blows, instruments such as brass instruments, the violin, and the piano.

This may be true for all instances in which the base verb-stem is one denoting sensory perception. For instance, *tintíinhara* “bell” in (16(b)) would literally mean “(thing) characterized by (actively) ringing”, *thankôora* “warming rock” (16(a)) would literally mean “characterized by being laid on the body (when sick),” and *kutráhara* “coat” (16(b)) would mean literally “characterized by (actively) bulging.” It is well within convention to name things based on attributive value or relational value, as will be discussed in the section on Nominal *-ara*, and this pattern would be, if nothing else, a reflection of the vitality of this practice. In fact, in (16(a)), *uhyanaváara* “telephone” not only patterns well semantically, meaning literally “(thing) characterized by being talked through,” but also shows long-vowel reduction of /u/, a morphophonemic feature which distinguishes the Nominal *-ara* morpheme from the others. In these cases, proposing the use of the Adjective-Nominal construction could also provide an explanation for derived instrument nouns, such as “drum” in (16(a)), whose transitive base verb has a valence for the object that is tapped on, and so would normally be restricted from selection or co-indexation by the Applicative *-ara*.

There are verb-stems that appear not to fit the phonological requirements for the Nominal *-ara*, either because no vowel reduction occurs or because denasalization does not occur. Two such examples, *tintíinhara* “bell” and *imthanuvnôora* “drum”, are listed in (16). In each of these cases, part of the stem has undergone reduplication. It could be the case that, because they are composed forms, stems that have undergone reduplication hold meaning and form constraints that prohibit both long vowel reduction and denasalization from occurring. So, if these are in fact formed using

the Adjective-Nominal construction, then the property described by each construct would be a one that is inherent to it, and would not be considered agentive. If, on the other hand, these constructs were formed using the Instrument Noun construction, the thematic role of agent would still not apply, for the referent instrument noun used in each of these processes requires agentive control, and so would if anything be patientive, not agentive. Further, the general meaning of this sub-case of Instrument Noun construction would be “instrument specifically fabricated to do X-process.”

There are other instances that seem to challenge this notion of agentivity. Table 2 provides a list of noun-themes derived from verbs denoting transitory states. Bright (1957)⁷ suggests these nouns are derived from the applicative *-ara* followed by the deverbative *-a*, and designate the subject of the underlying verb-stem. If it is the case that these noun-themes are constructed using the Instrument-Noun construction [V-*ara-a*], as Bright suggests, this would mean that instead of adding a role-restricted valence for which an inanimate entity may be positioned, as it has consistently and uniformly done, *-ara* is adding a valence to the verb-stem for which a sentient, volitional entity may be selected. Additionally, if noun-themes derived from *-ara* do hold an agentive meaning, as Bright suggests, then the subject of the underlying verb-stem must also inherit this agentive meaning. Upon analysis, this doesn't seem to be the case.

Table 2: Animate Deverbal Noun-Themes

Verb-Base	Part of Speech	Meaning	Noun-theme	Meaning
yêeripha	Vp.i.	<i>to go through puberty; (girl) to menstruate for the first time</i>	yêeriphara	<i>menstruating for the first time; menstrual girl</i>
kúhi	Vp.i.	<i>to be sick, be hurt</i>	kúhara	<i>sick person, invalid</i>
yíkihi	Vp.i.	<i>to get seriously sick</i>	yíkihara	<i>sick (one)</i>
vôor	Vp.i.	<i>to crawl, creep</i>	vôorara	<i>slow-moving</i>
xúrihi	Vp.i.	<i>to be hungry</i>	xúrihara	<i>hungry</i>
ixvíiphi	Vp.i.	<i>to be angry</i>	ixvíiphara	<i>angry</i>
ikvíit-hi	Vs.i.	<i>to fall sleep</i>	ikvíit-hara	<i>asleep</i>
áachichi	Vp.i.	<i>to be happy</i>	aachíchhara	<i>happy</i>

As Table 2 shows, each verb-stem in question is categorized in Bright (1957) as intransitive. This means that each verb has a single participant role, filled by the subject. It could be the case that

⁷ WB [G761: 116]; see Appendix E

because the intended referent in each instance is animate, Bright categorized these deverbal nouns as agentive. As Van Valin and Wilkins (1996) note, agentivity is sometimes seen as an implicature deriving from the propensity to ascribe agentive properties to human actors. What is of concern in these instances is the level of volition, affectedness, and intentionality the subject of these intransitive verbs possesses at the time of the event. If these deverbal nouns are agentive, then person marking on the verb-stem would consistently show only the present indicative forms, reflecting a volition and intention that are intact. However, it is the case that all of these verbs allow inverse person marking. This suggests that the animate referent of each of these verb processes is in experiencing a state of affectedness, and lacks intention and volition over the process at the time of the event. These animate referents are patients, not agents.

Perhaps a more suitable analysis is to posit that animate deverbal nouns like those listed in Table 2 are the result of the verb-stem unifying with the Resultant-State *-ara*, instead of the [*-ara-a*] construction. Phonologically, these deverbal nouns fit the criteria for attachment. With the exception of *vôor*, which is itself ineligible due to it already having a long vowel in its stem, all of the verb-stems end in a vowel, and so are restricted from undergoing vowel lengthening. Semantically, each deverbal noun describes a property of the referent. Because these verbs in Table 2 agree with the syntactic, semantic, and phonological constraints regarding the Resultant-State *-ara*, I will treat these deverbal nouns as Adjective-Nominals, and discuss them in the Resultant-State *-ara* section.

V-*ara-a* and V-*kiri-a* Constructions

The derivational morpheme *-kiri* is an applicative suffix that shares the same Class 4 suffix position as *-ara*. Bright (1957) describes *-kiri* as an instrumental suffix that forms verb-themes meaning “to use ... in order to,” “to ... by means of,” but differs from *-ara* in that it prototypically refers to the object in or on which the action is performed, rather than a tool used in the action. This means that while *-ara* profiles an instrument used in a verb process describing a caused change of state, *-kiri* will profile a path or location about which the verb-process takes place. For the most part, this seems to be the case. Events denoting motion along a path align with *-kiri*, while events denoting change of state align with *-ara*. However, there are instances that challenge these boundaries. For example, in (17), both nouns are formed from the same base verb-stem *ishrâat*, meaning

- (17) (a) *ishrâatkira* “reins” [WB719.2]
 (b) *ishrâatara* “reins” [WB-719.1]

“to lead (a horse).” It is fairly clear that the derived noun in (18(b)) formed with the Applicative –*ara* morpheme refers to the instrument with which one leads a horse, “reins.” The derived noun formed in (18(a)) with the Applicative –*kiri* morpheme doesn’t make much sense at first. It seems that –*kiri* would instead want to profile the path as the means by which the horse is lead. However the base verb-stem itself is composed in part with the verb *ishriv*, meaning “to pull (string).” With this added information, it is understandable that –*kiri* marks the “reins” as the location of the pulling action. This shows that the same action of leading a horse is profiled in two separate but equally productive ways. The applicative –*ara* focuses on the activity component, “what you use in order lead a horse,” while –*kiri* focuses on the more specific pulling action, “what you pull on in order to lead a horse.”

- (18) (a) *takníhkira* “wheel” [WB-1285.3]
 (b) *takníhara* “wheel” [WB-1285.2]

In (18), both derived nouns again share the same base verb-stem *taknih* meaning “to roll (like a log).” In this case, it is makes sense that –*kiri* would be selected, since the construct *takníhkira* refers to the thing on or in which one rolls. For –*ara*, the noun-theme could perceivably be composed from the Instrument-Noun construction, meaning “(one) that can be used to roll,” or the Adjective-Nominal construction, meaning “(one) characteristic of rolling (like a log).” A review of the verbs to which –*ara* has attached shows that there are no other instances of –*ara* attaching to a caused motion verbs such as this (Boas 2010: 223). And at present, there are no recorded uses of *takníhara* beyond Bright’s entry in the *Grammar* (Bright 1957: 382). Unless this is an anomalous case, or the beginnings of a new sense of –*ara* forming, it seems reasonable to suggest that *takníhara* was formed using the Attribute-Noun construction.

V-a and V-ara-a Constructions

There are instances when a construct, formed via the unification of one base verb-stem to the deverbative *-a*, produces a general meaning that is shared with a construct formed via the unification of that same base verb-stem with the [*-ara-a*] construction. The list of expressions in (19) – (21) display the semantic overlap in constructs, with the the Deverbative Noun construction

- (19) *iktiin* “to walk with a cane” [WB-515]
(a) *iktiina* “cane” [WB-515.1]
(b) *iktíinara* “cane” [WB-515.2]
- (20) *kíih* “to lock a door” [WB-872]
(a) *kíiha* “key” [WB-873]
(b) *kíihara* “key” [WB-872.1]
- (21) **ikchákish*(rih)
(a) *ikchákish* “bait” [JPH ethno ?:180]
(b) *ikchakishríhara* “bait” [JPH mat ?:706]

[[V-*a*]_N] appearing in (19-21(a)) and the Instrument Noun construction [[[V-*ara*]_V -*a*]_N] appearing in (19-21(b)). The semantic overlap in (20) is attributed to the time at which the loanword was borrowed. It is harder to justify the redundancy present in expressions like those in (19) and (21). At this time, these instances will remain unexplained.

Discussion

The Applicative *-ara* morpheme can combine with both transitive and intransitive verbs that denote agentive causal events to form Instrumental Applicative verb-themes. In each instance, *-ara* licenses a peripheral but salient object prototypically used in the verb process. This instrument can be a true instrument, a material, or metaphoric instrument as a means.

Instrument Noun constructs formed in part with *-ara* are understood as being the canonical instrument used in the backgrounded process denoted by the verb-stem. Without the affordances of the verb-stem frame, the instrument noun form is meaningless. For each instrument noun, the

design and configuration, the intention, and the use is all under human agentive control, and in no occasion is the instrument noun understood to be a body part or extremity.

RESULTANT-STATE *-ara*

Defining *-ara*

The result-state adjective morpheme *-ara* is classified in Bright (1957) as a suffix that forms a noun, with a meaning of “having ... -ed.”⁸ Morphophonemically, *-ara* conditions progressive accentuation^{2,3} and potential lengthening of a base verb-stem vowel.⁹ Morpho syntactically, *-ara* is described as being added to a limited number of intransitive verb-stems to form adjectives.

- (22) *ishtak* “to become chipped out” : *ishtáakara* “chipped out” [WB G764]
ishtáktak “to become chipped out repeatedly” : *ishtaktáakara* “chipped out repeatedly”
imship “to become extinguished” : *imshíipara* “extinguished”
imxaxaváraa “to become cracked through (pl.)” : *Imxaxaváraara* “cracked through”

Listed above in (22) are the examples that accompany the definition provided in the grammar. For the verbs *ishtak*, *ishtáktak*, and *imship*, the addition of *-ara* to the base verb-stem results in conditioned vowel lengthening of the base verb-stem vowel. For the verbs *ishtak* and *imship*, the addition of *-ara* results in conditioned progressive accentuation.

Discussion

Each base verb-stem in (23) describes an inchoative process, and each adjective is reflective of the result of the change of state in an undergoer/patient. Prototypically, these verbal processes are understood to be affecting inanimate nominal referents. It is assumed then that the unification of *-ara* to the verb base forms an adjective that will be restricted in its modification to only those referents that are inanimate as well.

⁸ [WB G764], p.117; for full-page images, see APPENDIX E

⁹ [WB G332], p.37-38; for full description of Potential Lengthening, see APPENDIX E

The analysis of Resultant-State *-ara* will therefore focus first on the types of verb-stems with which *-ara* unifies: (a) are verb-stems always intransitive and must the verb processes always be inchoative. Second, it will focus on the nominal referent of the Adjective-Nominal expression: (b) can the nominal referent be either inanimate or animate, the position and contribution of the resulting construct at the sentential level, and the possibility of metaphorical extension of meaning.

Lexical Constructions: Base Verb and *-ara*

When attached to a verb-stem, *-ara* can act as a part of speech changer, whereby the unification of a base verb-stem with *-ara* results in the formation of a Resultant-State Adjective-Nominal construction. This Resultant-State Adjective-Nominal construction is prototypically formed from an intransitive verb-stem and *-ara*, and incorporates a semantically transitive relationship between an agent that performed the action denoted by the verb and an undergoer/patient that has undergone the process or action. The set of expressions in (23) provide examples of this Result-State Adjective-Nominal construction.¹⁰ When unified with a verb-stem, *-ara* phonologically conditions progressive accentuation and potential lengthening of short vowels in the base verb-theme. The lexical constructs *ishpáatara* “without money; broke (one)” and *ikfíithara* “trimmed (thing)” exemplify this conditioned lengthening of the short vowels in the base verb-theme.

- (23) (a) *yíkihi* “to get (seriously) sick” > *yíkihara* “sick (one)” [WB-1675.1]
kúha “to get sick, hurt” > *kúhara* “sick/hurt (one); invalid” [KS-19]
xúriha “to get hungry” > *xúrihara* “hungry (one); woman’s name” [WB-1635.1]
aachíchhi “to be happy” > *aachíchhara* “happy (one)” [WB-8.1]
ikvíit-hi “to fall asleep” > *ikvíit-hara* “asleep (one)” [KM-26.14]
ishpat “to break; become broken” > *ishpáatara* “without money; broke (one)” [WB-715.1]
- (b) *imship* “to become extinguished” > *imshíipara* “extinguished (thing)” [WB G764]
ishtak “to become chipped out” > *ishtáakara* “chipped out (thing)” [WB G764]
íinkurih “to get burned out” > *íinkurihara* “burned out (thing)” [JPH_TKIC-170]
ikfith “to strip (branches from a tree)” > *ikfíithara* “trimmed (thing)” [DeA & F 4: Land of the Dead 013]

¹⁰ see Appendix C for full list of Resultant-State *-ara* constructs

The Result-State Adjective-Nominal construction profiles the resultant or end-state of the undergoer of the process. For this construction the verb-stems to which *-ara* may attach: inchoative, stative, or transitive, prototypically denote in the undergoer either a lasting, more permanent state, signifying that the agent seriously “affects” the entity, or for animate entities a state reflective of a temporary lack of self-control. In this way, the Result-State Adjective-Nominal constructions can be said to be eventive.

There are two sub-case Result-State Adjective-Nominal constructions: the End-State Adjective Nominal construction and the Stative Adjective-Nominal construction. The End-State Adjective-Nominal construction conveys a more permanent and defining aspect of the inanimate entity. For instance In (24(b)), the lexical constructs *ishtáakara* “chipped out (thing),” *ínkurihara* “burned out (thing),” formed with inchoative verb-stems, and *ikfíithara* “trimmed (thing),” formed with a transitive verb-stem, describe resultant states of inferred referents that have undergone permanent changes of state. The Stative Adjective-Nominal construction conveys a transient experiential state actively present in an animate entity. For instance in (23(a)) *xúrihara* “hungry (one),” *aachíchhara* “happy (one)” and *ishpáatara* “without money; broke (one)” all describe inferred referents who are experiencing a lack of control concerning their active present state at the time of the utterance.

Phrasal Constructions

Compound Constructions

Expressions in (24) and (25) are examples of Result-State Adjective-Nominal constructions filling noun phrase constituents slots in compound constructions. In (24) the head constituent of the compound construction, positioned at the left edge of the compound, is modified by the Result-State Adjective-Nominal construction, positioned to at the right edge of the compound. So, in (24(a)) *uhraam* is modified by the adjective nominal construct *ikxúrikara* meaning “decorated,”

(24) (a) *uhram'ikxúrikara*

[JPH_TKIC-169]

pipe-to.mark/decorate-**having(-ed)**

“a painted pipe”

(b) **ikooréeshtaakara** [JPH_TKIC-172]

stone.pipe.bowl-to.chip-**having(-ed)**

"a stone pipe bowl, a piece of which has been chipped out"

(c) **uhram'ímtaakara** [JPH_TKIC-170]

pipe-to.be.a.gap.burned-**having(-ed)**

"a pipe with a gap burned in the edge of the bowl"

resulting in the compound construct *ikooréeshtaakara* meaning “decorated pipe” or “painted pipe.” In (24(b)), *ikoora* is modified by the adjective nominal construct *ikshtaakara*, forming the compound construction meaning “chipped out stone pipebowl.” And in (24(c)), *uhraam* is modified by the adjective nominal construct *ímtaakara*, forming the compound construct *uhram'ímtaakara* meaning “gapped-out pipe.” In each of these constructs, it is understood that some agentive force, backgrounded in the semantics of the verb frame, has acted upon the undergoer, in these cases *uhraam* and *ikoora*, resulting in the attributive end-state of the participant, as denoted by the End-State Adjective-Nominal constructs.

In (25), the referent participant is understood to be animate, as constrained by either the base verb-stem of the base Verb-Stem construct *mah* or the external General Noun-Theme construct *íshkiit*. Like (24), the head constituent of the compound construction, positioned at the left edge of the compound, is modified by the Result-State Adjective-Nominal construction, positioned to at the right edge of the compound. In (25(a)), the noun *íshkiit* “luck” is modified by the Adjective-Nominal construct *mahara*, meaning “seen/found (thing),” and together it forms the construct *ishkítmahara* meaning “lucky.” Because “lucky” is an attribute specific to a human, the intended referent is understood to be animate. In (25(b)), *apmaan* “mouth” is modified by *íshtaakara* “gapped (thing),” forming the construct *apmaníshtaakara* meaning “harelipped.” Because animate entities are

(25) (a) **ishkítmahara** [JPH "Grammar" 90]

íshkiit-mah-**ara**

luck-to.see/find-**having(-ed)**

"lucky"

(b) **apmaníshtaakara**

[JPH ethno ?:200]

mouth-to.make.a.gap-**having(-ed)**

"harelipped" [lit. 'mouth-gapped']

(c) **ahéemshiipara**

[WB 29.1.1]

fire-be.extinguished-**having(-ed)**

"widower" [lit. 'one whose fire has been extinguished']

those that have mouths, it is speculated that this construct is constrained semantically to refer only those referents that are animate. And, in (25(c)), *áh* "fire" is modified by the construct *ímshiipara* "extinguished (thing)," forming the construct *ahéemshiipara* meaning "thing whose fire has been extinguished" or "widower." (25(c)) offers an example of metaphor and metonymy, whereby the union of two persons spirits or souls is frame metonymic for a marriage, and is itself construed as a fire, MARRIAGE IS A FIRE, and the entailed metaphor BECOMING WIDOWED IS EXTINGUISHING THE FIRE. For these compounds in (24) and (25), it is evident that the referent participant of the Result-State Adjective-Nominal construction is intended to be undergoer of the action denoted by the verb-base. Therefore, the frame element of the verb is co-indexed with the external general noun-theme in the compound.

The Resultant-State Adjective-Nominal construction can be utilized at the sentential level, forming a core argument of the primary verbal predicate, taking either determiner prefix marking or plural suffix marking. The sentences in both (26) and (27) illustrate the base verb-stem to which *-ara* may attach acting as the main verbal predicate, in (26(a)) and (27(a)), and the base verb-stem

(26) (a) **naa vúra nayíkihiti**

[VS-06]

1SG.PRON INTENS 3SG(:1SG)-**be.sick-DUR**

"I am sick."

(b) **ithasúpaa vooparampúkikti payíkihar**

[JPH_TKIC- 234]

all.day that.way-3SG(:3)-cook.with.hot.stones-REDUP-DUR **DET-be.sick-having(-ed)**

"All day long he steams **the sick person.**"

unified with *-ara* in the Result-State Adjective-Nominal construction, in (26(b)) and (27(b)). In (26(a)) and (27(a)), the referent participants of *yíkihi* and *kúha* are understood to be animate, given the semantic constraints contributed by each verb, and that animate being is understood to be the undergoer (either the patient or experiencer) of the active state denoted by the verb. This is shown via inverse person marking on the verb, denoted by the prefix *na-*. In fact, it appears that it is in only those instances where a stative or inchoative verb-base can take inverse person marking that *-ara* can unify to form the Result-State Adjective-Nominal construction. In (26(b)) and (27(b)) the Stative Adjective-Nominal construction is unified with the determiner *pa-*, forming the specified definite forms *payíkihar* and *pakúhar*. For each of these constructs, the referent lacks agentivity.

(27) (a) kári xás uxus, " tá **nakúha**, xâatik vúra nipváruprav." [WB_KL-58]
 then then 3SG(:3)-think PERF 3SG(:1SG)-**be.sick/hurt**, it's.better INTENS 1SG(:3)-ITER-come.out
 "And she said, "I'm sick, let me go out!""

(b) yánava **pakúhar** utháaniv [JPH_PHM-24-343a]
 behold DET-be.sick/hurt-**having(-ed)** 3SG(:3)-to.lie
 "Behold **the sick one** was lying there."

In (26(b)), *payíkihar* is the passive participant object of transitive verb *parámpuk* "to cook with hot stones," and in (27(b)) *pakúhar* is the subject of the intransitive verb *thaaniv* "to lie, be dead" but lacks agentivity and control over their current state.

(28) vaa káan uvêhriv, mukun'**ikfiithar** pámita mukunkeechíkyav [DeA & F 4: Land of the Dead 013]
 that there 3SG(:3)-be.standing, 3PL.POSS-**to.strip-having(-ed)** DET-PAST 3PL.POSS-sweatheart
 "There they stood, the '**trimmed trees**' of their former sweethearts."

The occurrences of inanimate Adjective-Nominal constructions at the sentential level are, as far as I can tell, less frequent in occurrence than those whose referent is animate. The sentence in (28) provides an example of one such instance. In this case, the Result-State Adjective-Nominal construction *ikfiithar* is acting as a noun phrase constituent in a possessive construction. What is

interesting about this construction is that *ikfiithar* is anthropomorphized and so assumes both an animate role previous to reference time and inanimate role at reference time. Nevertheless, the contextual referents are understood to have no control over their current “standing” position as described by the verb.

Clausal Constructions

Predicate Adjective Constructions

The Resultant-State Adjective-Nominal construction can be utilized at the sentential level in the form of a predicate adjective, either as a primary nonverbal predicate, seen in (29), or as a depictive secondary predicate of the primary verbal predicate, seen in (30). In (31), the Stative Adjective-Nominal construct, *ixvíiphara*, combines with the plural marker *-asa* to form *ixvíipharas* “angry ones.” In this way, the plural suffix acts as a definite marker, distinguishing the subset of individuals who were “angry” from the larger indefinite set. In (30), the constructs *aachíchhar* “happy (one)”

- (29) **ixvíipharas** vúra, páy yíthuk kun'úumanik [KS 14. *Pack-baskets* 004]
 be.angry-DEVERB-**having(-ed)**-PL INTENS this elsewhere 3PL(:3)-go.to-ANC
 “They were angry, and they were transformed.”

and *ikvíit-har* “asleep (one)” act as depictive secondary predicates, modifying in each case the subject of the main clause verb. In each case, the predicate adjective expresses an eventuality or state pertaining to one participant in the main clause, assigning a property to one participant of

- (30) (a) ta'ítam kunpáxtiivpuna, **aachíchhar** vúra kunpihmarápiithva [WB_KL-24]
 so 3PL(:3)-ITER-play.game(athletic)-PL be.happy-**having(-ed)** INTENS 3PL(:3)-ITER-run.around(pl.)
 “So they played again, they ran around again **happily**.”

- (b) hâari úksahti **ikvíit-har** [KM-26.14]
 sometimes 3SG(:3)-to.laugh-DUR to.sleep-**having(-ed)**
 “Sometimes he laughs **in his sleep**.”

the main predicate. This is reflected in its Figure/Ground configuration. So, for (30(a)), the subject of the primary verbal predicate is actively experiencing running around while in the backgrounded active state of “being happy.” In (30(b)), the subject of the primary verbal predicate is actively experiencing laughter while in the backgrounded active state of “being asleep.”

Discussion

The Resultant-State *-ara* morpheme can combine with inchoative, stative, and agentive transitive verb-stems to form adjective-nominal constructions. There are two emergent Resultant-State Adjective Nominal constructions: the End-State Adjective Nominal construction and the Active-Stative Adjective-Nominal construction. The End-State Adjective-Nominal construction unifies *-ara* primarily with inchoative and agentive transitive verb processes, and conveys a more permanent and defining aspect of the inanimate entity. The Active-Stative Adjective-Nominal construction conveys a transient experiential state actively present in an animate entity. As a phrasal construction, the Resultant-State Adjective Nominal construction can form noun phrase constituents in compounds and verbal predicates. The Resultant-State Adjective Nominal construction can also act as a predicate adjective, either filling the primary non-verbal predicate position or as a depictive secondary predicate of a primary verbal predicate.

NOMINAL *-ara*

Defining *-ara*

The attributive morpheme *-ara* is defined in Bright (1957) as a derivational suffix with a more common meaning of “characterized by ...” or “having ...”, and a less frequent meaning of “connected with ...” or “resembling ...”. Morphophonemically, *-ara* conditions progressive accentuation¹¹¹² and

¹¹ [WB G382.2], p.46-47; for description of Progressive Accentuation, see APPENDIX E

¹² [WB G381], p.45-46; for full description of Fixed versus Moving Accent, see APPENDIX E

Lexical Constructions: Base Noun and *-ara*

When attached to a non-derived noun-stem, *-ara* forms an Adjective-Nominal construction consisting of an adjectival noun-theme with a prototypically frame-metonymic meaning: “Y referent having in its frame X.” Uses of *-ara* in these environments show that *-ara* is constrained in its attachment to only those noun-themes classified in Bright (1957) as non-adverbial and general. The set of expressions in (32) provide examples of this Adjective-Nominal construction. When unified with a non-derived noun, *-ara* phonologically conditions progressive accentuation, reduction of long vowels in the base noun-stem, and denasalization of the consonants /m/ and /n/ to /v/ and /r/ respectively. Each example in (32), with the exception of (32(c)), show conditioned reduction of the long vowel in the noun-stem and progressive accentuation as a result of *-ara* attachment.

- (32) (a) axraat “*thorn*” > axrátara “*thorny*” [JPH “Grammar” 112]
 (b) imyaat “*hair*” > imyátara “*hairy*” [JPH_TK-53.30]
 (c) athkúrit “*fat/grease*” > athkúritara “*fatty/greasy*” [WB_KL-71]
 (d) iish “*meat/flesh*” > íshara “*coarse*” [JPH mat 07:465]
 (e) xuun “*acorn soup*” > xúrara “*thick (liquid)*” [WB-1631.3]
 (f) aas “*water*” > ásara “*juicy*” [JPH_TKIC-48.28]

And, in (32(d)), xuun “acorn soup” captures the conditioned denasalization of /n/ to /r/, resulting in xúrara “thick.” Semantically, there are two emergent sub-cases of the Adjective-Nominal construction. The first contributes a simple possessive meaning: “Y prototypically characterized by X,” seen in (32(a-c)). The second involves *-ara* contributing the meaning “Y prototypically resembling X,” seen in (32(c-e)). For both senses, this relation between this newly formed attribute and the nominal referent is atemporal, in the sense that the Adjective-Nominal construction formed by a noun-theme and *-ara* relates only the static and inherent nature of the base noun-theme

- (33) (a) tivxárahara [WB-1394.7] (b) apmanxárahara [JPH/JF]
 ear-long-**having** mouth-long-**having**
 “*mule*” “*Double-breasted Comorant*”

(c) ishxíkihara	[WB-690.5]	(d) yupsírihara	[WB 1698.9]
meat-rough- having		eye-shiny- having	
<i>“sturgeon”</i>		<i>“blind (one)”</i>	

to some second referent noun. It is important to note that the non-derived noun-stem with which *-ara* can unify could either be a simple lexical element, as seen in (32), or a phrasal constituent, seen in (33). Unlike those examples in (32), where *-ara* attaches directly to the base noun-stem, (33(a-b)) shows *-ara* directly adjacent to the bound adjectival suffix *-xárah* “long.” Similarly in (33(c)), *-ara* is positioned immediately adjacent to *-xíkih* “rough”, and in (33(d)), to *-sírih* “shiny.” This illustrates that within the Adjective-Nominal construction, the noun-stem to which *-ara* may attach can itself be a noun phrase.

Phrasal Constructions

Compound Constructions

Adjective-Nominal constructions appear most commonly as either maximal noun phrases or as noun phrase constituents in compound constructions. And it is in these constructions that the influence of conceptual metonymy on the grammatical construction is clear.

In (34) the profiled referent in each instantiation is contextually understood to be a specific indefinite referent and attributor of the noun phrase, though is not realized explicitly in the utterance itself. The expressions in (34(a-b)) constitute BODY PART FOR ANIMATE BEING metonymy. The salient body part of a bull or stud horse, its “testicles,” and the salient body part of a buck, its “horns”, comes to stand metonymically for the entire bull

(34) Adjective-Nominal Construction: Metonymy

(a) thirixôorara	[JPH ani 06:633]	(b) vêehshurara	[WB-1543.1]
thirixôon- ara		vêehshur- ara	
testicle- having		horn- having	
<i>“bull, stud horse”</i>		<i>“deer; buck”</i>	

- | | |
|---|---|
| <p>(c) kitaxríhara [WB-891.2]
 kitáxrih-ara
 wing-having
 <i>"a kind dangerous spirit"</i></p> | <p>(f) amtáparas [WB 89.1]
 ámtaap-ara-as
 dust-having-PL
 <i>"type of lupine"</i></p> |
| <p>(d) ipíhara [WB_KL-37]
 ipih-ara
 bone-having
 <i>"bony; alive"</i></p> | <p>(g) asaxêvara [WB-146.15.1]
 asaxêem-ara
 moss-having
 <i>"mossy; Baldy Peak"</i></p> |
| <p>(e) iptáxapara [WB-1345.1.1]
 iptáxap-ara
 braid-having
 <i>"Chinaman"</i></p> | |

or stud horse and buck, respectively, and have become lexicalized. The expression in (34(c)) represents ATTRIBUTE FOR ATTRIBUTOR, whereby the defining attribute of the mythical spirit "wings" is conventionalized to represent the dangerous spirit in its entirety. In (34(d-f)) the expressions exemplify instances of DEFINING PROPERTY FOR CATEGORY. In (34(d)) "having bones" is a defining property of being alive in Karuk, and so comes to stand for a living person. In (34(e)), the ethnic category "Chinamen" is named for its culturally salient property, "having braids." And, in (34(g)) the expressions provide instances of DEFINING PROPERTY FOR PLACE. In (34(g)) "mossy" is the defining property used to refer to Baldy Peak.

(35) Modifying Compound Constructions:

- | | |
|---|---|
| <p>(a) axthahaxúrarara [JPH ani 06:415]
 axthaha-xúran-ara
 mussel-shell-having
 <i>"mussel with shell on"</i></p> | <p>(c) uhram'athkúritara [JPH_TKIC-170]
 uhraam-athkúrit-ara
 pipe-fat-having
 <i>"greasy pipe"</i></p> |
| <p>(b) uhram'amyêera [JPH_TKIC-170]
 uhraam-amyiv-ara
 pipe-soot-having
 <i>"sooty pipe"</i></p> | <p>(d) athkúritara'ahup'ásip [JPH_TKIC-145]
 athkúritara-ara-áhup-ásip
 grease-having-wooden.cupboard
 <i>"greasy wooden cupboard"</i></p> |

Expressions in (35) are examples of Adjective-Nominal constructions filling noun phrase constituents slots in compound constructions. In (35(a)) a mussel with its shell still intact is a “shelled mussel,” in (35(b)) a pipe with ash in it is called a “sooty pipe.” The constructions in (36) further illustrate the prevalence of metonymy in these constructions, showing that although both noun phrase constituents corresponding to the image schematic semantic roles are filled, the intended referent may still need to be inferred from its use. In (36(b-c)) exemplify BODY PART FOR ANIMATE BEING metonymy as well as frame metonymy, since in each instantiation it is the salient BODY PART, “round forehead” and “green eyes,” that come to stand for the ANIMATE BEING, either a specified indefinite woman or a panther. The expressions in (36(a)), (36(d)), and (36(e)) each provide, in addition to frame metonymy, instances of metaphor. In (36(a)), a person who is “deaf” is construed as someone who “has ears resembling a seed basket.” Here, ears, like seed baskets, are understood to be containers. The tight stitching of hazel sticks and other materials that prevents seeds from leaking out of the seed basket is then mapped onto the ear, and it is this metaphor, INABILITY TO HEAR IS THE WEFT OF A SEED BASKET, that allows one to understand the literal expression “ears resembling seed baskets” as meaning “deaf.” In (36(d)), a “mallard duck” is construed as a “wet tule,” a type of bulrush plant that grows in the freshwater marshes of North America, including northern California. In this case, an

(36) Metaphoric and Metonymic Compound Constructions:

- | | |
|--|--|
| <p>(a) tiv'ásurara [WB 1394.3]
 tiiv-asura-ara
 ears-seed.basket-resembling
 "deaf"</p> | <p>(d) tapraráh'asara [JPH ani 06:865]
 tapriha-asa-ara
 tule-water-resembling
 "mallard duck"</p> |
| <p>(b) yupin'úruhara [JPH ethno ?:130]
 yúpin-úruh-ara
 forehead-round-having
 "round forehead; woman's name "</p> | <p>(e) asvút'iithkara [JPH ani 06:601]
 asvuut-iithka-ara
 ant-feather-having
 "winged ant"</p> |
| <p>(c) yupthúkirara [WB 1698.11]
 yuup-thúkin-ara
 eye-green-having</p> | |

image metaphor exists whereby the green color of the tule is mapped onto the green coloring around the neck of a male mallard duck. The “wet” component of the meaning contributes to the image metaphor the shininess of a mallard duck’s feathers due to the preen gland producing oil which makes the feathers waterproof. Finally, the green color of the mallard comes to stand for the entire bird via frame metonymy. The expression in (36(e)), “winged ant,” also contains image metaphor. Here, the wing of an ant is construed as a feather, and all of the inferred image schematic structure, including a feather’s appearance and behavior while floating in the air, is then mapped onto the head NP of the compound, “ant.” This allows the literal expression “ant-feather-resembling” to be understood as “ant with wings resembling feathers” and finally “winged ant.”

Bright (1957) describes two types of compounds in Karuk: substantival, where the attribute is in prebound position and the head is in postbound position, and adjectival, where the adjective is in postbound position and the head is in prebound position. In (35) and (36) the Adjective-Nominal constructs are acting as adjectives in postbound position of adjectival compounds. And, according to Bright (1957), this is its prototypical position, as prebound position is usually reserved for nouns. As mentioned in the introduction, because adjectives are grouped with nouns under the Noun class, they can behave semantically, and in (38) syntactically, like nouns. Expressions in (37) show Adjective-Nominal constructs in prebound position of exocentric substantival compounds. In (37(a)), the placename *xavisharáthuuf* “Ike’s Gulch” is frame metonymic, the salient feature of that geographic location being a creek that is known to prototypically have arrowheads in and

- | | | | |
|--------------------------------|-------------|--------------------------------|---------------|
| (37) (a) <i>xavisharáthuuf</i> | [WB-1613.1] | (c) <i>pathriharakútrahara</i> | [WB-1094.1.1] |
| arrowhead-having-creek | | rain-having-coat | |
| “arrowhead creek; Ike’s Gulch” | | “rain coat” | |
|
 | | | |
| (b) <i>axvaharaathkúrit</i> | [WB-241.1] | (d) <i>athkuritárahiva</i> | [WB-199.2] |
| pitch-having-grease | | fat-having-time | |
| “candle grease; kerosene” | | “hunting season” | |

around it. The expression in (37(b)), *axvaharaathkúrit* “candle grease,” refers to the fuel, wax or oil, used in lamps, and so has been semantically extended to include “kerosene.” The expression in (37(d)), *athkúritárahiva* “hunting season,” constitutes EFFECT FOR CAUSE metonymy, whereby the “fat-having-time” is a result of successful hunting, skinning, and cleaning of an animal.

Clausal Constructions

Predicate Adjective Constructions

The Adjective-Nominal construction can be used to form Predicate Adjective constructions. For instance, in (38(a)), the construction *athkúritara* “fatty” acts as the predicate of the main clause, alongside two subordinate clauses. And in (38(b)), *ípihar* “bony” acts as the predicate of the clause, modifying *chámuxich* “Sucker,” the subject of the clause.

(38) (a) patá kuníthviish, kári xás vúra **athkúritara** patá kuníshfir pamúmaan [WB_KL-71]

NOM-PERF 3PL(:3)-pack.home, still then INTENS **fat-having** NOM-PERF 3PL(:3)-? DET-3SG.POSS-skin

“When they brought it in, (the bear) was **fat** when they skinned its hide.”

(b) kúna chámuxich uum vúra **ípihar** [WB_KL-37]

in.addition sucker 3.SG Intensive **bone-having**

“But Sucker is **bony**.”

(39) (a) kúnish **aptíkaraheesh**, táayheesh pamúsaan [JPH_TKIC-86]

sort.of **branch-having-FUT**, lots-FUT DET-3SG.POSS-leaf

“They will be **branchy**, it will have many leaves.”

(b) pu'ásarhara, sákriiv [JPH_TKIC-48.28]

NEG-**water-resembling**-NEG, hard

“It’s not **juicy**, it is rough.”

Sentences in (39) show that as predicate adjectives, these forms are eligible to receive inflectional affixation, taking tense marking in (39(a)) and negation in (39(b)). Person marking in Karuk is limited to only those predicates that are verbal, and so does not appear with these constructions.

Discussion

The Nominal *-ara* morpheme can combine with general, non-adverbial nouns to form a Adjective-Nominal construction. The meaning formed from this unification is inherently metonymic, involving most commonly DEFINING PART FOR CATEGORY, BODY PART FOR ANIMATE BEING, and ATTRIBUTE FOR ATTRIBUTOR. The Adjective-Nominal construction has two sub-case constructions: the Attributive Adjective-Nominal construction and the Resembling Adjective-Nominal construction. As a phrasal construction, the Adjective-Nominal construction can form noun phrase constituents in compounds and non-verbal predicates. And at a clausal level, the Adjective-Nominal construction can be used as a non-verbal predicate, in the form of a predicate adjective.

DISCUSSION

The Applicative *-ara* licenses instrumental arguments in agent-controlled events. Because the instrument argument doesn't seem to appear in subject position of an agentive verb process, these instruments can be said to be facilitating instruments. Focus in these verb processes is consistently on the end-point or goal of the process or action. In this way, the Applicative *-ara* shows the same preference as the Result-State *-ara* for unifying with only those verbs that display end-point focus, with the referent in each case being non-agentive. There are cases, like those in (8) and (9), where *-ara* appears to be profiling a referential relationship between the undergoer of the state and the process, instead of introducing an instrument argument. In this way, the Applicative *-ara* appears to be acting much like the Nominal *-ara*.

The Instrument Noun construction is prototypically formed from the Applicative *-ara* followed by the deverbative *-a*. There are cases, like those expressions discussed in (16), where a verbal process in its entirety is profiled in reference to some entity that is characterized by being prototypically or canonically used in that verbal process, constituting ACTION FOR INSTRUMENT metonymy, or within its frame exhibits that characteristic, constituting ATTRIBUTE FOR ATTRIBUTOR metonymy. These uses are much like those involving the Nominal *-ara*, where the resulting Adjective-Nominal construction has inherent in its semantics frame-metonymy.

Both the Result-State *-ara* and the Nominal *-ara* form Adjective-Nominal constructions. This in itself suggests that a generalization can be made, such that there is an overarching Adjectivizer *-ara* construction that changes the part of speech of the head of the construction. For both morphemes, the Result-State *-ara* and the Nominal *-ara*, unification to a stem verb or noun results in the formation of a frame metonymic meaning, most generally ATTRIBUTE FOR ATTRIBUTOR metonymy.

Each of the three *-ara* morphemes profiles a non-agentive argument, each is used in instances of frame metonymy, and each phonologically conditions progressive accentuation. So, do these three *-ara* morphemes form a polysemy structure? I don't think so. The Applicative *-ara* morpheme isn't a grammatical marker; it is prototypically derivational, adding a valence to the verb-stem. Therefore, it is a hard argument to posit a grouping between those *-ara* morphemes that form a referential relation and this Applicative form. The Result-State *-ara* and Nominal *-ara* do appear to be related, as they both attach to a stem, creating a frame metonymic relation in the form of an adjective-nominal between itself and some referent entity. Yet, morphophonologically they condition different processes: the Result-State *-ara* conditions potential lengthening of the vowels in the verb-stem, and the Nominal *-ara* conditions potential shortening of long vowels in the noun-stem.

In addition, it is difficult to track any sort of diachronic shift in use of *-ara*. One could argue that perhaps *-ara* began as an applicative morpheme, and over time, through the formation Instrument Nouns the [*-ara-a*] construction merged, forming the Nominal *-ara* morpheme. And this Nominal *-ara* morpheme was then extended to caused change of state verbs, resulting in the formation of the Result-State *-ara*. Or, one could argue that the Nominal *-ara* came about as a result of compounding, where some noun-stem unified with *áara* "person," the shortened form being *ára*. Over time, the meaning of *ára* underwent semantic bleaching, becoming "person/thing," and was then extended to form new compounds. For example, the expression *tishrávara* "Shasta Indian of Scott Valley" has the literal meaning "valley person." Bright (1957) describes this expression as consisting of *tishraam* "valley; Scott Valley" and Nominal *-ara*. Yet, for expressions like *yurúkvaarara* "Yurok Indian," Bright (1957) describes the component parts as *yuruk* "Yurok" and *áaar* "person." If the Applicative *-ara* were merely a grammatical morpheme, marking the instrumental applicative, then it would be plausible to argue in favor of a polysemy structure. However, the Applicative *-ara* consistently introduces an instrument argument that is overtly expressed. Because no clear pattern is discernable, the notion of positing an overarching polysemy structure seems at this point to be impossible.

CONCLUSION

The morpheme *-ara* can attach to verb-stems denoting states, activities, and accomplishments. For a limited number of agentive verb-stems, transitive and intransitive, affixation of *-ara* to the verb-stem forms an applicative verb-theme. In these instances, *-ara* profiles the whole process denoted by the verb, and adds a valence to the verb-theme with the semantic role, instrument. In these instances, the profile remains verbal, and the valence licensed by *-ara* profiles in the verb frame one of the frame entities previously unprofiled—an instrument, material, or means, central to and canonically involved in the verb event. For example, given the verb *thimyav*, meaning “to polish,” suffixation of *-ara* would form the instrumental applicative verb-theme *thimyâara*, meaning “to polish with,” and the core argument licensed by *-ara* would be an instrument canonically used in the verb event, for instance *chimchîikar* “scouring rush,” seen in (3).

There is a much larger number of agentive verb-stems, transitive and intransitive, where affixation of *-ara* marks the formation of a nominal profile. In these cases, *-ara* profiles the whole process denoted by the verb, building a new referential profile whereby the lexical profile of the process denoted by the verb stands for the instrument used to carry out that process. For these constructions, “having the characteristic or state related to the verb-meaning” specifically means “being the standard kind of physical instrument used to in the verb-event.” So, for the verb-stem *vúxich*, meaning “to saw,” adding *-ara* would yield the construct *vúxichara*, meaning “saw,” referring to the standard kind of instrument “characteristic of sawing.”

The morpheme *-ara* can also combine with verb-stems denoting agentive causative events. For each process denoted by the verb, the combining of *-ara* to the verb-stem builds a new referential profile. This referential profile is one that is systematically linked to a verb’s lexical profile; in particular, the new meaning is that of a state or entity involved in the lexical profile of the verb.

When affixed to a stative verb, *-ara* profiles the static state denoted by the verb in its entirety, forming a state-denoting adjective-nominal construction. As mentioned in the introduction, noun senses are naturally derived via normal productive structures of the language. Therefore, given a verb *xúriha*, meaning “to be hungry,” affixation of *-ara* converts this meaning

into the adjective-form *xúrihara* meaning “hungry.” And, this adjective-form naturally allows the noun-sense “hungry-one.”

Inchoative verbs profile entry into a state. Thus, when *-ara* attaches to an inchoative verb, the atemporal relation profiles the resultant-state of the causal event denoted by the verb. This new meaning is again a state-denoting adjective-nominal construction, which is productively related to a noun in the same way mentioned above. For the verb *imship*, meaning “to become extinguished,” when affixed with *-ara*, would become an adjective-form *imshípara*, meaning “cracked one/thing.”

When attached to an agentive transitive verb involving a patient, *-ara* again produces a stative predicate, this time referring to the resultant-state of the patient involved in the verbal event. This is perhaps predictable, or at least very natural, since for such a transitive event the most salient state may well be this patientive resultant-state, which is often denoted cross-linguistically by past participles. For example, adding *-ara* to the transitive verb *ikfith*, meaning “to strip (something),” would yield the adjective-form *ikfíthara*, meaning “trimmed” (i.e. “in the state of a patient which has undergone trimming”), as well as a noun-sense meaning “trimmed one.”

The morpheme *-ara* can also attach to noun-themes with non-adverbial heads to form new noun-themes. When attached to a noun-base, *-ara* forms an adjectival noun-theme that evokes an atemporal relation between itself and an attributor that either has that characteristic or is in that state characteristic of the noun-base. Crucially, this seems to hold for both derived nouns and non-derived nouns. For example, the adjective-nominal construction *vêeshurara* is a noun-theme meaning “horned” and “buck/deer”, and is the kind of attribute noun that is formed from the lexicalized noun-theme *vêeshura*, meaning “horn,” – a deverbal noun which literally means “projecting-off (thing).”

Setting aside the applicative use of *-ara*, it is the case that most of these *-ara* forms profile a state, hence also an entity in that state. The morpheme used with a noun-base derives a meaning very similar to the morphemes used in agentive transitive and intransitive, stative, and inchoative forms. But the meanings are distinct, in that which state and how it is related to the verb meaning is not the same in every case, and so is not entirely predictable (suggesting that these forms are not entirely connected via one central sense of *-ara*; this is not a blanket case of polysemy). It appears then, that the functional purpose of *-ara* in the language is that of a syntactic category-shifter, or frame-shifter. It does this via frame metonymy in the semantics. It

is in these frame-metonymic shifts that polysemy patterns involving *-ara* are built across syntactic categories in Karuk.

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APPENDIX A: Instrumental Applicative Verb-Stems

Applicative Verb-Theme Constructions

Verb-Base	Part Of Speech	Meaning	Applicative Verb-Stem	Meaning
ikvar	V.tp.2t	<i>to buy</i>	ikvára	<i>to use to buy; to pay X for</i>
ikyav	V.p.2t	<i>to make</i>	ikyâara	<i>to make with</i>
taxíshxish	Vp.t.	<i>to scrape</i>	taxishxíshara	<i>to scrape with</i>
vik	Vp.t.	<i>to weave</i>	víkara	<i>to weave with</i>
íkrav	Vp.t.	<i>to pound</i>	ikrávara	<i>to pound/grind with</i>
íthxup	Vp.t.	<i>to cover</i>	íthxúpara	<i>to cover with</i>
íxup	Vp.t.	<i>to cover</i>	íxupara	<i>(pl.) to cover with</i>
thimyav	Vp.t.	<i>to grind</i>	thimyâara	<i>to polish with</i>
ikchur	Vp.t.	<i>to grind</i>	ikchúrara	<i>to grind with</i>
tayíithhi	Vp.t.	<i>to lash the base of a basket</i>	tayíithhara	<i>to lash the base of a basket with</i>
iyakva	Vp.t.	<i>to lash</i>	iyánaara	<i>to lash with</i>
kíshap	Vp.t.	<i>to tie in a bundle</i>	kíshapara	<i>to tie in a bundle with</i>
imthápka	Vp.t.	<i>to tie onto</i>	imthápkarariv	<i>to tie onto with</i>
inhîishrih	Vp.t.	<i>to tie down</i>	inhîishrihara	<i>to tie down with</i>
ikúrik	Vp.t.	<i>to mark, decorate</i>	ikxúrikara	<i>to decorate with</i>
av	Vp.t.	<i>to eat</i>	ávara	<i>to eat with</i>
ikrúp	Vp.t.	<i>to sew</i>	ikrúpara	<i>to sew with</i>
if	Vp.i.	<i>to grow up</i>	ífara	<i>to be raised with</i>
ixtíivhi	Vp.i.	<i>to play</i>	ixtíivhara	<i>to play with</i>
vup	Vp.i.	<i>to string beads</i>	vúpara	<i>to string beads with</i>

APPENDIX B: Deverbal Instrument Nouns

Deverbal Instrument Nouns: Transitive Verb-Stems

Verb-Base	Meaning	Instrument Noun	Meaning
áthip	<i>to wring</i>	áthipara	<i>wringer</i>
ikyútrih	<i>to pile up/ to plow</i>	ikyutrihara	<i>plow</i>
ithxup	<i>to cover</i>	ithxúpara	<i>cover</i>
kíshap	<i>to tie in a bundle</i>	kíshapara	<i>tie-string</i>
ishrâat	<i>to lead (a horse)</i>	ishrâatara	<i>reins</i>
ikyav	<i>to make</i>	ikyâara	<i>tool</i>
ikchur	<i>to grind (by friction)</i>	ikchúrara	<i>pestle (for grinding tobacco)</i>
ikrav	<i>to grind</i>	ikrávara	<i>pestle (for grinding acorns)</i>
pikchah	<i>to take a picture</i>	pikcháhara	<i>camera</i>
vúxich	<i>to saw</i>	vúxichara	<i>saw</i>
tasínsir	<i>to brush repeatedly</i>	iptasinsírara	<i>clothes-brush, lint brush</i>
tásir	<i>to brush</i>	tásirara	<i>brush</i>
thantap	<i>to sift</i>	thantápara	<i>sifter</i>
têet :	<i>to mow</i>	têetara	<i>scythe</i>
thivxish	<i>to plane</i>	thivxíshara	<i>plane</i>
pip	<i>(insect) to sting</i>	pípara	<i>stinger</i>
táthip	<i>to flatten</i>	táthipara	<i>carding-stick</i>
vimchuk	<i>to pinch</i>	vimchúkara	<i>pincher</i>
pútak	<i>to pinch</i>	pútakara	<i>pincher</i>
taxvuk	<i>to hook (wood)</i>	taxvúkara	<i>hook</i>
ikrúkuva	<i>to jab through</i>	ikrukuváraara	<i>rammer</i>
táchak	<i>to clip with scissors</i>	táchakara	<i>scissors</i>
imthátif	<i>to bat (baseball)</i>	imthátifitunara	<i>baseball bat</i>
pithxah	<i>to wash</i>	pithxáhara	<i>soap/washboard/washing.machine</i>
ikxurik	<i>to decorate, to write</i>	ikxurikara	<i>pencil</i>
ikxak	<i>to flail</i>	ikxákara	<i>flail</i>
iknáapka	<i>to nail on</i>	iknáapkara	<i>nailing-on instrument (for a horseshoe)</i>
kitnak	<i>to crack acorns</i>	iknátara	<i>rock to crack acorns with</i>
suprav	<i>to measure</i>	suprávara	<i>measuring basket</i>
ikrupkáanva	<i>to pierce into (PL.ACT.)</i>	ikrupkáanvara	<i>fork</i>
ithyururuprñihva	<i>to pull through</i>	ichyununupñihvanach	<i>needle</i>
pákoo	<i>to whip (one's hair) with a stick</i>	pakôora	<i>comb-stick; leech/juvenile eel</i>
ikxárip	<i>to chip/chop (wood, w/ an irregular cut)</i>	ikxáripara	<i>adzel chipper</i>
parâamva	<i>to split with a wedge</i>	parâamvara	<i>wedge/maul</i>

*iknik-	<i>ik- 'to hit' nik 'at intervals'</i>	ikníkara	<i>maul (for driving wedges)</i>
ákoo	<i>to chop (with an axe)</i>	akôora	<i>axe</i>
síchakvutva	<i>to put on a belt</i>	síchakvutvara	<i>belt</i>
iyuunvárayva	<i>to put (long object) around in (something)</i>	iyuunvárayvara	<i>mush-stirrer</i>
imchanáknak	<i>to tap, knock</i>	imchanaknákara	<i>drumstick</i>

Deverbal Instrument Nouns: Intransitive Verb-Stems

Verb-Base	Meaning	Instrument Noun	Meaning
ikrih	<i>to fish</i>	ikrihara	<i>fish trap</i>
iktiin	<i>to walk with a cane</i>	iktíinara	<i>cane</i>
ikxur	<i>to make a stripe</i>	ikxurâanara	<i>striped thing; garter snake</i>
ishxay	<i>to fish with a line</i>	ishxâara	<i>fishing pole</i>
kîih	<i>to lock a door</i>	kîihara	<i>key</i>
kunih	<i>to shoot</i>	kunihara	<i>wooden-tipped arrow</i>
pimustíhvaan	<i>to look at oneself</i>	pimustihváanara	<i>mirror</i>
tátuyshur	<i>to sweep off</i>	tátuyshurara	<i>broom</i>
taxrat	<i>to flake arrowheads</i>	taxrátara	<i>flaking instrument</i>
tharámpuk	<i>to cook/stir acorn soup</i>	tharampúkara	<i>spatula</i>
ipkîihpu	<i>(a door) to be locked</i>	ipkîihpara	<i>key</i>
ikfúyfuy	<i>to whistle repeatedly</i>	ikfuyfôora	<i>whistle</i>
taramnîihvu	<i>to fish with a dipnet</i>	taramnîihvara	<i>dipnet</i>
îhuk	<i>to do a flower dance</i>	îhukara	<i>flower dance song</i>
thivtap	<i>to do a war dance</i>	thivtápara	<i>war dance song</i>
piyníknik	<i>to do a kick dance</i>	piyníkníkara	<i>kick dance song</i>
chivchak	<i>to close a door</i>	chivchákara	<i>door/doorknob</i>
itkáanva	<i>to spear fish (lit. to look into the river)</i>	itkáanvara	<i>fish-spear</i>
thimýúrishrih	<i>to make a fire with a fire-drill</i>	thimýúrishrihara	<i>fire-drill/Indian matches</i>
chanchak	<i>to close to roof hatch of an Indian house</i>	chanchákara	<i>roof board on top of a house</i>
ishríika	<i>to tie a tumpline/bowstring (for a pack basket)</i>	ishríikara	<i>tumpline</i>
ikyaaamichva	<i>to play (non-athletic games)</i>	ikyamiichvara	<i>toy (play non-athletic games)</i>
iptáxatih	<i>to comb one's hair</i>	iptaxatíhara	<i>comb; juvenile eel</i>
imkuh	<i>(air) to be warm</i>	pimkúhara	<i>heating stove</i>
ikrup	<i>to sew</i>	pikrupváanara	<i>sewing machine</i>
írip	<i>to dig a hole</i>	íripara	<i>pick-axe</i>
ixakáxak	<i>to make a rattling noise</i>	ixakaxákara	<i>rattle/ golden-cradle</i>
arankúrihva	<i>to sink (pl.act.)</i>	arankúrihvara	<i>sinker</i>
imtháatva	<i>to play shiny stick (play shiny stick game)</i>	imtháatvara	<i>shiny sticks</i>

APPENDIX C: Resultant-State Verb-Stems

Resultant-State Adjective Nominal Constructions

Verb-Base	Part Of Speech	Meaning	Resultant-State Adjective-Nominal Construction	Meaning
ishpat	Va.i.	<i>to break/become broken</i>	ishpáatara	<i>broke, without money</i>
ikfith	Vp.t.	<i>to trim</i>	ikfíithara	<i>trimmed (tree)</i>
ishtak	Va.i.	<i>to become separated, to come to have a gap</i>	ishtáakara	<i>chipped out, nicked out</i>
imship	Va.i.	<i>to become extinguished</i>	imshíipara	<i>extinguished</i>
imxaxaváara	Va.i.	<i>to become cracked through</i>	imxaxaváraara	<i>cracked through</i>
iknax	Vs.i.	<i>to be cross-eyed</i>	iknáxaara	<i>cross-eyed</i>
Ikritíptip	Vp.t.	<i>to cut a fringe along the edge of</i>	ikritíptiipara	<i>fringed</i>
kúunhi	Va.i.	<i>to be crooked</i>	kúunhara	<i>crooked</i>
ishtáktak	Va.i.	<i>to become chipped out repeatedly</i>	ishtáakara	<i>chipped out repeatedly</i>

APPENDIX D: Nouns

Karuk Noun-Stems Co-occurring with -ara

Noun-Base	POS	Meaning	Derived Noun-Theme	POS	Meaning
ámtaap	N	<i>ashes; dust</i>	amtáparas	N	<i>type of lupine (dusty ones)</i>
apmaan	N	<i>mouth, beak</i>	apmárara	N	<i>woodpecker-head sash decorated with woodpecker scalps, [Literally: 'having</i>
asaxêem	N	<i>moss</i>	asaxêevara	ADJ/N	<i>mossy; a placename, Baldy Peak</i>
áax	N	<i>blood</i>	áxara	ADJ	<i>bloody</i>
ípih	N	<i>bone</i>	ípihara	ADJ/N	<i>living person; bony; alive</i>
iptáxap	N	<i>braid</i>	iptáxapara	ADJ	<i>Chinaman ['having a braid']</i>
xúus	N	<i>mind</i>	xúsara	ADJ	<i>sensible (person)</i>
thirixôon	N	<i>testicle</i>	thirixôorara	N	<i>bull, stud horse [Literally: 'having testicles'.]</i>
xunxún	N	<i>phlegm</i>	xunxúrara	ADJ	<i>slobbery (said of snail or baby)</i>
chishiih	N	<i>horse</i>	chishíhara	ADJ	<i>on horseback</i>
axraat	N	<i>thorn</i>	axrátara	ADJ	<i>thorny</i>
imyaat	N	<i>hair</i>	imyátara	ADJ	<i>hairly</i>
achiich	N	<i>louse</i>	achíchara	ADJ	<i>lousy</i>
xuun	N	<i>acorn soup</i>	xúrara	ADJ	<i>thick (said of liquid) [Literally: 'like acorn</i>
axváha	N	<i>pitch</i>	axvâahara	N	<i>pitch-wood</i>
aas	N	<i>water</i>	ásara	ADJ	<i>juicy</i>
axváha	N	<i>pitch</i>	axvâhahara	ADJ	<i>sticky</i>
iish	N	<i>meat</i>	íshara	ADJ	<i>coarse (of fiber)</i>
kitáxrih	N	<i>wing</i>	kitaxríhara	N	<i>a kind of dangerous spirit [Literally: 'having wings' 1]</i>
púux	N	<i>scab; sore</i>	púuxara	ADJ	<i>full of sores; scabby</i>
athkúrit	N	<i>fat, grease</i>	athkúritara	ADJ	<i>fatty, greasy [Literally: 'greasy'.]</i>
vêeshura	N	<i>horn</i>	vêeshurara	N	<i>a buck (deer) [literally: 'having horns']</i>
tíshraam	N	<i>Scott Valley</i>	tishrávara	N	<i>Scott Valley Shasta</i>
thirixôon	N	<i>testicle</i>	thirixôorara	N	<i>bull, stud (lit. 'having testicles')</i>
ûutiha	N	<i>obsidian blade</i>	ûutihara	N	<i>flint blade</i>
patáprih	N	<i>paved floor</i>	patapríhara	N	<i>headstone, flat slab placed on grave</i>

APPENDIX E: Grammar

Potential Vowel Shortening:

330. Shortening and lengthening.

331. Those long vowels which have short counterparts, namely i· a· u·, are replaced by the short vowels in three situations:

331.1. In dissyllabic roots with long first vowels, shortening occurs before all derivative suffixes except -Tih Durative.

?i·na "(du.) to live," -kiri Instrumental: ?iná·kiri "(du.) to live off of."

?u·ma "to arrive," -tanmah "in vain": ?uma-tánmah "to arrive in vain."

?í·hya "(long object) to stand," -sip(riv) "up": ihyá-sip(riv) "to stick up."

?í·θva "to pack": iθvá-sip(riv) "to pack up"; contrast ?i·θvú-Tih "to be packing."

331.2. i· a· u· are normally shortened in the first members of compounds.

?í·š "flesh, body," yav "good": ?íš-yav "having a good body."

axvâ·h "head," xu·s "smooth": axvâh-xu·s "bald-headed."

iθívθa·ne·n "world," ?ípan "end": iθivθane·n-?ípan "end of the world."

This shortening does not apply, however, to vowels of the morpho-phonemic type designated as "double-long," often arising from contraction (321), and written with a colon, rather than a single dot for the length marker.

pihní:č "old man," xus?é·θa·n "person who takes care," pihni·č-xus?é·θa·n "nurse for an old man."

apxantí:č "white man," pú·fič "deer": apxantí·č-pu·fič "sheep, goat."

?û:tihA "obsidian blade," -hi·č(va) "imitation": ?u·tihá-hi·č(va) "flint mark (a basket design)."

ya:s?árA "rich (person)," ?ávansa "man": ya·s?ara-?ávansa "rich man."

But although a double-long vowel is retained in one preponing, it is shortened when a second preponing occurs:

?í:n "falls," pí·t "new": ?í·n-pi·t "new falls (a place name)."

But ?í·npi·t + θú·f "creek" > ?inpít-θu·f "Sandy Bar-Creek."

331.3. Certain derivational suffixes condition vowel shortening in stems preceding them:

ápti·k "branch," -ara "characterized by": aptík-ara "branchy."

ikyá·vi·čva "to work," -a·n Agentive: ikyavíčv-a·n "worker."

Potential Vowel Lengthening:

332. Some suffixes are said to condition POTENTIAL LENGTHENING; this means that they condition vowel-lengthening in the final syllable of certain stems preceding them. In order for a stem to undergo this lengthening, it must 1) end in a consonant and 2) be of the class known as MOVING-ACCENT stems. This class, defined in detail in 381, consists (roughly speaking) of those stems which do not contain the sequence $\check{V}C\check{V}$. Thus all of the following stems may receive lengthening:

- ʔaṽ "to eat," -Tih Durative: ʔá·m-tih "to be eating."
- ikfuk "to crawl," -furu "indoors": ikfú·k-furu "to crawl indoors."
- ikrívruh "to roll," -rupu "downriver"; ikrivrú·h-rupu "to roll downriver."
- ikré·myah "to blow," -ro·vu "upriver": ikre·myá·h-ro·vu "to blow upriver."

By contrast, note the following stems: the first three end in vowels, and the others contain $\check{V}C\check{V}$.

- pata "to eat acorn soup," -Tih Durative: páta-Tih "to be eating acorn soup."
- iṭyuru "to pull": iṭyúru-Tih "to be pulling."
- ikšú·pku "to point at": ikšú·pku-Tih "to be pointing at."
- ʔápiṽ "to look for": ʔápim-tih "to be looking for."
- ʔárip "to cut a strip": ʔárip-tih "to be cutting a strip."

One other qualification must be made: When a suffix begins with a vowel, then potential lengthening affects only stems which end in geminable consonants. Thus lengthening occurs in the following examples:

- ʔax "to bite": ʔu-ʔá·x-at "he bit him," ʔá·x-i "bite him!"
- ikvip "to run": ʔú-kvi·p-at "he ran," ikvî·p-i "run!"

Fixed vs. Moving Accent:

380. Accentuation.

Various accentual patterns occur incidental to morphological processes. The accentuation in any stem-affix combination (leaving compounds aside for the time being) may be considered the result of two factors: the phonemic and morphophonemic structure of the stem, and the morphophonemic type of the affix.

381. Two stem-types will be distinguished: FIXED-ACCENT and MOVING-ACCENT stems. On the simplest level, fixed-accent stems are those containing circumflex accent, as in *pū·viš* "bag," or the sequence $\check{V}C\check{V}$, as in *ʔáhup* "wood," *ʔípih* "bone." Moving-accent stems, on the other hand, comprise all others, such as *ikriv* "to sit," *ikrívkira* "chair," *ʔá·mA* "salmon." To these definitions, however, the following exceptions must be made:

381.1. In some stems, the circumflex accent phoneme does not determine fixed accent. It is then considered to be of a morphophonemic type called UNSTABLE, written by placing the accent mark after the vowel instead of over it. Stems containing this morphophoneme are of the moving-accent type; e. g. —

ʔara^ˆrahiTih "(pl.) to live," -kiri Instrumental > *ʔararahiTíh-kiri* "(pl.) to live off of."

381.2. In some stems, the phonemic sequence $/\check{V}r\check{V}/$ does not determine fixed accent. This appears to be due to the tendency of such sequences to act like long vowels (333). Stems in which this behavior occurs are written morphophonemically with a capital R. Thus *ʔa^ˆRamsip(riv)* "to start out" acts like a moving-accent stem in *ʔaramsi^ˆpriv-tih* "to be starting out." With this may be contrasted the phonemically identical but morphophonemically distinct stem *ʔáramsip(riv)* "to begin to weave with three strands"; this is a fixed-accent stem, as shown in *ʔáramsi·priv-tih* "to be beginning to weave with three strands."

381.3. The presence of a morpheme boundary in the sequence $\check{V}C\check{V}$ may cause a stem to have moving, rather than fixed accent. Thus if C is a geminable consonant, then $\check{V}-C\check{V}$ determines a moving-accent stem:

ʔiná-kiri "(du.) to live off of," -Tih Durative: *ʔinakíri-Tih*
 "(du.) to be living off of."

If C is a link (334), then $\check{V}C\check{V}$ likewise determines moving accent:

vupakpákiri "to cut up with" (< **vupakpák-kiri*): *vupakpakíri-Tih* "to be cutting up with."

But $\check{V}C-\check{V}$ determines fixed accent:

ʔaxayčák-iš(rih) "to seize": *ʔaxayčákišrih-tih* "to be seizing."

If, on the other hand, C is a nongeminable consonant (symbolized \emptyset), then either $\check{V}-\emptyset\check{V}$ or $\check{V}\emptyset-\check{V}$ determines moving accent:

imustihá-yava "good-looking," -hi Denominative: **imustihayáva·hi* > *imustihayâ·hi* "to be good-looking."

(pu-)ʔiykár-ap "they do(n't) kill," -hat Past tense: *(pu-)ʔiykaráp hat* "they did(n't) kill."

By contrast with the last example, note the following, where use of a different stem-allomorph separates the non-geminable r from the morpheme boundary:

iykára-Tih "to be killing," -at Past tense: *-iykáraTih-at* "was killing."

Progressive Accentuation:

382.2. PROGRESSIVE accentuation does not affect fixed-accent stems, which retain their original accent.⁸ It affects moving-accent stems in the following ways:

1) In stems which contain a basic acute accent, this accent shifts to the next following syllable.

ʔá·mA "salmon," -ak Locative: ʔa·má-hak "in salmon."

í·θva "to pack," -sip(riv) "up": iθvá-sip(riv) "to pack up."

ikrív·kiri "to sit on," -at Past tense: -ikrivkír-at "sat on."

ʔuʔí·hya "it stands," -irak "where": ʔuʔi·hy=í·rak "where it stands."

ikrí·hvuTih "to be fishing," -an Participial: ikri·hvúTih-an
"one who is fishing."

But if this would cause the accent to fall on the final syllable of the combination, or on the antepenult of a combination ending in $\check{V}C\check{V}$, then no shift occurs.

ixví·phi "to be angry," -at Past tense: -ixví·ph-at "was angry."

uhθá·mhi "to plant," -ara Instrumental: uhθá·mh-ara "to plant
by means of."

2) In stems which are basically unaccented, acute accent falls on the last stem-syllable.

vik "to weave," -paθ "around": ví·k-paθ "to weave around."

inhi- "to tie," -tunva "together": inhí-tunva "to tie together."

iθva·y "chest," -ak Locative: iθvá·y-ak "in (one's) chest."

But in stems ending with $\check{V}C\check{V}$, the acute accent falls on the stem's penult, rather than on its ultima.

pata "to eat acorn soup," -rip "out": páta-rip "to eat remnants
of food."

ivrara "(pl.) to fall," -suru "off": ivrára-suru "(pl.) to fall off."

Instrumental Applicative -ara:

754.3. -ara Instrumental forms verb themes meaning "to use . . . in order to . . . , to . . . by means of" The suffix conditions progressive accentuation.

ikyav "to make": *ikyáv-ara > ikyâ:ra "to make with."

ikraṽ "to grind": ikráv-ara "to grind with."

ikrup "to sew": ikrúp-ara "to sew with."

When followed by the deverbative suffix, -ara often has agentive rather than instrumental meaning; see 671.

{-a} is especially common after verbs containing the suffixes -ahiv "on some occasion," -ara and -kiri Instrumental and -raṽ "in"; in many such cases the verb stem has not been found in verb forms, but only in these derivatives, which are used as the names of various tools, utensils, etc.

pâ·kuhi "to pick acorns": *pâ·kuh-ahiv > pâ·kuhiv "to participate in the acorn harvest": pâ·kuhiv-a "acorn harvest."
 ikraṽ "to grind": ikráv-ara "to grind with": ikrávar-a "pestle."
 icyav "to make": icyâ-:ra "to make with: icyâ:r-a "tool."
 itká·nva "to spear fish": itká·nv-ara- "to spear fish with": itká·nvar-a "fish spear."
 tátuyšuru "to sweep off": tátuyšur-ara- "to sweep off with": tátuyšurar-a "broom."
 ?áho· "to walk": ?ahó·-kiri "to walk on": ?ahó·kir-a "sidewalk."
 ikriv "to sit": ikrív-kiri "to sit on": ikrívkir-a "chair."
 ?aṽ "to eat": ?am-kiri- "to eat on": ?amkir-a "table."
 pátum "to put one's head": patúm-kiri- "to put one's head on": patúmkir-a "pillow."

Nouns in -ar-a occasionally designate the subject of the underlying verb stem, rather than an instrument:

yíkihi "to get sick": yíkih-ara- "invalid."
 vô·ř "to crawl": vô·r-ara- "slow-moving."

Resultant-State -ara:

764. -ara is added to a limited number of intransitive verbs, forming adjectives with the meaning "having . . . -ed." The suffix conditions progressive accentuation and potential lengthening.

išták "to become chipped out": ištá·k-ara "chipped out."
 ištáktak "to become chipped out repeatedly": ištáktá·k-ara "chipped out repeatedly."
 imšip "to become extinguished": -imší·p-ara "extinguished," with ?á·ha "fire" in ?ahé·mši·para "one having an extinguished fire, i.e., a widower."
 imxaxavára· "to become cracked through (pl.)": imxaxavára·-ra "cracked through."

Nominal *-ara*:

621.2. *-ara* usually has the meaning "characterized by . . . , having" In a few cases the meaning is "connected with . . . , resembling" It conditions progressive accentuation and shortening of long vowels in stems preceding it.

ʔá·x "blood": ʔáx-ara "bloody."
ápti·k "branch": aptík-ara "branchy."
axváhA "pitch": axváha-haṛa "pitchy."
ʔifunihaxxárA "long hair": ʔifunihaxxára-hara "long-haired."
čiši·h "horse": čišíh-ara "on horseback."
tíšra·m "Scott Valley": tišráv-ara "Scott Valley Shasta."
xu·n "acorn mush": xúr-ara "thick (of liquid)."

amyiv "soot": *amyív-ara > amyê·ra "sooty."

A number of derivatives in *-ara* have been observed to form plurals, as adjectives would do; e.g.—

ámta·p "dust": amtáp-ara "dusty": amtápar-asa "dusty ones,
i.e., lupine plants."

However, they have also been found as prepounds, which is not normal for adjectives:

xáviš "arrowwood": xáviš-ara "full of arrowwood": xavišará-
θθu·f "full-of-arrowwood creek, i.e., Ike's Gulch."

On the whole, derivatives in *-ara* are rare both in plural formations and in compounds, so that the evidence is inadequate for judging whether they should be considered adjectives or not. They may originally have behaved like derivatives in *-kúNiš* (621.13).

Class 4 Suffixes:

754. Suffix-class 4 consists of the following:

754.1. -ahiv "on some occasion," conditioning progressive accentuation, is found in a small number of derivatives:

ʔiř "to perform the world-renewal rite": ʔír-ahiv "to have a world-renewal celebration."

pâ·kuhi "to pick acorns": *pâ·kuh-ahiv > pâ·kuhiv "to participate in the acorn harvest."

754.2. -ař "to go in order to" conditions progressive accentuation.

ʔih "to dance": ʔih-ař "to go in order to dance, to go to a dance, to go dancing."

iřxay "to fish": *iřxáy-ař > iřxâ·ř "to go fishing."

ʔá·kram "to argue": ʔa·krám-ař "to go argue."

čančá·ksuru "to open": čančá·ksúr-ař "to go open."

imká·nva "to gather food": imká·nv-ař "to go gather food."

ʔapímpí·θva "to look around for": ʔapímpí·θv-ař "to go look around for."

ʔáho· "to walk, travel": ʔáho·-ř "to go to travel."

This suffix is frequently followed by two other Class 4 elements, namely -ko "to, thither" and -uk "hither"; the combination -ar-uk then means "to come in order to."

ʔihař "to go dancing": ʔiha·n-ko "to go there to dance":

ʔihar-uk "to come to dance."

754.3. -ara Instrumental forms verb themes meaning "to use . . . in order to . . . , to . . . by means of" The suffix conditions progressive accentuation.

ikyav "to make": *ikyáv-ara > ikyâ·ra "to make with."

ikrař "to grind": ikráv-ara "to grind with."

ikrup "to sew": ikrúp-ara "to sew with."

When followed by the deverbative suffix, -ara often has agentive rather than instrumental meaning; see 671.

754.4. -e·p "away from (a person)," conditioning progressive accentuation, occurs in a small number of derivatives:

ʔê·θ "to take": ʔê·θ-e·p "to take away from."

pax "to catch": páx-é·p "to win from."

754.5. -fip "completely" conditions pre-suffixal accentuation:

čifič "to beat (in a game)": čifíč-fip "to beat badly."

pápiř "to search for": papím-fip "to search all over for."

754.6. {-i·čva} "in play, in pretense" conditions change of r to n and θ to č in stems preceding it. The usual allomorph, -i·čva, conditions pre-suffixal accentuation of the unstable acute type (382.4).

ifyuku "to wander": ikyu´k-i·čva "to take a stroll."

ʔá·θva "to be afraid": ʔa·čv-i·čva "to pretend to be afraid."

After the denominative suffix *-hi*, however, the allomorph *-i·čva* occurs:

ʔê·mhi "to be a doctor": ʔe·mh-i·čva "to pretend to be a doctor."

The following example shows suffixes of Class 2 and 3 in sequence with *{-i·čva}*:

kû·ř- "to sit": kû·n-taku "to sit on, to ride": kû·ntaku-θuna
"to ride around": ku·ntakuču´n-i·čva "to take a ride for
pleasure."

{-i·čva} also occurs preceding another suffix of Class 4, namely *{-iruv}*; see 754.8.

This morpheme is evidently a combination of *{-ič}* Diminutive and *{-va}* Plural Action; such a combination is so irregular, however, that *{-i·čva}* is best treated as a single morpheme. It may be identified, however, with the pseudo-postpound *-hi·č(va)* "make-believe" (614.2).

754.7. *-ihi* Benefactive is added to personal transitive stems to form transpersonal double-transitive ones;⁵ it may be translated "to, for (a person)." It conditions potential lengthening and progressive accentuation.

paθ "to throw": pá·θ-ihi "to throw to (someone)."

ikšup "to point": ikšúp-ihi "to teach (someone)."

paku´ri·hva "to sing": pakurí·hv-ihi "to sing to (someone)."

Note that *-ihi* occurs after another Class 4 suffix, namely *-i·čva* "in pretense":

ikya´vi·čva "to work": ikyaví·čv-ihi "to work for (someone)."

754.8. *{-iruv}* "too much" has been noted in a few cases. Some of them show the form *-iruv*, while others show *-inuv*; the reason for the difference is not known. The suffix evidently conditions change of *r* to *n* within stems. Data is insufficient to determine whether progressive or presuffixal accentuation is conditioned.

ʔaṽ "to eat": ʔáv-iruv "to eat too much."

imkuh "to be warm": imkúh-iruv "to be overheated."

ʔiṽ "to die": ʔív-iruv "to be nearly dead from exhaustion."

ʔiš "to drink": ʔiš-inuv "to drink too much."

iváxrah "to be dry": ivaxnáh-inuv "to be too dry."

vištař "to have an appetite": vištán-inuv "to have excessive
appetite."

Note that this suffix occurs after another one of Class 4, namely *-i·čva* "in pretense":

ikyá'vi-čya "to work": ikyaví'čv-iruv "to work too much."

This suffix may be identified with -híruvA "excessively," added to nouns (621.8).

754.9. -kiri Instrumental forms verbs meaning "to use . . . in order to, to . . . by means of." This suffix differs in meaning from the semantically similar -ara in that it refers not so much to a tool, but to the object in or on which an action is performed. It conditions presuffixal accentuation and vowel shortening.

ʔáho· "to walk": ʔahó·-kiri "to walk on, by way of."

ikriv "to sit": ikrív-kirí "to sit on."

ʔi·na "(du.) to live": ʔiná-kiri "(du.) to live by means of."

imus- "to look": imús-kiri "to look on (as a spectator), to admire" (this is a variant from the usual semantic type of derivatives in -kiri).

-kiri + {-va} Plural Action > -ki·n·va:

'imúskiri "to look on": imu'·ski·n·va "to watch a show, to listen to the radio."

A second suffixal morpheme -kiri, also conditioning presuffixal accentuation, must be distinguished. Occuring only in a small number of themes, it seems to involve the idea of motion.

čunva- "to sneak": čunvá-kiri "to sneak up."

Formally, it is differentiated by the fact that its combination with {-va} Plural Action is -ki'·re·. E.g.—

ipšá·mkiri "to leave, abandon" (cf. {ip-} Iterative and sa·m "to remain"): ipša·mki'·re· "to leave (pl.)."

754.10. -ko·, conditioning vowel shortening and presuffixal accentuation, is a combination of the Class 2 suffix {-ku} "onto a vertical surface" and {-va} Plural Action. Often, however, it has the position of a Class 3 suffix and some special meanings. Thus, after stems expressing the action of speaking, it has the sense of "to . . . directly to (a person)"; in this function it may follow another Class 3 suffix, namely -uniš "to."

ipê·ř "to tell": ipé'·n·ko· "to tell to one's face."

čuphu·niš- (< čú·phi "to speak" + {-uniš} "to," but not used alone):

čuphuni'·š·ko· "to speak to."

-ko· is also common after the Class 3 suffix -ař "to go in order to"; in this case -ko· adds the meaning of "thither, to (a place)."

ʔíhař "to go dancing": ʔiha'·n·ko· "to go there to dance."

754.11. -mara "to finish . . . -ing" conditions potential lengthening and progressive accentuation. Derivatives containing it are used almost exclusively with {-ip} Iterative.

ikrup "to sew": p-ikrú·p-mara "to finish sewing."
 , ikvař "to buy": p-ikvá·n-mara "to finish buying."
 ihê·ra "to smoke": p-ihê·ra-mara "to finish smoking."
 tarúpraṽ "to lace": ip-taruprá·m̄ara "to finish lacing."

The following irregularity is noted among these formations:

?aṽ "to eat": p-ám·va·ra "to finish eating," but pámvvara-
 before other derivative suffixes.

?iš "to drink": p-íš·ma·ra "to finish drinking," but píšmara-
 before other derivative suffixes.

754.12. -maθ Causative may be translated "to make . . . , to cause . . . "; added to intransitive stems, it creates transitive ones. It conditions potential lengthening and progressive accentuation, and is denasalized to -vaθ after vowels (343).

?if "to grow, (water) to boil": ?í·f-maθ "to cause to grow, to
 boil (water)."

iváxrah "to be dry": ivaxrá·h-maθ "to dry (something)."

iškáxiš(rih) "to stop (i.e., come to a stop)": iškáxišrih-maθ
 "to stop (i.e., bring to a stop)."

?á·θva "to be afraid": ?a·θvá·vaθ "to scare."

?á·xhi "to bleed (i.e., lose blood)": ?a·xhí·vaθ "to bleed (i.e.,
 draw blood from)."

kunukúnuhi "to have an itch": kunukúnuhi·vaθ "to tickle (some-
 one)."

754.13. -o· "habitually" conditions vowel shortening and presuffixal accent of the unstable acute type. It is often added to stems which already contain {-va} Plural Action, which in this environment seems only to reinforce the habitual meaning.

vik "to weave": vi·k-o· "to weave habitually."

ví·kva "to weave (pl.)": vi·kv-o· "to weave habitually (pl.)."

pákurih "to sing" (not used as such in verb forms): paku·ri·hva
 "to sing" (the stem normally used in verb forms): pakuri·hv-o·
 "to sing habitually."

754.14. -rih "up" is an element found in a few derivatives, conditioning progressive accentuation. Its occurrence is very limited, and owing to the small number of examples, the only meaning which can be assigned to it is vague and rather doubtful.

iktat "to prop": iktát·rih "to prop up."

?í·hya "(long object) to stand": ihyá·rih "(an.) to stand."

ipší·nva "to fail to recognize": ipšinvá·rih "to forget."

The last example above may indicate that -rih conditions vowel shortening,

but there are no other examples to prove or disprove this.

Before {-va} Plural Action, the allomorph *ri·h* occurs:

iktát-rih "to prop up": iktá^ˆtri·h-va "to prop up (pl.)."

754.15. -sař "along with, together with" conditions presuffixal accentuation.

vik "to weave": vík-šař "to weave in together with (as string with twigs)."

ištuk "to pluck": ištúk-sař "to pluck (something) along with (something else)."

?išunva "to bury": ?išunvá-sař "to bury with."

754.16. -tánmah "for nothing, for no reason" may be connected with the verb tánmaha "to owe."

?ê·h "to give": ?e·h-tánmah "to give for nothing, gratis."

ikyav "to make": ikya·-tánmah "to make for nothing."

?if "to grow": ?if-tánmah "(plant) to grow as a volunteer, without having been planted."

?u·ma "to go": ?uma-tánmah "to go in vain."

754.17. -uk "hither" conditions progressive accentuation. It occurs freely only after derivatives in -ař "to go in order to"; the resultant meaning is "to come in order to." Besides these cases, -uk is added to a very few other stems; the meaning "hither" is apparent in some cases, but completely indiscernible in others.

imus- "to look at": imús-ař "to go to see, to visit": imúsar-uk "to come to see."

išxê·h "to give some to": išxê·h-ař "to take some to": išxê·har-uk "to bring some to."

ivyih- "(pl.) to go": ivyîh-uk "(pl.) to come."

?ih "to dance": ?îh-uk "to do a puberty dance."

Before {-va} Plural Action, the allomorph *-u·k* occurs:

imúsar-uk "to come to see": imusa^ˆru·k-va "to come to see (pl.)."

754.18. {-úniš} "to, at, about" makes transitive stems out of intransitive ones which express various vocal and mental functions. In most cases, the suffix has the form -uniš, conditioning progressive accentuation, but after stems ending in -hi Denominative, the allomorph -u^ˆniš occurs, conditioning vowel shortening.

ikšah "to laugh": ikšáh-uniš "to laugh at."

ihváramu "to bark": ihváram-uniš "to bark at."

ihyiv "to shout": *ihyív-uniš > ihyû·niš "to shout at."

ikví·thi "to be asleep": ikvíth-u^ˆniš "to dream about."

ixví·phi "to be angry": ixviph-u^hniš "to be angry at."

754.19. -û·ř "for a long time" occurs in a small number of derivatives:

vik "to weave": vik-û·ř "to weave for a long time."

ikyiv "to fall": icyiv-û·ř "to fall for a long time."

754.20. -va·na "oneself" forms derivatives with a reflexive meaning. It occurs only in conjunction with {ip-} Iterative, and conditions presuffixal accentuation of the unstable acute type.

ʔaṽ "to eat": ʔip-a´m·va·na "to eat oneself."

ikšah "to laugh": p-ikša´h·va·na "to laugh at oneself."

imčak "to get burnt": p-imča´k·va·na "to burn oneself (on purpose)."

ikmáarakurih "to slash": p-ikmarakuri´h·va·na "to slash oneself."

754.21. -Ovrik "in response to motion" conditions zero accentuation.

ʔáha- "to herd, drive (animals)": ʔáha·vrik "to head off."

mah "to see": máh·avrik "to see coming."

ʔê·θ "to take": ʔê·θ·ivrik "to catch (a thrown object)."