The Internal Structure of Montana Salish Instrumental Nominals

Isabel McKay
University of Arizona

Abstract: In this paper I will discuss a novel analysis of instrumental nominalization patterns in Montana Salish. This language has three primary mechanisms which can be used to derive nouns depicting tools from the verb the tool is used to perform. The verb may be suffixed with *-m(i)n* ($INST_1$), *-t(i)n* ($INST_2$), or with both, in the order *-mín-tn*. The primary semantic difference between these two forms is in the semantic function of the tool's possessor. When *-mín* nominals are marked with a possessor, the possessor DP is interpreted as the owner of the tool, but when *-tín* or *-mín-tn* tools are marked with a possessor, that possessor is interpreted as the patient of a tool. In this paper I describe how, by breaking down each of these suffix complexes into their component parts, the appropriate interpretation for the possessor may be derived.

Keywords: Montana Salish, nominalization, instrument, morphology, syntax, semantics

1 Introduction

When de-verbal instrument DPs in English are possessed, the semantic function of the possessor is often ambiguous, as is illustrated by the example in (1). In one meaning, the possessor is interpreted as the owner of a tool (1a), while in the other meaning, the possessor is interpreted, instead, as the standard object of the action the tool performs (1b).[1]

(1) My poker
   a. The object that I use to poke things
   b. The object that was/is used to poke me

Though instrument DPs in English are ambiguous in this way, in Montana Salish[2] these two types of instrument nouns may be disambiguated, as they are nominalized using different strategies. In this paper I will discuss how these two types of instrument nouns may be derived and the differences between the internal structures of the nouns created using these strategies.

In Montana Salish there are two suffixes which can be used to derive instrument (= "tool") nouns from the verbs they are used to perform. These two suffixes are *-m(i)n* and *-t(i)n.* Each of these suffixes may be used alone, or the two may be used together, in which case the *-mín* suffix always precedes *-tín.* An example of each type of instrument is given in (2).[3]

[1] Agentive *-er* nouns are also ambiguous as to whether the performer of the action is a tool (object that pokes) or a human (person that pokes) (Alexiadou and Schäfer 2008; Baker and Vinokurova 2009). Since this paper is concerned only with tool nouns in Montana Salish, this particular ambiguity will not be discussed here. However, it is worth noting that the forms under discussion here do not bear this agent/instrument ambiguity and all denote tools.

[2] Montana Salish (sometimes known as "Flathead") is the Montana dialect of the language whose other dialects are Kalispel and Spokane.

[3] Data for this project has been drawn from published sources, not from my own elicitations. Most of the example instrument nouns were drawn from Mengiarini et al. (1877–1879), but Thomason's more modern dictionary (2014a) was used as a glossing aid and to provide some longer examples. Though I am in the process of planning future elicitations to provide support for the analysis proposed here, such elicitations have not yet taken place. Where examples are drawn from Mengiarini et al. (1877–1879), the first line is given using the orthography which was used in this text. The second line is a morphemic breakdown using

Papers for the International Conference on Salish and Neighbouring Languages 54.
D. K. E. Reisinger & Gloria Mellesmoen (eds.). Vancouver: UBCWPL, 2019.

(2) Three Types of Instrument Nouns in Montana Salish

a. chalmín
čál-mín
cut-$INST_1$
'scissors (regarding the man)'

b. aiptín
ʕaẏ̓-p-tín
fast-INCH-$INST_2$
'what carries a fellow fast'

c. čalmínten
čal-mín-tín
cut-$INST_1$-$INST_2$
'scissors in regard to the thing cut' (Mengiarini et al. 1877–1879)

As illustrated by the examples in (2), a speaker's decision to use *-mín*, *-tín*, or *-mín-tn* seems to have very little impact on the semantics of the resulting tool noun, when such nouns are presented in isolation. The differences between nouns derived using these suffixes only really surface when they are marked for possession. When the *-mín* nominalizer is used on its own, the possessor is interpreted as the owner of the tool, as is illustrated by the examples in (3). However, whenever the *-tín* nominalizer is used either on its own, or after the *-mín* nominalizer, the possessor is interpreted, instead, as the patient of the verb performed by the tool, as is illustrated by the examples in (4).

(3) a. inagamin
in-ʕáq̓-mín
1S.POSS-stretch/scrape-$INST_1$
'my stretcher, etc., what I use'

b. ƛ̓łazmíis Louis
k̓ʷł-ʕác-mín-s Louis
LOC:under-tie-$INST_1$-3.POSS Louis
'be it the trap of Louis, he may use it'

(4) a. kłchazshintíis
č-ʕác-šn-tín-s
LOC:to-tie-foot-$INST_2$-3.POSS
'his feet-hobbler' (i.e. to hobble *his* feet)

b. kłazmíntis łu ipégu
k̓ʷł-ʕác-mín-tín-s łu ipéqʷu
LOC:under-tie-$INST_1$-$INST_2$-3.POSS COMP bay.horse
'be it the cabress of the bay horse' (Mengiarini et al. 1877–1879)

---

the orthography used in Thomason's more recent dictionary (2014a). Many of the words listed in Mengiarini et al. appear to have fallen out of usage in the modern language, and therefore phonetic transcriptions of these words using modern orthography are sometimes unavailable. Where re-elicited forms are available, they have been cited.

In the following sections of this paper I will argue that, by breaking down these two instrumental nominalization complexes into their component parts, we can construct distinct syntactic representations of these nouns which will lead to their differing interpretations. The primary difference between these two comes from the way that the internal argument role of each nominalized verb is saturated. While the *-mín* forms do this by existentially quantifying over the un-filled position, the *-tín* forms actually involve merging in an object DP, which is later extracted to the specifier position above DP where it can receive Case and triggers agreement on the determiner just as is accomplished by a possessor.

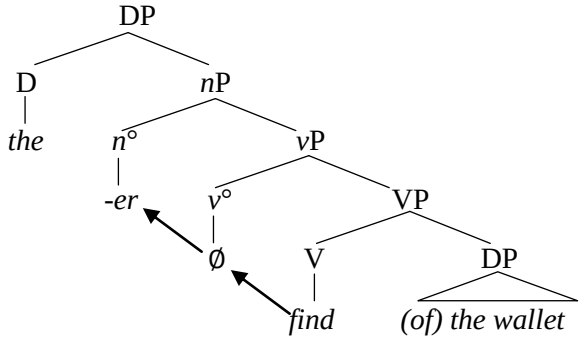
In Section 2 I will describe the derivation of *-mín* nominals, in Section 3 I will describe the derivation of *-tín* nominals, and in Section 4 I will describe the derivation of *-mín-tn* nominals. Section 5 will provide some conclusions and directions for future research.

2 The Possessor-Oriented Instrumental, *-mín*

We begin with the simpler of the two instrumental suffix complexes, *-m(i)n*. I will argue that this complex is actually three independent suffixes which operate together to perform a predictable function. The *-m* portion, I will argue, is the *Existential Binder* (EB) which saturates the type *e* argument of type $\langle e, t \rangle$ transitive roots. These saturated predicates are then generally verbalized either with one of two verbalizers which convert the saturated root into a predicate of type $\langle s, t \rangle$. These two verbalizers are v_{become} (v_{bec}), a phonologically null non-finite verbalizer used to describe an event during which the embedded state comes into being, and v_{be}, the *-í* suffix, which describes an event during which the embedded state simply continues. Finally, the verbal predicate is nominalized using the true *Instrumental Nominalizer* (INST), *-n*, which nominalizes the verb while also adding causation into the semantics.

Each of the three suffixes (-EB, -$v_{be/become}$, and -INST) performs one of the essential functions which have been proposed to be present in the creation of instrumental nominals cross-linguistically. A representation of the structure of an English *-er* agentive/instrumental nominal is given in (5). I propose that the only significant difference between this structure and the structure of Montana Salish *-mín* nominals is in the mechanism by which the internal argument of the verb is saturated, as illustrated by the structure given in (6).

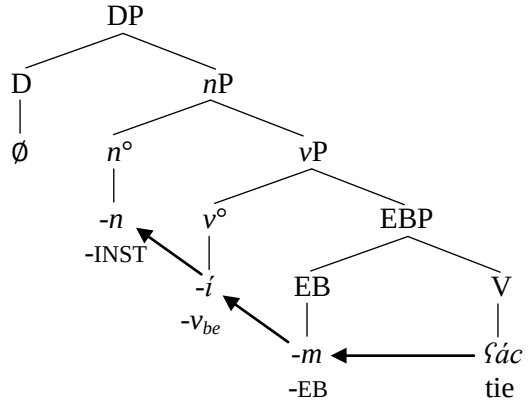
(5) English Agentive/Instrumental Nominalization (Baker and Vinokurova 2009)[4]



[4] This paper uses a distributed morphology framework which makes three essential assumptions: (i) each morpheme is a terminal node, (ii) syntax operates on nodes that are underspecified for phonological content, so pronunciations can be dependent on syntactic placement, and (iii) syntactic features may be underspecified, permitting elsewhere interpretations. For more on Distributed Morphology see Harley and Noyer (1999).

(6) Proposed Montana Salish Instrumental Nominalization: *-mín*

ʕác-m-í-n
tie-EB-v_{be}-INST
'a trap'



In the following sections, I will go through each of these component suffixes in the proposed structure in (6) to explain the step-by-step derivation of instrument nouns bearing the *-mín* suffix complex.

2.1 The Existential Binder *-m*

The first portion of the instrumental suffix complex *-mín* is the existential binder, *-m*. This suffix has been referred-to in the Salish literature by various names and is most commonly called either an "intransitivizer", an "antipassive", or "middle" (Thomason 1994; Carlson 1972; Spek and Post 1980). Though most of these terms could be applied to describe the broad function of this morpheme in the language, I have chosen to use the term "existential binder" here because the other names for the suffix are inherently connected with verbs. Since the current analysis assumes that the existential binder is merged with the root before verbalization takes place, I have chosen to use a label which is less tied to the presence of an event in the semantics.

The proposed semantics associated with the existential binder are given in (7) and the effect a predicate has when merged with a transitive root[5] is given in (8).

(7) *-m* = EB — Type: $\langle\langle e,t\rangle,t\rangle$
$[\![\text{EB}]\!] = \lambda f_{\langle e,t\rangle}\exists x_e.f(x)$

(8) a. ʕác = tie, tangle
$[\![\text{ʕác}]\!] = \lambda x_e.\text{TIE}(x)$ — Type: $\langle e,t\rangle$
'for some entity *xx* is tied'

[5] Here I use the phrase 'transitive root' to mean 'unaccusative root,' (Perlmutter, 1978) as I believe the former term is clearer in this context. The essential difference between a transitive root and an intransitive root here, then, is that transitive roots license an internal argument while intransitive roots do not.

b. $[\![$ʕác-m$]\!] = \exists x_e.\,\text{TIE}(x)$ Type: *t*
'there exists some *x* such that *x* is tied'

The existential binder acts as a function of type $\langle\langle e, t\rangle, t\rangle$, which takes a transitive root as its argument and existentially binds the unsaturated argument. This means that when the existential binder is merged with the root *ʕác* 'tie', the resulting word means something like 'the state of something being tied.'

Usually when such existentially bound forms appear on their own they are interpreted as being verbalized and merged with a null pronoun, producing a meaning 'he/she/it/they caused something to in a state of having been verbed.' An example illustrating this effect is given in (9).

(9) a. čn háʔu.
čn háʕ̓ʷ
1S.SBJ loose
'I got rested, I got relaxed.'

b. čn háʔum.
čn háʕ̓ʷ-m
1S.SBJ loose-EB
'I made something loose.' (Thomason 2014a)

In the example sentence in (9a) the verb is not existentially bound. For this reason the internal argument position is still open to be filled by the subject of the sentence, and the subject is interpreted as the patient/undergoer of the verb. In the example sentence in (9b), on the other hand, the internal argument position is saturated by the existential binder (see 8b), and so the subject of the sentence is interpreted, instead, as an agent that causes the state depicted by the existentially bound root.

Since the first morpheme in the instrumental nominalizing complex *-m-í-n* is the existential binder, we would predict that any stem that can bear the existential binder should also be able to bear the complex *-mín*. As it turns out, this is the case. The *-mín* complex is only attached to unsaturated transitive stems. Generally both suffixes attach directly to bare roots, though sometimes the stems may be marked by one of the locative prefixes as well. Some examples of the types of stems that can host both the *-mín* complex or the existential binder are given in (10).

(10) Instrumental Nouns Derived Using *-mín*:

a.	agamín	chin agem.
	ʔaq̓-mín	čn ʔaq̓-m
	hide.cure -INST_1	1S.SBJ hide.cure-EB
	'what one uses to stretch (hides)'	'I tie, band, stake a hide.'
b.	azmín	chin-azmí.
	ʕác-mín	čn [ʕac-m]-í
	tie-INST_1	1S.SBJ [tie-EB]-C.ST
	'trap'	'I am tying, catching.'

c.	chalmín	chines-chalmi.
	čal-mín	čn e-s-[čál-m]-í
	cut-INST$_1$	1S.SBJ ACT-NOM-[cut-EB]-C.ST
	‘sissors etc.’	‘I cut something into strings.’

(Mengiarini et al. 1877–1879)

It is also worth noting, in discussing the similarities between the suffix *-mín* and the existential binder, that the presence of either morpheme in the structure seems to block the case licensing of an overt patient. Though that patient is semantically present, any overt noun describing that patient must be independently licensed by a preposition, rather than by the verb in question. When the existential binder is used on its own, the patient is licensed by the preposition *t* (11), [6] and when the instrumental complex *-mín* is used, the patient is usually licensed by the preposition *l* (12).

(11) a. k^{w} c̓wétm t sʔíɬn.
k^{w} c̓wét-m t sʔíɬn
2S.SBJ fetch-EB OBL food
‘You went to get some food.’ (Compare: ‘You went fetching for food.’)

b. čn č̓éx^{w}m t st̓šá.
čn č̓éx^{w}-m t st̓šá
1S.SBJ dry.in.sun-EB OBL huckleberries
‘I dried the huckleberries.’ (Compare: ‘I did drying of huckleberries.’)

(Thomason 2014a)

(12) snkólemen łu l’chminemen.
s-n-k̓^{w}úl̓-mín [l č-míƛ-mín]
NOM-LOC:in-make-INST$_1$ [to LOC:on-smear-INST$_1$]
‘a butter churn’ (Compare: ‘an in-maker for butter’) (Mengiarini et al. 1877–1879)

We can therefore conclude that though transitive stems bearing the instrumental complex or the existential binder have an object present in the semantics, there is no syntactic position permitting the presence of a patient in either case.

2.2 The Verbalizers v_{become} and v_{be}

The second portion of the instrumental suffix complex is the verbalizer. There are two morphemes which may be selected for this purpose. The first, v_{become}, is phonologically null and indicates that the state depicted by the saturated root is coming into being, while the second, v_{be}, is the phonologically overt suffix *-í*, which indicates that the state depicted by the saturated root is continuing in a state of being. This *-í* suffix has been called the “continuative” suffix in previous literature (Spek and Post 1980; Thomason 1992; Carlson 1972).

[6] Though reflexes of the particle *t* in related languages are often categorized as oblique markers or as ergative case markers (ex: Matthewson and Davis 1995), there is strong evidence that at least some instances of the morpheme are, instead, prepositions and this morpheme was analyzed as such in much of the older work on this language (Mengiarini et al. 1877–1879; Spek and Post 1977). Not only can this particle be used to syntactically license adjunct instruments of semantically saturated transitive verbs, but the particle is also used to license clear adjuncts such as time adverbials (Thomason 2014b). For a more in-depth discussion of this particle see McKay (2019).

Generally, in this language, when a bare or minimally-modified transitive root is combined with an intransitive subject, the resulting sentence denotes an event in which the subject takes on the quality denoted by the verb.[7] Some examples are given in (13).

(13) a. čn nʔás.
čn nás
1S.SBJ wet
'I got wet.' (Compare: 'I wetted.')

b. c̓ʔúy.
Ø c̓úy
3.SBJ sour
'It turns sour.' (Compare: 'It sours.') (Thomason, 2014a)

Since sentences that semantically involve change-of-state verbalization do not require a phonetically overt change-of-state verbalizer, we can assume that in this language v_{become} is phonologically null. Many, perhaps most, instrument nominalizations use this phonologically null verbalization to derive an embedded event. Some examples in which the *-m-Ø-n* variant of the $INST_1$ suffix complex is used are given in (14).

(14) a. c̓óq̓ʷmn
[c̓óq̓ʷ-m]-Ø-n
point-EB-v_{bec}-INST
'finger' (lit: 'pointer')

b. láq̓ʷmn
[láq̓ʷ-m]-Ø-n
splash-EB-v_{bec}-INST
'something you use to throw water' (lit: 'splasher') (Thomason, 2014a)

Many instrument nominalizations, however, do clearly involve an *-í* vowel within the suffix. I argue that this *-í* suffix is the phonetic reflex of the verbalizer v_{be}. An illustration of the semantic contrast between sentences verbalized with v_{become} and sentences verbalized with v_{be} is given in (15). The sentence in (15a) is verbalized with v_{become}, while the sentence in (15b) is verbalized with v_{be}.

(15) a. čn háʔu.
čn háʕ̓ʷ
1S.SBJ loose
'I got rested, I got relaxed.'

[7] Because transitive roots license an internal argument, the assumption here is that, like unaccusative verbs crosslinguistically, the intransitive subject is first merged with the root below the level of verbalization, and is then extracted to subject position to satisfy syntactic constraints. Thus the syntactic subject is the semantic object.

b. i čn háʕ̣ʷ.
i čn háʕ̣ʷ
v_{be} 1S.SBJ loose
'I feel good, I feel well.' (Thomason, 2014a)

Though in intransitive sentences like those in (15) the verbalizer surfaces as a prefix, it seems to be the case that once derivations become more complex v_{be} usually surfaces as a suffix. This commonly takes place within aspectually continuative constructions. Some examples are given in (16).

(16) a. chines-chiamí.
čn e-s-[čya-m-í]
1S.SBJ ACT-NOM-seduce-EB-v_{bec}
'I seduce, debauch.' (Compare: 'I am doing seducing')

b. chines-chiái
čn e-s-[čya-Ø-í]
1S.SBJ ACT-NOM-seduce-PRO-v_{bec}
'I am seduced, solicited to evil.' (Compare: 'I am being seduced')
(Mengiarini et al. 1877–1879)

In (16a), the v_{be} suffix licenses a transitive verb that has been saturated by the existential binder, while in (16b) it licenses a transitive verb that has been saturated by a null pronominal element, which causes the difference in the two sentences' semantics.

The suffix *-í* most commonly appears in constructions such as those given in (16), which are known collectively as "continuative" constructions because of the aspectual interpretation of these verbs as progressive or ongoing. For this reason *-í* is sometimes considered an aspect marker, rather than a verbalizer. I would argue, however, that the continuative interpretation of structures such as those in (16) stems from the fact that these structures are formed by nominalizing an embedded verb (given in brackets above) using the prefix *s-* to form a participle which is then merged with the subject in a copular construction. This effectively creates a structure much like the English progressive, where the subject is linked to a participle using a copula or other verbalizer (ex: *She is dancing, He does filing…*).

I suggest that the basic semantics of these two morphemes can be captured by the descriptions given in (17) which are fairly standard as representations of these verbalizers cross-linguistically (Folli and Harley, 2005).

(17) a. -Ø = v_{become}
$[\![v_{bec}]\!] = \lambda v_t \lambda e_s . \text{BECOME}(v, e)$

b. *-í* = v_{be}
$[\![v_{be}]\!] = \lambda v_t \lambda e_s . \text{BE}(v, e)$

We can therefore continue the semantic derivation of the instrumental nominal begun in (8) through the addition of this suffix, as is illustrated in (18c).

(18) a. ʕác = tie, tangle
$[\![\text{ʕác}]\!] = \lambda x_e . \text{TIE}(x)$ Type: $\langle e, t \rangle$
'x is tied'

b. $[\![$ʕác-m$]\!] = \exists x_e.\,\text{TIE}(x)$ Type: *t*
‘there exists some entity *x* such that *x* is tied’

c. $[\![$ʕác-m-í$]\!] = \lambda e_s \exists x_e.\,\text{BE}(\text{TIE}(x), e)$ Type: $\langle s, t\rangle$
‘for some event *e*, there exists an entity *x* such that during *e*, *x* exists in a state of being tied’

2.3 The Instrumental Nominalizer

The final component of *-mín* nominalization is the instrumental nominalizer, *-n*, which performs essentially the same function as the English *-er* nominalizer. Though this morpheme is generally not analyzed on its own for this language, it does bear some similarity to the non-control portion of the uncontrolled transitivizing complex *-n-t-* (Carlson 1972; Thomason 1994).

In this context, the *-n* morpheme acts as a nominalizer, taking an event as its argument and returning a predicate of type $\langle e, t\rangle$ describing the non-volitional causer of that event. The proposed semantics of this suffix are given in (19).

(19) *-n* = INST
$[\![\text{INST}]\!] = \lambda f_{\langle s,t\rangle} \lambda x_e \exists e_s.\, f(e)\ \&\ \text{CAUSE}(e, x)$ Type: $\langle\langle s, t\rangle, \langle e, t\rangle\rangle$

By merging this nominalizer with the event predicate given in (16c) we can derive the instrument noun given in (20).

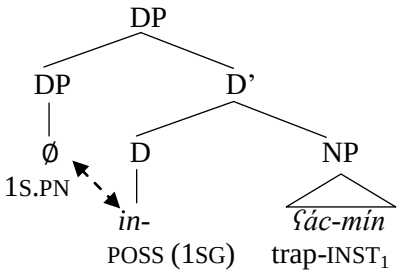
(20) $[\![$ʕác-m-í-n$]\!] = \lambda x_e \exists e_s \exists y_e.\,\text{BE}(\text{TIE}(y), e)\ \&\ \text{CAUSE}(x, e)$ Type: $\langle e, t\rangle$
‘For some entity *x*, there exists an event *e* and an entity *y* such that *x* caused *e* and *y* continues in a state of being tied during *e*’ (= ‘trap’)

2.4 Possession of *-mín* Instrumental Nominals

I will assume that possessive nominals in Montana Salish are formed according to a structure roughly equivalent to that illustrated in (21), which is a fairly standard structure for possession cross-linguistically (ex: Baker and Vinokurova 2009). In this structure, the possessive determiner agrees in person and number features with the possessor DP in its specifier position.

(21) Montana Salish Possessive DP

inʕácmín
in-ʕác-m-í-n
1S.POSS-trap-EB-v_{be}-INST
‘my trap’ (my tool for trapping things)



The possessive determiner head in this model essentially just applies definite semantics to the un-filled type *e* argument of the NP. The result of merging the instrumental NP with a possessive determiner is given in (22).

(22) $[\![\text{in-ʕác-m-í-n}]\!] = \iota x_e \exists e_s \exists y_e.\, \text{BE}(\text{TIE}(y), e)\ \&\ \text{CAUSE}(e, x)$
'the entity *x* for which there exists an event *e* and an entity *y* such that during *e*, *y* continues in a state of being tied and *x* causes *e*'

Because the semantics of the D' described in (20) are fully specified, the relationship between the DP in specifier position above the determiner is interpreted as a simple possession relationship. This, then, results in the intuition that the possessor of a *-mín* instrumental nominal is the possessor of a tool, not the object upon which the tool acts.

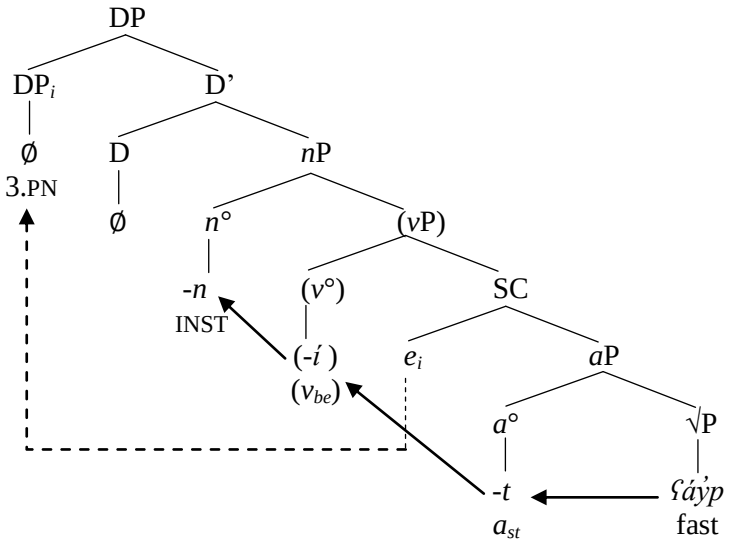
3 The Object-Oriented Instrumental, *-tín*

In this section I examine instrument nouns formed using the *-t(í)n* instrumental nominalizing complex. I will argue that this nominalizer is also composed of three independent morphemes. The first of these morphemes, *-t* (a_{st}), is an adjectivizer that derives 'characterized-by' adjectives. The second and third morphemes *-í* and *-n* are the same v_{be} (or v_{become}) and instrumental nominalizer morphemes described above (in sections 2.2 and 2.3 respectively).

The primary difference between *-mín* and *-t(í)n* nominals, I will argue, comes from the manner in which the internal argument of the root becomes saturated. While in *-mín* nominals the internal argument is existentially bound by the existential binder morpheme *-m*, in *-t(í)n* nominals the root/stem is adjectivized before combining with an explicit DP object. The proposed structure of *-t(í)n* nominals is given in (23).

(23) Proposed Montana Salish Instrumental Nominalization: *-t(í)n*

aiptín
[ʕáy̓-p]-t-í-n
[fast-INCH]-ST-v_{be}-INST
'what carries a fellow fast' (Mengiarini et al. 1877–1879)



3.1 The Stative Suffix *-t*

The first portion of the *-tín* suffix complex is the morpheme commonly referred-to as the stative suffix, *-t*. This suffix is used to derive create words describing states of being from bare roots. Generally these words are translated into English as adjectives. Some examples of stative-marked words being used in sentences are given in (24).

(24) a. čn q̓ʷéyłt.
čn q̓ʷéył-t
1S.SBJ healthy-a_{ST}
'I'm well (again), I'm capable.'

b. čn ʕáymt.
čn ʕáym-t
1S.SBJ angry-a_{ST}
'I got mad.' (Thomason 2014a)

I suggest that the stative suffix is an *a*° morpheme, used to derive adjectives, that may be compared to English morphemes like *-ful* (*delight-ful*) or *-ous* (*lustr-ous*), in that it creates an adjective meaning 'characterized-by' the quality denoted by the root (Harley, 2011). A suggested semantics for this morpheme is given in (25).

(25) *-t* = a_{ST} Type: $\langle\langle e,t\rangle,\langle e,t\rangle\rangle$
$[\![a_{ST}]\!] = \lambda f_{\langle e,t\rangle}\lambda x_e.\,\text{CHARACTERIZED. BY}(f,x)$

When the stative adjective suffix is merged with a bare root or simple stem of type $\langle e,t\rangle$, the result is a semantic derivation like the one given in (26).

(26) a. $[\![\text{ʕay̓p}]\!] = \lambda x_e.\,\text{FAST}(x)$ Type: $\langle e,t\rangle$
'for some entity *x*, *x* is fast'

b. $[\![\text{ʕay̓p-t}]\!] = \lambda x_e.\,\text{CHARACTERIZED. BY}(\lambda y.\,\text{FAST}(y),x)$ Type: $\langle e,t\rangle$
'for some entity *x*, *x* is characterized by the function that takes entities and evaluates them for the quality of being fast.'

Stative adjectives created by the addition of a_{st} are syntactically distinct from the bare roots and stems that are existentially bound by *-m*. One result of this is that in instrumental nominals based around stative adjectives, the adjectival predicate is not existentially bound, but is instead combined with an object DP in a small clause, as is illustrated in (27).

(27) $[\![\text{ʕay̓p-t-}\emptyset_{pn}]\!] =$ $\text{CHARACTERIZED. BY}(\lambda y_e.\,\text{FAST}(y),\boldsymbol{a})$ Type: *t*
'the entity *a* is characterized by the function that takes entities and evaluates them by the quality of being fast.'

3.2 Deriving the Remainder of the *-tín* Instrumental

The remaining portion of *-tín* instrumental nominals are derived using the same set of morphemes that were used in the upper portion of *-mín* nominals. A semantic derivation is provided in (28).

(28) a. $[\![$ʕaẏp-t-$\emptyset_{pn}$-í$]\!] =$
λe_s. BE(CHARACTERIZED. BY(λy. FAST(y), $\boldsymbol{a}$), e)
'for some event *e*, *e* is an event of the entity *a* being characterized by the function that takes entities and evaluates them by the quality of being fast.'

b. $[\![$ʕaẏp-t-$\emptyset_{pn}$-í-n$]\!] =$
$\lambda x_e \exists e_s$. BE(CHARACTERIZED. BY(λy. FAST(y), $\boldsymbol{a}$), e) & CAUSE(e, x)
'for some entity *x*, there exists an event *e* such that *e* is an event ov the entity *a*'s being characterized by the function that takes entities and evaluates them by the quality of being fast, and such that *x* causes *e*.'

c. $[\![$DET-ʕaẏp-t-$\emptyset_{pn}$-í-n$]\!] =$
$\iota x_e \exists e_s$. BE(CHARACTERIZED. BY(λy. FAST(y), $\boldsymbol{a}$), e) & CAUSE(e, x)
'the entity *x* for which there exists an event e…'

In the above derivation, the small clause from (27) is first combined with v_{be} (28a). This verbalizer syntactically licenses the embedded object. The verbalized predicate is then merged with the instrumental nominalizer *-n* (28b) and with the determiner (28c), resulting in a DP of type *e*.

Because the embedded object DP is case-licensed by a verbalizer, it may sometimes appear as a full DP nominal, as in the example in (29).[8]

(29) c̓wétn inq̓eymín
c̓wét-t-Ø-n in-q̓éymín
fetched-a_{ST}-v_{BEC}-INST 1S.POSS-papers
'a carrier, someone who goes after a paper, a mailman' (Compare: paper-fetcher)
(Thomason, 2014a)

In cases where the object remains pronominal, but the speaker wishes that pronoun to be coreferent with some other entity in the clause, the object undergoes optional extraction to the specifier position of the DP, as illustrated by the dotted line on the figure in (23). This extraction triggers agreement with the determiner and also allows the embedded pronoun to be semantically accessible to the rest of the clause. This is what causes the possessors of *-tín* instrumentals to be interpreted as the object the tool acts upon rather than the owner of the tool (see the examples given in (4)).

If the pronoun does not need to be coreferent with another entity in the sentence it generally remains low in the syntax, resulting in unpossessed *-tín* instrumentals.

4 Double-Marked Instrumentals, *-mín-tn*

There are numerous instrument nouns in Montana Salish that make use of both the *-mín* and *-tín* nominalizing complexes (Spek and Post 1980; Carlson 1977). When this happens the *-mín* suffix is always closer to the stem than the *-tín* suffix. Additionally, like *-tín* nominals, the possessors of *-mín-tn* nouns are interpreted as the standard object of the action performed by the tool denoted by the noun. Some examples are given in (29).

[8] Often roots used in *-tín* nominals undergo manner adjunction with a lexical suffix before being merged with the *-t* suffix, allowing for the creation of nouns like *ɬp̓úlex*^{w}*tn* 'boundary' (*ɬíp* 'line' + *-úɬex*^{w} 'land' + *-t* (a_{ST}) + Ø (v_{BEC}) + *-n* (INST), compare '[land-line]-it-er')

(29) a. inagaminten
in-[ʔáq̓-m-í-n]-t-í-n
1S.POSS-[stretch-EB-v_{be}-INST]-a_{st}-v_{be}-INST
'what is used to stretch me'

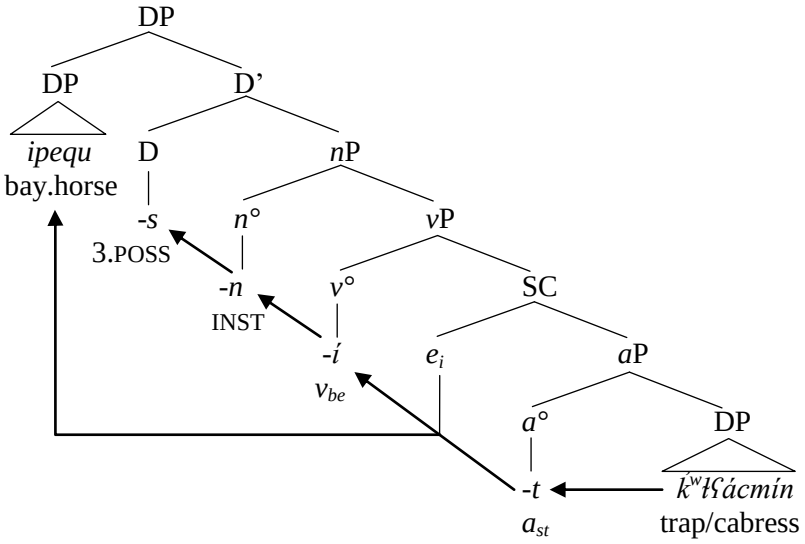
b. kłazmíntis łu ipégu
[k̓ʷł-ʔác-m-í-n]-t-í-n-s[9] łu ipéqu
[LOC-under-tie-EB-v_{be}-INST]-a_{st}-v_{be}-INST-3.POSS COMP bay.horse
'be it the cabress of the bay horse'

c. chalmínten
[čál-m-í-n]-t-i-n
[cut-EB-v_{be}-INST]-a_{st}-v_{be}-INST
'scissors, in regard to the thing cut' (Mengiarini et al. 1877–1879)

I propose these sorts of double-marked instruments are actually simple *-tín* instrumental nominals formed around a stem which is a re-verbalization of a *-mín* nominal, as illustrated in the diagram in (30).

The derivation in (30) begins with the formation of the *-mín* instrumental, which is a possessor-oriented instrument DP describing 'a trap' or 'cabress.' This DP is what forms the stem for *-tín* nominalization. After merging the *-t* suffix, we have a stative adjective describing meaning 'characterized by a trap.' This is then merged with a null pronoun, and is then verbalized with v_{become} and nominalized using the instrumental nominalizer *-n*, giving us a noun depicting the thing that caused an event in which a something was characterized by a trap. Since the pronoun in this sentence is coreferent with *ipequ* 'bay horse', it is extracted to the specifier position above the DP, which results in definite determiner's being inflected for the 3rd person.

(30) Proposed Montana Salish Instrumental Nominal Structure: *-mín-tn*



[9] There is a phonetic process in this language whereby /n/ → [i] / __ [s] which has arguably taken place here (Thomason 1994).

5 Conclusion

In this paper I have proposed an analysis of the three different mechanisms used to form instrumental nominals in Montana Salish. In doing so, I have provided an explanation for the differences in the ways the possessors of these two types of nouns are interpreted. The possessors of *-mín* instrumental nouns are interpreted as owning a tool which causes someone or something else to be verbed, while the possessors of *-tín* and *-mín-tn* instrumental nouns are interpreted as the object which is acted upon by the tool depicted.

Many other Southern Interior Salish languages use morphemes related to one or both of these instrumental nominalizing complexes (ex: Okanagan (Doak and Mattina 1997), Nxa'amxcin/Moses-Columbia (Willet 2003), etc.). Whether or not this analysis could be extended to other languages would be an interesting subject for further research, but is, unfortunately, beyond the scope of the current investigation.

This analysis is relevant not only to Salish but also to the analysis of instrument nouns cross-linguistically. In many languages, including English, possessed instrument nouns are semantically ambiguous, but it seems likely that this ambiguity results from structural differences not unlike the differences between *-mín* and *-tín* nouns in Montana Salish that are simply not phonetically realized in languages like English.

References:

Alexiadou, Artemis & Schäfer, Florian. 2008. Instrumental -er nominals revisited. *Online-Proceedings of WCCFL XXVII* (Poster Session), 10–19.

Baker, Mark, & Vinokurova, Nadya. 2009. On agent nominalizations and why they are not like event nominalizations. *Language* 85, 517–556.

Carlson, Barry F. 1972. *A grammar of Spokan: A Salish language of eastern Washington.* University of Hawaii, Honolulu.

Doak, Ivy, & Mattina, Anthony. 1997. Okanagan -lx, Coeur d'Alene -ilš and cognate forms. *International Journal of American Linguistics* 63, 334–361.

Folli, Raffaella, & Harley, Heidi. 2005. Flavors of v. *Aspectual inquiries*, 95–120.

Harley, Heidi. 2013. Getting morphemes in order: Merger, affixation, and head movement, in: Cheng, L.L.-S., Corver, N. (eds.), *Diagnosing Syntax*. Oxford University Press.

Harley, Heidi. 2011. Compounding in Distributed Morphology, in: Lieber, R., Štekauer, P. (eds.), *The Oxford Handbook of Compounding*. Oxford University Press.

Harley, Heidi & Noyer, Rolf. 1999. Distributed morphology. *Glot international* 4, 3–9.

Matthewson, Lisa, & Davis, Henry. 1995. The structure of DP in St'át'imcets (Lillooet Salish), *30th International Conference on Salish and Neighbouring Languages.* University of Victoria.

McKay, Isabel. 2019. Transitive Subjects as Adjuncts in Montana Salish. *LSA 2019*, New York, NY.

Mengarini, Gregory, S. J., Giorda, Joseph, van Gorp, Leopold, Bandini, Joseph, Guidi, Joseph. 1877–1879. *A dictionary of the Kalispel of Flat-head Indian language.* St. Ignatius, MT; St. Ignatius.

Perlmutter, David M. 1978. Impersonal Passives and the Unaccusative Hypothesis, *The Annual Meeting of the Berkeley Linguistics Society 38.* Linguistic Society of America.

Speck, Brenda J., & Post, John A. 1980. *An edition of Father Post's Kalispel grammar*. University of Montana.

Thomason, Lucy. 1994. Transitivity-related morphological alternations in Montana Salish. *29th International Conference on Salish and Neighboring Languages*, 265–287.

Thomason, Sarah. 1992. *The Flathead Word.* University of Michigan.

Thomason, Sarah. 2014a. *Montana Salish Dictionary.* University of Michigan.

Thomason, Sarah. 2014b. *Montana Salish Grammar Lessons.* University of Michigan.

Willett, Marie Louise. 2003. *A Grammatical Sketch of Nxa'amxcin (Moses-Columbia Salish*). University of Victoria.