

The combinatory properties of Halkomelem lexical suffixes

DONNA B. GERDTS
Simon Fraser University

0. Halkomelem lexical suffixes

This paper is part of on-going research into the morphosyntactic structure of lexical suffixes. I explore some properties of lexical suffixes in Halkomelem, one of twenty-three Salishan languages. Halkomelem is spoken in southwestern British Columbia in the vicinity of Vancouver and on the east coast of Vancouver Island. The data are from the Island dialect of Halkomelem (*həlqəmínəm*). This dialect is currently spoken by around two hundred elders.¹

Lexical suffixes are suffixes that have substantival meaning. That is, they have meanings usually carried by nouns in other languages. Lexical suffixes usually bear no phonological similarity to free-standing nouns of similar meaning:²

(1)	-as	'face, round object'	sʔaθəs	'face'
	-cəs	'hand, finger'	celəš	'hand'
	-šən	'foot, leg'	sʔəñə	'foot'
	-wıl	'rib, vessel'	ləwəʃ	'rib'
	-θən	'mouth, edge'	θaθən	'mouth'
	-əwtx ^w	'building, room'	leləm	'house'
	-əyəł	'baby, child'	qeɣ	'baby'

Most Salishan languages have approximately one hundred lexical suffixes denoting body parts (*hand, foot, heart, nose*), basic physical/environmental concepts (*earth, fire, water, wind, tree, rock*), cultural items (*canoe, net, house, clothing*), and human/relational terms (*people, spouse, child*). The suffixes, especially the body part suffixes, extend to take on shape, locative, and relational meanings (Hinkson 1999) and some are grammaticized into grammatical morphemes functioning as desideratives, applicatives, etc. (Gerdtts and Hinkson 1996).

One common use of lexical suffixes is to form compounds. The suffix is added to a verb or noun root to form a noun, as seen in (2).³

(2)	íiwəyəł-éwtx ^w	'church' (pray + building)
	ʔitət-əlwət	'pajamas' (sleep + clothing)
	təmət-əpsəm	'woodpecker' (ochre + neck)
	q ^w łey-šən	'shoe' (log + foot)

Lexical suffixes also frequently appear in verb phrases. Here they can play the role of an oblique nominal adding a locative or manner meaning to the verb phrase, as illustrated in (3).

- | | | |
|-----|-----------|--|
| (3) | q̇t-aθən | 'walk along (a shore etc.)' (go along + mouth) |
| | q̇ət-néc | 'go around end of lake' (go along + bottom) |
| | q̇a-šín-t | 'accompany him' (accompany + foot + transitive) |
| | q̇p-as-əm | 'assemble, gather face to face' (gather + face + middle) |

The commonly accepted view of lexical suffixation is that it does not alter core argument structure, as noun incorporation does, but rather it adds an adverbial or adjectival specification to the stem. For example, Anderson (1992) and Bach (1995) make this claim for the neighboring Wakashan languages. In this paper, I present evidence that runs counter to this view of lexical suffixation. I claim instead that lexical suffixes can in fact occupy argument positions in initial structure. That is, they are exactly parallel to incorporated nouns, which are attested in many languages of the world.

First, note that lexical suffixes frequently appear in verb phrases carrying the role of theme, as in (4); in my corpus this use is more common than that in (3).

- | | | |
|-----|---------------------------------------|--|
| (4) | q ^w s-eýən | 'set a net' (throw out + net) |
| | səẇq̇-iẇs | 'search for a lost person' (seek + body) |
| | l̇əç̇-əlqən | 'shear wool' (cut + hair) |
| | ṗṫ ^θ -əlməx ^w | 'milk a cow' (wring out + breast) |

In this use, lexical suffixation is functionally parallel to compounding noun incorporation (Rosen 1989, Gerdts 1998). The lexical suffixation of the theme detransitivizes the clause. This can be seen by comparing the form with the lexical suffix in (5) to the clause with a free standing nominal in (6).

- | | | | | |
|-----|-----------------|------------------------------------|--------------------------------|----------|
| (5) | ni [?] | šk̇ ^w -əyət | l̇ə Mary. | |
| | aux | bathe-baby | det Mary | |
| | | 'Mary bathed the baby.' | | |
| (6) | ni [?] | šak̇ ^w -ət-əs | l̇ə sl̇eni [?] /*Mary | l̇ə qeq. |
| | aux | bathe-tr-3erg | det woman/*Mary | det baby |
| | | 'The woman/*Mary bathed the baby.' | | |

The clause in (6) is transitive and thus has a transitive suffix and ergative agreement while (5) lacks these. Furthermore, proper noun ergatives are prohibited by many speakers of Island Halkomelem, as seen in (6). But note that *Mary* in (5) is not subject to this prohibition; it is an absolutive nominal due to the lexical suffixation of the object.

This paper seeks to give further evidence that the lexical suffix is an argument in underlying structure, based on the combinatory properties of lexical suffixes. As seen in the basic verb template given in (7), lexical suffixes occur in position 1, following the verb root.

(7)	-1	0	+1	+2	+3	+4
	prefixes	root +aspect	applicative suffixes; lexical suffixes	transitivity suffixes	object suffixes; reflexive suffixes; reciprocal suffix	subject suffixes

This paper discusses three combinations of lexical suffixes with other suffixes. First, I discuss the combination of lexical suffixes with other position 1 suffixes, the applicatives. Then I discuss lexical suffixes and causative, a position 2 suffix. Finally, I discuss lexical suffixes and reflexive, a position 3 suffix.

1. Lexical suffixes and applicatives

First, let us see how lexical suffixes interact with applicative constructions. Halkomelem has several applicative constructions, as discussed in Gerdts (1988). The benefactive applicative is illustrated in (8).

(8)	niʔ	qʷəl-əlc-θámš-əs	ʔə	kʷθə	sce:ltən.
	aux	bake-ben-tr+1obj-3erg	obl	det	salmon
		'He baked the salmon for me.'			

The suffix *-əlc-* is added to the verb root, the benefactive is the surface object, and the theme, if it is expressed, is an oblique phrase. Benefactive applicatives are totally productive. Any verb that has a simple transitive form can also have a benefactive as long the meaning makes sense. Some examples are given in (9).

(9)	qʷələt	'bake it'	qʷələlɬət	'bake it for him/her'
	ʃəlɬ	'write it'	ʃələlɬət	'write it for/to him/her'
	kʷənət	'take it'	kʷənəlɬət	'take it for him/her'
	pətʰət	'sew it'	pətʰəlɬət	'sew it for him/her'
	θəyt	'fix it'	θəyəɬət	'fix it for him/her'

It has been noted by Mithun (1984), Baker (1988), and others that the theme in the applicative construction in some languages can appear as an incorporated noun. Baker (1988) cites the following Tuscarora example from Williams (1976):⁴

(10)	Waʔ-khe-taʔnar-atyaʔt-hahθ.
	PAST-1sS/3fO-bread-buy-APPL+PUNC.
	'I bought her some bread.'

Halkomelem shows parallel facts. The theme in the applicative construction can appear as a lexical suffix:

(11)	ʃkʷ-əyəɬ-əlc-θámš.
	bathe-baby-ben-tr+1obj
	'Bathe the baby for me.'

- (12) $i^{\theta}\check{x}^w\text{-}\dot{a}lw\dot{a}t\text{-}\dot{a}t\text{-}\dot{a}t$.
wash-clothes-ben-tr
'Wash clothes for him/her.'
- (13) $\dot{q}p^{\dot{a}}\text{-}\dot{a}w\dot{a}l\text{-}\dot{a}t\text{-}\dot{a}t$.
tie-vessel-ben-tr
'Tie up the canoe for him/her.'

The benefactive applicative $-\dot{a}t\text{-}$ follows the lexical suffix.

The applicative $-\dot{a}t\text{-}$ is used only on transitive forms. A different applicative, $-me^{\dot{a}}\text{-}$ is used to form the benefactive applicative based on intransitive verbs:

- (14) $k^wuk^w\text{-}me^{\dot{a}}\text{-}t$.
cook-appl-tr
'Cook for him/her.'

The verb in (14) is an intransitive cooking action k^wuk^w 'cook' (from English). This contrasts with the verb in the first example in (9), $\dot{q}^w\dot{a}l\dot{a}t$ 'bake it', which is a transitive cooking action, as seen by the presence of the transitive suffix $-t$. Note that the latter forms an applicative with the benefactive suffix $-\dot{a}t\text{-}$. The examples in (15) illustrate other instances where a benefactive applicative formed with $-me^{\dot{a}}\text{-}$ is based on an intransitive.

- | | | | | |
|------|---|----------|--|----------------------|
| (15) | $\dot{q}^w\dot{a}y\dot{i}l\dot{a}\check{s}$ | 'dance | $\dot{q}^w\dot{a}y\dot{i}l\dot{a}\check{s}me^{\dot{a}}t$ | 'dance for him/her' |
| | $ya:ys$ | 'work' | $ya:ysme^{\dot{a}}t$ | 'work for him/her' |
| | $\dot{i}\check{x}il\dot{a}\check{s}$ | 'stand' | $\dot{i}\check{x}il\dot{a}\check{s}me^{\dot{a}}t$ | 'stand for him/her' |
| | $^{\dot{a}}\check{s}\dot{a}l$ | 'paddle' | $^{\dot{a}}\check{s}\dot{a}lme^{\dot{a}}t$ | 'paddle for him/her' |

The applicative suffix $-me^{\dot{a}}\text{-}$ can not be used with lexical suffixes to form benefactives, as seen in (16). Examples like these are ungrammatical regardless of the order that the lexical suffix and the applicative appear in.

- (16) $*\check{s}k^w\text{-}\dot{a}y\dot{a}l\text{-}me^{\dot{a}}\text{-}\theta\acute{a}m\check{s}$ or $*\check{s}k^w\text{-}me^{\dot{a}}\text{-}\dot{a}y\dot{a}l\text{-}\theta\acute{a}m\check{s}$
 $*i^{\theta}\check{x}^w\text{-}\dot{a}lw\dot{a}t\text{-}me^{\dot{a}}\text{-}t$ $*i^{\theta}\check{x}^w\text{-}me^{\dot{a}}\text{-}\dot{a}lw\dot{a}t\text{-}t$
 $*\dot{q}p^{\dot{a}}\text{-}\dot{a}w\dot{a}l\text{-}me^{\dot{a}}\text{-}t$ $*\dot{q}p^{\dot{a}}\text{-}me^{\dot{a}}\text{-}\dot{a}w\dot{a}l\text{-}t$

The ungrammaticality of these data is paradoxical because, as we have argued above, lexical suffixation detransitivizes the clause. These observations lead to the conclusion that the type of applicative is selected based on the underlying structure of the clause, not its structure after lexical suffixation.

- (17) Benefactive applicatives:
 a. Use $-\dot{a}t\text{-}$ when the underlying predicate is 2-place.
 b. Use $-me^{\dot{a}}\text{-}$ when the underlying predicate is 1-place.

Following our assumption that the lexical suffix is a core argument in underlying structure (name, the theme), the underlying predicate is transitive and forms benefactives as expected, with the transitive benefactive applicative *-əlc-*.

Lexical suffixes can in fact occur with *-meʔ-* but not in its use as a benefactive. The applicative suffix *-meʔ-* is also used for applicative objects with the semantics of causal, stimuli, or direction (Gerds 1988):

- | | | | | |
|------|--------|-----------------------|------------|----------------------|
| (18) | ɪciws | ‘tired’ | ɪciwsmeʔt | ‘tired of him/her’ |
| | qel | ‘believe’ | qelmeʔt | ‘believe him/her’ |
| | siʔsiʔ | ‘afraid’ | siʔsiʔmeʔt | ‘afraid of him/her’ |
| | xiʔxeʔ | ‘ashamed’ | xiʔxeʔmeʔt | ‘ashamed of him/her’ |
| | ʔiy-əs | ‘happy’ (good + face) | ʔiyəsmeʔt | ‘happy for him/her’ |

For example, we see a directional use of *-meʔ-* co-occurring with lexical suffixes in (19) and (20).

- | | | | | | | | | | |
|------|--|--------|-------------------|------|-------|-------------------|------|-----|---------|
| (19) | niʔ | ct | q̣t-aθən-meʔ-t. | | | | | | |
| | aux | 1plsub | walk-edge-appl-tr | | | | | | |
| | ‘We walked right by him as we walked along the shore.’ | | | | | | | | |
| | | | | | | | | | |
| (20) | ʔi | ʔə | ce:p | ʔəw | xʷən | səwq̣-iws-meʔ-t | kʷθə | niʔ | s-ʔikʷ? |
| | aux | int | 2plsub | comp | still | seek-body-appl-tr | det | aux | nm-lost |
| | ‘Are you all still searching for that lost person?’ | | | | | | | | |

The example in (20) contrasts with the applicative in (21), which is benefactive (in this case delegative) rather than directional in meaning.

- | | | | |
|------|--|------|------|
| (21) | səwq̣-iws-əlc-θámš | č | ceʔ. |
| | seek-body-ben-tr+lobj | 2obj | fut |
| | ‘You will take my place in the search for the missing person.’ | | |

Note that *-əlc-*, the transitive benefactive, is used in (21). So we see that the blocking of the co-occurrence of lexical suffix and *-meʔ-*, as in the examples in (16), is not due to a morphological constraint.

To summarize, Halkomelem has two forms of benefactive: *-əlc-* is used for base transitives, while *-meʔ-* is used for base intransitives. In examples like (11)–(13), in which a lexical suffix and a benefactive co-occur, the transitive form of the benefactive is used. What these data show is that the lexical suffix satisfies the notion of transitivity required by the transitive benefactive suffix. This follows from an analysis that posits that the lexical suffix is the theme argument in these examples.

2. Lexical suffixes and causatives

A second type of evidence that the lexical suffix is a core argument in underlying structure comes from causative constructions. The interaction of causatives and noun incorporation has been noted for many languages, including

Alutor (Koptjevskaja-Tamm and Muravyova 1993). For example, we see in the Alutor causative in (22) that the caused event ‘cutting the wood’ appears inside the causative.

- (22) gəm-nan akək tə-n-u-svitku-və-tk-ən.
 I-erg son:abs 1sg.A-caus-wood-cut-suff.pres-3sg.p
 ‘I am making the son cut wood.’

We see parallel data in Halkomelem. The causative suffix *-st* only attaches to intransitive bases (Gerds 1988). Since lexical suffix constructions are morphosyntactically intransitive, it is not surprising that lexical suffixes can appear inside causatives:

- (23) sđ-əlčəp-stəxʷ č.
 cut-wood-caus+3obj 2sub
 ‘You make him chop wood.’
- (24) niʔ cən ʔaʔ-éyət-stəxʷ.
 aux 1sub comfort-child-caus
 ‘I had him comfort the child.’

Notice the mirror image morphological order in Alutor and Halkomelem. The incorporated noun and the causative are prefixal in Alutor while the lexical suffix and causative are suffixal in Halkomelem.

Alutor also has examples of noun incorporation outside the causative. For example in (25), the incorporated noun ‘wife’ is the causee.

- (25) gəmmə tə-ŋəvə-n-awəj-at-Ø-ək tərg-a.
 I:abs 1sg.s-wife-caus-eat-suff.aor-1sg.s meat-instr
 ‘I fed my wife with meat.’

Again, Halkomelem shows parallel data. The causee in Halkomelem must be animate (Gerds 1988). And the data in (26) show lexical suffixes referring to humans representing the causee. This appears outside the causative suffix.

- (26) a. niʔ ʔəmət-st-ənəq.
 aux sit-caus-people
 ‘He sat the people down.’
- b. niʔ ʔiməš-st-ənəq.
 aux walk-caus-people
 ‘He made the people walk.’
- c. niʔ ʔxiliš-st-ənəq.
 aux stand-caus-people
 ‘She made the people stand up.’

- d. niʔ qəqəmaʔ-st-eyəɫ.
 aux take breast-caus-child
 'She breast-fed a child.'

In addition, Alutor shows double causatives, where causative appears before and after noun incorporation:

- (27) gəm-nan akək tə-n-nalgə-n-kuww-at-avə-tk-ən.
 I-erg son:abs 1sg.s-caus-skin-caus-dry-suf-suf-pres-1sg.s
 'I am making my son dry a skin/skins.'

Halkomelem again has parallel data.

- (28) niʔ cən ɬxiliʃ-st-ənəq-stəxʷ.
 aux 1sub stand-caus-people-caus+3obj
 'I made him stand the people up.'
- (29) niʔ qəqəmaʔ-st-éyəɫ-stəxʷ-əs ɬə nas ɬə Mary.
 aux breast-caus-child-caus+3obj-3erg det nurse det Mary
 'The nurse had Mary breast-feed the child.'

We see causative morphology both before and after the lexical suffixes for 'people' (28) and 'child' (29). These lexical suffixes are causees of the first causative.

Also in Halkomelem, lexical suffixes can appear both before and after causatives as in (30c) and (31c) and in the double causatives in (30d) and (31d).

- (30) a. sɔ́-əlcəp 'cut firewood'
 b. sɔ́-əlcəp-stəxʷ 'make him cut firewood'
 c. sɔ́-əlcəp-st-ənəq 'make people cut firewood'
 d. sɔ́-əlcəp-st-ənəq-stəxʷ 'make him make people cut firewood'
- (31) a. ʔe:-nəq 'give a potlatch' (invite + people)
 b. ʔe:-nəq-stəxʷ 'have her give a potlatch'
 c. ʔe:-nəq-st-ənəq 'have people give a potlatch'
 d. ʔe:-nəq-st-ənəq-stəxʷ 'have her have people give a potlatch'

The first lexical suffix is the theme (object) of the base verb, while the second lexical suffix represents the causee of the first causative.

The Halkomelem data thus mirror the interactions found between causatives and noun incorporation, for example in Alutor. Since the usual view of causatives is that the causee and the theme are core arguments in initial structure, these data provide evidence that the lexical suffix is a core argument.

3. Lexical suffixes and reflexives

A third type of evidence that the lexical suffix does not always originate as an adjunct comes from the interaction of external possession constructions and reflexives. As noted by Mithun (1984), Baker (1988), and others, many languages with noun incorporation also allow a construction in which the incorporated noun is the possessed head of a theme. This gives rise to an external possession construction, in which the semantic possessor appears as an argument of the verb, normally the object of a transitive verb or the subject of an intransitive verb. In the following example from Blackfoot (Frantz 1971), the underlying possessor 'man' is the surface object of the verb, while the possessed body part is an incorporated noun.

- (32) Nít-ssik-o'kakín-aw óma nínaawa.
 I-break-back-him that man
 'I broke the man's back.'

Halkomelem lexical suffixes similarly appear in an external possession construction. In (33), the possessed head of the theme 'head' appears as a lexical suffix, and the notional possessor *sqʷəméy* 'dog' is the syntactic object of the clause.

- (33) ni? tši-ʔqʷ-t-əs lə sleni? kʷθə sqʷəméy.
 aux comb-head-tr-3erg det woman det dog
 'The woman combed the dog's hair.'

This construction is not limited to part-whole constructions, as seen in (34) where the possessed object is 'bed'.

- (34) ni? ʔə č θəy-eʔt-θámš?
 aux int 2obj make-flexible.material-tr+1obj
 'Did you make my bed?'

Alternatively, it could be claimed that the 'possessor' is actually the theme argument of the clause, while the lexical suffix is an adverbial modifier. Under this account a more suitable translation for (33) would be 'The woman combed the dog on the head.' However, as I argued in Gerdts (1981), the possessor, though it inflects like a surface object, lacks the properties of a theme or underlying object.

For example, the underlying possessor cannot be reflexivized like a theme. In Halkomelem reflexives, the suffix *-θət* appears in the object position.

- (35) ni? kʷələš-θət kʷθə swəýqe?
 aux shoot-tr+ref det man
 'The man shot himself.'

Other examples of reflexive verb forms are given in (36):

- (36) qayθət 'kill self'
 čəyχ^wθət 'dry self'
 ləχ^wəθət 'cover self'

But external possessor constructions with lexical suffixes cannot be reflexivized with *-θət*, as seen in (37a). Rather, the middle suffix *-əm* is used, as seen in (37b) (Gerdt to appear, Gerdt and Hukari 1998).

- (37) a. *ni? cən t^θəχ^w-šé-θət.
 aux 1sub wash-foot-tr+refl
 'I washed my feet.'
- b. ni? cən t^θəχ^w-šén-əm.
 aux 1sub wash-foot-intr
 'I washed my feet.'

I give examples of external possession, with and without coreference in (38) and further examples of reflexive cases of external possession in (39).

- (38) ?e?i^θ-šə-t 'wiping his/her feet' ?e?i^θ-šən-əm 'wiping one's feet'
 šk^w-əyət-t 'bathe his/her baby' šk^w-əyət-əm 'bathe one's baby'
 təmš-əñə-t 'braid his/her hair' təmš-əñe:-m 'braid one's hair'
 sewq-əwtχ^w-t 'looking for a house for him/her' sewq-əwtχ^w-əm 'looking for a house for oneself'
 k^wax^w-əwtχ^w-ət 'knock on his house' k^wax^w-əwtχ^w-əm 'knock on own house'
- (39) se?-šén-əm 'raise one's foot'
 t^θχ^w-cs-əm 'wash one's hands'
 tš-i?q^w-əm 'comb one's hair'
 x^w?ət^θ-əlqsən-əm 'wipe one's nose'
 t^θχ^w-əlnəs-əm 'brush one's teeth'
 ləw-t^θe?əm 'undress, take off one's clothes'
 θq^w-it^θe?-əm 'put many layers of clothes on self'
 x^wt^θət-qín-əm 'quench one's thirst'
 θəy-e?t-əm 'make one's own bed'
 k^wəñé-wət-əm 'take one's own car or boat'
 θəy-əwtχ^w-əm 'build a house for oneself'

These data are easily accounted for given the condition on reflexives stated in Gerdt (1988). The reflexive suffix *-θət* is used only when the reflexive is the underlying object or theme. It is not used for derived objects like external possessors nor for the derived objects in applicative constructions. Gerdt (1988, to appear) gives the following generalization:

- (40) Reflexives:
- a. Use *-θət* when the underlying object is coreferent with the subject.
 - b. Use *-əm* when a derived object is coreferent with the subject.

Thus, the reflexive data provide support for the claim that the possessor is a derived object. This follows under an analysis that posits that the possessor modifies the lexical suffix in underlying structure. The lexical suffix occupies the position of head of the theme, an argument position.

4. Conclusion

We can conclude that lexical suffixes are not merely adverbial modifiers occupying non-argument positions. Lexical suffixation can internalize a core argument such as theme or causee and thus affects the argument structure of the clause. Lexical suffixation functions like compounding noun incorporation and can be ordered with other argument structure-altering rules. Moreover, we see on the basis of the reflexive data that the possessor in the external possessive construction is not the theme. This follows from an analysis that posits that the lexical suffix is the head of the theme in underlying structure.

Sapir (1911) claims that lexical suffixes cannot be regarded as incorporated nouns because they do not resemble free-standing nouns. But what we have seen here is that lexical suffixes function exactly like incorporated nouns. Lexical suffixes are simply historical nouns that have journeyed further down the grammaticization path than the incorporated nouns found in many languages. New free-standing nouns have been invented to serve as nominals as the old noun roots became bound forms. The lexical suffix still has the functional properties and the categorial status of noun, even though its ability to function as a free-standing noun is gone.

Notes

¹ I thank the Island Halkomelem elders, especially Theresa Thorne, for their assistance with the Halkomelem data. My research is funded by grants from the Jacobs Fund and from the Social Sciences Humanities Research Council of Canada. Thanks to Tom Hukari, Charles Ulrich, and audiences at BLS and LSA for their comments and suggestions.

The following abbreviations are used in glossing the Halkomelem examples: 1 = first person, 2 = second person, 3 = third person, appl = applicative, aux = auxiliary, ben = benefactive, comp = complementizer, caus = causative, det = determiner, erg = ergative, fut = future, int = interrogative, intr = intransitive, nm = nominalizer, obj = object, obl = oblique, pl = plural, sub = subject, ref = reflexive, tr = transitive.

² For a discussion of the origin of lexical suffixes and their relationship to free-standing nominals see Kinkade (1998) and references therein.

³ Gerdt and Hinkson (1996) have noted the ability of the lexical suffix to head a N compound and have used this as evidence that the lexical suffix has the categorial status of a noun.

⁴ The relative order of the incorporated noun and applicative in Tuscarora is not transparent since one is prefixal and the other suffixal. In Halkomelem, however, the lexical suffix clearly precedes the benefactive suffix.

References

- Anderson, Stephen R. (1992). *A-Morphous Morphology*. Cambridge: Cambridge University Press.
- Bach, Emmon. (1993). On the semantics of polysynthesis. *BLS* 19:361–68.
- Baker, Mark C. (1988). *Incorporation: A Theory of Grammatical Function Changing*. Chicago: The University of Chicago Press.
- Frantz, Donald G. (1971). *Toward a Generative Grammar of Blackfoot*. Norman, Oklahoma: Summer Institute of Linguistics.
- Gerds, Donna B. (1981). A syntactic analysis of lexical suffixes in Halkomelem Salish, Paper presented at BLS 7.
- Gerds, Donna B. (1988). *Object and Absolutive in Halkomelem Salish*. New York: Garland Publishing.
- Gerds, Donna B. (1998). Incorporation. In Andrew Spencer and Arnold M. Zwicky (eds.), *Handbook on Morphology*. Oxford: Basil Blackwell, 84–100.
- Gerds, Donna B. (to appear). Combinatory restrictions on Halkomelem reflexives and reciprocals. In Zygmunt Frajzyngier, ed. *Reciprocals: Forms and Functions*. Amsterdam: John Benjamins, Amsterdam, 133–160.
- Gerds, Donna B., and Mercedes Q. Hinkson. (1996). Salish lexical suffixes: A case of decategorialization. In Adele E. Goldberg, ed., *Proceedings of the Conference on Conceptual Structure, Discourse, and Language*, Stanford: CSLI, 163–176.
- Gerds, Donna B., and Thomas E. Hukari. (1998). Inside and outside the middle, *Papers for the 33rd International Conference on Salish and Neighboring Languages*, Seattle: University of Washington, 166–220.
- Hinkson, Mercedes Q. (1999). *Salishan Lexical Suffixes: A Study in the Conceptualization of Space*. Ph.D. dissertation, Simon Fraser University.
- Kinkade, M. Dale. (1998). Origins of Salishan lexical suffixes. *Papers for the 33rd International Conference on Salish and Neighboring Languages*. Seattle: University of Washington, 266–295
- Koptjevskaja-Tamm, Maria, and Irina A. Muravyova. (1993). Alutor causatives, noun incorporation, and the Mirror Principle. In Bernard Comrie and Maria Polinsky (eds.) *Causatives and Transitivity*. Amsterdam: John Benjamins, 287–314.
- Mithun, Marianne. (1984). The evolution of noun incorporation. *Language* 60.847–94.
- Rosen, Sara Thomas. (1989). Two types of noun incorporation: A lexical analysis. *Language* 65.294–317.
- Sapir, Edward. (1911). The problem of noun incorporation in American languages. *American Anthropologist* 13.250–82.
- Williams, Marianne. (1976). *A Grammar of Tuscarora*. New York: Garland.