Halkomelem psych applicatives[1]

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In Halkomelem, the relational applicative suffix *-me?* is suffixed to an intransitive psychological predicate to form a transitive construction where the experiencer is the subject and the stimulus is the object. We detail the morphosyntactic properties of psych applicatives and contrast them with other constructions formed on the same predicates. A brief look at other languages reveals that psych applicatives are relatively rare in languages of the world but robustly attested in Salish languages.

1 Halkomelem applicatives

Halkomelem is a Central Salish language, currently spoken by around one hundred elders in southwest British Columbia.[2] Halkomelem, like other Salish languages, is a polysynthetic language: a rich array of affixes referencing nominals appear in the verb complex, including subject and object inflection, transitive suffixes, lexical suffixes, and applicative suffixes.

As previously detailed by Kiyosawa (1999, 2002), Salish applicative constructions can be divided into two types—redirective and relational.[3] As we outline below, Halkomelem has two of each type. In a REDIRECTIVE applicative, the direct object role is redirected to a non-theme nominal—the applied object. The stem is usually transitive. The semantic role of the applied object is usually goal, benefactive, malefactive, or possessor. We can see the syntactic effect of a

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[1] Our research is part of an on-going SSHRC-funded project by Donna Gerdts and Tom Hukari to study classes of verb roots and how they combine with prefixes and suffixes. Also this is part of a pan-Salish study on applicatives that Kaoru Kiyosawa is writing as a dissertation. Versions of this paper were presented as Gerdts and Kiyosawa (2003a, 2003b) and we thank those audiences for their questions and comments. We also thank Tom Hukari and Charles Ulrich for suggestions and criticisms.

[2] The data that we present here are based on our original fieldwork with speakers of the Island dialect (həl̓q̓əmín̓əm̓) and the Downriver dialect (həńq̓əmín̓əm̓). We label the latter data as (DR). Our field research has been funded by grants from Jacobs Fund, SFU, and SSHRC. We would like to thank the speakers who have worked with us on this data, including Arnold Guerin, Bill Seward, Theresa Thorne, and especially Ruby Peter. Errors remain our own responsibility.

[3] The concept of dividing applicatives into two types has now become generally recognized typologically (e.g. Payne 2000) and formally (e.g. McGinnis 2001 and references therein).

redirective applicative by comparing the simple transitive construction in (1a) with the applicative in (1b).[4]

(1) a. ni? ləkʷ-at-əs kʷθə sc̓ešt.
AUX break-TR-3ERG DET stick
'She broke the stick.'

b. ni? ləkʷ-əɬc-t-əs tθə swiẇləs ?ə kʷθə sc̓ešt.
AUX break-BEN-TR-3ERG DET boy OBL DET stick
'She broke the stick for the boy.'

The verb in (1a) is transitive, and the verb is suffixed with the general transitive suffix *-t*. The third person transitive subject determines ergative agreement. The patient 'stick' is a direct object, and it appears as a plain NP. Example (1b) is the benefactive applicative. The verb is suffixed with the benefactive applicative *-əɬc*. The benefactive 'boy' is the direct object and the patient 'stick' appears with an oblique marker. Gerdts (1988b) details the syntactic properties of this construction.

Halkomelem has two redirective applicative suffixes: the dative as in (2) and the benefactive as in (3).

(2) *-as* dative

?e?əm	'give'	?a·m-əs-t	'give it tohim/her'
xʷayəm	'sell'	xʷayem-əs-t	'sell it to him/her'
?iẇ-	'instruct'	?iẇ-əs-t	'show it to him.her'
yəθ-	'tell'	yəθ-əs-t	'tell him/her about it'

(3) *-əɬc* benefactive

q̓ʷələt	'bake it'	q̓ʷəl-əɬc-ət	'bake it for him/her'
θəyt	'fix it'	θəy-əɬc-ət	'fix it for him/her'
kʷənət	'take it'	kʷən-əɬc-ət	'take it for him/her'
p̓eiθət	'sew it'	p̓eiθ-əɬc-t	'sew it for him/her'

In RELATIONAL applicatives, the verb stem is intransitive. The semantic role of the applied object is usually stimulus of a psychological or perceptual event, goal or direction of motion, goal of a speech act, source, or undergoer of

[4] The following abbreviations are used in glossing the data: ACT activity, ASP aspect, AUX auxiliary, BEN benefactive, CON connective, CONT continuative, CS causative, DET determiner, DRV directive, EMPH emphatic, ERG ergative, FUT future, GEN genitive, IMPERF imperfective, INCHO inchoative, LCTR limited control transitive, LOC locative, MID middle, NEG negative, NOM nominalizer, OBJ object, OBL oblique, PAS passive, PERF perfect, PL plural, POS possessive, PR prefix, Q interrogative, REC reciprocal, REFL reflexive, REL relational, SSUB subordinate subject, SUB subject, TR transitive, UNR unrealized, VBL verbalizer.

an adverse event. Compare the intransitive clause in (4a) with the applicative in (4b).

(4) a. ni? neṁ kʷθə swiẇləs.
AUX go DET boy
'The boy went.'

b. ni? nəm-nəs-əs kʷθə swiẇləs kʷθə swəẏqeʔ.
AUX go-DIR:TR-3ERG DET boy DET man
'The boy went up to the man.'

In (4b) 'man', the goal of the motion, is the object. (See Gerdts 1988b for discussion).

Halkomelem has two relational applicative suffixes—the directional suffix *-nəs* and the general relational applicative suffix *-meʔ*. The directional suffix illustrated in (4b) allows the goal of a verb of motion to be the applied object. It appears on a wide range of verbs of motion, for example:

(5) *-nəs* directional

neṁ	'go'	nəṁ-nəs	'go toward him/her/it'
ʔewə	'come'	ʔewə-nəs	'come toward him/her/it'
x̌ʷčenəm	'run'	x̌ʷčenəm-nəs	'run toward him/her'
xʷəniʔ	'get there'	xʷəni-ṅs	'get there to him/her/(that place)'

We call *-meʔ* the general relational suffix, for want of a better term. It has a variety of uses: it appears when the applied object is the stimulus of a psychological predicate, the source of a verb of motion, the goal of a speech act, the sufferer of an adversative, or the benefactive of an intransitive verb.

(6) *-meʔ* general relational applicative

a. stimulus of psychological or cognitive predicate

ɬciws	'tired'	ɬciws-meʔ-t	'tired of him/her'
q̓eḷ	'believe'	q̓eḷ-meʔ-t	'believe him/her'
siʔsiʔ	'afraid'	siʔsiʔ-meʔ-t	'afraid of him/her'
x̌iʔx̌eʔ	'ashamed'	x̌iʔx̌eʔ-meʔ-t	'ashamed of him/her'

b. source of verb of motion

ləẇ	'run away'	ləẇ-mə-t	'run away from him/her'
kʷəl	'hide'	kʷel-meʔ-t	'hide from him/her'

c. goal of speech or expressive act

xʷəyxʷəyasəm	'brag'	xʷəyxʷəyas-meʔ-t	'bragging to him/her'
x̌e:m	'cry'	x̌e:x̌əm-mə-t	'crying over him/her'
qʷal	'speak'	qʷəl-mə-t	'lecture to, bawl out him/her'

d. adversative (often in passive)

θeʔc	'get dark'	θeʔc-meʔ-t	'get dark on him/her'
łəməxʷ	'rain'	θəməxʷ-meʔ-t-əm	'(he/she/it) get rained on'
yəq̓	'snow'	yəq̓-meʔ-t-əm	'(he/she/it) get snowed on'
sqʷəlqʷalx̌ʷ	'hail'	sqʷəlqʷalx̌ʷ-meʔ-t-əm	'(he/she/it) get hailed on'

e. benefactive of intransitive verb

kʷukʷ	'cook'	kʷukʷ-meʔ-t	'cook for him/her'
ya:ys	'work'	ya:ys-meʔ-t	'work for him/her'

The most common use of the suffix *-meʔ* (common in the sense that it appears on the greatest number of different predicates) is with psych applicatives. We now turn to a discussion of this construction.

2 Halkomelem psych applicatives

To date we have found 27 examples of psychological, cognitive, or perceptual predicates that form applicatives.

Gloss	Halkomelem
afraid, frightened of	siʔsiʔmeʔt
annoyed at	c̓iwəlməṯ (DR)
astonished, surprised at	c̓əq̓meʔt
believe (lies)	q̓elmeʔt
dream about	ʔəlʔəlyəməṯ (DR)
embarassed, shy of	x̌iʔx̌eʔmeʔt
fed up with	kʷiɬəmeʔt
forget about	mel̓qmeʔt
get full of	məq̓miʔt (DR)
happy for	hiləkʷmeʔt
happy for	ʔiyəsmeʔt
jealous of	wəẇistən̓əqmeʔt
lonely, sad for	səl̓səlqʷmeʔt
mad at	t̓et̓iyəq̓məṯ
miss	qəl̓meʔt
respect	siʔəm̓meʔt
remember	hek̓ʷmeʔt
sad for	qiləsmeʔt

sad for	səẃsəẃme?t
sense	siwəlme?t
startled at	t̓ᶿəẏk̓ʷme?t
suspicious of	k̓ʷelək̓ʷme?t
think, decide about	xʷθtiwənme?t
think that way about	štə?e:wən̓me?t
think about	xʷqʷələwənme?t
tired of waiting for	q̓səme?t
tired of	łciwsme?t

Table 1. Halkomelem Psych Applicatives

In most cases, the applicative suffix appears immediately after the verb root. But in several cases, it follows a lexical suffix. For example, see the use of the lexical suffix for 'inside' in (7).

(7) š-tə?e:-wən̓-me?-t
NOM:LOC-like.that-INSIDE-REL-TR
'thinking that way about it/him/her'

This suffix appears in other verbs of thinking. Also we see the suffix for 'body' *-iws* in 'tired' and the suffix 'people' (fused with the causative suffix) *-stən̓əq* in 'jealous'. Examples like these have led us to conclude that applicatives follow lexical suffixes, as represented in the suffix template in Table 2.[5]

root	+1 lexical suffix	+2 applicative	+3 antipassive	+4 transitive limited control, causative	+5 object, passive, reflexive, reciprocal	+6 subject

Table 2. Verbal suffix template

As part of our attempt to locate examples of psych applicatives, we took a list of psych predicates and tried to elicit them. We have found only a couple of potential predicates that do not allow the applicative suffix, and these are given in (8).[6]

[5] It might be the case that these verbs prefer inanimate stimuli and thus are not good candidates for psych applicatives. See the discussion in section 2.5.

[6] This template is just a heuristic device—not a formal treatment of the morphology. After all, outer layer morphology often creates the right sort of base for earlier morphology in the template, creating another "cycle" of suffixation. See Gerdts (to appear) for some examples of this.

(8)	*k̓ʷeẏk̓ʷəẏ-meʔ-t	'hungry for it'
	*təx̌-meʔ-t	'make a mistake about it'
	*hiɬeːn̓əq-meʔ-t	'pretending about it'
	*xʷen-meʔ-t	'relieved about it'

Although further research needs to be done on this topic, we conclude that almost all psych predicates form applicatives. This is quite a general, productive construction in Halkomelem.

2.1 Transitive psych constructions

Psych applicatives are not the only way to express psychological events. Most psych predicates also have transitive forms. Here the agent or causer that is directly responsible for the action is the subject and the experiencer is the object. For example, the roots meaning 'startle' and 'sense' can be suffixed with the transitive suffix *-t*, as in (9a) and (10a). Compare the psych applicatives in (9b) and (10b).

(9) a. t̓ᶿəẏk̓ʷ-t
startle-TR
'startle him/her'

b. t̓ᶿəẏk̓ʷ-meʔ-t
startle-REL-TR
'be startled at him/her'

(10) a. siwəl-t
sense-TR
'get his/her attention'

b. siwəl-meʔ-t
sense-REL-TR
'sense him/her'

We can see the difference in the two types of clauses by contrasting (11) and (12): the subject 'you' is the agent in (11), but it is the experiencer in (12).

(11) c̓q̓-ət č ceʔ kʷθə nəc̓əwməxʷ ʔi ceʔ tecəl.
surprise-TR 2SUB FUT DET visitor AUX FUT arrive
'You will surprise the visitors when they arrive.'

(12) c̓əq̓-meʔ-t č ceʔ kʷθə nəc̓əwməxʷ ʔi ceʔ tecəl.
surprise-REL-TR 2SUB FUT DET visitor AUX FUT arrive
'You will be surprised at the visitors when they arrive.'

Some psych predicates form transitives with the causative suffix, as in (13a). Contrast the psych applicative in (13b).

(13) a. ʔiyəs-stəxʷ
happy-CS
'make him/her happy'

b. ʔiyəs-meʔ-t
happy-REL-TR
'happy for him/her'

Compare (14) and (15):

(14) ʔi cən q̓i:q̓əl̓-stəxʷ.
AUX 1SUB believe(IMPERF)-CS:3OBJ
'I am making him believe my lies.'

(15) ʔi cən q̓i:q̓əl̓-meʔ-t.
AUX 1SUB believe(IMPERF)-REL-TR
'I am believing him.'

The first person subject is the causer in (14), but the experiencer in the psych applicative in (15). Also compare examples (16) and (17):

(16) niʔ cən siʔsiʔ-stəxʷ kʷθə smayəθ.
AUX 1SUB frighten-CS:3OBJ DET deer
'I frightened the deer.'

(17) niʔ siʔsiʔ-meʔ-θaṁš-əs kʷθə smayəθ.
AUX frighten-REL-TR:1OBJ-3ERG DET deer
'The deer was frightened of me.'

The causer in (16) is a direct, purposive agent and is expressed as the subject of the transitive. But the first person in (17) is the stimulus. It is an indirect cause of the event. I might not even be aware that I am having an effect on the deer. The stimulus is expressed as the applied object in the psych applicative.

Thus we see that psych applicatives differ syntactically and semantically from transitive psych constructions.

2.2 Evidence that the stimulus is the object

This brings us to the next point. How do we know that the stimulus is the object? There are several ways that we can tell that the psych applicative is a transitive construction and that the stimulus is the object. As we have shown in various examples above, the transitive suffix *-t* appears after the applicative suffix *-meʔ*. (It is +4 suffix in the template in Table 2.) Also, a third person main clause subject determines ergative agreement, as in (17) above. (Subject suffixes are +6 in the template).

2.2.1 Object inflection

Also we see that the applied object is expressed with the standard object personal suffixes. The same paradigm appears on psych applicatives as on simple transitives.

	Transitive object	Applied object
1sg	kʷənəθaṁš	siʔsiʔmeʔθaṁš
2sg	kʷənəθamə	siʔsiʔmeʔθamə
1pl	kʷənətalx̣ʷ	siʔsiʔmeʔtalx̣ʷ
2pl	kʷənətalə	siʔsiʔmeʔtalə
3rd	kʷənət	siʔsiʔmeʔt
	'take'	'frightened of'

Table 3. Transitive object inflection

Example (17) above gives a sentential example with object inflection.

2.2.3 Passive

Another piece of evidence that the stimulus is an object is the fact that it can passivize. Halkomelem, like many other Salish languages, forms its passive paradigm by using an object pronominal inflection followed by an intransitive suffix. (See Gerdts and Hukari 2001 and references therein.)

	Transitive passive	Applied passive
1sg	kʷənəθələm	siʔsiʔmeʔθələm
2sg	kʷənəθa:m	siʔsiʔmeʔθa:m
1pl	kʷənətaləm	siʔsiʔmeʔtaləm
2pl	kʷənətaləm	siʔsiʔmeʔtaləm
3rd	kʷənətəm	siʔsiʔmeʔtəm
	'be taken'	'be frightened of'

Table 4. Main clause passive inflection

In the active sentence in (17) above, the experiencer 'deer' is the subject and the stimulus 'me'is the object. In the passive in (18), the experiencer 'John' is the agent of the passive and expressed as an oblique phrase, while the stimulus 'I' is the subject, expressed by the passive pronominal inflection.[7]

(18) niʔ siʔsiʔ-meʔ-θel-əm ʔə-χ̓ John.
AUX frighten-REL-TR:1PAS.OBJ-MID OBL-DET John
'John was frightened of me.'

It is difficult to provide an adequate translation in English, since English lacks psych applicatives and passives thereof. But literally, example (18) means "I was frightened of by John."

[7] Gerdts (1984, 1988b) argues that psych predicates that take the transitive suffix *-t* are initially unaccusative. Thus applicative passives of these predicates violate the 1-AEX.

2.2.4 Reflexive/reciprocal

A fourth piece of evidence that the stimulus is the object comes from reflexive and reciprocal constructions, which are formed by suffixes (+ 5 on the template), as seen in (19).[8]

(19) a. kʷələš-θət 'shoot self'
b. kʷələš-təl 'shoot each other'

We see that the stimulus in a psych applicative can appear as a reflexive, as in (20) and (21), or as a reciprocal, as in (22).[9]

(20) ʔi cən wəɬ ɬciws-maʔ-θət ǩʷə-nə-s ʔi q̓aq̓iʔ.
AUX 1SUB already tired-REL-REFL DET-1POS-NOM AUX sick
'I'm tired of myself being sick.'

(21) niʔ cən siʔsiʔ-meʔ-θət ʔə kʷθə nə
AUX 1SUB frighten-REL-REFL OBL DET 1POS
q̓ilx̌ənetən niʔ ʔə kʷθə šǩʷcastən̓.
reflection AUX OBL DET mirror
'I frightened myself with my reflection in the mirror.'

(22) ʔeʔət x̌iːʔx̌eʔ-meʔ-tə̓l θə sx̌ə̓ɬiqəɬ kʷ-s
AUX shy(IMPERF)-REL-REC DET children DET-NOM
qʷə̓lqʷə̓l-tə̓l-s.
speak(IMPERF)-REC-3POS
'The children are shy about speaking to each other.'

As we know from other languages of the world, morphological reflexives and reciprocals can refer only to objects (direct objects, and, in some languages, indirect objects) but not oblique NPs. Thus data like the above provide evidence for the objecthood of the stimulus.

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[8] See Gerdts (2000) for a discusion of the morphology, syntax, and semantics of the reflexive and the reciprocal.

[9] We use this as an opportunity to retract claims that were made erroneously in Gerdts (1988b). Although the particular forms cited there were rejected, the problem was phonological (e.g., harmony was not applied to the suffix: (*meʔ* should be *maʔ* before the reflexive). Some of the examples were also seen as semantically anamolous. Later fieldwork revealed many good cases of the relational applicative followed by reflexives. Note that the reflexive suffix does not follow the redirective applicative suffixes. See Gerdts and Hukari (1998), Gerdts and Hinkson (2003).

2.3 Applied objects differ from simple transitive objects

The evidence shows that the stimulus in psych constructions is the object. Halkomelem provides some unique evidence, though, that applied objects differ from simple transitive objects.

2.3.1 Limited control

Halkomelem has two varieties of transitive inflection—the general transitive suffix *-t* (23) and the limited control transitive suffix *-nəxʷ* (24).

(23)	kʷən-ət	'take him/her/it (on purpose)'
	q̓ʷaqʷ-ət	'club him/her/it (on purpose)'
	kʷələš-t	'shoot him/her/it (on purpose)'
(24)	kʷən-nəxʷ	'grab him/her/it'
	q̓ʷəqʷ-nəxʷ	'club him/her it accidentally'
	kʷələš-nəxʷ	'managed to shoot him/her/it'

The limited control suffix is used with an action that was done accidentally, unintentionally, or with great effort. As Gerdts (1988b) notes, only objects of simple transitives can appear with the limited control suffix, as in (24). Applied objects cannot:

(25)	*siʔsiʔ-meʔ-nəxʷ	'accidentally be frightened by him/her/it'
	*həʔk̓ʷ-meʔ-nəxʷ	'managed to remember him/her/it'
	*kʷel-meʔ-nəxʷ	'managed to hide from him/her/it'
	*yaːys-meʔ-nəxʷ	'managed to work for him/her/it'

2.3.2 Antipassive

Antipassive constructions (Gerdts and Hukari 2000) provide a second way to distinguish the two types of objects. Simple transitive objects can be antipassivized, as in (26b) and (27b).

(26) a. niʔ q̓ʷəl-ət-əs tθə sceːɬtən.
AUX bake-TR-3ERG DET salmon
'He cooked/barbecued the salmon.'

b. niʔ q̓ʷəl-əm ʔə tθə sceːɬtən.
AUX bake-MID OBL DET salmon
'He cooked/barbecued the salmon.'

(27) a. na?ət q^{w}əs-t-əs t$^{\theta}$ə ƛ̓eɬəm̓ sce:ɬtən.
AUX go in water-TR-3ERG DET salted salmon
'She put the salted fish in water.'

b. na?ət q^{w}s-els ?ə t$^{\theta}$ə ƛ̓eɬəm̓ sce:ɬtən.
AUX go in water-ACT OBL DET salted salmon
'She soaked the salted fish.'

Antipassives are formed with the middle suffix *-m* or the activity suffixes *-els*. The patient in the antipassive is expressed as an oblique NP. However, as Gerdts (1988b) notes, applied objects do not form applicatives. Thus, the psych applicative in (28b) and the benefactive relational applicative in (29b) do not form antipassives.

(28) a. ni? cən q̓el̓-me?-t k^{w}θə ləplit.
AUX 1SUB believe-REL-TR DET priest
'I believed the priest.'

b. *ni? cən q̓el̓-me?-əm/əls ?ə k^{w}θə ləplit.
AUX 1SUB believe-REL-MID/ACT OBL DET priest
'I believed the priest.'

(29) a. k^{w}uk^{w}-me?-t k^{w}θən̓ sil̓ə!
cook-REL-TR DET:2POS grandparent
'Cook for your grandfather!'

b. *k^{w}uk^{w}-me?-əm/els ?ə k^{w}θən̓ sil̓ə!
cook-REL-MID/ACT OBL DET:2POS grandparent
'Cook for your grandfather!'

Neither the middle nor the activity suffix can follow the applicative suffix, and the stimulus cannot appear as the oblique-marked object of the antipassive.[10]

2.3.3 An asymmetry

We conclude that applied objects have some, but not all, of the properties of simple transitive objects, as summarized in Table 5.

[10] So we actually do not know the relative order of antipassives and applicatives in the template, since they do not combine.

	Simple object	Applied object
-t transitve	√	√
object agreement	√	√
passive	√	√
reflexive/reciprocal	√	√
extraction (w/o morph)	√	√
limited control	√	*
antipassive	√	*

Table 5. Object Properties

Thus Halkomelem shows an interesting kind of asymmetry. Gerdts (1988b) uses such facts to argue that applied objects must be derived objects (in Relational Grammar terms, "advancees" to object). Of course, non-syntactic accounts are also possible, for example, making use of the differences in thematic roles of simple versus applied objects. But the key point is that applicatives should not be thought of simply as a type of marking of a semantic feature of a patient/ theme NP.

2.4 Stimulus as an Oblique NP

We thus conclude that the stimulus in examples like (30) is an applied object.

(30) ni? cən si?si?-me?-t kʷθə sqʷəmeẏ̓.
AUX 1SUB frighten-REL-TR DET dog
'I was frightened at the dog.'

But this is not the only way to express a stimulus. As example (31) shows, the stimulus can be an oblique NP instead, marked with the general oblique preposition *?ə*.[11]

(31) ni? cən si?si? ?ə kʷθə snəxʷəɬ.
AUX 1SUB frighten OBL DET canoe
'I was frightened at the car.'

The experiencer is the same in examples (30) and (31). But, since (31) does not have an applied object, there is no applicative morphology and also there is no transitive inflection. Transitivity is apparent in examples with third person subjects: in (32) the third person subject determines ergative agreement, but (33) is intransitive and hence lacks ergative agreement. Third person absolutive agreement is Ø.

[11] Thus, relational applicatives differ from redirective applicatives in that the latter do not have alternative paraphrases where the goal or benefactive is an oblique NP (Gerdts 1988b).

(32) ni? si?si?-me?-t-əs kʷθə sx̌i?x̌qəɬ kʷθə sqʷəmeẏ.
AUX frighten-REL-TR-ERG DET child DET dog
'The child was frightened at the dog.'

(33) ni? si?si? kʷθə sx̌i?x̌qəɬ ?ə kʷθə snəxʷəɬ.
AUX frighten DET child OBL DET canoe
'The child was frightened at the car.'

A variety of different types of NPs appear as obliques, as seen in the case rule in (34b).

(34) Halkomelem case
a. subjects, objects, possessors are caseless
b. other NPs take the oblique preposition *?ə*
- obliques of all sorts (location, direction, instrumental, source, manner, stimulus)
- "oblique objects" patient/theme of ditransitives and antipassives
- passive agents
- proper noun possessors

However, different oblique NPs behave differently in extractions (Gerdts 1988b, Hukari 1979).

(35) Extraction in Halkomelem (wh-questions, relative clauses, clefts, pseudo-clefts)
a. No special morphology
- ergatives (ergative agreement is deleted), absolutives

b. Nominalization with *s-*
- patients of antipassives, patients of applicatives, objects of denominal verbs

c. Nominalization with *š(xʷ)-*
- obliques (location, direction, instrumental, source, manner, stimulus)

The true obliques, such as instrument, locative, and goal of motion, extract through nominalization with the prefix *š(xʷ)-*. This rule is given in (35c). Stimuli in intransitive clauses also extract in this fashion, as the data in (36–38) show.

(36) stem kʲʷə ni? ?əṅ-š-q̓eƛ̓?
what DET AUX 2POS-NOM-believe
'What did you believe?'

(37) stem alə̓ k̓ʷə ʔi ʔəṅ-š-hiləkʷʔ
what EMPH DET AUX 2POS-NOM-happy
'What ever are you happy about?'

(38) scx̌əm-s kʷθə niʔ nə-š-c̓əq̓.
jump-3POS DET AUX 1POS-NOM-happy
'His jump is what astonished me.'

This provides evidence that the oblique-marked stimulus is a true oblique NP. In contrast, the applied object, since it is the absolutive NP, extracts according to the rule in (35a). That is, it uses no special morphology:

(39) ɬwet niʔ q̓el̓-meʔ-t-əxʷʔ
who AUX believe-REL-TR-2SSUB
'Who did you believe?'

(40) wet k̓ʷ ʔi hek̓ʷ-meʔ-t-əxʷʔ
who DET AUX remember-REL-TR-2SSUB
'Who are you remembering?'

(41) niɬ tθey̓ swəy̓qeʔ niʔ x̌iʔx̌eʔ-mə-t-əs.
3EMPH DET man AUX embarrassed-REL-TR-3ERG
'That's the man that she was embarrassed of.'

2.5 Applied objects versus oblique NPs

Thus, we see that there are two different ways of expressing a stimulus —as an applied object in a psych applicative or as an oblique NP in an intransitive psych construction. This of course raises two questions: Are these really synonymous? What determines the choice between applied object and oblique NP?

In previous work, Gerdts (1988a, b) has suggested that animacy is at play. Applied objects are often animate, as in (42) while oblique NPs are often inanimate, as in (43).

(42) niʔ cən q̓el̓-meʔ-t kʷθə ləplit.
AUX 1SUB believe-REL-TR DET priest
'I believed the priest.'

(43) niʔ cən q̓el̓ ʔə kʷθə sqʷaqʷəl̓-s kʷθə ləplit.
AUX 1SUB believe OBL DET word-3POS DET priest
'I believed the priest's words.'

The speakers that Gerdts worked with in the 1970s had strong intuitions about this. They rejected (44), where the oblique NP is an animate.

(44) ʔ*niʔ cən ɫeɬ ʔə kʷθə ləplit.
AUX 1SUB believe OBL DET priest
'I believed the priest.'

So, they dispreferred (45), where the applied object is inanimate.

(45) ??niʔ cən ɫeɬ-meʔ-t kʷθə sqʷaqʷəɬ-s kʷθə ləplit.
AUX 1SUB believe-REL-TR DET word-3POS DET priest
'I believed the words of the priest.'

One speaker, Arnold Guerin, suggested (46) with an animate applied object, as a repair.

(46) ʔi cən ɫeɬ-meʔ-t kʷθə ləplit kʷis qʷaqʷəɬ.
AUX 1SUB believe-REL-TR DET priest DET:3SSUB talk(IMPERF)
'I believed the priest when he was talking.'

The speakers we work with today do not have such clear judgments and produce applicatives with inanimate stimuli and intransitives with animate obliques. However, person and animacy may still be factors in their choice. As a pilot study, we constructed a database from every sentence example of psych predicates we had in our fieldnotes. Also we used the data that appeared in the Cowichan dictionary of Hukari and Peter (1995). Each form in the dictionary is illustrated with a sentence. So between the two sources we quickly came up with approximately 200 sentences. We organized the data according to the person/animacy properties of the stimulus, as given in Table 6. It is clear from even this small sample that first and second person stimuli are usually expressed as applied objects.

	Applied object (with meʔ-t)		**Oblique**	
	#	%	#	%
1st and 2nd person	40	27	0	0
Proper noun	20	13	1	2
Other human	57	38	6	14
Animal	10	6	6	14
Inanimate	19	13	22	51
Clause	5	3	8	19
TOTAL	150	100	43	100

Table 6. Applied object vs. oblique NP

In Table 7 we give figures totaling all the animates versus the inanimates given from the point of view of each construction type.

	Animate	Inanimate
Applied object	87%	13%
Oblique	37%	63%

Table 7 Animacy of stimuli in psych clauses

We see that animacy does play some kind of role, though obviously we need to do further research on this topic.

Our impression is that what is involved is a general system of topicality or centrality rather than an actual grammatical condition. After all, first and second person and animates tend to be more central to the discourse. We find that a stimulus expressed in an applicative can play a central role, even if it is inanimate. For example 'the fog' is crucial in (47):

(47) ʔeʔət xʷiʔ siʔsiʔ-meʔ-t-əs tᶿə speʔxʷəm
AUX INCHO fightened-REL-3ERG DET fog
kʷs nem̓-s x̌əl̓im̓-t-əs tᶿə snəxʷəɬ-s.
DET:NOM go-3SSUB steer-TR-3ERG DET canoe-3POS
'He's scared of the fog when he drives his car.'

Sometimes the applicative can be used to highlight a participant of a complement clause. The importance to me of my quitting my job is highlighted by expressing me as the applied object, resulting in the reflexive in the following:

(48) ʔi cən wəɬ štəʔe:wən̓-meʔ-θət k̓ʷə-nə-s
AUX 1SUB PERF think-REL-TR:REFL DET-1POS-NOM
hay ʔə kʷθə nə-sya:ys.
finish OBL DET 1POS-job
'I was thinking about quitting my job.'

Similarly, when an intransitive construction with an oblique NP is used even when the stimulus is animate, there is a downplaying of the participation of the animate. For example:

(49) niʔ ʔə č wəɬ kʷiɬəm̓ ʔə kʷθə ʔi hiẇal̓əm̓ sx̌əl̓iqəɬ?
AUX Q 2SUB PERF fed up OBL DET AUX playing children
'Are you fed up with the playing children?'

After all, it is the disturbance made by the playing children that is annoying, not the children themselves.

In sum, the choice between using an applicative or not is one that can be manipulated by speakers to good effect. Further research may reveal some of the factors at play. We hope to collect a larger sample and to use texts or contextualized examples rather than elicited data in order to help clarify this issue.

3 On the nature of the applicative suffix

This section turns to a brief discussion of what we know about the form of the applicative suffix. Bringing in data from all three dialects of Halkomelem, we examine three hypotheses concerning the status of the applicative suffix: (1) that it is a part of a complex transitivizer of the form *-me?t* or *(-mət)*, (2) that it is actually the middle suffix *-əm* appearing in combination with the transitive suffix *-t*, and (3) that it is, in fact, an applicative suffix in its own right. We conclude that the evidence favors the last hypothesis.

As we have seen in the above data, in the Island dialect of Halkomelem, the suffix usually surfaces followed by the general transitive suffix as *-me?t* or alternatively *-mət*. The speakers we have worked with used these in free variation in examples like the following:

(50)	ɬciwsmé?t	ɬcíwsmət	'tired of him/her'
	q̓eɬmé?t	q̓éɬmət	'believe him/her'
	si?si?mé?t	sí?si?mət	'afraid of him/her'
	x̌i?x̌e?mé?t	x̌í?x̌e?mət	'ashamed of him/her'
	qəɬmé?t	qə́ɬmət	'miss him/her'

The forms in the first column are associated with more careful speech. The stress falls on the suffix and it has a full vowel and glottal stop. Alternatively, the informal speech version keeps primary stress on the root, the vowel is reduced to schwa and the glottal stop is lost.[12]

The Downriver dialect also has psych applicatives. Suttles (in press: §10.4.5) identifies a suffix *-mət* 'concern', that appears variously as *-ə́mət ~ -əmət ~ -mət ~ -mít ~ -mé?t*. The Suttles' material may have some dialect mixing though. Arnold Guerin, who spoke both Island and Downriver dialects, suggested to Donna Gerdts that the Island version of the form was *-me?t* while the Downriver version was *-mi?t*, giving pairs like 'afraid of him/her' *si?si?me?t* Island dialect and *si:si?mi?t* Downriver dialect. Gerdts' fieldwork with the Katzie variety of Downriver includes examples with *-mít* and *-mət*. Other examples of the correspondence between *i* and *e* are attested: cf. the verb 'arrive' *ticəl* Downriver/ *tecəl* Island[13] or the third person subordinate passive suffix *c̓ewəti:t*[14] Downriver/ *c̓éwətewət* Island 'he/she was helped'.

For Upriver Halkomelem, Galloway (1993: 249) identifies a transitive

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[12] Bianco (1996, 1998) shows that primary stress falls on the first vowel based on the following sonority hierarchy: /e, a, o, u/ > /i/ > /ə/. Certain latter cycle suffixes draw primary stress. We see this is optional in the case of *me?-*. Since stress in Island Halkomelem is thus largely predicable, we do not usually indicate it in our data. Sequences of schwa and glottal stop do not occur.

[13] Some Nanaimo speakers use *ticəl*.

[14] The Downriver form shows deletion of the intervocalic resonant and coalescence.

control suffix *-məT* 'happen to do an action (with little control) not directly affecting someone or something.' None of his examples have a full vowel in the suffix. Given the scarcity of speakers of Downriver and Upriver dialects and the amount of dialect mixing, we may not ever have a clear picture of the phonological status of this suffix.[15] Nevertheless, we see that all three dialects use some form of the suffix in psych applicatives. Suttles gives eight examples and Galloway gives seven. We have compiled these together with their Island equivalent (Ø indicates that the form is not used), in Table 8.

Gloss	Island	Downriver	Upriver
afraid, frightened of	si?si?me?t		si:si:mət
annoyed at	Ø	c̓íwəl̓me?t	t̓ᵊíwə́l̓mət
believe (lies)	q̓elme?t		q̓ə́l̓mət
dream about	Ø	?əlyámət	?ə́liyəmət
get full of	Ø	məq̓mít	
happy for	hiləkʷme?t	híləkʷmət	
jealous of	wəẇistəńəqme?t		wawistə́ləqmət
mad at	ɬeɬiyəq̓mət	ɬéyəq̓me?t	
remember	hek̓ʷme?t	hə́k̓ʷme?t, hə́k̓ʷmət	
sense	siwəlme?t	síwəlmət	síwə́l̓mət
think that way about	štə?e:wəńme?t		st̓ɛ́wə́l̓mət
tired of	ɬciwsme?t	ɬcíwsmət	

Table 8. Psych Applicatives in the three Halkomelem dialects

3.1 The applicative suffix versus the middle suffix

Galloway (1993) treats *-mət* as a single suffix. However, Suttles (in press: §10.4.5) speculates that the first element of the suffix is the middle suffix *-əm* together with a stressed vowel in the durative aspect and followed by *-t* 'transitive'. First, the explanation that the full vowel is due to a durative meaning is not very appealing given that there is no difference in meaning between the forms with the full and reduced vowels in Island dialect (see (50)). The alternative explanation, that the schwa in *-mət* is a reduced form of the full vowel in *-mit/-me?t* is more straightforward, given that this type of alternation is seen widely.

Second, data from the Island dialect provides evidence that the applicative suffix is different from the middle suffix. As mentioned above, the applicative suffix alternatively comes in a full and reduced form, as exemplified in (50). But the same is not true of the middle suffix when it is followed by the transitive suffix.

[15] Neither Galloway (1993) or Suttles (in press) discuss the syntax of psych applicatives in any detail.

(51)	xʷiyəɬeɱ-ət	*xʷiyəɬeɱeʔt	'listen to him/her'
	x̌ʷčenəm-ət	*x̌ʷčenəmeʔt	'run for it'
	t̓θxʷim-ət	*t̓θxʷimeʔt	'pity him/her'
	ċeɬəm-ət	*ċeɬəmeʔt	'hear him/her/it'
	leɬəɱ-ət	*leɬəɱeʔt	'looking after him/her'
	nəqəm-ət	*nəqəmeʔt	'dive for it'
	ṫcəm-t	*ṫ(i)cəmeʔt	'swim after him/her/it'
	cx̌m-ət	*cx̌(ə)meʔt	'jump after it'
	ċtem-ət	*ċtemeʔt	'crawl to him/her'

So while the applicative suffix allows the alternation, the middle suffix does not. Thus, it is easy to distinguish the two types in the Island dialect, but it is difficult to do so in other dialects where forms with reduced vowels predominate. In fact, Galloway and Suttles present both types of data in their discussions. This is understandable given that the middle followed by the transitive often results in an applicative meaning that is similar to a relational applicative, as seen in various examples in (51) above.[16]

In addition, we have found several cases where a verb formed with the middle takes the relational applicative as well. In the first example, the sequence of two *-m*'s that would result, is reduced to a single consonant.[17]

(52)	kʷiɬəm	'fed up'	kʷiɬəmeʔt	'fed up with him/her'
	siʔeɱ	'respect'	siʔəɱmeʔt	'respect him/her'
	q̓səm	'tired of waiting'	q̓səmmeʔt	'tired of waiting for him/her'

So it is easy to see how, without the aid of the test of the full vowel data available in the Island dialect, analytical confusion between the middle and the applicative suffixes could arise. But once the forms are distinguished, a more coherent picture of the syntax and semantics of each construction is possible.

3.2 Evidence for the independence of the applicative suffix

We conclude on the basis of the preceding discussion that the form *-meʔt* contains a relational applicative suffix and not the middle suffix. In this section, we present evidence that the form is composed of two pieces—an applicative suffix followed by the transitive suffix. On the basis of comparative data, Kinkade (1998) reconstructs the relational applicative suffix as **-mi* in Proto-Salish.

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[16] See Gerdts and Hukari (2003) for a discussion of the meaning of the transitive suffix when added to motion verbs. Many motion verbs end in the middle suffix.

[17] When we played a tape of the last example to Tom Hukari, he could clearly discern two *-m*'s. Perhaps we have mis-transcribed the first example. Future study, including instrumental phonetic research on consonant sequences, could clarify this.

Branch	Language	Relational
Central Salish	Sliammon/Comox	-mi
	Sechelt	-mí
	Squamish	-min$^{?}$
	Clallam	-ŋə
	Saanich	-ŋiy
	Halkomelem	-mi, -me$^{?}$
	Lushootseed	-bi
Tillamook	Tillamook	-əwi
Tsamosan	Upper Chehalis	-mis/-mn
Northern Interior Salish	Lillooet	-min/-miṅ
	Thompson	-mi
	Shuswap	-m(í)
Southern Interior Salish	Okanagan	-min
	Kalispel/Spokane	-mi
	Coeur d'Alene	-mi
	Columbian	-mi

Table 9 Reflexes of Proto-Salish *-mi

We see reflexes with and without a final consonant in various languages. One could speculate that the */n/* is a separate suffix, perhaps from the *-(n)t* transitive suffix found in many languages. However, an alternative suggestion would be that the Proto-Salish form is **-min*. Furthermore, given the glottalization in several languages, **-miṅ* is also a possible candidate, though glottalized resonants are notoriously difficult to reconstruct.

Gerdts and Hinkson (1996), approaching the problem from a Halkomelem internal viewpoint, similarly posit the applicative to be *-min*. They claim that other applicatives originate as grammaticalized lexical suffixes (see Gerdts and Hinkson 2003), and speculate that the relational applicative grammaticalizes from the instrumental suffix *-min*, which was probably a lexical suffix historically.[18] This suffix is an old, non-productive suffix that appears in the names for a variety of instruments, for example: *kʷəcmin* 'deer hoof rattle' (*kʷəc* 'noise'), *ɬc̓imən* 'comb' (*ɬic̓* 'shear, cut'), *ɬəɬ̓əmən̓* 'herring rake' (*ɬəl̓* 'flipped'), *ʔəyəmən* 'weaving loom' (root not recognized), *kʷəxʷmən* 'deer hoof' (cf. *kʷaxʷ-ət* 'knock on it'), *q̓ətmən̓* 'fish fin' (cf. *q̓t-aθən* 'walk along the shore').[19]

[18] See Hinkson 1999 for examples of how the meaning of lexical suffixes can extend from their core concrete meaning to more abstract meanings such as locative and relational.

[19] The suffix *-min* appears commonly on words for 'residue' of an activity. For example: *yəqʷmin* 'ashes' (*yəqʷ* 'burn') and *qʷəl̓smən* 'broth' (*qʷəl̓s* 'boil'). This use is more productive. So one speaker jokingly referred to apple juice as *qʷaʔapmən* (*qʷaʔap* 'crabapple').

Their reasoning is as follows, the notion of an instrument of activity verbs is semantically parallel to the notion of an indirect cause (aka causal) of psychological and perception predicates. Therefore instrumental morphology could come to refer to the stimulus. In fact, we see in other languages of the world that instrumental forms can be used in this fashion. For example, in Chickasaw (Munro 2000: 292), there is an applicative proclitic, *isht*, used to specify both instrumentals (53) and 'about' arguments (54):[20]

(53)
ishtabi	'kill with'; cf. abi 'kill'
ishtalhpoba	'be paid for with (e.g., money)'; cf. alhpoba 'be paid for'
ishhaksi	'get drunk on [with]'; cf. haksi 'get drunk'
ishholissochi	'write with'; cf. holissochi 'write'
ishwihpoli	'rob using [with]'; cf. wihpoli 'rob'

(54)
ishtanompoli	'talk about'; cf. anompoli 'talk'
ishhashaa	'be angry about'; cf. hashaa 'be angry'
ishyaa	'cry about, mourn'; cf. yaa 'cry'

The Chickasaw dictionary (Munro and Willmond 1994: 160-176) has sixteen pages of forms with the instrumental proclitic. These include many examples based on psychological predicates.

(55)
ishnokhámmi'chi	'to be impatient (about an upcoming event)'; cf. nokhámmi'chi 'to be impatient'
ish-ayoppa	'to be happy about, proud of'; cf. ayoppa 'to be happy'
ishitikimalhpi'so	'to be sad about, lonely for'; cf. ikimalhpi'so 'to be sad'
ishtikímpo	'to be ashamed of, to be disgusted by (someone)'
ishtilhpokonna	'to dream about'; cf. ilhpokonna 'to dream'
ishtimaanokfila	'to think about, worry about'; cf. imaanokfila 'mind (noun)'

Many names for tools and machines are nominalizations (formed with final glottal stop <'>) of verbs with the instrumental proclitic.

(56)
ishtamo'	'mower, cutter'; cf. amo 'to mow'
ishpiha'	'broom'; cf. piha 'to be swept up, swept away'
ishbo'chi'	'beater, mixer'; cf. bo'chi 'to churn, to beat'
ishhayoochi'	'sifter'; cf. hayoochi 'to sift, to clean corn'
ishholbachi'	'camera, film'; cf. holbachi 'to photograph'
ishkapassali'	'air conditioner'; cf. kapassali 'to make cold'

[20] We thank Charles Ulrich for pointing this out to us. This proclitic comes from the verb *ishi* 'get, take'.

So we see that the conflation of the concepts of instrument and stimulus is something that happens in at least one other applicative morpheme in the world's languages.

Incidentally, if *-min* is the historical source for *-me?*, there is no difficulty at arriving at a surface form without the *-n* when it is used as an applicative. This is because the final */n/* of a lexical suffix regularly deletes before the transitive suffix. So compare *t̓ᶿəx̌ʷ-šen-əm* 'wash one's feet' (with middle suffix) and *t̓ᶿəx̌ʷ-še-t* 'wash his/her feet', *xʷ-ʔət̓ᶿ-əlqsən-əm* 'wipe one's nose' (with middle suffix) and *xʷ-ʔət̓ᶿ-əlqs-t* 'wipe his/her nose', *s-ḵ̓ʷəsəl̓-cx̌ən̓* 'burned on the arm' (Hukari and Peter 1995) and *ɬc̓-əl-ex̌ə-t* 'cut his/her arm' (Hukari and Peter 1995).

Finally, there is an additional piece of evidence that we can bring to bear on this issue. Psych predicates appear in one construction with the suffix *-mən* and, since this is intransitive, there is no suffix *-t*. This construction is formed with the verbalizing prefix *c-*.

(57) ni? cən q̓el̓-me?-t kʷθə ləplit.
AUX 1SUB believe-REL-TR DET priest
'I believed the priest.'

(58) ni? cən c-q̓el̓-mən.
AUX 1SUB do-believe-MIN
'I caused someone to believe.'

(59) ni? cən c-ɬciws-mən
AUX 1SUB do-believe-MIN
'I'm the one that caused someone to be tired. [not intentional]'

(60) x̌ʷəm č ʔi c-t̓ᶿəyḵ̓ʷ-mən ʔəẇ kʷələš-t-əxʷ
fast 2SUB AUX do-startle-MIN CON shoot-TR-2SUB
tᶿə skʷəl̓eš.
DET gun
'If you shoot the gun, you will startle many people.'

This construction deserves careful study, but there are several points we can make about it. First, we have one example from the Downriver dialect where the suffix is stressed and appears as *-min*.

(61) ni cən c-c̓əq̓-min.
AUX 1SUB do-astonished-MIN
'I was astonishing. [e.g. I astonished someone with my soccer footwork.] (DR)'

The prefix involved is *c-* 'make, do, have'. Gerdts and Hukari (2002) discuss the use of this suffix in forming denominal verbs: prefixed to a noun, it derives an intransitive verb form.

(62)	kʷəmləxʷ	'root'	c-kʷəmləxʷ	'get roots'
	s-taɬəs	'spouse'	c-taɬəs	'get a spouse'
	telə	'money'	c-tetəɬə	'earning money'
	s-wetə	'sweater'	c-wetə	'make a sweater'
	snəxʷəɬ	'canoe'	c-nəxʷəɬ	'make, have a canoe'

The most frequent use of this prefix is on nouns. However, it can occur on adjectives serving as NP heads (*c-məḱʷ* 'get all of them', *c-ṗəq̓* 'have white ones') and on adjectives modifying NP heads:

(63) ʔi: č ʔəẇ c-ṗəq̓ ləmətuɬqən?
AUX:Q 2SUB CON VBL-white wool
'Do you have any white wool?'

(64) ʔi: č ʔəẇ c-c̓əy̓xʷ sce:ɬtən?
AUX:Q 2SUB link VBL-dry salmon
'Do you have any dried fish?'

Psych predicates, some of them at least, may in fact be adjectival or even nominal, so this might explain the possibility of the *c-* prefix.[21] This prefix does not generally appear with verb roots. However, there are a few roots of perception that take it:

(65)	c-pit	'recognize'	(cf. pit-ət 'recognize him/her/it')
	c-haqʷ	'catch a whiff'	(cf. haqʷ-əm 'smell bad')
	c-lem	'catch a glimpse'	(cf. lem-ət 'look at him/her/it')

Until more research is done on the categorial status of psych and perception predicates, we cannot say anything substantial about the use of the *c-* prefix in these cases. Suffice it to say that the *c-* prefix combines with stems of different types to form an intransitive verb whose sole argument is the agent.

We should also clarify that psych predicates without the suffix *-min* cannot take the *c-* prefix: **c-q̓eɬ̓* 'do believe', **c-ɬ̓θəy̓ḱʷ* 'do startled', **c-łciws* 'do tired', **c-hiləkʷ* 'do happy', etc. Furthermore, we have no examples of the *-min* suffix appearing on the psych predicate without the *c-* prefix. Note, however, the form *qʷəl-mən* 'talk, speech, lecture'. As noted above the verb *qʷal* 'talk' can take the relational suffix: *qʷəl-meʔ-t* 'talk to/lecture/bawl out him/her.'

[21] See Jelinek and Demers for a discussion the categorially of Lummi verbs meaning 'like', 'dislike', 'intend', 'shame', 'remember', 'forget'.

Evidence that the *c-X-min* construction is intransitive comes from examples where the agent is a third person.

(66) ni? wəɬ c-q̓əl̓-mən t$^{\theta}$ə yəθ ?əẇ łe? sq̓il̓əsəm.
AUX PERF VBL-believe-MIN DET talk CON EMPH ????
'The one that was telling the stories about himself is being believed/ they are starting to believe.'

Also, the construction cannot be inflected for object: **c-t̓$^{\theta}$əy̓k̓^{w}me?t.* And the stimulus cannot appear as a direct argument NP:

(67) *ni? cən c-q̓əl̓-mən k^{w}θə-nə q^{w}əlmən.
AUX 1SUB VBL-believe-MIN DET-1POS talk
'I made someone believe with my talk.'

However, it can appear as an oblique phrase.

(68) ni? cən c-q̓əl̓-mən ?ə k^{w}θə-nə q^{w}əlmən.
AUX 1SUB VBL-believe-MIN OBL DET -1POS talk
'I made someone believe with my talk.'

(69) ni? wəɬ cən c-q̓əl̓-mən t$^{\theta}$ə šmiθənqəṅ
AUX PERF 1SUB VBL-believe-MIN DET liar
?ə t$^{\theta}$ə ni? sq^{w}il̓q^{w}əl̓-s
OBL DET AUX stories-3POS
'The liar got someone to believe his stories.'

(70) ni? cən c-t̓$^{\theta}$əy̓k̓^{w}-mən ?ə k^{w}θə sq^{w}əməy̓.
AUX 1SUB VBL-startled-MIN OBL DET dog
'I frightened someone with/because of my dog.'

Furthermore, extraction evidence shows that the stimulus is a "true" oblique, since it extracts via the rule in (35c) above, using nominalization with the prefix *š(x^{w})-*:

(71) niɬ ce? p̓e? t$^{\theta}$ey̓ siləẇaləm̓ ?əṅ
3EMPH FUT EMPH DET toy 2POS
š-c-hilək^{w}-mən ?ə k^{w}θə sx̌əl̓iqəɬ.
NOM:OBL-VBL-happy-MIN OBL DET children
'It will be those toys that you make those children happy with.'

Also, the experiencer argument cannot be the object.

(72) *niʔ cən c-ɬciws-mən kʷθə Dad.
AUX 1SUB VBL-tired-MIN DET dad
'I'm the one that caused Dad to be tired.'

The experiencer usually does not overtly appear in the construction but always gets rendered in the translation as 'someone' or 'people'. The one example we have with an overt experiencer is in the example involving extraction in (71) above. The experiencer 'the children' appears as an oblique phrase. We assume this is parallel to an oblique-marked agent in a passive and will try to research this further.

Given what we know about this construction, the analysis we suggest is as follows. The psych predicate has a single argument, the experiencer. The combination of psych predicate plus *-min* creates a two place argument with an experiencer and a stimulus. If this is mapped to a transitive construction in the syntax, then a psych applicative will arise: the experiencer is the subject and the stimulus is the object, for example:

(73) niʔ qəl̓-meʔ-θaṁš-əs kʷθə xʷələnitəṁ.
AUX believe-REL-TR:1OBJ-3ERG DET White.man(PL)
'The White men believed me.'

The addition of the *c-* prefix adds an additional argument—the (accidental/ indirect) causer—thus creating a form with three arguments: the causer, the experiencer, and the stimulus. But argument structure maps to an intransitive construction in the syntax. The causer maps to the subject position. The experiencer and stimulus, if they are overtly mentioned at all, should appear as oblique NPs (agent and oblique respectively). We have no examples of this type but hypothetically it should look like (74):

(74) niʔ cən c-qəl̓-mən (ʔə kʷθə xʷələnitəṁ)
AUX 1SUB VBL-believe-MIN OBL DET White.man(PL)
ʔə kʷθə-nə qʷəlmən.
OBL DET-1POS talk
'I caused (the White men) believe with my talk.'

In sum, we see that the suffix *-min* is associated with the presence of a stimulus as an argument of a psych predicate. Furthermore, it can appear in one construction, with a *c-* prefix, that is intransitive and thus the transitive suffix *-t* does not appear. This supports our claim that the applicative form *-meʔt* is composed of two pieces—the instrumental suffix *-min/-miṅ* and the transitive suffix *-t*. Given that the final */n/* of a lexical suffix is deleted before the transitive suffix, we easily derive the Downriver form *-mi(ʔ)t*. The vowel shift to *-meʔt* in the Island dialect remains mysterious but seems to be one of many puzzles concerning vowel correspondences.

4 Salish psych applicatives in cross-linguistic perspective

As we have seen in the previous sections, Halkomelem psych applicatives form transitive constructions. The experiencer is the subject and the stimulus is the object. We claim that the psych applicative relates to an intransitive construction where the stimulus is an oblique NP. Evidence from extraction shows that the stimulus is like other semantically oblique NPs such as instruments and locatives. At this point, we have only a vague picture of what controls the choice between the transitive and intransitive psych constructions. But it does seem that person and animacy play a role. The higher the animacy of the NP, the more likely it will appear as an applied object. This may be part of a general system of topicality or centrality rather than an actual grammatical condition.

Relational applicative suffixes show up in all of the Salish languages. Table 10 summarizes how the various meanings of relational applicatives are expressed by the different suffixes. The forms are given from the Proto-Salish perspective, following Kinkade's reconstructions. Actual reflexes of the suffix *-*mi* in individual languages were given in Table 9 above.

	Psychological Event	Motion	Speech Act	Adversative	Source
Northern Interior Salish	*-mi				Ø
Southern Interior Salish				Ø	Ø
Other Central Salish		*-nəs	*-ni		*-ni
Lushootseed			*-nəs	Ø	*-ni
Tillamook			*-nəs	Ø	Ø
Upper Chehalis	*-ni, *-nəs	*-mi	*-ni, *-nəs	Ø	Ø
Squamish	*-ni		*-ni	Ø	*-ni

Table 10. Salish relational applicatives[22]

[22] The key references that were consulted to ascertain the pan-Salish facts were: Bella Coola (Davis and Saunders 1997), Clallam (Montler 1996), Coeur d'Alene (Doak 1997), Columbian (Kinkade 1980, 1982), Halkomelem (Gerdts 1988b, Hukari and Peter 1995), Lillooet (van Eijk 1997), Lushootseed (Bates, Hess, and Hilbert 1994, Hess 1967), Okanagan (A. Mattina 1994, N. Mattina 1993), Saanich (Montler 1986), Sechelt (Beaumont 1985), Shuswap (Kuipers 1974), Sliammon/Comox (Watanabe 1996), Kalispel/Spokane (Carlson 1972, 1980), Squamish (Kuipers 1967), Thompson (Thompson and Thompson 1992), Tillamook (Egesdal and Thompson 1998), Upper Chehalis (Kinkade 1991). See Kiyosawa (1999, 2002) for more details.

We see it is a general Salish pattern to use a relational applicative on a psychological predicate. For example, the following data show psych applicatives based on the root meaning 'afraid' in several languages:

Sechelt (Beaumont 1985: 102)

(75) *č̓ásx̌ém-mí-t*
afraid-REL-TR
'be afraid of someone/ something'

Halkomelem (Gerdts 1988b: 139)

(76) *sí?si?-me?-t*
afraid-REL-TR
'afraid of him/her/it'

Lushootseed (Hess 1967: 39)

(77) *xəc-bí-d*
afraid-REL-TR
'afraid of him'

Lillooet (van Eijk 1997: 114)

(78) *páq̓u?-min*
afraid-REL:TR
'to be afraid of something'

Shuswap (Kuipers 1992: 50)

(79) *nx̌el-mn-s*
afraid-REL:TR-3ERG
'be afraid of'

Okanagan (A. Mattina 1994: 219)

(80) *n-x̌ílməntsən*
n-x̌íl-min-nt-s-ən
LOC-afraid-REL-TR-2OBJ-1ERG
'I got scared of you.'

Coeur d'Alene (Doak 1997: 178)

(81) *iy̓-n-x̌íł-mən-əm*
in-y̓c-hn-x̌ił-min-m
2GEN-CONT-LOC-fear-REL-M
'Thou art fearing him.'

Upper Chehalis (Kinkade 1991: 113)

(82) *q̓ʷán-ts*
afraid-REL
'afraid of'

Tillamook (Egesdal and Thompson 1998: 254)

(83) *qeš qe n-x̌ʷaỷəš-əẁí-n-i k s-qéx̌eʔ*
NEG UNR LOC-afraid-REL-DRV-1SUB ART NOM-dog
'I am not afraid of dogs.'

Thus, the evidence points towards the psych applicative being a very old construction within the Salish language family.

A quick look at the cross-linguistic literature suggests that psych applicatives are relatively rare in the languages of the world. Many languages use a dative subject construction or a transitive psych verb instead. English, for example, uses lexical means (like the verb *fear* in *"John fears me."*) rather than derivational means to express an experiencer and a stimulus.

Peterson (1999: 122) gives some general observations on the types of applicative constructions from a survey that he conducted based on data from fifty languages, as summarized in Table 11:

Type	% of languages
Benefactive/malefactive	80%
Comitative	60%
Locative	50%
Instrumental	40%
Circumstantial	20%

Table 11. Peterson's (1999) survey of applicatives in 50 languages

He observes that nine languages have "circumstantial" (aka causal) applicatives. These are: Caquinte, Chichewa, Halkomelem, Kalkatungu, Maasai, Tepehua, Tukang Besi, West Greenlandic, and Zoque. However, "circumstantial" is a cover term for several types of applicatives, including reason as well as stimulus. For example, in the circumstantial applicative in Tukang Besi (Donohue 1997: 416), the applied object is a reason, not a stimulus, and this language lacks psych applicatives per se:

(84) No-mate-ako te buti *Tukang Besi*
3.R-die-APPL CORE fall
'They died in a fall.'

When we revisited Peterson's sample languages, we found that only Halkomelem and West Greenlandic had the psych use of the circumstantial applicative. Chichewa, Kalkatungu, Maasai, Tepehua, and Tukang Besi did not. We could not find enough data on Caquinte and Zoque to determine the nature of their circumstantial applicatives. However, it may be the case that in fact only two out of the fifty languages in Peterson's sample exhibit psych applicatives.

The relevant applicative in West Greenlandic has been discussed by Fortescue (1984: 89–90), who says: "The affix *ut(i)*...has a 'relation-shifting' function covering a range of semantic senses, roughly 'with/for/with respect to..." Examples include:

(85)	a.	tikkuarpaa	'he points it out'
		tikkuuppaa	'he points s.th. out for him'
	b.	nassarpaa	'he brings it along'
		nassaappaa	'he brings s.th. along for/to him'
	c.	tikippuq	'he has arrived'
		tikiuppaa	'he has brought it'
	d.	atuarpuq	'he read'
		atuvvappaa	'he read (aloud) for him'
	e.	unnarurpuq	'it became night'
		unnuaruuppa	'it became night for him/while he _'
	f.	kamappuq	'he is angry'
		kamaappaa	'he is angry with him'

Notably (85f) is a psych applicative.

The scarcity of psych applicatives in Peterson's data led us on a search for this construction in other languages. So far we have found two other examples. First there is the example from the Muskogean language Chickasaw (Munro 2000) discussed in section 3.2 above. Also, some Austronesian languages apparently have applicative affixes which can be used for applied objects that are stimuli. For example, Bowden (n.d.) says: "Taba has two applicative affixes which derive verbs with added non-Actor arguments. Applied arguments can have a variety of different semantic roles." And among the examples of each affix, we found some that could be considered psych constructions:

(86)	Wangsi	lkiuak	baratci.
	wang=si	l=kiu-ak	barat-si
	child=PL	3pl=be.scared-APPL	westerner=PL
	'The children are scared of westerners.'		

(87)	Oci namaro	Iswan.
	Oci n=ha-mara-o	Iswan
	Oci 3sg=CS-be.angry-APPL	Iswan
	'Oci is angry at Iswan.'	

We also found that some languages, although they lack psych applicatives, express psychological events as intransitive clauses with the stimulus marked by a special case marker. For example, Blake (1979: 47) says of the Australian language Kalkatungu: "The causal case [-ʈuŋu, -ŋkuŋu] covers the sense of indirect cause or reason..." And he gives the following examples:

(88)	piciri-ʈuŋu	ŋai	miḷḷti	wakini.
	pituri-causal	I	eyes	spin
	'I'm high on pituri.'			

(89) ŋai ɾumpi ɳaa iti-jiŋu miɬ̪iwakini-ɲin-tuŋu.
I fear here man-causal intoxicated-part-causal
'I'm afraid of drunken men.'

(90) ati-ɳ̪tuŋu ŋai maanti-ɳa wakaɾi-ɾ̪uŋu aɾi-li-ɲin.
meat-caus I sate-past fish-caus eat-a/p-part
'I'm full because I ate the fish.'

So the notion of stimulus is one that is coded either in case systems or applicatives, depending on the devices at hand in a particular language.

In sum, our search has so far uncovered psych applicatives in four language families: Austronesian, Eskimo-Aleut, Muskogean, and Salishan. Although we are bound to find more examples of psych, it is apparent that this is not a common phenomenon. So Salish languages are important to the cross-linguistic picture, especially because psych applicatives are robustly attested in this family. All the Salish languages have them. And as we have seen in Halkomelem, psych applicatives are the most common use of the general relational applicative. Furthermore, almost all psychological predicates in Halkomelem form applicatives. This is apparently a productive process.

It is noteworthy that there is no unique morpheme to mark the psych applicative in any of the languages we have seen—Chickasaw, West Greenlandic, Taba, or Halkomelem and other Salish languages. The morpheme is always used for other meanings as well. So in a sense, the psych meaning is parasitic off of a more general applicative system. Furthermore, Kiyosawa (1999) shows that Salish languages exhibit the full range of applicatives discussed by Peterson (see Table 11), although comitative and instrumental applicatives are not common. It may be the case that psych applicatives arise only at the edge of an elaborate applicative system. Further work on the typology of applicative systems should shed light on this issue.

References

Bates, Dawn, Thom Hess, and Vi Hilbert. 1994. *Lushootseed dictionary*. Seattle: University of Washington Press.

Beaumont, Ronald C. 1985. *she shashishalhem, the Sechelt language: Language, stories and sayings of the Sechelt Indian people of British Columbia.* Penticton, British Columbia: Theytus Books.

Bianco, Violet M. 1996. The Role of sonority in the prosody of Cowichan, M.A. thesis, University of Victoria.

Bianco, Violet M. 1998. Stress assignment in Halkomelem-Cowichan Roots, *ICSNL* 33: 60–76.

Blake, Barry J. 1979. *A Kalkatungu grammar*. Canberra: The Australian National University.

Bowden, John. n.d. Taba as a 'split-O' language: Applicatives in a split-S system. *http://linguistics.anu.edu.au/WP/Bowden2.html*

Carlson, Barry F. 1972. *A grammar of Spokan: A Salish language of eastern Washington.* Ph.D. dissertation, University of Hawaii.
Carlson, Barry F. 1980. Two-goal transitive stems in Spokane Salish, *IJAL* 46: 21–26.
Davis, Philip W., and Ross Saunders. 1997. *A grammar of Bella Coola, UMOPL* 13.
Doak, Ivy Grace. 1997. *Coeur d'Alene grammatical relations.* Ph.D. dissertation, University of Texas at Austin.
Donohue, Mark. 1997. The applicative construction in Tukang Besi, in Cecilia Ode and Wim Stokhof (eds.), *Proceedings of the Seventh International Conference on Austronesian Linguistics*, 415–432. Amsterdam: Editions Rodopi B. V.
Egesdal, Steven M., and M. Terry Thompson. 1998. A fresh look at Tillamook (Hutéyu) inflectional morphology, in Ewa Czaykowska-Higgins and M. Dale Kinkade (eds.), *Salish Languages and Linguistics: Theoretical and descriptive perspectives, Trends in linguistics: Studies and monographs* 107: 235–273. Berlin: Mouton de Gruyter.
Fortescue, Michael. 1984. *West Greenlandic.* London: Croom Helm.
Galloway, Brent D. 1993. A Grammar of Upriver Halkomelem, *UCPL* 96, Berkeley, California.
Gerdts, Donna B. 1984. A Relational Analysis of Halkomelem Causals, in Eung-Do Cook and Donna B. Gerdts (eds.), *The Syntax of Native American Languages* (= *Syntax and Semantics*, Volume 16), 169–204. New York: Academic Press.
Gerdts, Donna B. 1988a. A Nominal Hierarchy in Halkomelem Clausal Organization, *Anthropological Linguistics* 30.1: 20–36.
Gerdts, Donna B. 1988b. *Object and absolutive in Halkomelem Salish.* New York: Garland Publishing.
Gerdts, Donna B. 2000. Combinatory Restrictions on Halkomelem Reflexives and Reciprocals, in Zygmunt Frajzyngier and Traci S. Curl (eds.), *Reciprocals: Forms and Functions,* 133–160. Amsterdam: John Benjamins.
Gerdts, Donna B. to appear. Combinatory Conditions on Halkomelem Causatives, *Linguistics.*
Gerdts, Donna B. and Mercedes Hinkson. 1996. Salish lexical suffixes: A case of decategorialization, in Adele Goldberg (ed.), *Proceedings of the Conference on Conceptual Structure, Discourse, and Language*, 163–176. Stanford: CSLI.
Gerdts, Donna B. and Mercedes Hinkson. 2003. An Applicative use of the Halkomelem lexical suffix FACE. This volume.
Gerdts, Donna B., and Thomas E. Hukari. 1998. Inside and outside the middle, *ICSNL* 33: 166–220.
Gerdts, Donna B. and Thomas E. Hukari. 2000. Stacked Antipassives in Halkomelem Salish, *ICSNL* 35: 95–106.

Gerdts, Donna B. and Thomas E. Hukari. 2001. A-Subjects and Control in Halkomelem. *Papers from the 7th International Conference on Head-driven Phrase Structure Grammar.* http://csli-publications.stanford.edu/HPSG/HPSG00/

Gerdts, Donna B. and Thomas E. Hukari. 2002. The Morphosyntax of Halkomelem Denominal Verbs. Paper presented at Workshop on the Structure and Constituency of the Languages of the Americas, University of Alberta, Edmonton, Alberta.

Gerdts, Donna B. and Thomas E. Hukari 2003. The Dual Structure of Halkomelem Motion Verbs, *Proceedings of the Workshop on American Indigenous Languages* 2000, *Santa Barbara Working Papers in Linguistics* 10: 33–46.

Gerdts, Donna B. and Kaoru Kiyosawa. 2003a. Psych Predicates and Applicatives in Salish. Paper presented at the annual meeting of the Canadian Linguistic Association, Halifax, Nova Scotia.

Gerdts, Donna B. and Kaoru Kiyosawa. 2003b. Salish psych applicatives. Paper presented at the Workshop on American Indigenous Languages, University of California, Santa Barbara, California.

Hess, Thomas M. 1967. *Snohomish grammatical structure.* Ph.D. dissertation, University of Washington.

Hinkson, Mercedes Q. 1999. *Salishan lexical suffixes: A study in the conceptualization of space.* Ph.D. dissertation, Simon Fraser University.

Hukari, Thomas E. 1979. Oblique objects in Halkomelem, *ICSL* 14: 158–172.

Hukari, Thomas E., editor, and Ruby Peter, associate editor. 1995. *Hul'qumi'n'um' Dictionary.* Duncan, British Columbia: Cowichan Tribes.

Jelinek, Eloise and Richard A. Demers. 2002. A Note on "psych" nouns in Lummi, *ICSNL* 37: 181–188.

Kinkade, M. Dale. 1980. Columbian Salish *-xí, -ł, -túł, IJAL* 46: 33–36.

Kinkade, M. Dale. 1982. Transitive inflection in Moses-Columbian Salish, *KWPL* 7: 49–62.

Kinkade, M. Dale. 1991. *Upper Chehalis dictionary, UMOPL* 7.

Kinkade, M. Dale. 1998. Comparative Salish Seminar, Course notes, UBC.

Kiyosawa, Kaoru. 1999. Classification of applicatives in Salishan languages, *ICSNL* 34: 112–152.

Kiyosawa, Kaoru. 2002. Proto-Salish applicatives, *Working Papers of the Linguistics Circle* 15: 61–70. University of Victoria.

Kuipers, Aert H. 1967. *The Squamish language: Grammar, texts, dictionary.* (Janua Linguarum, Series Practica 73.) The Hague: Mouton.

Kuipers, Aert H. 1974. *The Shuswap language: Grammar, texts, dictionary.* (Janua Linguarum, Series Practica 225.) The Hague: Mouton.

Kuipers, Aert H. 1992. The Shuswap complex transitivitizers, *ICSNL* 27: 49–53.

Mattina, Anthony. 1994. *-tułt,* and more on Okanagan transitive forms: A working paper, *ICSNL* 29: 204–231.

Mattina, Nancy. 1993. Some lexical properties of Colville-Okanagan ditransitives, *ICSNL* 28: 265–284.
McGinnis, Martha. 2001. Phases and the syntax of applicatives, *NELS* 31: 333–349.
Montler, Timothy R. 1986. *An outline of the morphology and phonology of Saanich, North Straits Salish, UMOPL* 4.
Montler, Timothy R. 1996. Some Klallam paradigms, *ICSNL* 31: 257–263.
Munro, Pamela. 2000. The leaky grammar of the Chickasaw applicatives, *Papers from the Regional Meetings, Chicago Linguistic Society* 36: 285–310.
Munro, Pamela, and Catherine Willmond. 1994. *Chickasaw: An Analytical Dictionary*. Norman: University of Oklahoma Press.
Payne, Thomas E. 2000. Toward a substantive typology of applicative constructions. Paper presented at the Workshop on Applicatives in the Languages of the Americas, CAIL 39, AAA 99, San Francisco, California.
Peterson, David A. 1999. *Discourse-functional, historical and typological aspects of applicative constructions.* Ph.D. dissertation, University of California, Berkeley.
Suttles, Wayne. In press. *Musqueam: A Reference grammar of hən̓q̓əm̓ín̓əm̓ Salish*. Vancouver, British Columbia: UBC Press.
Thompson, Laurence C., and M. Terry Thompson. 1992. *The Thompson language, UMPOL* 8.
van Eijk, Jan P. 1997. *The Lillooet language: Phonology, morphology, syntax.* Vancouver, British Columbia: UBC Press.
Watanabe, Honoré. 1996. Sliammon (Mainland Comox) transitive constructions with *-ʔəm*, *-ni*, and *-mi*, *ICSNL* 31: 327–338.