

Halkomelem psych applicatives

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In Halkomelem, the relational applicative suffix *-meʔ* 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.¹ 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.² 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 redirective applicative by comparing the simple transitive construction in (1a) with the applicative in (1b).³

- (1) a. niʔ ləkʷ-at-əs kʷθə sčəšt.
AUX break-TR-3ERG DET stick
'She broke the stick.'
- b. niʔ ləkʷ-əlc-t-əs tʰə swiwləs ʔə kʷθə sčəšt.
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 *-əlc*. 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

ʔeʔəm	‘give’	ʔa-m-əs-t	‘give it to him/her’
x ^w ayəm	‘sell’	x ^w ayem-əs-t	‘sell it to him/her’
ʔiŵ-	‘instruct’	ʔiŵ-əs-t	‘show it to him/her’
yəθ-	‘tell’	yəθ-əs-t	‘tell him/her about it’

(3) *-əlc* benefactive

q̄wələt	‘bake it’	q̄wəl-əlc-ət	‘bake it for him/her’
θəyt	‘fix it’	θəy-əlc-ət	‘fix it for him/her’
k ^w ənət	‘take it’	k ^w ən-əlc-ət	‘take it for him/her’
pət ^θ ət	‘sew it’	pət ^θ -əlc-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 an adverse event. Compare the intransitive clause in (4a) with the applicative in (4b).

- (4) a. niʔ neŋ k^wθə swiŵləs.
 AUX go DET boy
 ‘The boy went.’
- b. niʔ nəm-nəs-əs k^wθə swiŵləs k^wθə swəyqeʔ.
 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

neḡ	‘go’	nəḡ-nəs	‘go toward him/her/it’
ʔewə	‘come’	ʔewə-nəs	‘come toward him/her/it’
ḡʷčənəm	‘run’	ḡʷčənəm-nəs	‘run toward him/her’
xʷəniʔ	‘get there’	xʷəni-ḡs	‘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

łciws	‘tired’	łciws-meʔ-t	‘tired of him/her’
qel	‘believe’	qel-meʔ-t	‘believe him/her’
siʔsiʔ	‘afraid’	siʔsiʔ-meʔ-t	‘afraid of him/her’
ḡiʔḡeʔ	‘ashamed’	ḡiʔḡeʔ-meʔ-t	‘ashamed of him/her’

b. source of verb of motion

łəw	‘run away’	łəw-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’
ḡe:m	‘cry’	ḡe:ḡəm-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’
yəq	‘snow’	yəq-meʔ-t-əm	‘(he/she/it) get snowed on’
sqʷəlqʷalḡʷ	‘hail’	sqʷəlqʷalḡʷ-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.

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-təʔe:-wəh̄n-meʔ-t
 NOM:LOC-like.that-INSIDE-REL-TR
 ‘thinking that way about it/him/her’

Table 1. Halkomelem Psych Applicatives

Gloss	Halkomelem
afraid, frightened of	siʔsiʔmeʔt
annoyed at	ciwəlmət (DR)
astonished, surprised at	čəqmeʔt
believe (lies)	qelmeʔt
dream about	ʔəlʔəlyəmət (DR)
embarrassed, shy of	xiʔxeʔmeʔt
fed up with	kʷiləmeʔt
forget about	melqmeʔt
get full of	məqmiʔt (DR)
happy for	hiləkʷmeʔt
happy for	ʔiyəsmeʔt
jealous of	wəwistəhəqmeʔt
lonely, sad for	səlsəqʷmeʔt
mad at	tetiyaqmət
miss	qəlmeʔt
respect	siʔəmmeʔt
remember	hekʷmeʔt
sad for	qiləsmeʔt
sad for	səwsəwmeʔt
sense	siwəlməʔt
startled at	tʰəyəkʷmeʔt
suspicious of	kʷeləkʷmeʔt
think, decide about	xʷθtiwənməʔt
think that way about	štəʔe:wəh̄nmeʔt
think about	xʷqʷələwənməʔt
tired of waiting for	qəsmeʔt
tired of	lciwsmeʔt

Table 2. Verbal suffix template

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

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) *-stəḥəq* in ‘jealous’. Examples like these have led us to conclude that applicatives follow lexical suffixes, as represented in the suffix template in Table 2.⁴

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).⁵

- (8) *k^weŷk^wəŷ-me[?]-t ‘hungry for it’
 *təḥ-me[?]-t ‘make a mistake about it’
 *hile:ḥəq-me[?]-t ‘pretending about it’
 *x^wen-me[?]-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. t^θəŷk^w-t b. t^θəŷk^w-me[?]-t
 startle-TR startle-REL-TR
 ‘startle him/her’ ‘be startled at him/her’
- (10) a. siwəl-t b. siwəl-me[?]-t
 sense-TR sense-REL-TR
 ‘get his/her attention’ ‘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) čq-ət č ceʔ k^wθə nəčəwməx^w ?i ceʔ tecəl.
surprise-TR 2SUB FUT DET visitor AUX FUT arrive
‘You will surprise the visitors when they arrive.’

(12) čəq-meʔ-t č ceʔ k^wθə nəčəwməx^w ?i 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. ?iyəs-stəx^w b. ?iyəs-meʔ-t
happy-CS happy-REL-TR
‘make him/her happy’ ‘happy for him/her’

Compare (14) and (15):

(14) ?i cən qi:qəl¹-stəx^w.
AUX 1SUB believe(IMPERF)-CS:3OBJ
‘I am making him believe my lies.’

(15) ?i cən qi:qəl¹-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-stəx^w k^wθə sməyəθ.
AUX 1SUB frighten-CS:3OBJ DET deer
‘I frightened the deer.’

(17) niʔ siʔsiʔ-meʔ-θamš-əs k^wθə sməyəθ.
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.

Table 3. Transitive object inflection

	Transitive object	Applied object
1sg	k ^w ənəθamβ	siʔsiʔmeʔθamβ
2sg	k ^w ənəθamə	siʔsiʔmeʔθamə
1pl	k ^w ənətalex	siʔsiʔmeʔtalxə
2pl	k ^w ənətalə	siʔsiʔmeʔtalə
3rd	k ^w ənət	siʔsiʔmeʔt
	‘take’	‘frightened of’

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.)

Table 4. Main clause passive inflection

	Transitive passive	Applied passive
1sg	k ^w ənəθələm	siʔsiʔmeʔθələm
2sg	k ^w ənəθa:m	siʔsiʔmeʔθa:m
1pl	k ^w ənətələm	siʔsiʔmeʔtaləm
2pl	k ^w ənətələm	siʔsiʔmeʔtaləm
3rd	k ^w ənətəm	siʔsiʔmeʔtəm
	‘be taken’	‘be frightened of’

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.⁶

- (18) ni? si?si?-me?-θel-əm ?ə-ǎ 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.”

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).⁷

- (19) a. k^wələš-θət ‘shoot self’
 b. k^wələš-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).⁸

- (20) ?i cən wəl łciws-ma?-θət k^wə-nə-s ?i qaqi?
 AUX 1SUB already tired-REL-REFL DET-1POS-NOM AUX sick
 ‘I’m tired of myself being sick.’

- (21) ni? cən si?si?-me?-θət ?ə k^wθə nə
 AUX 1SUB frighten-REL-REFL OBL DET 1POS
 q̄ilx̄ənetən ni? ?ə k^wθə šk^wcastəñ.
 reflection AUX OBL DET mirror
 ‘I frightened myself with my reflection in the mirror.’

- (22) ?e?ət xi:ʔxe?-me?-təl t^θə s̄l̄əliqəł k^w-s
 AUX shy(IMPERF)-REL-REC DET children DET-NOM
 q^wəlq^wəl-təl-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.

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 *-nəx^w* (24).

- | | | |
|------|--|---------------------------------|
| (23) | k ^w ən-ət | ‘take him/her/it (on purpose)’ |
| | q ^w aq ^w -ət | ‘club him/her/it (on purpose)’ |
| | k ^w ələš-t | ‘shoot him/her/it (on purpose)’ |
| (24) | k ^w ən-nəx ^w | ‘grab him/her/it’ |
| | q ^w əq ^w -nəx ^w | ‘club him/her it accidentally’ |
| | k ^w ələš-nəx ^w | ‘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) | *si [?] si [?] -me [?] -nəx ^w | ‘accidentally be frightened by him/her/it’ |
| | *hə [?] k ^w -me [?] -nəx ^w | ‘managed to remember him/her/it’ |
| | *k ^w el-me [?] -nəx ^w | ‘managed to hide from him/her/it’ |
| | *ya:ys-me [?] -nəx ^w | ‘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. | ni [?] | q ^w əl-ət-əs | t ^θ ə | sce:ltən. | |
| | | AUX | bake-TR-3ERG | DET | salmon | |
| | | | | | ‘He cooked/barbecued the salmon.’ | |
| | b. | ni [?] | q ^w əl-əm | ʔə | t ^θ ə | sce:ltən. |
| | | AUX | bake-MID | OBL | DET | salmon |
| | | | | | ‘He cooked/barbecued the salmon.’ | |

- (27) a. naʔət q^wəs-t-əs t^θə ʔeləm̄ sce:ltən.
 AUX go.in.water-TR-3ERG DET salted salmon
 ‘She put the salted fish in water.’
 b. naʔət q^ws-els ʔə t^θə ʔeləm̄ sce:ltən.
 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. niʔ cən ɟel̄-meʔ-t k^wθə ləplit.
 AUX 1SUB believe-REL-TR DET priest
 ‘I believed the priest.’
 b. *niʔ cən ɟel̄-meʔ-əm/əls ʔə k^wθə ləplit.
 AUX 1SUB believe-REL-MID/ACT OBL DET priest
 ‘I believed the priest.’
- (29) a. k^wuk^w-meʔ-t k^wθəñ sil̄ə!
 cook-REL-TR DET:2POS grandparent
 ‘Cook for your grandfather!’
 b. *k^wuk^w-meʔ-əm/əls ʔə k^wθəñ sil̄ə!
 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.⁹

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.

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, “advances” 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.

Table 5. Object Properties

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

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 k^wθə sq^wəmeɣ.
 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 ʔə.¹⁰

- (31) ni? cən si?si? ʔə k^wθə snəx^wəł.
 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.

- (32) ni? si?si?-me?-t-əs k^wθə sʔi?ʔqəł k^wθə sq^wəmeɣ.
 AUX frighten-REL-TR-ERG DET child DET dog
 ‘The child was frightened at the dog.’
- (33) ni? si?si? k^wθə sʔi?ʔqəł ʔə k^wθə snəx^wəł.
 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 ʔə
 - 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 (Gerds 1988b, Hukari 1979).

- (35) Extraction in Halkomelem (wh-questions, relative clauses, clefts, pseudo-clefts)
- a. No special morphology
 - ergatives (ergative agreement is deleted), absolutes
 - b. Nominalization with *s-*
 - patients of antipassives, patients of applicatives, objects of denominal verbs
 - c. Nominalization with $\check{s}(x^w)$ -
 - obliques (location, direction, instrumental, source, manner, stimulus)

The true obliques, such as instrument, locative, and goal of motion, extract through nominalization with the prefix $\check{s}(x^w)$ -. This rule is given in (35c). Stimuli in intransitive clauses also extract in this fashion, as the data in (36)–(38) show.

- (36) stem $k^wə$ ni^ʔ ʔəñ-š-ɖel^ʔ
 what DET AUX 2POS-NOM-believe
 ‘What did you believe?’
- (37) stem $alə$ $k^wə$ ʔi ʔəñ-š-hilək^{wʔ}
 what EMPH DET AUX 2POS-NOM-happy
 ‘What ever are you happy about?’
- (38) $sc\lambdaəm-s$ $k^w\thetaə$ ni^ʔ nə-š-čəɖ.
 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) *łwet niʔ qel-meʔ-t-əxʷ?*
 who AUX believe-REL-TR-2SSUB
 ‘Who did you believe?’
- (40) *wet kʷ ʔi hekʷ-meʔ-t-əxʷ?*
 who DET AUX remember-REL-TR-2SSUB
 ‘Who are you remembering?’
- (41) *nił tʰeɣ swəɣqeʔ niʔ xiʔxeʔ-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 qel-meʔ-t kʷθə ləplit.*
 AUX 1SUB believe-REL-TR DET priest
 ‘I believed the priest.’
- (43) *niʔ cən qel ʔə kʷθə sqʷaqʷəl-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)?**niʔ cən qel 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 qel-meʔ-t kʷθə sqʷaqʷəl-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) ?i cən qel-meʔ-t kʷθə ləplit kʷis qʷaqʷəl.
 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.

In Table 7 we give figures totaling all the animates versus the inanimates given from the point of view of each construction type. We see that animacy does play some kind of role, though obviously we need to do further research on this topic.

Table 6. Applied object vs. oblique NP

	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 7. Animacy of stimuli in psych clauses

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

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 tʰə speʔxʷəm
 AUX INCHO frightened-REL-3ERG DET fog
 kʷs nem-s ʕəliḿ-t-əs tʰə snəxʷəl-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 wəl ʕtəʔe:wəh-meʔ-θət kʷə-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 wəl kʷiləm ʔə kʷθə ʔi hiwələḿ sʕəliqəlʔ
 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 transitivity marker of the form *-meʔt* 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 *-meʔt* or alternatively *-mət*. The speakers we have worked with used these in free variation in examples like the following:

(50)	ɪciwsméʔt	ɪciwsmət	‘tired of him/her’
	qəléméʔt	qəlémət	‘believe him/her’
	siʔsiʔméʔt	síʔsiʔmət	‘afraid of him/her’
	xiʔxeʔméʔt	xiʔxeʔmət	‘ashamed of him/her’
	qəléméʔt	qəlémət	‘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.¹¹

The Downriver dialect also has psych applicatives. Suttles (in press: §10.4.5) identifies a suffix *-mət* ‘concern’, that appears variously as *-əmət* ~ *-əmət* ~ *-mət* ~ *-mít* ~ *-méʔt*. 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 *-meʔt* while the Downriver version was *-miʔt*, giving pairs like ‘afraid of him/her’ *siʔsiʔmeʔt* Island dialect and *si:siʔmiʔt* 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’ *tical* Downriver/*tecəl* Island¹² or the third person subordinate passive suffix *čewəti:t*¹³ Downriver/*čéwəwət* Island ‘he/she was helped’.

For Upriver Halkomelem, Galloway (1993: 249) identifies a transitive 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.¹⁴ 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 (∅ indicates that the form is not used), in Table 8.

Table 8. Psych Applicatives in the three Halkomelem dialects

Gloss	Island	Downriver	Upriver
afraid, frightened of	siʔsiʔmeʔt		si:si:mət
annoyed at	∅	čiwəlmeʔt	ʔ ⁰ iwəl̩mət
believe (lies)	qelmeʔt		qəl̩mət
dream about	∅	ʔəlyámət	ʔəliyámət
get full of	∅	məq̩mít	
happy for	hilək ^w meʔt	hilək ^w mət	
jealous of	wəwistəhəqmeʔt		wawistəl̩əq̩mət
mad at	ʔetiyəq̩mət	ʔéyəq̩meʔt	
remember	hek ^w meʔt	hək ^w meʔt, hək ^w mət	
sense	siwəlmeʔt	siwəl̩mət	siwəl̩mət
think that way about	ʂtəʔe:wəh̩meʔt		ʂtəwəl̩mət
tired of	łciwsmeʔt	łciwsmət	

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/-meʔt* 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.

- (51)
- | | | |
|-------------------------------------|--------------------------------------|-------------------------|
| x ^w iyəh̩er̩-ət | *x ^w iyəh̩em̩eʔt | ‘listen to him/her’ |
| ḡ ^w čənəm-ət | *ḡ ^w čənəmeʔt | ‘run for it’ |
| ʔ ⁰ x ^w im-ət | *ʔ ⁰ x ^w imeʔt | ‘pity him/her’ |
| čeləm-ət | *čeləmeʔt | ‘hear him/her/it’ |
| lel̩əm-ət | *lel̩əmeʔt | ‘looking after him/her’ |
| nəqəm-ət | *nəqəmeʔt | ‘dive for it’ |
| ʔcəm-t | *ʔ(i)cəmeʔt | ‘swim after him/her/it’ |
| cł̩m-ət | *cł̩(ə)meʔt | ‘jump after it’ |
| čtem-ət | *čtemeʔt | ‘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.¹⁵

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.¹⁶

(52)	<i>kʷiləm</i>	'fed up'	<i>kʷiləmeʔt</i>	'fed up with him/her'
	<i>siʔem</i>	'respect'	<i>siʔəmmeʔt</i>	'respect him/her'
	<i>qsəm</i>	'tired of waiting'	<i>qsəmmeʔt</i>	'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.

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.¹⁷ This suffix is an old, non-productive suffix that appears in the names for

Table 9. Reflexes of Proto-Salish *-mi

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

a variety of instruments, for example: *k^wəcmin* ‘deer hoof rattle’ (*k^wəc* ‘noise’), *l̥cimən* ‘comb’ (*li̥c* ‘shear, cut’), *l̥təmən* ‘herring rake’ (*l̥t̥* ‘flipped’), *ʔəyəmən* ‘weaving loom’ (root not recognized), *k^wəx^wmən* ‘deer hoof’ (cf. *k^wəx^w-ət* ‘knock on it’), *q̣ətmən* ‘fish fin’ (cf. *q̣t-aθən* ‘walk along the shore’).¹⁸

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):¹⁹

- (53) *ishtabi* ‘kill with’; cf. *abi* ‘kill’
ishtalhpo ‘be paid for with (e.g., money)’; cf. *alhpo* ‘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’

- (58) ni? cən c-čel-mən.
AUX 1SUB do-believe-MIN
'I caused someone to believe.'
- (59) ni? cən c-łciws-mən
AUX 1SUB do-believe-MIN
'I'm the one that caused someone to be tired. [not intentional]'
- (60) ǰwəm č ?i c-t^θəyk^w-mən ?əw k^wələš-t-əx^w t^θə sk^wələš.
fast 2SUB AUX do-startle-MIN CON shoot-TR-2SUB 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-čəq-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) k ^w əmləx ^w | 'root' | c-k ^w əmləx ^w | 'get roots' |
| s-taləs | 'spouse' | c-taləs | 'get a spouse' |
| telə | 'money' | c-tetələ | 'earning money' |
| s-wetə | 'sweater' | c-wetə | 'make a sweater' |
| snəx ^w əl | 'canoe' | c-nəx ^w əl | '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-mək^w* 'get all of them', *c-pəq* 'have white ones') and on adjectives modifying NP heads:

- (63) ?i: č ?əw c-pəq ləmətulqən?
AUX:Q 2SUB CON VBL-white wool
'Do you have any white wool?'
- (64) ?i: č ?əw c-čəy^x sce:łtən?
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.²⁰ 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-haq^w ‘catch a whiff’ (cf. *haq^w-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-qel* ‘do believe’, **c-t^θəjk^w* ‘do startled’, **c-lciws* ‘do tired’, **c-hilək^w* ‘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 *q^wəl-mən* ‘talk, speech, lecture’. As noted above the verb *q^wal* ‘talk’ can take the relational suffix: *q^wəl-me²-t* ‘talk to/lecture/bawl out him/her.’

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

- (66) *ni² wəl c-qəl-mən t^θə yəθ ʔəw lə²*
sqiləsəm.
 AUXPERF 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-t^θəjk^wme²t*. And the stimulus cannot appear as a direct argument NP:

- (67) **ni²cən c-qəl-mən k^wθə-nə q^wəlmən.*
 AUX1SUB VBL-believe-MIN DET-1POS talk
 ‘I made someone believe with my talk.’

However, it can appear as an oblique phrase.

- (68) *ni² cən c-qəl-mən ʔə k^wθə-nə q^wəlmən.*
 AUX1SUB VBL-believe-MIN OBL DET-1POS talk
 ‘I made someone believe with my talk.’

- (69) ni? wəł cən c-ǰəl-mən t^θə šmiθənqəñ
 AUX PERF 1SUB VBL-believe-MIN DET liar
 ?ə t^θə ni? sq^wilq^wəl-s
 OBL DET AUX stories-3POS
 ‘The liar got someone to believe his stories.’

- (70) ni? cən c-t^θəy^kw-mən ?ə k^wθə sq^wəməy.
 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 $\check{s}(x^w)$ -:

- (71) nił ce? pə? t^θeý siləwaləm ?əñ
 3EMPH FUT EMPH DET toy 2POS
 š-c-hilək^w-mən ?ə k^wθə s^łəliqəł.
 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) *ni? cən c-łciws-mən k^wθə 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) ni? ǰəl-me?-θamš-əs k^wθə x^wələnitañ.
 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) ni[?] cən c-ɟəl-mən (ʔə k^wθə x^wələnɪtəm)
 AUX 1SUB VBL-believe-MIN OBL DET White.man(PL)
 ʔə k^wθə-nə ɟ^wəlmən.
 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/-miñ* 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(?)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

Table 10. Salish relational applicatives²¹

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

perspective, following Kinkade's reconstructions. Actual reflexes of the suffix *-mi in individual languages were given in Table 9 above.

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) *čásxém-mí-t*
afraid-REL-TR
'be afraid of someone/something'

Halkomelem (Gerdtts 1988b: 139)

- (76) *síʔsiʔ-meʔ-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) *páq^wuʔ-min*
afraid-REL:TR
'to be afraid of something'

- Shuswap* (Kuipers 1992: 50)
- (79) *n̄xel-mn-s*
afraid-REL:TR-3ERG
'be afraid of'
- Okanagan* (A. Mattina 1994: 219)
- (80) *n-ḥilməntsən*
n-ḥíl-min-nt-s-ən
LOC-afraid-REL-TR-2OBJ-1ERG
'I got scared of you.'
- Coeur d'Alene* (Doak 1997: 178)
- (81) *iȳ-n-ḥíł-mən-əm*
in-ȳc-hn-ḥíl-min-m
2GEN-CONT-LOC-fear-REL-M
'Thou art fearing him.'
- Upper Chehalis* (Kinkade 1991: 113)
- (82) *q^wán-ts*
afraid-REL
'afraid of'
- Tillamook* (Egesdal and Thompson 1998: 254)
- (83) *qeš qe n-ḥ^wayəš-əwí-n-i k s-qéḥeʔ*
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.

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

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

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

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
 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 [-t̩uŋu, -ŋkuŋu] covers the sense of indirect cause or reason..." And he gives the following examples:

- (88) piciri-t̩uŋu ŋai miłti wakini.
 pituri-CAUSAL I eyes spin
 'I'm high on pituri.'
- (89) ŋai ɾumpi ŋaa iti-jiŋu miłtiwakini-ŋin-tuŋu.
 I fear here man-CAUSAL intoxicated-PART-CAUSAL
 'I'm afraid of drunken men.'
- (90) ati-ŋt̩uŋu ŋai maanti-ŋa wakaɾi-t̩uŋu aɾi-li-ŋin.
 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.

Notes

1. The data that we present here are based on our original fieldwork with speakers of the Island dialect (həlqəmínə̀m) and the Downriver dialect (hə̀nqəmínə̀m). 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.
2. 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).
3. 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.
4. 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.

5. 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.
6. 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.
7. See Gerdts (2000) for a discussion of the morphology, syntax, and semantics of the reflexive and the reciprocal.
8. 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 anomalous. 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).
9. So we actually do not know the relative order of antipassives and applicatives in the template, since they do not combine.
10. 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).
11. 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 *meʔ-*. Since stress in Island Halkomelem is thus largely predictable, we do not usually indicate it in our data. Sequences of schwa and glottal stop do not occur.
12. Some Nanaimo speakers use *tical*.
13. The Downriver form shows deletion of the intervocalic resonant and coalescence.
14. Neither Galloway (1993) or Suttles (in press) discuss the syntax of psych applicatives in any detail.
15. 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.
16. 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.
17. 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.

18. The suffix *-min* appears commonly on words for ‘residue’ of an activity. For example: *yəq^wmin* ‘ashes’ (*yəq^w* ‘burn’) and *q^wəlsmən* ‘broth’ (*q^wəls* ‘boil’). This use is more productive. So one speaker jokingly referred to apple juice as *q^wa[?]apmən* (*q^wa[?]ap* ‘crabapple’).
19. We thank Charles Ulrich for pointing this out to us. This proclitic comes from the verb *ishi* ‘get, take’.
20. Jelinek and Demers (2002) discuss the categoriality of forms meaning ‘like’, ‘dislike’, ‘intend’, ‘shame’, ‘remember’, and ‘forget’ in Lummi, a closely related Central Salish language.
21. 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 (Gerds 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.

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