

Salish Psych Applicatives¹

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1 Salish applicatives

There are 23 languages in the Salish language family of the Pacific Northwest, and they are grouped into 5 branches as shown in Table 1.

Branch		Language
Bella Coola		Bella Coola
Central Salish		Comox/Sliammon, Clallam, Halkomelem, Lushootseed, Nooksack, Northern Straits, Pentlatch, Sechelt, Squamish, Twana
Interior Salish	Northern Interior Salish	Lillooet, Shuswap, Thompson
	Southern Interior Salish	Coeur d'Alene, Columbian, Kalispel/Flathead/Spokane, Okanagan/Colville
Tsamosan		Lower Chehalis, Upper Chehalis, Cowlitz, Quinault
Tillamook		Tillamook

Table 1: Branch of the Salish language family

Salishan languages are known for their polysynthetic structure. They exhibit a large number of affixes (prefixes, suffixes, and infixes) and reduplications, a rich agreement system of personal inflection, a rich system of transitive suffixes, and lexical suffixation (which is like noun incorporation, only the lexical suffix bears no resemblance to free-standing noun of same or similar meaning). A template for the verbal suffixes is given in Table 2.

root	+1 lexical suffix	+2 applicative	+3 antipassive	+4 transitive (- control, causative)	+5 object, passive, reflexive, reciprocal	+6 subject
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Table 2. Verbal suffix template²

In this paper, we address aspect one function of the zone 2 suffixes—the applicatives. An applicative construction is where a non-patient NP is the object of the clause and verb morphology signals the semantic role of the object. As previously shown in Kiyosawa (1999, 2000, 2002), Salish languages have two types of applicatives—redirective and relational.³ In redirective constructions, the verb stem is usually transitive, and the semantic role of the applied object is usually goal, benefactive, malefactive, or possessor.⁴

• Dative

(1) *Spokane* (Carlson 1980: 24)

x^wíç-š-t-ən łu[?] Agnes łu[?] t yámš^we[?]
 gave-APPL-TR-1SG.SUB ART Agnes ART OBL basket
 ‘I gave a basket to Agnes.’

• Benefactive

(2) *Okanagan* (N. Mattina 1993: 265)

Mary ʔac-xí-t-s i[?] t snklča[?]sqáħa[?] i[?] ttwít.
 Mary tie-APPL-TR-3ERG ART CP horse ART boy
 ‘Mary tied the horse for the boy.’

• Malefactive

(3) *Thompson* (Thompson & Thompson 1980: 28)

ʔúq^we[?]-x-cm-s tə tíy.
 drink-APPL-TR:1SG.OBJ-3ERG ART tea
 ‘She drank my tea up on me.’

• Possessor

(4) *Okanagan* (N. Mattina 1993: 265)

Mary ʔác-ł-t-s i[?] ttwít i[?] kəwáp-s.
 Mary tie-APPL-TR-3ERG ART boy ART horse-3GEN
 ‘Mary tied the boy’s horse (for him).’

In terms of their general syntactic characteristics, Salish languages have verb initial word order, head marking, and argument NPs are caseless. We can see the syntactic effect of the applicative suffix by comparing (5a) with (5b):

(5) *Halkomelem* (f.n.)

a. ni[?] lək^w-at-əs k^wθə sčəšt.
 AUX break-TR-3ERG DET stick
 ‘She broke the stick.’

b. ni[?] lək^w-əłc-t-əs t^θə swiwləs ʔə k^wθə sčəšt.
 AUX break-BEN-TR-3ERG DET boy OBL DET stick
 ‘She broke the stick for the boy.’

The verb in (5a) 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 (5b) is the benefactive applicative. The verb is suffixed with the benefactive applicative *-əłc*. 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.

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.

Psychological Event

- (6) lháyel-**mít** ‘ashamed of’ *Sechelt* (Beaumont 1985: 108)
 (7) c[ɫəš-eš(-s)-wəš-š ‘angry at’ *Tillamook* (Egesdal and Thompson 1998: 257)

Motion

- (8) təkʔilx-**mn-s** ‘run to’ *Shuswap* (Kuipers 1992: 50)
 (9) kʷənəŋàt-**nəs-ájəs** ‘ran after’ *Saanich* (Montler 1986: 168)

Speech Act

- (10) qʷay-**mi-θi** ‘scold’ *Sliammon* (Watanabe 1996: 53)
 (11) yáʔš-**n-ń** ‘tell’ *Upper Chehalis* (Kinkade 1991: 170)

Transfer-Source

- (12) kʷúlŋ-**ni-t** ‘borrow from’ *Squamish* (Kuipers 1967: 79)
 (13) qáda-**di-d** ‘steal from’ *Lushootseed* (Bates, Hess & Hilbert 1994: 172)

Adversative

- (14) čʔəl-**ni-θay-ə**m ‘I got rained on.’ *Sliammon* (Watanabe 1996: 334)
 (15) tékɫ-**m-t-i-t** ‘We get rained on.’ *Thompson* (Thompson & Thompson 1992: 74)

We can see the syntactic effect of the relational applicative suffixes by comparing the intransitive clause in (16a) with the applicative in (16b):

(16) *Halkomelem* (f.n.)

- a. niʔ neŋ kʷθə swiʷləs.
 AUX go DET boy
 ‘The boy went.’
- b. niʔ nəʔeŋ-**nəs-əs** kʷθə John.
 AUX go-DIR:TR-3ERG DET John
 ‘He went up to John.’

(16a) is intransitive, shown by the lack of a transitive suffix and the 3rd person ergative marker, and ‘John’, the goal of the motion, is the object. (See Gerdts 1988b for discussion). Directional applicatives are marked with the suffix *-nəs* in *Halkomelem*.

There are twelve different applicative suffixes in Salish languages, and the reconstruction of proto-forms are done by Kinkade (1998): **-xi* (*-xi*, *-ši*, *-si*, *-yi*), **-VmV* (*-ʔəm*, *-émt*, *-tmi*), *-as/-əs*, *-ɫ*, *-ɫc*, *-tuɫt*, *-txʷt*, **-mi* (*-min*, *-minʔ*, *-mis*, *-meʔ*, *-bi/-i*, *-əwi*, *-ŋiy*), *-m*, **-ni* (*-di*), **-nəs* (*-c/-s*, *-tas/-ts*), *-amk*. Each Salish language has from two to six applicative suffixes, and at least one redirective and one relational suffix as shown in Table 3.

Branch	Language	Redirective #: Relational #	Redirective	Relational
Bella Coola	Bella Coola	??1:1	?-amk	-m
Central Salish	Sliammon-Comox	1:2	-ʔəm	-mi, -ni
	Sechelt	1:2	-ém	-mí, -ni
	Squamish	1:2	-ši	-minʔ, -ni
	Clallam	1:2	-sí	-ŋə, -nəs
	Saanich	1:2	-si	-ŋiy, -nəs
	Halkomelem	2:2	-as, -lc	-meʔ, -nəs
	Lushootseed	1:3	-yi	-bi, -di, -c/-s
Tillamook	Tillamook	1:2	-ši	-əwi, -əs
Tsamosan	Upper Chehalis	3:3	-ši, -tmi, -tux ^w t/-tx ^w t	-mis/-mn, -ni, -tas/-ts
Northern Interior Salish	Lillooet	1:1	-xi	-min/-miñ
	Thompson	1:1	-xi	-mi
	Shuswap	1:1	-x(í)	-m(í)
Southern Interior Salish	Okanagan	3:1	-xi, -ł, -túł	-min
	Spokane/Kalispel	2:1	-ši, -ł	-mi
	Coeur d'Alene	3:1	-ši, -ł, -túł	-mi
	Columbian	3:1	-xi, -ł, -túł	-mi

Table 3. Distribution of redirective vs. relational applicatives⁵

Relational applicative suffixes show up in all of the Salish languages. They are used for psychological events, as in (6) and (7), goals of motion, as in (8) and (9), goals of speech acts, as in (10) and (11), the source of transfer verbs, as in (12) and (13), and for the undergoer of adverse events as in (14) and (15). Table 4 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 (1998) reconstructions.

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

Table 4. Salish relational applicatives

This paper focuses on one use of the relational applicative—its use to encode the stimulus of a psychological event. We see it is a general Salish pattern to use a relational applicative on a psychological predicate. For example, the following data in Table 5 show psych applicatives based on the root meaning ‘afraid’ in several languages:

Language	Psych Applicative	Source
Sechelt	čásxém- mí -t ‘be afraid of someone/ something’	Beaumont 1985: 102
Halkomelem	síʔsíʔ- meʔ -t ‘afraid of him/her/it’	f.n.
Lushootseed	xəc- bí -d ‘afraid of him’	Hess 1967: 39
Lillooet	páqʷuʔ- min ‘to be afraid of something.’	van Eijk 1997: 114
Shuswap	nxel- mn -s ‘be afraid of’	Kuipers 1992: 50
Okanagan	nǰíl- mən -ts-ən ‘I got scared of you.’	A. Mattina 1994: 219
Coeur d’Alene	iý-n-ǰíl- mən -əm ‘Thou art fearing him.’	Doak 1997: 178
Upper Chehalis	qʷán- ts ‘afraid of’	Kinkade 1991: 113
Tillamook	qeš qe n-ǰʷayǰəš- əwí -n-i k s-qéǰeʔ ‘I am not afraid of dogs.’	Egedal & Thompson 1998: 254

Table 5. Psych applicatives with ‘afraid’

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

2 Halkomelem psych applicatives

In this section we turn to a case study based on original fieldwork on psych applicatives in one Salish languages, Halkomelem, a Central Salish language, currently spoken by around one hundred elders in southwest British Columbia.⁶

As illustrated in the previous section, Salish applicative constructions can be divided into two types—redirective and relational. Halkomelem has two suffixes of each type, and psych applicative suffix *-meʔ* is one of the two relational applicative suffixes—the directional suffix *-nəs* and the general relational applicative suffix *-meʔ*. 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.

(17) *-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’
xiʔxeʔ	‘ashamed’	xiʔxeʔ-meʔ-t	‘ashamed of him/her’

b. source of verb of motion

ław	‘run away’	ław-mə-t	‘run away from him/her’
k ^w əl	‘hide’	k ^w əl-meʔ-t	‘hide from him/her’

c. goal of speech or expressive act

xe:m	‘cry’	xe:χəm-mə-t	‘crying over him/her’
q ^w al	‘speak’	q ^w əl-mə-t	‘lecture to, bawl out him/her’

d. adversative (often in passive)

θeʔc	‘get dark’	θeʔc-meʔ-t	‘get dark on him/her’
łəməx ^w	‘rain’	łəməx ^w -meʔ-t-əm	‘(he/she/it) get rained on’

e. benefactive of intransitive verb

k ^w uk ^w	‘cook’	k ^w uk ^w -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.

To date we have found 27 examples of psychological, cognitive, or perceptual predicates that form 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	xi:ʔxeʔmeʔt
fed up with	k ^w iłəmeʔt
forget about	mełqmeʔt
get full of	məqmiʔt (DR)
happy for	hiłək ^w meʔt
happy for	ʔiyəsmeʔt
jealous of	wəwistəñəqmeʔt
lonely, sad for	səlsəłq ^w meʔt
mad at	teʔiyəqmət
miss	qəlmeʔt

respect	siʔəḿmeʔt
remember	heḱʷmeʔt
sad for	qiləsmeʔt
sad for	səwsəwmeʔt
sense	siwəlmeʔt
startled at	tʰəyḱʷmeʔt
suspicious of	ḱʷeləḱʷmeʔt
think, decide about	xʷθtiwənməʔt
think that way about	ʃtəʔe:wənməʔt
think about	xʷqʷələwənməʔt
tired of waiting for	q̣səmeʔt
tired of	lciwsmeʔt

Table 6. Halkomelem Psych Applicatives

The relational suffix appears immediately following the verb stem, or it can follow a lexical suffix, as in the following example:

- (18) ʃ-təʔe:-wəḱ-məʔ-t
 NOM+LOC/INST-like.that-INSIDE-REL-TR
 ‘thinking that way about it/him/her’

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 (19).

- (19) *ḱʷeyḱʷəy-məʔ-t ‘hungry for it’
 *təḱ-məʔ-t ‘make a mistake about it’
 *hile:ḱəq-məʔ-t ‘pretending about it’
 *xʷen-məʔ-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. We can see the difference in the two types of clauses by contrasting (20a) and (20b): the subject ‘you’ is the agent in (20a), but it is the experiencer in (20b).

- (20) a. ʃq-ət ʃ ceʔ kʷθə nəcəwməxʷ ʔi ceʔ tecəl.
 surprise-TR 2SUB FUT DET visitor AUX FUT arrive
 ‘You will surprise the visitors when they arrive.’

- b. $\text{c}^{\text{a}}\text{q}^{\text{a}}\text{-me}^{\text{?}}\text{-t}$ c $\text{ce}^{\text{?}}$ $\text{k}^{\text{w}}\text{θ}^{\text{a}}$ $\text{n}^{\text{a}}\text{c}^{\text{a}}\text{w}^{\text{m}}\text{x}^{\text{w}}$?i $\text{ce}^{\text{?}}$ $\text{tec}^{\text{a}}\text{l}$.
 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 (21a). Compare (21a) and (21b):

- (21) a. $\text{ni}^{\text{?}}$ $\text{c}^{\text{a}}\text{n}$ $\text{si}^{\text{?}}\text{si}^{\text{?}}\text{-st}^{\text{a}}\text{x}^{\text{w}}$ $\text{k}^{\text{w}}\text{θ}^{\text{a}}$ $\text{sm}^{\text{a}}\text{y}^{\text{a}}\text{θ}$.
 AUX 1SUB frighten-CS:3OBJ DET deer
 ‘I frightened the deer.’
- b. $\text{ni}^{\text{?}}$ $\text{si}^{\text{?}}\text{si}^{\text{?}}\text{-me}^{\text{?}}\text{-θ}^{\text{a}}\text{m}^{\text{s}}\text{-}^{\text{a}}\text{s}$ $\text{k}^{\text{w}}\text{θ}^{\text{a}}$ $\text{sm}^{\text{a}}\text{y}^{\text{a}}\text{θ}$.
 AUX frighten-REL-TR:1OBJ-3ERG DET deer
 ‘The deer was frightened of me.’

The causer in (21a) is a direct, purposive agent and is expressed as the subject of the transitive. But the first person in (21b) 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 Applied objects versus oblique NPs

There are two different ways of expressing a stimulus—as an applied object in a psych applicative (22) or as an oblique NP in an intransitive psych construction (23).

- (22) ni $\text{c}^{\text{a}}\text{n}$ $\text{si}^{\text{?}}\text{si}^{\text{?}}\text{-me}^{\text{?}}\text{-t}$ $\text{k}^{\text{w}}\text{θ}^{\text{a}}$ $\text{sq}^{\text{w}}\text{a}^{\text{m}}\text{e}^{\text{y}}$.
 AUX 1SUB frighten-REL-TR DET dog
 ‘I was frightened at the dog.’
- (23) ni $\text{c}^{\text{a}}\text{n}$ $\text{si}^{\text{?}}\text{si}^{\text{?}}$?^{a} $\text{k}^{\text{w}}\text{θ}^{\text{a}}$ $\text{sn}^{\text{a}}\text{x}^{\text{w}}\text{a}^{\text{l}}$.
 AUX 1SUB frighten OBL DET canoe
 ‘I was frightened at the car.’

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 (24) while oblique NPs are often inanimate, as in (25).

- (24) $\text{ni}^{\text{?}}$ $\text{c}^{\text{a}}\text{n}$ $\text{q}^{\text{e}}\text{l}^{\text{a}}\text{-me}^{\text{?}}\text{-t}$ $\text{k}^{\text{w}}\text{θ}^{\text{a}}$ $\text{l}^{\text{a}}\text{p}^{\text{l}}\text{i}^{\text{t}}$.
 AUX 1SUB believe-REL-TR DET priest
 ‘I believed the priest.’
- (25) $\text{ni}^{\text{?}}$ $\text{c}^{\text{a}}\text{n}$ $\text{q}^{\text{e}}\text{l}^{\text{a}}$?^{a} $\text{k}^{\text{w}}\text{θ}^{\text{a}}$ $\text{sq}^{\text{w}}\text{a}^{\text{q}}\text{w}^{\text{a}}\text{l}^{\text{a}}\text{-s}$ $\text{k}^{\text{w}}\text{θ}^{\text{a}}$ $\text{l}^{\text{a}}\text{p}^{\text{l}}\text{i}^{\text{t}}$.
 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 (26), where the oblique NP is an animate.

- (26) ?*ni? cən qel̩ ʔə kʷθə ləplit.
 AUX 1SUB believe OBL DET priest
 ‘I believed the priest.’

So, they dispreferred (27), where the applied object is inanimate.

- (27) ??ni? cən qel̩-meʔ-t kʷθə sqʷaqʷəl̩-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 (28) with an animate applied object, as a repair.

- (28) ʔi cən qel̩-meʔ-t kʷθə ləplit kʷis qʷaqʷəl̩.
 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 7. 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	
	#	%	#	%
1 st and 2 nd 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. Applied object vs. oblique NP

In Table 8, 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 8. 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 (29):

- (29) ʔeʔət x^wiʔ siʔsiʔ-meʔ-t-əs t^θə speʔx^wəm
 AUX INCHO frightened-REL-3ERG DET fog
 k^ws nem-s ʔəli^m-t-əs t^θə snəx^wəl-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:

- (30) ʔi cən wəl ʂtəʔe:wəⁿ-meʔ-θət k^wə-nə-s
 AUX 1SUB PERF think-REL-TR:REFL DET-1POS-NOM
 hay ʔə k^wθə 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:

- (31) niʔ ʔə č wəl k^wi^ləm ʔə k^wθə ʔi hiwələm sʔəliqəl?
 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 Psych applicatives in cross-linguistic perspective

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 9:

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

Table 9. 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:

- (32) 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:

- (33) nassarpa ‘he brings it along’ nassaappaa ‘he brings s.th. along for/to him’
 tikippuq ‘he has arrived’ tikiuppaa ‘he has brought it’
 atuarpuq ‘he read’ atuvvappaa ‘he read (aloud) for him’
 kamappuq ‘he is angry’ kamaappaa ‘he is angry with him’

Notably the last example in (33) 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. One of them is from the Muskogean language Chickasaw (Munro and Willmond 1994: 168, 171):

- (34) ishtayoppa ‘to be happy about, proud of’; cf. ayoppa ‘to be happy’
 ishtikimalhpi’so ‘to be sad about, lonely for’; cf. ikimalhpi’so ‘to be sad’

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:

- (35) Wangsi lkiuak baratci.
 wang=si l=kiu-ak barat-si
 child=PL 3PL=be.scared-APPL westerner=PL
 ‘The children are scared of westerners.’
- (36) Oci namaro Iswan.
 Oci n=ha-mara-o Iswan
 Oci 3SG=CS-be.angry-APPL Iswan
 ‘Oci is angry at Iswan.’

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 9), 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 Our research is part of an on-going SSHRC-funded project by Donna Gerdt 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 Gerdt 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 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 Gerdtts (to appear) for some examples of this.

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).

⁴ The following abbreviations are used in glossing the data: APPL applicative, AUX auxiliary, BEN benefactive, CS causative, DET determiner, DIR directional, ERG ergative, FUT future, GEN genitive, IMPERF imperfective, INCHO inchoative, INST instrumental, LOC locative, NOM nominalizer, OBJ object, OBL oblique, PERF perfect, POS possessive, Q interrogative, REFL reflexive, REL relational, SG singular, SSUB subordinate subject, SUB subject, TR transitive.

⁵ 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 (Gerdtts 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.

⁶ The data that we present here are based on our original fieldwork with speakers of the Island dialect (həlqəmínəm) and the Downriver dialect (həñqəmínəm). 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.

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