## The Argument Structure of Halkomelem Verb Roots: Evidence from Intransitive/Transitive Alternations<sup>\*</sup>

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## 1. Introduction

Research on the lexical semantics of argument realization starts from the viewpoint that the mapping of the roles AGENT and PATIENT to argument structure can be used to classify predicates. More precisely, verbs sort into transitive and intransitive types, and intransitive verbs further sort into unergative and unaccusative types. Language-internal tests can be used to organize verbs with shared morphological, syntactic, and semantic properties into verb classes. The research on any language seeks to answer the following questions: What are the verb classes? What are the properties that distinguish them? How are the verb classes of a language similar to and different from verb classes in other languages of the world?<sup>1</sup>

Salish languages are noted for their "inchoative/causative" alternation: the inchoative forms are usually unmarked, while the corresponding causative verbs require the transitive suffix. This is demonstrated by the following Halkomelem data:  $\dot{q}a^2$  'get added' in (1) contrasts with  $\dot{q}a^2$ -t 'add it, put it in with' in (2):<sup>2</sup>

(1)	ni?	₫a?	k <sup>w</sup> Өә	nə	šeləmcəs	$^{9}$	k <sup>w</sup> θə	nə	s-k <sup>w</sup> u:k <sup>w</sup> .
	AUX	add	DT	1pos	ring	OB	DT	1pos	NM-cook
	'My ri	ng got	into my	y cookii	ng.'				

t<sup>θ</sup>ə (2)nem č da?−t sqewθ ?ə t<sup>θ</sup>ə'n słaj! 2sub add-TR potato DT.2POS soup go DT OB 'Go put the potatoes into your soup!'

Such examples seem to be a prima facie case for deriving the causative verb from its intransitive counterpart (à la Levin & Rappaport Hovav 1995).<sup>3</sup> The verbs in question all have bare root intransitive alternants and marked transitive alternants in Halkomelem.

In fact, a look at most Salish languages gives the impression that a vast majority of verb roots are of this type. This has led to two hypotheses. First, some Salish scholars, for example Kuipers (1968), Hess (1973), Jelinek (1994), and Suttles (2004), claim that all verb roots in Salish languages are intransitive and require the addition of transitive morphology in order to serve as transitive stems. However, this result is somewhat misleading because in fact all syntactically transitive constructions in Salish, i.e. those with two direct nominal or pronominal arguments, take transitive marking. This has led to an alternative view taken by some Salish scholars, including Gerdts (1988a), Nater (1984), Thomason & Everett (1993), and Gerdts & Hukari (1998): the transitive suffix is a verbal inflection that appears on bases that are already semantically transitive. We explore this issue in section 2, showing that in fact at least some roots in Halkomelem are transitive.

Second, some Salish scholars take the hypothesis of intransitivity a step further, claiming that all roots are unaccusative in the argument structure (Davis 1997, 2000; Davis and Demirdache 2000). In our research, however, we have maintained an unerga-tive/unaccusative distinction (Gerdts 1991, Gerdts and Hukari 1998, 2001). We explore this issue in section 3, showing that our tests reveal that at least some intransitive verb roots are unergative in Halkomelem.

# 2. Transitivity revisited

One way to explore the status of roots is to make a more complete survey of the  $\emptyset/-t$  pairs in the language, classifying them according to the semantic properties of the root. This is undertaken by Gerdts and Hukari (2006b); some of their results are summarized here.

Section 2.1 shows that around one hundred verb roots that appear with the transitive suffix do not occur as a  $\emptyset$ -form intransitive. Section 2.2 shows that many bare roots used unaccusatively seemed to be coerced into this frame while the transitive alternants are more basic. We, thus conclude that the Halkomelem data do not support the viewpoint that all roots are intransitive. Rather, Salish verb roots should be classified, like those in other languages, into intransitive and transitive roots.

# 2.1 Some bare roots do not appear as words

Some verbs that occur with the suffix -t lack a corresponding bare root alternant that can appear as a free-standing word (93 of our sample of 489 roots (19%)). Some examples are:<sup>4</sup>

ACTIVITIES INVOLVING MANIPULATING, MOVING, ACQUIRING, INGESTING, ETC.

 $\sqrt{ha^{2}x^{w}}$  'steam bathe',  $\sqrt{hes}$  'ritual brushing',  $\sqrt{k^{w}ey}$  'bathe in cold water',  $\sqrt{y}$   $\sqrt{k^{w}}$  'scrub, rub together',  $\sqrt{y}$   $\sqrt{q}$  'scrub',  $\sqrt{yi}$  'sand',  $\sqrt{xi}$  'scratch',  $\sqrt{x}$   $\sqrt{y}$  'beat',  $\sqrt{t}$   $\sqrt{y}$  'move',  $\sqrt{qix}$  'slide',  $\sqrt{yi}$  'fell, tip over',  $\sqrt{qx}$  'drop off',  $\sqrt{hik^{w}}$  'rock',  $\sqrt{c}$   $\sqrt{m}$  'pack on one's back',  $\sqrt{\gamma}$  if 'carry by the handle',  $\sqrt{s}$  e? 'put on lap',  $\sqrt{lad^{w}}$  'tap, pat',  $\sqrt{k^{w}e}$  'drop it, let go, leave it alone',  $\sqrt{tan}$  'leave behind',  $\sqrt{xim}$  'grab',  $\sqrt{x}k^{wa}$  'grab and pull',  $\sqrt{m}k^{w}$  'pick up off the ground',  $\sqrt{wen}$  'throw',  $\sqrt{\gamma}im$  'step on',  $\sqrt{l}$  bail it out',  $\sqrt{ma}$  'start a fire',  $\sqrt{\gamma}il$  'grab' it',  $\sqrt{lk^{w}a}$  'peck',  $\sqrt{k^{w}eld}$  'pop, slam, snap',  $\sqrt{l}$   $\sqrt{q^{w}}$  'drink in one swallow',  $\sqrt{t^{\theta}k^{w}}$  'eat, riddle (as pests do)'

# VERBS OF COGNITIVE AND SOCIAL INTERACTION

 $\sqrt{k}$  whisper',  $\sqrt{k}$  weld 'pop, slam, snap',  $\sqrt{lem}$  'look at',  $\sqrt{y}$  'laugh at',  $\sqrt{t}$  'insult, jeer',  $\sqrt{x}$  to 'jinx',  $\sqrt{x}$  wo 'beat (in a game, race)',  $\sqrt{na}$ ? 'find s.o. dear, miss',  $\sqrt{nan}$  'take someone's side, defend',  $\sqrt{p}$  wa 'keep quiet, calm down',  $\sqrt{neh}$  'name someone',  $\sqrt{t}$  ih 'ask him/her, beg',  $\sqrt{2a}$ : 'call for, invite',  $\sqrt{ya}$ : 'order',  $\sqrt{cse}$  'tell (to do)',  $\sqrt{k}$  we 'forbid',  $\sqrt{2ex}$  we 'give, share with'

These verbs typically appear as transitives cross-linguistically, e.g. activity verbs involving a direct effect on the patient, often with an instrument; verbs involving the agent moving

the patient; ditransitive verbs of giving, letting, and telling; etc. The simplest analysis to posit for these verbs is that the roots are transitive.

### 2.2 Bare root is syntactically unaccusative but semantically transitive

A second challenge for the claim that all roots are intransitive come from a class of verbs that might at first seem like classic unaccusatives, since they appear in intransitive clauses where the sole argument is the patient. The following are typical examples:

(3) ?i ce? ?ə tə?i k<sup>w</sup>s taž<sup>w</sup>-s k<sup>w</sup>θ<sub>θ</sub> sənix<sup>w</sup>əł DT.NM beach-3POS DT AUX FUT OB here canoes ?∍ŵ k<sup>w</sup>eyələs. LNK tomorrow 'You will beach the canoes over here tomorrow.' [Lit: 'The canoes will be beached here tomorrow.'] nem ce? pələč ċəỷx<sup>w</sup>−t. (4) θəň swetə k<sup>w</sup>əns FUT turn.inside.out DT.2POS sweater DT.2POS dry-TR go 'You will turn your sweater inside out to dry.' [Lit: 'Your sweater will be turned inside out when you dry it.']

(5) <sup>2</sup> ∂y k<sup>w</sup>s qiq-s t<sup>θ</sup>∂ qeq <sup>2</sup>∂w∂ k<sup>w</sup>ł <sup>2</sup>i<sup>2</sup> Åa<sup>2</sup>.
good DT-NM bind-3POS DT baby not EMPH and stop.cry 'You'd better bind the baby that hasn't stopped crying.'
[Lit: 'It's good for the baby that hasn't stopped crying to be bound.']

However, this construction is highly marked semantically. While the transitive alternants of these verbs are easily used in a variety of contexts, the intransitive verbs are used only in a construction that we call the pseudo-intransitive imperative. It functions as a polite or indirect imperative, with an implied second person agent. The sentence is usually framed in the future (3)–(4) or with the higher predicate  $2\partial y$  'good' (5). Furthermore, the construction allows the motion auxiliary  $ne\dot{m}$  'go', which is otherwise limited to clauses in which there is an agent that can move (Gerdts 1988b); in (4) it is the implied agent that is moving.

A fair number of verb roots (37 out of 489, or 8%) appear in the pseudo-transitive imperative construction:

### PSEUDO-TRANSITIVE IMPERATIVES

<sup>?</sup>iye<sup>?</sup>q 'change', łťe 'flip', ġe<sup>?</sup> 'skim cream off milk, flatten', qəye<sup>?</sup> 'take out', <sup>?</sup>aləx 'collect', Žəpx 'scatter it, spread it, broadcast', ġəyt<sup>θ</sup> 'bring -together', ġway 'scrape, singe a canoe', sať 'suck', səyt 'tickle him/her', šakw 'bathe', šem 'dry, smoke', ṫaləxw 'send away, chase away', wet<sup>θ</sup> 'knit; pry with a tool', xcə 'figure out', ċxwa 'more, add more to it', θəyx 'stoke, rake', ṫəlqi<sup>?</sup> 'soak', t<sup>θ</sup>łekw 'pinch', yəŽq' 'paint', məlxw 'rub oil on it, grease it', kwcə 'shout at, use a sharp tone with', kw $\theta$ ə 'lie down (a quadruped), crouch', kwše 'number', ləžw 'cover', pələc' 'turn inside out, turn over', tažw 'beach', ta' 'pull apart',  $\theta$ əyq 'uneven, staggered', ž $\theta$ e 'jerk', yaż 'rub', ye' (ya') 'paddle backward', qəlp' 'curl, bend',  $\theta$ ima' 'freeze', žqwə 'wrap up, tidy up', t $\theta$ ał 'dampen', xwkwa 'pull, pull the slack up'

Gerdts and Hukari (2006b) conclude that the best analysis for these roots is that they should be classified as transitive, since the transitive alternants seem semantically more basic than the intransitive ones. The unaccusative verbs are derived from transitive roots through zero derivation.

# 2.3 Summary

In sum, we posit that the 130 verb roots discussed in sections 2.1 and 2.2 are transitive. The recognition of a class of transitive roots opens up a Pandora's box of questions about how to distinguish intransitive from transitive roots and how to relate the two types to each other—questions beyond the scope of this paper.

# 3. Intransitivity revisited

The question addressed in this section concerns intransitive verb classes: are unergative and unaccusative verb roots lexically distinguished in Halkomelem? We claim that they are. Unergative verbs, such as *yays* 'work', appear as bare roots in an intransitive construction where the sole argument is the agent of the event (6), while unaccusative verbs, such as  $\dot{q}a^2$  'get added to', appear as bare roots in an intransitive construction where the sole argument of the event (7):

- ni? yays t<sup>θ</sup>ə swəýqe?.
   AUX work DT man
   'The man worked.'
- $^{9}$ ə k<sup>w</sup>θə nə (7)ni? da? k<sup>w</sup>θə nə šeləmcəs  $s-k^{w}u:k^{w}$ . 1POS NM-cook add DT 1POS ring AUX OB DT 'My ring got into my cooking.'

Furthermore unergative and unaccusative verb roots behave differently with respect to how they form transitives, as discussed in section 3.1. They also behave differently with respect to suffixes of agent-oriented modality, as discussed in section 3.2. These differences allow us to derive profiles for canonical unergative versus canonical unaccusative verb roots, as summarized in section 3.3.

# 3.1 Two types of transitives

As pointed out in Gerdts (1988a, 1991), unergative and unaccusative verbs differ with respect to how they form transitive clauses. Unergative verbs transitivize with the causative suffix  $-st a x^w$ , for example  $yays - st a x^w$ :

(8) ni? cən yays-stəx<sup>w</sup> t<sup>θ</sup>ə swəỷqe?.
 AUX 1SUB work-CS DT man
 'I put the man to work.'

In contrast, this suffix is not usually allowed with unaccusative verbs, for example  $*\dot{q}a^2$ stax<sup>w</sup> ('add' + CAUSATIVE). Other examples of unergative verb roots that form causatives are given in Table"1.

BASIC VERB		-st	$\partial x^w$ CAUSATIVE
<u>n</u> em	ʻgo'	ne məstəx <sup>w</sup>	'take it'
mi	'come'	mistəx <sup>w</sup>	'bring it'
cam	'go uphill'	cəmstəx <sup>w</sup>	'take it uphill'
łew	'run away, flee'	ł <b>ə</b> ẁstəx <sup>w</sup>	'run away with him/her'
°a:ł	'get on board'	?a:łstəx™	'put it on board'
ťakw	'go home'	ťək <sup>w</sup> stəx <sup>w</sup>	'take it home'
?∍nəx™	'stop'	<sup>9</sup> ənəx <sup>w</sup> stəx <sup>w</sup>	'stop it',
			'make him/her stop'
k™i?	'climb'	k <sup>w</sup> i?stəx <sup>w</sup>	'lift/raise it',
			'make him/her climb'

Table 1. Unergative verb roots with the causative suffix

As discussed in Gerdts and Hukari (2006a), causatives formed on activity verbs usually have the meaning of a causer making the agent perform the action indicated by the verb root, while causatives of motion verbs often have an associative meaning: the object expresses the person or thing that is taken or brought along during the performance of the motion.

In contrast, unaccusative verbs form transitives with the transitive suffix -t, for example  $\dot{q}a^{2}-t$ :

(9)	nem	č	ḋa?−t	t <sup>θ</sup> ə	sqewθ	$^{9}$	t <sup>0</sup> ən	sła <i>ż</i> .
	go	2sub	add-TR	DT	potato	OB	DT.2POS	soup
	'Go pi	it the p	otatoes int	o your	soup.'			

In contrast, this suffix generally does not appear on unergative verbs, for example \*yays-t ('work' + TRANSITIVE) 'work it'. Table 2 gives additional examples of verbs with the transitive suffix.

	BASIC VERB		-t TRANSITIVE
?ak™	'get hooked'	?ak॑ʷət	'hook it'
ċəx™	'increase'	ċx <sup>w</sup> at	'add more to it'
k <sup>™</sup> əł	'spill'	k <sup>™</sup> łet	'pour it'
lək	'break in two'	lək <sup>w</sup> at	'break it in two'
ċəỷx*	'get dry'	ċəỷ x <sup>w</sup> t	'dry it'
ləċ	'(container) get full'	ləċət	'fill it'
łəq™	'get wet'	łqʷət	'wet it'
ċə <b>ἀ</b> <sup>w</sup>	'get pierced'	ċἀʷat	'pierce it'
səở	'get torn'	sqet	'tear it'
іх́әх™	'get covered'	Åx™at	'cover it'
<i>k</i> <sup>w</sup> es	'burn', 'get hot'	<i>k</i> <sup>w</sup> esət	'burn it', 'singe it',
			'scorch it'

Table 2. Unaccusative verb roots with the transitive suffix

# **3.2** Two tests for agentivity

Two suffixes of agent-oriented modality, in the sense of Bybee et al. (1994), give additional evidence for intransitive verb classes. As discussed in Gerdts (1988b, 1991) the desiderative suffix -alman behaves differently on unergative and unaccusative verbs. On unergative verbs like yays 'work', the suffix straightforwardly indicates the desire of the agent to perform the action:

(10) ni? yays-əlmən  $t^{\theta}$ ə swəýqe?. AUX work-DES DT man 'The man wanted to work.'

Other examples of the desiderative use of this suffix are given in Table 3:

BASIC VERB		-əlmən		
k <sup>™</sup> i?	'climb'	k <sup>w</sup> i <sup>9</sup> əlmən	'want to climb'	
łakw	'fly'	łakwəlmən	'want to fly'	
nem	'go'	neməlmən	'want to go'	
q <sup>w</sup> al	'speak'	q <sup>w</sup> aləlmən	'want to speak'	
ťak <sup>w</sup>	'go home'	ťak <sup>w</sup> əlmən	'want to go home'	
həye?	'depart'	həye <sup>9</sup> əlmən	'want to depart'	

Attaching the desiderative suffix  $-\partial lm\partial n$  to an unaccusative verb root gets a much different result. Either the form is not acceptable at all, or it has an aspectual meaning,

indicating that the event is 'almost' happening, 'on the verge of' happening, 'about to' happen, or 'ready to' happen:

(11)	ni? AUX 'It a	da? K add- almost g	-əlmən <sup>9</sup> ə l DES OB I ot mixed in with r	kʷθə nə sថ <sup>θ</sup> ź DT 1POS was ny washing.'	ć'əlwətəm. shing
		I	BASIC VERB		-əlmən
		łəq <sup>w</sup>	'get wet'	łəq <sup>w</sup> əlmən	'almost damp'
		ģil	'fill'	piləlmən	'starting to fill'
		yeả	'fall down'	yeqəlmən	'almost falling down'
		yax̃ <sup>w</sup>	'melt'	yaž <sup>w?</sup> əlmən	'almost melting'
		<i>k</i> <sup>w</sup> es	'get hot'	<i>k</i> <sup>w</sup> esəlmən	'starting to sweat'
		?∍ẁḱ	'gone, finished'	?∍ŵk <sup>™</sup> əlmən	'almost gone, finished
		məs	'get smaller'	məs <sup>9</sup> əlmən	'starting to shrink'
		pav	'bend. get bent'	pavəlmən	'almost bent'

Table 4. Aspectual use of -*əlmən* 

Gerdts and Hukari (2006c) explore this development further, relating it to the path of grammaticization proposed by Bybee et al. (1994). Lexical forms for 'desire' are frequent sources for futures cross-linguistically (cf. English *will*). They posit the following pathway: desire > willingness > intention > prediction. Table 5 shows the results for  $-\partial lm \partial n$  on 457 roots, some of which are used in more than one way:

	+	– əlmən
	əlmən	
DESIDERATIVE	176	_
ASPECTUAL	118	_
TOTAL	287	170

Table 5. Two uses of *-alman* 

The limited control form  $-nam \partial t$  shows a second case of agent-oriented modality. Gerdts (1998, 2000) claims that the suffix  $-nam \partial t$  originates as a limited-control counterpart of the plain reflexive  $-\theta \partial t$ , as seen in Table 6. The basic meaning of this suffix is thus 'manage to/accidentally do something to oneself'.

REFL	EXIVE	LIMITED (	CONTROL REFLEXIVE
q҆ayθət	'kill self'	qaynamət	'accidentally kill self'
həliθət	'save self'	həlinamət	'manage to save self'
dwaqwə0ət	'club self'	d <sup>w</sup> əq <sup>w</sup> namət	'accidentally club self'
?ak॑ʷəθət	'hook self'	?ək™namət	'accidentally hook self'

Table 6. Two types of reflexives

In additiona, the limited control reflexive *-namot* regularly appears on unergative verbs with the meaning of 'manage to do something', as in:

(12) ni<sup>?</sup> yays-namət t<sup> $\theta$ </sup>ə swəýqe<sup>?</sup>. AUX work-L.C.REFL DT man

'The man managed to work.'

BASIC VERB		-namət	
ťak҆™	'come home'	ťakwnamət	'manage to come home'
təs	'get there'	təsnamət	'manage to get there'
q <sup>w</sup> al	'speak'	q <sup>w</sup> əlnamət	'manage to speak'
ťax <sup>w</sup>	'go down'	iax <sup>w</sup> namət	'manage to go down'

Table 7. Non-reflexive use of -namot

Furthermore, on process and stative verbs, -*namot* has an aspectual meaning; it indicates an anterior (perfect) whose endpoint is in the recent past, and thus is translated 'finally', 'just', 'now', etc.

(13) a. ni? q<sup>w</sup>əl t<sup>θ</sup>ə st<sup>θ</sup>u:m. AUX ripe DT berry 'The berries got ripe.'
b. ni? q<sup>w</sup>əl-namət t<sup>θ</sup>ə st<sup>θ</sup>u:m. AUX ripe-L.C.REF DT berry 'The berries are finally ripe (despite the inclement weather).'

	BASIC VERB		-əlmən
ťθex <sup>w</sup>	'(sun) set'	i <sup>0</sup> əx <sup>w</sup> namət	'(sun) has finally set'
Źəlž	'(fire) spark'	Åəlxnamət	'finally start sparking'
ləṁ	'erode'	ləṁnamət	'has finally eroded'
k <sup>w</sup> əyž	'stir, (car) to start'	k <sup>w</sup> əyxnamət	'(car) finally started'
ģis	'get knotted up'	qisnamət	'all knotted up now'
təł	'unravel, spread open'	təłnamət	'finally spread open'

Table 8. Aspectual use of -namət

Bybee et al. (1994) cite cases of anteriors developing from resultatives, passives, or dynamic verbs ('finish', 'complete', 'do before'). But, since *-namət* has its historical source in a limited control reflexive, we suggest the following pathway: limited control > managed to do > managed to finish > finished. Table 9 gives results for 467 roots tested for *-namət*; some roots allow more than one use.

	+	_
	namət	namət
REFLEXIVE	109	_
MANAGE	156	_
ТО		
ASPECTUAL	74	_
TOTAL	339	128

Table 9. Verb roots and uses of *-namət* 

We see then that the suffixes  $-\partial lm\partial n$  and  $-nam\partial t$  indicate agent-oriented modality only when they appear on unergative verbs. With unaccusative verbs, if the suffixes are allowed at all,  $-\partial lm\partial n$  has an aspectual meaning and  $-nam\partial t$  has either a reflexive or aspectual meaning.

#### **3.3 Profiling unergatives versus unaccusatives**

To summarize the previous sections, we can develop a profile for canonical unergative or unaccusative verb roots. The unergative root in the bare form takes an agent as the sole argument and transitivizes by means of the causative suffix. The agency of the argument is further established by the use of the desiderative or limited control suffixes with the agentive meaning. Unaccusatives on the other hand, take the patient as the sole argument, transitivize with the suffix -t, and do not take agentive meanings for the desiderative and limited control suffixes.

FORM	FUNCTION	UNERGATIVE	UNACCUSATIVE
Ø	intransitive	agent	patient
-stəx <sup>w</sup>	causative	yes	no
- <i>t</i>	transitive	no	yes
-əlmən	desiderative	'want to'	no/aspectual
-namət	limited control	'manage to'	no/reflexive/aspectual

Table 10. Unaccusative vs. unergative verb profiles

A search of our database for these five features reveals that 28 verb roots test to be canonical unergatives:

## CANONICAL UNERGATIVES

cam 'go uphill', hek' 'recall to mind', həye? 'depart', k''i? 'climb', łak' 'fly', nem' 'go', dłan 'be forward', q''al 'speak', tax 'bring down', tak' 'go home',  $\theta$ ət 'say to', Xin' 'growl', X''te? 'go/come to', yays 'work', ?əmət 'sit down/rise out of bed', ?ənəx' 'stop', ?a:ł 'get on vehicle', ?eli 'away, take away', ?ewə 'come here', ?itət 'sleep', ta:l 'go to middle of floor', Xiw' 'sneak off, run away', he:wə 'go away for a long time', k''ayək'' 'fish with line, gaff', łəne 'go along a way', təy 'pull (race) a canoe', łew 'flee', tel 'be like'

Searching for canonical unaccusatives yields a larger, but still unexpectively small result. Only 55 verb roots, which Gerdts and Hukari (2006b) further divide into three types: spontaneously-occurring processes (26 verbs), externally-caused events (17 verbs), and states (12 verbs):

## PROCESS (SPONTANEOUS) VERBS

lək<sup>w</sup> 'break', me' 'come off', yəx̆<sup>w</sup> 'come undone, set free', q̆wəl 'cook, bake, ripen', k̆wes 'get burnt, scald, injure by a burn', mq̈́ə 'get full of food', x̌əl 'get hurt', q̈́is 'get knotted', q̈́ay 'get sick, die', liq<sup>w</sup> 'get slack', c̈aq̈́ 'get surprised', sq̈́e 'tear', c̈qwa 'absorb', ləl̈q 'soak, flood, (river) rise', l̈q̃wa 'take bark off', ləm̈́ 'fold, hem', pqwa 'break', səl̈q 'twirl, swing', ẍk̄wa 'wedge, get stuck', x̆way 'die (plural)', sik̄w 'peel', ca? 'pull off a layer of clothing', tlə 'spread, open', txwa 'uncover', cən̈́ 'lean against something', xwiq 'cheer up'

## EXTERNALLY-CAUSED EVENTS

 $\dot{t}^{\theta}$ as 'get bumped',  $\dot{q}^{w}aq^{w}$  'get clubbed', pas 'get hit',  $\dot{t}^{\theta}$ ə $\check{x}^{w}$  'get washed',  $\dot{q}^{w}a\dot{p}$  'wrinkle, pleat', qə $\dot{p}$  'stick something to something',  $\check{x}^{w}i\dot{q}^{w}$  'loop', qit 'tie in the middle', 'aqw 'soak up, absorb', 'a $\dot{q}^{w}$  'brush',  $\dot{t}^{\theta}e\dot{k}^{w}$  'shine a light on', pah 'blow on, blow out, inflate it', qem 'bend',  $\dot{t}^{\theta}$ is 'nail', le' 'put away', pšə 'spit medicine',  $\dot{t}^{\theta}$ əl 'lose it all gambling'

STATES

həli 'be alive, living', Åəxw 'be hard', qəx 'much, lots', tqwa 'be taut', łəqw 'be wet', məs 'decrease in size', Åcə 'close together', Åpə 'deep', pil 'fill to brim', łec 'dark', łəlp 'flatten, flop'

In sum, 83 verb roots (17%) test to be canonically unergative or unaccusative. Although they comprise less than a fifth of the total data, these roots suffice to show that both unergative and unaccusative verb roots exist in Halkomelem.

However, it also raises the issue of why so few verb roots test to be canonically unergative and unaccusative. First, as discussed by Gerdts (2006), half of the verb roots in our sample are "swingers". That is, the bare root appears in either an unergative or an unaccusative frame, as required by the context. For example, the root  $\dot{p}\partial k^w$  'float' behaves unergatively with a sentient subject, denoting an action under the control of the agent NP (see (14), but it behaves unaccusatively with inanimates, denoting an activity that the NP undergoes (see (15)).

(14)nəqəm-nəs ?∍ŵ phak<sup>w</sup> ni? nem cən ce? dive-APPL surface FUT go 1SUB LNK AUX ?ə t<sup>θ</sup>ə ni? ?amət s-q<sup>w</sup>əs=šen. OB DT AUX sit NM-submerge=foot

> 'I'm going to dive, and then I'll come out in front of the one that's got his leg in the water.'

(15) na<sup>9</sup>ət wəł  $\dot{p}$ ək<sup>w</sup> t<sup> $\theta$ </sup>ə q<sup>w</sup>łeý. AUX:DT now surface DT log 'The log has floated up.'

Since the verb root can be either unergative or unaccusative, the suffix *-alman* can appear on the root with either meaning, depending on the context. In (16) *-alman* has the agent-oriented modality meaning and in (17) it has an aspectual meaning.

(16)	ni? AUX 'The s	ở∍k <sup>w</sup> -əl surface-l sea otter v	mən DES wanted	t <sup>θ</sup> ə DT to sı	təməs. sea.otter urface.'					
(17)	?i AUX 'The l	čə EVID beaver's c	ðəðək surfac lam is	x™-ə æ(IM start	lmən PF)-DES ing to floa	t <sup>θ</sup> ə DT at up.	stəq-s dam-3POS	t <sup>θ</sup> ə DT	sqəlew. beaver	

This fact is not unexpected; work on unaccusativity cross-linguistically has shown that verbs in many languages switch easily from one type to another and that some classes have mixed properties (Rosen 1984, Levin and Rappaport Hovav 1995). For example,

Halkomelem motion verbs (Gerdts and Hukari 2001) and middles (Gerdts and Hukari 1998) show mixed properties, manifesting some unergative and some unaccusative features.<sup>5</sup>

Second, as discussed in Gerdts (2006) and Gerdts and Hukari (2006a), some attention needs to be paid to the accuracy of the transitive test. We posited that unergativity is correlated with the causative suffix and unaccusativity with the transitive suffix. But in fact, many verbs take either suffix. So clearly this test should be fine-tuned.

#### 4. Conclusion

We conclude that any analysis that tries to put all the roots into a single class is uninsightful for Halkomelem. At least some of the roots are transitive, as discussed in section 2, and the intransitive verb roots can be separated into unergatives and unaccusatives, as discussed in section 3. We give the totals for the number of verb roots of each type in Table 11:

TRANSITIVE	UNERGATIVE	UNACCUSATIVE	TOTAL
130	28	76	234

Table 11. Classes of Halkomelem verb roots

In other words, Halkomelem probably exhibits a normal tripartite system: there are three major verb classes—unergative, unaccusative, and transitive—and these map to three different syntactic structures.<sup>6</sup> It is unnecessary to posit a view of argument realization in Salish languages that is radically different from that proposed for English or other languages of the world. Differences between Halkomelem and other languages should not be handled by positing deep conceptual differences, but rather by accommodating differences in the verb class of particular roots, or in their ability to swing between types.

#### Notes

\* Halkomelem is a Central Salish language spoken by around one hundred elders in southwestern British Columbia. For the last twenty-five years, we have been studying verb classes in the Island dialect. Thanks to the expertise of three native-speaker linguists, Ruby Peter, the late Theresa Thorne, and the late Arnold Guerin, around 486 verb roots have been identified and tested in combination with two dozen affixes (transitive, causative, reflexive, etc.). Forms were judged for acceptability, and illustrative sentences were composed for each allowed form. From this corpus, supplemented by additional verb data culled from elicitations, texts, dictionaries, and language teaching materials, we have constructed a database coded for argument realization and semantic nuances. Thanks also to Sarah Kell and Kaoru Kiyosawa for research assistance, to Todd Peterson and Charles Ulrich for editing, and to SSHRC, SFU, UVic, Jacobs Fund, Phillips Fund, The Museum of Civilization, Ottawa, and the Canadian Consulate, Washington, D.C., for funding. 1 We use the term 'root' to include both monomorphemic bases and frozen forms that include one inseparable suffix. Much of what we say here also applies to complex forms.

2 The following abbreviations are used in glossing the data: APPL: applicative, AUX: auxiliary, CS: causative, DES: desiderative, DT: determiner, EMPH: emphatic, EVID: evidential, FUT: future, IMPF: imperfective, L.C.REFL: limited control reflexive, LNK: linker, NM: nominalizer, OB: oblique, PL: plural, POS: possessive marker, Q: interrogative, SER: serial, SUB: subject, SSUB: subordinate subject, TR: transitive.

3 Indeed, Salish languages are "transitivizing" languages in the sense of Nichols et al. (2004), who looked at eighteeen intransitive/transitive pairs in eighty languages, including the neighboring Salish language Squamish, and rated them on the basis of whether the intransitive or the transitive alternant was morphologically marked.

4 Eight of these verbs form intransitive forms with the middle suffix: t 
arrow q 
arrow intransitive forms with the middle suffix: <math>t 
arrow q 
arrow integration intransitive forms with the middle suffix: <math>t 
arrow q 
arrow move, q 
arrow is a constrained in the integration integration in the integration integration in the integration integration in the integration integration integration in the integration integrated integration integration integration integrated integration integration integration integrated integration integrated integration integrated integration integrated integration integrated integrated integration integrated integrated integration integrated integrated integrated integrated integrated integration integrated integr

5 Section 2.2 shows that around forty Ø/transitive pairs show an unergative/transitive alternation, where the agent remains constant, rather than an inchoative/causative one, where the patient remains constant.

6 See Levin & Rappaport Hovav 2005 for a survey of how this is accomplished in various theories.

### References

- Bybee, Joan, Revere Perkins, and William Pagliuca. 1994. The evolution of grammar: Tense, aspect, and modality in the languages of the world. Chicago: The University of Chicago Press.
- Davis, Henry. 1997. Deep unaccusativity and zero syntax in St'át'imcets. Theoretical issues at the morphology-syntax interface, ed. by Amaya Mendikoetxea and Myriam Uribe-Etxebarria, 55–96. Bilbao: Supplements of the International Journal of Basque Linguistics and Philology.
- Davis, Henry. 2000. Salish evidence on the causative-inchoative alternation. Morphological analysis in comparison, ed. by Wolfgang U. Dressler, Oskar E. Pfeiffer, Markus Pöchtrager, and John R. Rennison, 25–60. [Current Issues in Linguistic Theory 201.] Amsterdam: John Benjamins.
- Davis, Henry, and Hamida Demirdache. 2000. On lexical verb meanings: Evidence from Salish. Events as grammatical objects, ed. by Carol Tenny and James Pustejovsky, 97–142. Stanford: CSLI Publications.
- Gerdts, Donna B. 1988a. Object and absolutive in Halkomelem Salish. New York: Garland.
- Gerdts, Donna B. 1988b. Semantic linking and relational structure in desideratives. Linguistics 26.843–872.
- Gerdts, Donna B. 1991. Unaccusative mismatches in Halkomelem Salish. International Journal of American Linguistics 57.230–250.

- Gerdts, Donna B. 1998. The double life of Halkomelem reflexive suffixes. Proceedings of the first Workshop on American Indigenous Languages, Santa Barbara Working Papers in Linguistics 8.70–83.
- Gerdts, Donna B. 2000. Combinatory restrictions on Halkomelem reflexives and reciprocals. Reciprocals: Forms and functions, ed. by Zygmunt Frajzyngier and Traci S. Curl, 133–160. Amsterdam: John Benjamins.
- Gerdts, Donna B. 2006. Argument realization in Halkomelem: A study in verb classification. Proceedings of the Workshop on Structure and Constituency in Languages of the Americas, University of British Columbia Working Papers in Linguistics, to appear.
- Gerdts, Donna B., and Thomas E. Hukari. 1998. Inside and outside the middle. Papers for the 33rd International Conference on Salish and Neighboring Languages, Seattle, Washington, 166–220.
- Gerdts, Donna B., and Thomas E. Hukari. 2001. The dual structure of Halkomelem motion verbs. Proceedings of WAIL 2000, Santa Barbara Working Papers in Linguistics 10.33–46.
- Gerdts, Donna B., and Thomas E. Hukari. 2006a. Classifying Halkomelem causatives. Papers for the 41st International Conference on Salish and Neighboring Languages, to appear.
- Gerdts, Donna B., and Thomas E. Hukari. 2006b. A closer look at Salish intransitive/transitive alternations. Berkeley Linguistics Society 32, to appear.
- Gerdts, Donna B., and Thomas E. Hukari. 2006c. From agent-oriented modality to aspect in Halkomelem. Paper presented at the Society for the Study of Indigenous Languages of the Americas, Albuquerque, New Mexico.
- Hess, Thomas M. 1973. Agent in a Coast Salish language. International Journal of American Linguistics 29.89–97.
- Jelinek, Eloise. 1994. Transitivity and voice in Lummi. Papers for the 29th International Conference on Salish and Neighboring Languages, Pablo, Montana.
- Kuipers, Aert H. 1968. The categories verb-noun and transitive-intransitive in English and Squamish. Lingua 21.620–626.
- Levin, Beth, and Malka Rappaport Hovav. 1995. Unaccusativity: At the syntax-lexical semantics interface. Cambridge: MIT Press.
- Levin, Beth, and Malka Rappaport Hovav. 2005. Argument realization. Cambridge: Cambridge University Press.
- Nater, Hank F. 1984. The Bella Coola language. Ottawa: National Museum of Man. [Mercury Series, Ethnology Service Papers 92.]
- Nichols, Johanna, David A. Peterson, and Jonathan Barnes. 2004. Transitivizing and detransitivizing languages. Language Typology 8.149–211.
- Suttles, Wayne. 2004. Musqueam reference grammar. Vancouver: UBC Press.
- Thomason, Sarah, and Daniel Everett. 1993. Transitivity in Flathead. Papers for the 28th International Conference on Salish and Neighboring Languages, Seattle, Washington, 317–344.