A Closer Look at Salish Intransitive/Transitive Alternations[1]

DONNA B. GERDTS AND THOMAS E. HUKARI
Simon Fraser University and University of Victoria

0.   Introduction

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: *q̓aʔ* 'get added' in (1) contrasts with *q̓aʔ-t* 'add it, put it in with' in (2):[2]

(1)   niʔ   q̓aʔ   kʷθə   nə   šeləmcəs   ʔə   kʷθə   nə   s-kʷu:kʷ.
    AUX add DT   1POS ring   OB   DT   1POS NM-cook
    'My ring got into my cooking.'

(2)   nem̓   č   q̓aʔ-t   t̓θə   sqewθ   ʔə   t̓θən̓   słap̓!
    go   2SUB add-TR DT   potato OB DT.2POS soup
    '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). Indeed Salish languages are "transitivizing" languages in the sense of Nichols et al. (2004), who looked at 18 intransitive/transitive pairs in 80 languages, including the neighboring Salish language Squamish, and rated them on the basis of whether the intransitive or the transitive alternant was morphologically marked. The verbs in

---

[2] The following abbreviations are used in glossing the data: APPL: applicative, ATTRIB: attributive, AUX: auxiliary, CNJ: conjunction, DT: determiner, EMPH: emphatic, FUT: future, LNK: linker, NM: nominalizer, OB: oblique, POS: possessive marker, Q: interrogative, SUB: subject, SSUB: subordinate subject, TR: transitive.

question all have bare root intransitive alternants and marked transitive alternants in Halkomelem. 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 some Salish scholars, for example Kuipers (1968), Hess (1973), Jelinek (1994), and Suttles (2004), to the viewpoint that all verb roots in Salish languages are intransitive and they require the addition of transitive morphology in order to serve as transitive stems. However, there is an alternative view taken by some Salish scholars, including Gerdts (1988a), Gerdts & Hukari (1998), Nater (1984), and Thomason & Everett (1993): the transitive suffix is a verbal inflection that appears on bases that are already semantically transitive. It is that viewpoint that we seek to explore in this paper.

First we review some information regarding intransitive roots in section 1. Then, we explore the issue of transitivity from three perspectives. Section 2 shows that around one hundred verb roots that appear with the transitive suffix do not occur as a Ø-form intransitive. Section 3 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. Section 4 shows that many bare roots used unaccusatively seemed to be coerced into this frame by special semantics while the transitive alternants are more basic. We, thus conclude that the Halkomelem data do not support the viewpoint that all roots are unaccusative or even that all roots are intransitive. Rather, Salish verb roots should be classified, like those in other languages, into intransitive and transitive roots.

1.　　Intransitive Roots

One way to explore the status of roots is to make a more complete survey of the Ø/-*t* pairs in the language, classifying them according to the semantic properties of the base. A project that we have been undertaking for the last twenty years is testing Halkomelem verb roots in combination with the various suffixes. So far we have identified 489 verb roots and tested them in combination with twelve suffixes (transitive, causative, reflexive, desiderative, etc.). We checked with speakers to see if forms were acceptable and asked for illustrative sentences. We also took materials from our elicitations, texts, dictionaries, and composed a database coded for argument realization and semantic nuances. Our survey shows that the transitive suffix -*t* can occur with 407 of the 489 roots in our sample (83%).[3]

In oft-cited examples of the Ø/-*t* alternations, such as those in Table 1, the Ø alternant is typically a state or process verb with an unaccusative frame. That is, the sole argument (syntactically the subject) is semantically a patient/undergoer.

---

[3] The transitive suffixes are also used on bases that consist of more than a root. We have discussed the combinatorial properties of transitive suffixes elsewhere (see especially Gerdts 1988a) and limit the discussion here to cases where the suffix is attached directly to the root.

Table 1. Examples of Transitive -*t*

Ø INTRANSITIVE		-*t* TRANSITIVE	
səq̓	'get torn'	sq̓et	'tear it'
k̓ʷəɫ	'spill'	k̓ʷɫet	'pour it'
k̓ʷes	'burn', 'get hot'	k̓ʷesət	'burn it'
c̓əy̓xʷ	'get dry'	c̓əy̓xʷt	'dry it'
ləc̓	'(container) get full'	ləc̓ət	'fill it'
ɫət̓	'flipped'	ɫt̓et	'flip it'
ɫəqʷ	'get wet'	ɫqʷət	'wet it'
nec̓	'be different'	nec̓t	'change it'
c̓əq̓ʷ	'get pierced'	c̓q̓ʷat	'pierce it'
c̓əxʷ	'increase'	c̓xʷat	'add more to it'
ƛ̓əxʷ	'get covered'	ƛ̓xʷat	'cover it'
ləkʷ	'break in two'	ləkʷat	'break it in two'
ʔak̓ʷ	'get hooked'	ʔak̓ʷət	'hook it'
tiq̓ʷ	'get hit, bumped'	tiq̓ʷət	'hit, bump it'

We see that the Salish data go far beyond the English *melt/melt* alternation (i.e. the inchoative/causative alternation) to include intransitive verbs that cannot spontaneously occur, but must have an external force (Haspelmath 1993). The robustness of this pattern, along with the distinctly un-English semantics, has led Davis (1997, 2000) to take the claim of intransitivity for Salish roots one step further: he posits that all roots are unaccusative.[4] Under his deep-unaccusativity approach, transitive verbs and unergative verbs are derived in the syntax. The transitive suffix is a *v* head that brings in an external argument, the agent. Unergative verbs are marked with a variety of suffixes that serve as a *v* head that both brings in an external argument and cancels the internal argument.

However, what we find in our data is that the claim for universal unaccusativity is not justified. As we show in this paper, there are several types of relationships between the bare root and the alternant with -*t*. Furthermore, when we use tests for establishing unaccusativity as laid out in Gerdts (1991) and Gerdts & Hukari (2001, 2006), we find surprisingly that only 54 out of 489 roots (11%) straightforwardly test to be unaccusative, divided into three semantic types as follows:[5]

---

[4] See Davis and Demirdache (2000) for a more refined version of this hypothesis. There verb roots are taken to by semantically "causative" but syntactically unaccusative. Our objections to positing that all roots are of one type are equally applicable to this revised hypothesis.

[5] These tests include the lack of a causative, a desiderative, and a limited control reflexive with an agentive reading.

STATE/TRANSITIVE
həli 'be alive, living', ƛ̓əx̌ʷ 'be hard', qəx̌ 'much, lots', tqʷa 'be taut', ləqʷ 'be wet', məs 'decrease in size', x̌ƛ̓ə 'close together', x̌̓pə 'deep', p̓il 'fill to brim', ɬec 'dark', ləl̓p̓ 'flatten, flop'

PROCESS (SPONTANEOUS)/TRANSITIVE
ləkʷ 'break', meʔ 'come off', yəx̌ʷ 'come undone, set free', q̓ʷəl 'cook, bake, ripen', k̓ʷes 'get burnt, scald, injure by a burn', mq̓ə 'get full of food', x̌əɬ 'get hurt', q̓is 'get knotted', q̓ay 'get sick, die', liqʷ 'get slack', ċəq̓ 'get surprised', sq̓e 'tear', ċqʷa 'absorb', ləm̓ 'fold, hem', ɬəlq 'soak, flood, (river) rise', ɬq̓ʷa 'take bark off', pqʷa 'break', səlq̓ 'twirl, swing', x̌k̓ʷa 'wedge, get stuck', x̌ʷay 'die (plural)', sik̓ʷ 'peel', caʔ 'pull off a layer of clothing', tɬə 'spread, open', txʷa 'uncover', cən̓ 'lean against something', xʷiq 'cheer up'

EXTERNALLY CAUSED EVENT/TRANSITIVE
t̓θas 'get bumped', q̓ʷaqʷ 'get clubbed', pas 'get hit', t̓θəx̌ʷ 'get washed', q̓ʷap̓ 'wrinkle, pleat', qəp̓ 'stick something to something', x̌ʷiq̓ʷ 'loop', qit 'tie in the middle', ʔaqʷ 'soak up, absorb', ʔaq̓ʷ 'brush', t̓θek̓ʷ 'shine a light on', pah 'blow on, blow out, inflate it', qem 'bend', t̓θis 'nail', leʔ 'put away', pšə 'spit medicine', t̓θəl 'lose it all gambling'

The roots that test to be unaccusative (54) outnumber the roots that straightforwardly test to be unergative (33). The unergative roots split into two types, canonical unergatives, which do not form transitives with the suffix -t, and a small group of motion verbs, which do form transitives with -t:[6]

CANONICAL UNERGATIVES
cam 'go uphill', hek̓ʷ 'recall to mind', həyeʔ 'depart', k̓ʷiʔ 'climb', ɬak̓ʷ 'fly', nem̓ 'go', q̓ɬan 'be forward', qʷal 'speak', taxʷ 'bring down', tak̓ʷ 'go home', θət 'say to', x̌in̓ 'growl', x̌ʷteʔ 'go/come to', yays 'work', ʔəmət 'sit down/rise out of bed', ʔənəxʷ 'stop', ʔa:ɬ 'get on vehicle', ʔeli 'away, take away', ʔewə 'come here', ʔitət 'sleep', ta:l 'go to middle of floor', ƛ̓iw̓ 'sneak off, run away', he:w̓ə 'go away for a long time', k̓ʷayəkʷ 'fish with line, gaff', lən̓e 'go along a way', təy 'pull (race) a canoe', ɬew 'flee', tel 'be like'

MOTION VERBS
ɬe:l 'go ashore; beach it', kʷe:l 'hide', ʔəƛ̓q 'go out, get out', səl̓ċ 'go around, surround', q̓ʷim 'disembark'

However, we did not find an overwhelming preponderance of unaccusative roots that we would expect under the deep unaccusativity hypothesis.

---

[6] Some of these verbs take -š as a morphophonemic variant of -t.

Furthermore, our research has revealed that half of the roots that have alternants with *-t* are "swingers". That is, the bare root appears in either an unergative or an unaccusative frame, as required by the context. For example, the roots *ṗeƛ̓θ* 'sew' and *ṗəkʷ* 'float' behave unergatively with a human (or sentient) subject, denoting an action under the control of the agent NP (see (3) and (5)), but they behave unaccusatively with inanimate objects, denoting an activity that the NP undergoes (see (4) and (6)).

(3)   x̌ət̓ə   kʷs   ṗeƛ̓θ-s   ʔiʔ   ʔeʔəθ   ƛ̓eʔ   wəɫ   sʔeʔƛ̓q.
          say   DT.NM sew-3SSUB   CNJ   AUX:DT again now   outside
          'She said she was going to sew and now she's outside.'

(4)   niʔ   ṗeƛ̓θ   kʷθə   qtewəstəns.
          AUX   sew   DT   waistband
          'The waistband got accidentally sewn together.'

(5)   nem̓   cən   nəqəm-nəs   ʔəw̓   ṗəkʷ   ceʔ   niʔ
          go   1SUB dive-APPL   LNK   surface   FUT   AUX

                 ʔə   tθə   niʔ   ʔam̓ət   s-qʷəs=šeṅ.
                 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.'

(6)   naʔət   wəɫ   ṗəkʷ   tθə   qʷɫeẏ.
          AUX:DT now   surface   DT   log
          'The log has floated up.'

This fact is not unexpected; work on unaccusativity cross-linguistically has shown that verbs in many languages easily switch from one type to another or that types have mixed properties (Levin & Rappaport Hovav 1995).

      Given that global unaccusativity fails to be a semantically interesting hypothesis for Salish languages, we are led back to the question of whether positing intransitivity for all roots is at all insightful.

2.   Transitive Roots

The first problem that arises for the intransitive root hypothesis is that not all verbs that occur with the *-t* suffix have a corresponding bare root alternate that can appear as a free-standing word. We find 93 of the 489 roots (19%) are like this. The following verbs are typical of this type:

ACTIVITIES INVOLVING MANIPULATING, MOVING, ACQUIRING, INGESTING, ETC.
√haʔxʷ 'steam bathe', √hes 'ritual brushing', √k̓ʷey 'bathe in cold water', √yək̓ʷ 'scrub, rub together', √yətq̓ʷ 'scrub', √yič 'sand', √x̌ip̓ 'scratch', √x̌əy̓ 'beat', √təyq 'move', √qix̌ 'slide', √yiq 'fell, tip over', √qx̌ʌ̓ə 'drop off', √hikʷ 'rock', √cəm̓ 'pack on one's back', √ʔit̓ 'pack by the handle', √šeʔ 'put on lap', √ɬaq̓ʷ 'tap, pat', √kʷeʔ 'drop it, let go, leave it alone', √tan 'leave behind', √x̌im 'grab', √ƛ̓kʷa 'grab and pull', √mək̓ʷ 'pick up off the ground', √wen 'throw', √ʔim 'step on', √ɬəl 'bail it out', √maʔ 'start a fire', √ʔiləq 'buy it', √ɬkʷa 'peck', √k̓ʷeɬq̓ 'pop, slam, snap', √ləq̓ʷ 'drink in one swallow', √t̓θk̓ʷə 'eat, riddle (as pests do)'

VERBS OF COGNITIVE AND SOCIAL INTERACTION
√ɬeq 'whisper', √k̓ʷeɬq̓ 'pop, slam, snap', √lem 'look at', √yən 'laugh at', √t̓qə 'insult, jeer', √x̌t̓ə 'jinx', √ƛ̓xʷə 'beat (in a game, race)', √naʔ 'find s.o. dear, miss', √nan 'take someone's side, defend', √p̓xʷa 'keep quiet, calm down', √neh 'name someone', √t̓ih 'ask him/her, beg', √ʔa: 'call for, invite', √ya: 'order', √cse 'tell (to do)', √k̓ʷəye 'forbid', √ʔexʷeʔ 'give, share with'

These verbs have semantics typical of transitive verbs 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. In fact, the simplest analysis to posit for these verbs is that the roots are transitive.

Such verbs show us two things. First, that some roots are in fact basically transitive. Second, that transitive marking, rather than functioning as a means of deriving transitive from intransitive forms, should be viewed as inflection on roots that are already semantically transitive.

3.   Unergative Verbs With Transitive Semantics
A second problem for the intransitive root hypothesis comes from a class of verb roots that show a Ø/transitive alternation, but not of the expected pattern. The agent rather than the patient is the constant factor across the two constructions. Furthermore, even the intransitive alternate is semantically transitive: the oblique-marked NP is the semantic patient in the intransitive (a) examples corresponding to the direct object in the transitive (b) examples.[7]

(7)   a.   nem̓   čəkʷx̌   ʔə   kʷθə   sce:ɬtən!
               go   fry   OB   DT   salmon
               'Go fry some salmon!'

---

[7] More precisely, this is a particular kind of oblique-marked NP that we refer to as an oblique object (Gerdts 1988a, Gerdts & Hukari 1998).

b. nəwə-s   neṁ   čək^wx̌-t   t^θə   səplil!
you-NM   go   fry-TR   DT   bread
'You go fry the bread!'

(8)   a.   neṁ   łə   təẃ   šəyq   ʔə   t^θə   x̌θəm ʔə   ḱ^w   laʔθən!
go   EMPH   bit   look.through   OB   DT   box   OB   DT   plate
'Go look through the box for a plate!'

b.   neṁ   təẃ   šəyq-t   t^θə   ləq^wə   ʔə   k^wθə   šx^wʔaʔt^θəsəṁ!
go   bit   look.through-TR   DT   suitcase   OB   DT   towel
'Go look through the suitcase for a towel!'

(9)   a.   x̌^wəm   ʔə   č   ʔiʔ   ləṗt^θ   ʔə   t^θə   ṫeməḱ^w-s   t^θə   ḱ^wsəc?
can   Q   2SUB   and   slurp   OB   DE   egg-3POS   DT   trout
'Can you slurp up the trout eggs?'

b.   scəẃet   k^ws   ləṗt^θ-t-s   θə   qeq   t^θə
know.how   DT.NM   slup-TR-3POS   DT   baby   DT

ščəymən-aʔł   nutəls.
Chinese-ATTRIB   noodles

'The baby knows how to slurp up the Chinese noodles.'

This is a significant class of verbs: 35 of the 489 verb roots (7%) exhibit this pattern. They are as follows:

SEMANTICALLY TRANSITIVE WITH OBLIQUE OBJECT
łiš 'bite and tear it apart', q^wəls 'boil', səẃq̣ 'seek', ʔeṁəq 'return, give back', čək^wx̌ 'fry', ḱ^wəl̇c 'gut it', łip 'strip slices off', mai 'aim', qeṅ 'steal from', ƛ̓əmḱ^w 'pop in mouth', šəyq 'ransack, go through looking', ṫel 'half-drying fish', x^wik^w 'brush close by', x̌iḱ^w 'gnaw', x̌ṫeḱ^w 'carve', qeləc 'spin (wool, etc)', calaʔł 'borrow', weq̇ 'dig', łəṅ 'weave', ləṗt^θ 'slurp it up', melq 'forget', nəwən 'will it to', ƛ̓eʔə 'propose', k^wuk^w 'cook it', x̌ṫeḱ^w 'carve', łəṅ 'weave', has 'blow on it', łet^θ 'joke with someone', qamaʔ 'nurse', seṁ 'sell', ṫem 'guess', x̌łas 'eat, dine', t^θəmx̌ 'peek at, peer at', t^θaq^w 'suck on', nəpəc 'send, mail, hitch ride'

Like the verb roots in the previous section, these verbs denote semantically purposeful actions, often activities that require some duration. We have no explanation for why these verbs appear in the oblique object construction while the verbs in the previous section do not. Nevertheless, both groups of verbs seem to denote transitive events.

4. Bare Root is Unaccusative but Semantically Transitive

A third problem for the intransitive root hypothesis comes 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:

(10)
nem̓	ʔə	ceʔ	θimaʔ	θə	sq̓ʷi:l̓məxʷ	ʔi	ʔən̓	šən̓cə?
go	Q	FUT	freeze	DT	blackberry	AUX	2POS	pick

'Are you going to freeze the blackberries you picked?'
[Lit: 'Are the blackberries that you picked going to go freeze?']

(11)
ʔi	ceʔ	ʔə	təʔi	kʷs	tax̌ʷ-s	kʷθə	sənixʷəɫ
AUX	FUT	OB	here	DT.NM	beach-3POS	DT	canoes

ʔəw̓	kʷeyələs.
LNK	tomorrow

'You will beach the canoes over here tomorrow.'
[Lit: 'The canoes will be beached here tomorrow.']

(12)
nem̓	ceʔ	pələc̓	θən̓	swetə	kʷən̓s	c̓əy̓xʷ-t.
go	FUT	turn.inside.out	DT.2POS	sweater	DT.2POS	dry-TR.

'You will turn your sweater inside out to dry.'
[Lit: 'Your sweater will be turned inside out when you dry it.']

(13)
ʔəy̓	kʷs	qiq̓-s	tᶿə	qeq	ʔəwə	kʷɫ	ʔiʔ	x̌̓aʔ.
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. That is, 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-transitive imperative. It functions as a polite or indirect imperative. As seen in the English translation that speakers give for such examples, the agent is implied. It is usually translated as second person singular or plural, but occasionally a first person hortative. The sentence is usually framed in the future (10)–(12), as a question (10), or with the higher predicate *ʔəy̓* 'good' (13). Furthermore, the construction allows the motion auxiliary *nem̓* 'go', which is otherwise limited to clauses where there is an agent that can move (Gerdts 1988b).[8] For example in (10) and (12) above, it is the implied second person agent that is thought to be moving.

---

[8] There is one exception to this condition on animacy: the subject of verbs expressing natural events such as the tide going out or the moon setting can take motion auxiliaries.

We were actually surprised to find that a fair number of verbs roots (37 out of 489 or 8%) appear in the pseudo-transitive imperative construction:

PSEUDO-TRANSITIVE IMPERATIVES
kʷcə 'shout at, use a sharp tone with', kʷθə 'lie down (a quadruped), crouch', k̓ʷše 'number', ləx̌ʷ 'cover', p̓ələc̓ 'turn inside out, turn over', tax̌ʷ 'beach', t̓aʔ 'pull apart', θəyq 'uneven, staggered', x̌θe 'jerk', yax̌̓ 'rub', yeʔ (yaʔ) 'paddle backward', q̓əlp̓ 'curl, bend', θimaʔ 'freeze', x̌̓q̓ʷə 'wrap up, tidy up', t̓θał 'dampen', xʷk̓ʷa 'pull, pull the slack up', ʔiyeʔq 'change', łte 'flip', p̓eʔ 'skim cream off milk, flatten', qəyeʔ 'take out', ʔaləx̌ 'collect', x̌̓əpx̌ 'scatter it, spread it, broadcast', q̓əy̓t̓θ 'bring together', q̓ʷay 'scrape, singe a canoe', sat̓ 'suck', səy̓t̓ 'tickle him/her', šak̓ʷ 'bathe', šem 'dry, smoke', t̓aləx̌ʷ 'send away, chase away', wet̓θ 'knit; pry with a tool', x̌ca 'figure out', c̓xʷa 'more, add more to it', θəyx̌ 'stoke, rake', t̓əl̓qiʔ 'soak', t̓θłek̓ʷ 'pinch', yəx̌̓q̓ 'paint', məlxʷ 'rub oil on it, grease it'

In many cases, the English equivalents are transitive verbs, though in some cases there are also unaccusative counterparts in English. Again, we have no explanation for why these verb roots differ from the roots in the previous two sections. However, the best analysis for them is that these roots are basically transitive rather than unaccusative in Halkomelem, since the transitive alternants are semantically neutral.

5.   Conclusion

In sum, roots that take the transitive suffix fall into two types: those where the bare root can easily appear in an unaccusative frame and those that cannot. Typical unaccusative verbs denote processes, with or without an implied external force, and also a handful of states. Those that are not easily classified as unaccusative include a small group of motion verbs, bare roots that appear in an unaccusative frame only in a pseudo-transitive imperative, bare roots that appear in an unergative frame with an oblique-marked object, or those that cannot appear as bare roots at all. These roots are probably best analyzed as being semantically transitive, as the transitive rather than the intransitive alternant (if there is one) seems to be more basic. We summarize our results in Table 2:

Table 2. The semantics of roots taking the transitive suffix

	UNACCUSATIVE	UNERGATIVE	TRANSITIVE
STATE	12	—	—
SPONTANEOUS PROCESS	26	—	—
EXTERNAL FORCE	38	—	—
MOTION VERBS	—	5	—
PSEUDO-TRANSITIVE	—	—	39
UNERGATIVE WITH OBLIQUE OBJECT	—	—	35
TRANSITIVE	—	—	47
TOTAL	76	5	121

This table gives information on 201 of the 407 roots that allow -*t*. The other 206 roots are "swingers", exhibiting mixed properties, as discussed in the introduction. Leaving the indeterminate ones aside, we can still say that any hypothesis that tries to put all the roots into a single class is uninsightful for the Halkomelem data. At least some of the roots are transitive, and, as discussed in section 1, some appear to be unergative.

In other words, Halkomelem probably exhibits the normal tripartite system: there are three major verb classes—unaccusative, unergative, and transitive—and these map to three different syntactic structures.[9] An unaccusative-based syntactic architecture is overly simplistic and provides no insight into the lexical complexities of verb classification in Salish.

Alternatively, we might heed Piñón's (2001a, 2001b) warning against naively taking the morphology at face value. Under his "least common denominator" analysis (cf. Parsons 1990), verb stems are neutral (or alternating) with respect to argument structure. Both transitive and intransitive verbs are built from these neutral verb stems, rather than one being derived from the other. Moreover, the derivation is lexical and therefore subject to conditions on the semantics of event structure (Levin & Rappaport Hovav 2005, and references therein). The neutral approach to alternations not only has cross-linguistic appeal, given the variety of morphological marking patterns found within and across languages (Haspelmath 1993), but also makes sense for Salish, where a unidirectional analysis turns out not to be as promising as it might initially appear, as we have discussed herein.

Whether we posit three distinct classes of roots and then sort out which class or classes a particular root belongs to, or we posit neutral roots and then give the rules for building types of verbs from them, we are left with the task of trying to make sense of the semantics of verb classes. This paper is one step in this enterprise.

---

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

References

Davis, Henry. 1997. Deep Unaccusativity and Zero Syntax in St'át'imcets. In Amaya Mendikoetxea and Myriam Uribe-Etxebarria, eds., *Theoretical Issues at the Morphology-Syntax Interface*, 55–96. Bilbao: *Supplements of the International Journal of Basque Linguistics and Philology*.

Davis, Henry. 2000. Salish Evidence on the Causative-Inchoative Alternation. In Wolfgang U. Dressler, Oskar E. Pfeiffer, Markus Pöchtrager, and John R. Rennison, eds., *Morphological Analysis in Comparison*, 25–60. [*Current Issues in Linguistic Theory* 201.] Amsterdam: John Benjamins.

Davis, Henry, and Hamida Demirdache. 2000. On Lexical Verb Meanings: Evidence from Salish. In Carol Tenny and James Pustejovsky, eds., *Events as Grammatical Objects*, 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., 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, Vol. 10, 33–46.

Gerdts, Donna B., and Thomas E. Hukari. 2006. From Agent-oriented Modality to Aspect in Halkomelem. Paper presented at SSILA, Albuquerque, New Mexico.

Haspelmath, Martin. 1993. More on the Typology of Inchoative/Causative Verb Alternations. In Bernard Comrie and Maria Polinsky, eds., *Causatives and Transitivity*, 87–120. Amsterdam: John Benjamins.

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.* [Mercury Series, Ethnology Service Papers 92.] Ottawa: National Museum of Man.

Nichols, Johanna, David A. Peterson, and Jonathan Barnes. 2004. Transitivizing and Detransitivizing Languages. *Language Typology* 8:149–211.

Parsons, Terence. 1990. *Events in the Semantics of English: A Study in Subatomic Semantics.* Cambridge: MIT Press.

Piñón, Christopher. 2001a. A Finer Look at the Causative-Inchoative Alternation. In Rachel Hastings, Brendan Jackson, and Zsofia Zvolenszky, eds., *Proceedings of Semantics and Linguistic Theory* 11. Ithaca, NY: CLC Publications, Cornell University.

Piñón, Christopher. 2001b. Modelling the Causative-Inchoative Alternation. *Linguistische Arbeitsberichte* 76:273–293. University of Leipzig.

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.

Donna B. Gerdts
Department of Linguistics
Simon Fraser University
Burnaby, BC V5A 1S6
Canada

gerdts@sfu.ca

Thomas E. Hukari
Department of Linguistics
University of Victoria
Victoria, BC V8W 3P4
Canada

hukari@uvic.ca