A Closer Look at Salish Intransitive/Transitive Alternations

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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: 'qa’ ‘get added’ in (1) contrasts with 'qa?-t ‘add it, put it in with’ in (2):2

(1) nəʔ 'qa' kʷθə nə sələmcəs ʔə kʷθə nə s-kʷu:kʷ. AUX add DT 1POS ring OB DT 1POS NM-cook
‘My ring got into my cooking.’

(2) nəm tə 'qa?-t tə sqewθ ?ə təʔən slap! 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

1 Halkomelem is a Central Salish language spoken by around one hundred elders in southwestern British Columbia. Data are based on fieldwork with Island Halkomelem speakers. We especially thank Ruby Peter and the late Arnold Guerin and Theresa Thorne for assistance with data. Thanks also to Sarah Kell and Kaoru Kiyosawa for research assistance, to Todd Peterson and Charles Ulrich for editing, and to SSHRC; Simon Fraser University; University of Victoria; Jacobs Fund; Phillips Fund; The Museum of Civilization, Ottawa; and the Canadian Consulate, Washington, D.C., for funding.

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 Gerds (1988a), Gerds & 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%).

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.

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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 Gerds 1988a) and limit the discussion here to cases where the suffix is attached directly to the root.
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Table 1. Examples of Transitive -t

<table>
<thead>
<tr>
<th>Ø INTRANSITIVE</th>
<th>-t TRANSITIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>saq</td>
<td>‘get torn’</td>
</tr>
<tr>
<td>k*ol</td>
<td>‘spill’</td>
</tr>
<tr>
<td>k*es</td>
<td>‘burn’, ‘get hot’</td>
</tr>
<tr>
<td>córyx*</td>
<td>‘get dry’</td>
</tr>
<tr>
<td>ləc</td>
<td>‘(container) get full’</td>
</tr>
<tr>
<td>lət</td>
<td>‘flipped’</td>
</tr>
<tr>
<td>ləqʷ</td>
<td>‘get wet’</td>
</tr>
<tr>
<td>nəc</td>
<td>‘be different’</td>
</tr>
<tr>
<td>cəqʷ</td>
<td>‘get pierced’</td>
</tr>
<tr>
<td>cəxʷ</td>
<td>‘increase’</td>
</tr>
<tr>
<td>ḥxʷ</td>
<td>‘get covered’</td>
</tr>
<tr>
<td>ləkʷ</td>
<td>‘break in two’</td>
</tr>
<tr>
<td>?akʷ</td>
<td>‘get hooked’</td>
</tr>
<tr>
<td>tiqʷ</td>
<td>‘get hit, bumped’</td>
</tr>
</tbody>
</table>

We see that the Salish data go far beyond the English molt/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 Gerdt (1991) and Gerdt & 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

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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.
Some of these verbs take \( -\) as a morphophonemic variant of \(-t\).
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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 pet’w ‘sew’ and pəkʷ ‘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) xəiə kʷs pet’w-s yʔi? cəʔəθ ʔeʔ səʔəʔəʔəŋ.
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 pet’w kʷθə qtewaʔstəns.
AUX sew DT waistband
‘The waistband got accidentally sewn together.’

(5) neʔə cən nəqəm-əs wəʔ əʔəkʷ cəʔ niʔ
go lSUB dive-APPL LNK surface FUT AUX
ʔə tʰə niʔ əʔəmət s-qʷəs=ʔəʔəŋ.
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 wəʔ əʔəkʷ tʰə qʷɬeʔ.
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.
\[\sqrt{\text{haq}}\] ‘steam bathe’, \[\sqrt{\text{hes}}\] ‘ritual brushing’, \[\sqrt{\text{k}}\] ‘bathe in cold water’, 
\[\sqrt{\text{qaq}}\] ‘tap, pat’, \[\sqrt{\text{k}}\] ‘drop it, let go, leave it alone’, \[\sqrt{\text{tan}}\] ‘leave behind’, 
\[\sqrt{\text{lk}}\] ‘peck’, \[\sqrt{\text{elq}}\] ‘pop, slam, snap’, \[\sqrt{\text{lq}}\] ‘drink in one swallow’, \[\sqrt{\text{θk}}\] ‘eat, riddle (as pests do)’

VERBS OF COGNITIVE AND SOCIAL INTERACTION

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 O/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. ne\[\text{m}^\text{t}\] \[\sqrt{\text{cak}}\] \[\sqrt{\text{y}}\] \[\sqrt{\text{k}}\] \[\sqrt{\text{θ}}\] \[\sqrt{\text{sce}}\]:\[\text{ltən}!\]  
\[\text{go}\ \text{fry}\ \text{ob}\ \text{dt}\ \text{salmon}\]  
‘Go fry some salmon!’

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\(^7\) More precisely, this is a particular kind of oblique-marked NP that we refer to as an oblique object (Gerdts 1988a, Gerdts & Hukari 1998).
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b. nəmə-s ne’m čəkʷ-š- tə səplil!
you-NM go fry-TR DT bread
‘You go fry the bread!’

(8) a. ne’m təw ṣəyq tə łəqʷə tə kʷəłəmə? kʷə łəʔəm!
go EMPH bit look.through OB DT box OB DT plate
‘Go look through the box for a plate!’

b. ne’m təw ṣəyq-t tə łəqʷə tə kʷəłəmə!
go bit look.through-TR DT suitcase OB DT towel
‘Go look through the suitcase for a towel!’

(9) a. ḣəmə tə cətə ʔə tə ʔəməkʷ-ə tə kʷəłə?
can Q 2SUB and slurp OB DE egg-3POS DT trout
‘Can you slurp up the trout eggs?’

b. șćəyənəʔə?l nutəl.
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**


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) *neim* qa *ce≈ðima†* *súq≈i:Imox≈w* ?i *qo≈ñ sañca?
    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) *qi* ce≈? *ta†i k*s ta≈x≈-s k≈θa sənix≈a†
    AUX FUT OB here DT.NM beach-3POS DT canoes
    ?ωω k≈eyəla.ς.
    LNK tomorrow
    ‘You will beach the canoes over here tomorrow.’
    [Lit: ‘The canoes will be beached here tomorrow.’]

(12) *neim* ce≈? *p≤laoç* *θañ sweis k≈œns ña≥y≈x≈-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) *œy† k*s qi≈-s tθa qeq ?œwa k≈t ?i≈? ŝa≈?.
    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 *œy† ‘good’ (13). Furthermore, the construction allows the motion auxiliary *neim* ‘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.

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

**PSEUDO-TRANSITIVE IMPERATIVES**

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:
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. 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.

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