Going Radical in Salish

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1. Three Claims about Roots in Salish

I make the following three claims in this paper, which as far as I can see hold good throughout the Salish language family.

A. Roots are *categorially specified*: there is a three-way distinction between *nouns*, *adjectives*, and *verbs*.
B. All verb roots are *unaccusative*: they systematically *lack an external argument*, even when the meaning of the verb root entails an agent.
C. All verb roots are *eventive* and *culminate* (they have the aspectual profile of *achievements*).

The claims in A-C cause various problems for putative universals of lexical decomposition. In particular, A is a challenge to the idea that there is an acategorial √ underlying all categorially specified heads; B counter-exemplifies typological claims concerning universal limits on the mapping of lexical semantic representations onto argument structure; and C suggests that roots may vary cross-linguistically in how they realize *Aktionsarten*.[1]

I discuss each claim in turn in Sections 2-4. Section 5 concludes.

2. Roots in Salish are Categorially Specified

The discredited claim that Salish completely lacks lexical category distinctions now has the status of a Zombie Hypothesis: it stubbornly refuses to die, though it is now largely banished to introductory textbooks and the typological literature. See Demirdache and Matthewson (1995), Davis and Matthewson (1999), Montler (2003), Davis (2011), Davis et al. (2014) for robust syntactic evidence for a noun-verb distinction and (more subtly, yet reliably) for adjective-verb and noun-adjective distinctions.

However, the category-neutral hypothesis has an offspring: the idea that category distinctions are imposed in the syntax by categorial heads (*n, a, v*), which attach to acategorial roots (√). This is the position advocated by Wiltschko (2005, 2008; see also Thompson 2007), on the basis of data from Halkomelem (Central Salish).

Setting aside the conceptual (dis)advantages of such a model, I'll focus here on its most important empirical prediction: that there are morphological operations which take place at a pre-categorial level, and therefore directly target the √.

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[1] Most of the data here are from St'át'imcets (a.k.a. Lillooet, Northern Interior Salish; ISO 639-3 lil). Data come either through direct elicitation or from both published and unpublished textual sources. Much of the data is not new – see in particular Davis (1997, 2000), Bar-el et al. (2005), Davis and Matthewson (2009) – though increased textual resources have bolstered many of the conclusions reached there. I also draw on published data from other Salish languages where relevant, including Halkomelem (Central Salish: ISO 639-3 hur), and Sḵwx̱wú7mesh (a.k.a. Squamish: Central Salish ISO 639-3 squ).

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Wiltschko identifies two non-concatenative morphological processes, PLURAL (PLU) and DIMINUTIVE (DIM), as exemplifying pre-categorial operations in Halkomelem.[2] Her basic claims are:

(i) These operations apply cross-categorially (because there are no categorial distinctions at the relevant level).
(ii) They apply at the level of the root, and therefore crucially precede any operation that targets specific syntactic categories.
(iii) Semantically, they are functions on pre-categorial "concepts" rather than category-specific semantic atoms.

Of these three claims, (i) is compatible with but does not provide a positive argument for pre-categorial operations, since we can easily imagine a fully categorially specified system in which PLU and DIM generalize across semantic atoms (entities for nouns and events for verbs, for example). On the other hand, the claim in (iii) is hard to evaluate without a worked out theory of what "concepts" are, and how they differ from standard semantic representations. For reasons of space, I will therefore focus here on (ii), which has the virtue of falsifiability.

2.1. Do PLU and DIM target roots in Salish?

Non-concatenative PLU and DIM marking on nouns (1a-c) and adjectives (1d-e) does indeed target the (morphological) root in Halkomelem, as can be seen in (1a), where the prefix *s-* is ignored for purposes of reduplication.[3]

(1) (Downriver) Halkomelem (Suttles 2004)

	Root	*Plural*	*Diminutive*[4]
a.	√me:nt	s-mən-mé:nt	s-mé<m>nət
	rock, mountain	NMLZ-PLU-rock	NMLZ-rock<DIM>
		'rocks, mountains'	'little rock, little mountain'
b.	√céləx	cəl-céləx	cé<c>ələx
	hand	PLU-hand	hand<DIM>
		'hands'	'little hand'
c.	√k̓ʷáxʷaʔ	k̓ʷá<l̓ə>xʷaʔ	k̓ʷá<k̓ʷ>xʷaʔ
	box	box<PLU>	box<DIM>
		'boxes'	'little box'

[2] I use the term PLU here to distinguish non-concatenative plural morphology from plural inflection (PL), which is marked on pronouns throughout the Salish family (optionally with third persons) and also on determiners and demonstratives in St'át'imcets (and to a limited extent in Halkomelem). In most of the family, PLU involves C_1C_2-reduplication; however, in Halkomelem, it is a more complex morphological operation, with several idiosyncratic allomorphs, including reduplication, ablaut, and <*l*> infixation: see Hukari (1978), Galloway (1993), and Suttles (2004) for accounts of the phenomenon in the Island, Upriver, and Downriver dialects, respectively. Non-concatenative diminutive morphology takes the form of ($<C_2>$) reduplication throughout the family, with variations involving stress, vowel quality and glottalization.

[3] Halkomelem is a dialect continuum, with three principal dialect areas: Upriver (həl̓qəméyləm), Downriver (hən̓q̓əmín̓əm̓) and Island (həl̓q̓əmín̓əm̓). The data here are primarily taken from Suttles (2004), the major grammatical resource for the Downriver dialect, which lays out the relevant data in a particularly perspicuous fashion. Wiltschko's work is based on the Upriver dialect, but as far as I can see from Galloway (1993), the major source for Upriver Halkomelem, there are no relevant dialect differences in this area of the grammar.

[4] Examples are given in the version of the North American Phonetic Alphabet (NAPA) standardly employed in Salish linguistics. Abbreviations follow the Leipzig Glossing Conventions, with the following additions: AUT = 'autonomous' , CTR = 'control transitivizer' , EXIS = 'existence asserting'.

d.	√ṗəq̓	ṗe<p>q̓	ṗí<(ʔ)p>q̓
	white	white<PLU>	white<DIM>
		‘white (ones)’	‘little white one’
e.	√x̌ew̓s	x̌é<lə>w̓s	x̌é<ʔx̌ə>w̓s
	new	new<PLU>	new<DIM>
		‘new (ones)’	‘little new one’
f.	√nas	ná<l̓ə>s	na<n̓>s
	fat	fat<PLU>	fat<DIM>
		‘fat (ones)’	‘little fat one’

However, verbs are crucially different. Unlike nouns and adjectives, verbs show a systematic alternation between perfective (unmarked) and imperfective stems with both plural and singular allomorphs, as expounded in detail by Hukari (1978), Galloway (1993), and Suttles (2004).

Assuming imperfectivity is a criterial property of verbs (there are no imperfective nouns or adjectives), the prediction for a category-neutral PLU operation is clear: imperfectives (IPFV) should be built from pluralized roots only *after* they have been categorized by *v*. The data do not bear this prediction out, as illustrated in (2).

(2) (Downriver) Halkomelem

	Root (perfective)	*Plural (perfective)*	*Imperfective*	*Imperfective plural*
a.	√q̓iḵʷ	q̓é<l>əkʷ	q̓í-q̓əḵʷ	q̓íkʷ-q̓əḵʷ
	get bitten	get.bitten<PLU>	get.bitten<IPFV>	get.bitten<IPFV.PLU>
b.	√t̓aǰʷ	t̓á<l>əǰʷ	t̓á-t̓əǰʷ	t̓áǰʷ-t̓əǰʷ
	go down	go.down<PLU>	go.down<IPFV>	go.down<IPFV.PLU>
c.	√səq̓	se<s>q̓	sə<s>éq̓	sə<l>ə<s>éq̓
	crack, split, tear	crack<PLU>	crack<IPFV>	crack<PLU><IPFV>
d.	√wəq̓ʷ	wəq̓ʷ-wéq̓ʷ	hə-ẇq̓ʷ	həw-hé-ẇq̓ʷ
	drift away	drift.away-PLU	IPFV-drift.away	PLU-IPFV-drift.away

(Note that both IPFV and PLU are notoriously complex in Halkomelem. The three most regular alternations are illustrated here.)

The examples in (a) and (b) involve CVC roots with full vowels: here the (perfective) PLU, IPFV, and PLU+IPFV are all derived independently from the (perfective) root. The example in (c) involves a CəC root, where C is an obstruent, and the example in (d) an RəC root, where R is a resonant (i.e., a sonorant). In both these cases, the (perfective) PLU and the IPFV are built separately from the (perfective) root, but crucially the PLU+IPFV is built from the *IPFV* form. As Hukari (1978:190) puts it, “It seems preferable to assume imperfective formation precedes plural formation.” Conspicuously missing is the predicted pattern where a category-neutral plural operation is the input to a categorially sensitive imperfective operation, i.e., where the PLU+IPFV is derived from the (perfective) PLU.

The interaction of PLU and IPFV morphology therefore shows us that we need to appeal to categorial restrictions (verb versus non-verb) *before* PLU applies. And this in turn means that PLU *cannot be a category-neutral operation taking* √ *as its input.*

This conclusion is reinforced by the behaviour of diminutive verbs in Halkomelem. Once again, the prediction of the √ hypothesis is that a category-neutral operation (DIM) will apply to a root prior to addition of category-sensitive IPFV morphology.

However, *all* DIM forms are based on IPFV stems*:* "There are no perfective diminutive forms" (Suttles 2004:172). Diminutive verbs are illustrated in (3): in each case, DIM consists of a reduplicative prefix, which attaches to the imperfective base.[5]

(3) (Downriver) Halkomelem

	Root (Perfective)	*Imperfective*	*Diminutive*
a.	√p̓et$^{\theta}$	p̓é<p̓>ət$^{\theta}$	p̓ə-p̓éʔ<p̓>ət$^{\theta}$
	sew	sew<IPFV>	DIM-sew<IPFV>
b.	√pe:l̓s	pi-pé:l̓s	pi-pi-pé:l̓s
	blow	IPFV-blow	DIM-IPFV-blow
c.	√ʔítət	ʔi-ʔítət	ʔi-ʔi-ʔítət
	sleep	IPFV-sleep	DIM-IPFV-sleep

In other words, as with plurals (only even more strikingly), interaction with the imperfective shows that as long as IPFV can only be formed on verbs, DIM cannot be a category-neutral operation taking a √ as its input. More broadly, I conclude that there is no evidence for pre-categorial morphological operations in Halkomelem.

As far as I can see, the same is true of other Salish languages. In St'át'imcets, for example, the C_1C_2-reduplication operation which forms plurals is normally root-based, but crucially includes in its input the glottal infix which derives inchoative verbs. The latter is category-sensitive, as argued by van Eijk and Hess (1986): it *only* targets verbs. In (4), the glottal infix is highlighted: as can be seen in the right-hand column, it counts as C_2 for the purposes of C_1C_2- reduplication.

(4) St'át'imcets (cf. van Eijk 1997:68)

	Root	*Inchoative*	*Plural Inchoative*
a.	√x̌as	x̌a<**ʔ**>s	x̌á**ʔ**-x̌<**ʔ**>as
	ache	ache<INCH>	PLU-ache<INCH>
b.	√ciʕ^{w}	cí<**ʔ**>əʕ̓^{w}	cí**ʔ**-ci<**ʔ**>əʕ̓^{w}
	bleed	bleed<INCH>	PLU-bleed<INCH>
c.	√x̌^{w}is	x̌^{w}<**ʔ**>is	x̌^{w}í**ʔ**-x̌^{w}<**ʔ**>is
	smile	smile<INCH>	PLU-smile<INCH>

Diminutive formation in St'át'imcets – as in several other Interior Salish languages – is not even root-based, since it is stress-sensitive, and therefore often dependent on stress-shift in morphologically derived stems.[6] Diminutive reduplication in St'át'imcets is an infix which targets the C immediately preceding the stressed vowel and copies it afterwards (with concomitant glottalization of a following resonant). When a weak (schwa) verb root co-occurs with the strong allomorph of the 'autonomous' (lexical reflexive) suffix *-ilx*, stress shifts to the suffixal vowel, which then serves as the input for DIM, as shown in (5).

(5) St'át'imcets

[5] There is no semantic motivation for this restriction. In other Salish languages, perfective verbs are entirely compatible with diminutive marking: cf. e.g., St'át'imcets perfective *k^{w}is* 'it rained' vs. diminutive perfective *k^{w}ə<k^{w}>s* 'it drizzled, rained a little bit'.

[6] In the Northern Interior language Secwepemctsín (Shuswap: ISO 369-3 shs), first person pronouns induce "honorific" diminutive reduplication, which is stress-sensitive and therefore may target inflectional as well as derivational morphology (including lexical suffixes, transitivizers, and object suffixes: Kuipers 1974:23). There is no question here of a pre-categorial DIM operation.

	Root	*Autonomous*	*Diminutive Autonomous*
a.	√łəʕʷ	**łəʕʷ-íl**x	**łəʕʷ-í<ʕʷ>**l̓əx
	bounce	bounce-AUT	bounce-AUT<DIM>
		‘jump’	‘jump a bit, hop’
b.	√x̌ʷəm	x̌ʷ**əm-íl**x	x̌ʷ**əm-í<m>**l̓əx
	fast	fast-AUT	fast-AUT<DIM>
		‘go fast or faster’	‘go a bit faster’

There is no question in this case that DIM must apply to a categorially specified verb stem, since its input has specifically verbal morphology (the autonomous suffix).

I conclude that there is no evidence, either in Halkomelem or in Salish more broadly, for pre-categorial morphological operations.

3. All Verb Roots in Salish are Unaccusative

Focusing more specifically on verbs, I now turn to claim (B): that all verb roots in Salish are unaccusative, by which I mean they completely lack an external argument.

It is known that Salish languages exemplify the extreme causative end of the cross-linguistic continuum between causative languages, which build transitive verbs from intransitive (more specifically, unaccusative) roots, and anti-causative languages, which do the opposite (see Davis 1997, 2000). However, there still appears to be uncertainty in the typological literature about how extreme the Salish tendency is: for example, Haspelmath (2020:53) makes the following claim (my italics):

> “…languages almost never say ‘make something be cut’ for ‘cut’. The only language family where *a few causative pairs of this type are attested* is Salishan, as discussed by Davis (2000) (e.g. Lillooet ʔus ‘get thrown out, causative ʔus-c ‘throw out’; q̓ʷəl ‘be cooked’, causative q̓ʷə́l-ən ‘cook’).”

In fact, Haspelmath severely understates the degree to which Salish languages exemplify a purely causative system. By way of an initial response to the remarks above, here is a sample of fifty bare root unaccusative verbs in St’át’imcets; all were produced spontaneously, either in texts or conversation.

(6) St’át’imcets

zalk̓ʷ	‘get wrapped around’	*c̓aw̓*	‘get washed, baptized’
łap	‘get forgotten’	*puł*	‘get boiled’
pək̓ʷ	‘get poured out (esp. solids)’	*p̓um̓*	‘get smoked (e.g., hide)’
maƛ̓	‘get mixed in’	*mil̓*	‘get shared out’
cək̓ʷ	‘get pulled’	*cak̓ʷ*	‘get spread out (e.g., blanket)’
ciq̓	‘get poked, stabbed’	*c̓əq̓*	‘get struck, hammered’
nik̓	‘get cut’[7]	*łəp̓*	‘get hung over something’
(n-)łam̓	‘get put into a container’[8]	*łum*	‘get attached, installed’
łux̓ʷ	‘get inserted into something hollow’	*łiʕ̓*	‘get scattered’
kəł	‘get removed, taken off’	*k̓ʷan̓*	‘get taken’
k̓ʷuɬ̓	‘get soaked’	*k̓ʷul̓*	‘get made, created’
xaƛ̓	‘get taken out of liquid’	*xil̓*	‘get stirred’
xik̓	‘get pushed’	*x̓ʷik̓*	‘get butchered’
ɣəp	‘get stood up’	*qəł*	‘get stored’
q̓min	‘get knocked or thrown over’	*q̓il*	‘get laid on a flat surface’
q̓ʷəz	‘get used’	*zəwát*	‘get known’
ƛ̓up	‘get twisted’	*x̌al*	‘get stretched on a frame’

[7] Contra Haspelmath, St’át’imcets does indeed ‘make something be cut’ for ‘cut’!

[8] The locative prefix *n-* has no bearing on argument structure or aspect: it is common (though often optional) on verbs involving position or direction.

(n-)xʷuk̓ʷ	‘get pulled out’	*łəxʷ*	‘get put on, of clothes’
q̓ʷiʔ	‘get wrung out’	*mul*	‘get immersed in liquid’
x̌im̓	‘get grabbed’	*p̓am̓*	‘get made, of fire’
nak̓	‘get changed’	*xʷulk̓ʷ*	‘get rolled up’
qap	‘get softened’	*c̓əx̌*	‘get cleaned’
zaw̓	‘get scooped up (liquid)’	*pal̓*	‘get spread out (e.g., berries)’
kih	‘get picked up/carried (e.g., baby)’	*ləpinitás*	‘get punished’
cəq	‘get put down with opening up’	*mays*	‘get fixed, made’

It is worth observing that *none* of these verbs are recorded in their bare root form in van Eijk (2013), the most comprehensive published dictionary of the language (though many other more commonly attested bare root unaccusatives are listed there). This points to two important properties of unaccusatives in Salish. First, they are not lexically restricted: given the right discourse circumstances, *any* verb can show up as an unaccusative bare root. And second, due to the complete absence of an agent in their argument structure, the right discourse circumstances are sometimes quite hard to find (or to construct); I return to this point in 3.2 below.

3.1. Bare root unaccusatives are not morphologically derived

First, however, it is necessary to show that verbs like those in (6) really do consist of underived roots. To start with, nearly all have the canonical Salish root shape (CVC), and none of them show any trace of overt detransitivizing morphology, or indeed, any transitivity-related morphology at all.

In contrast, *all* formally transitive verbs (that is, those which may take an object suffix) are overtly suffixed with a transitivizer; this generalization holds almost without exception throughout the Salish family.[9]

Throughout the family there is also a set of *intransitivizing* suffixes which derive agentive intransitive verbs. In St’át’imcets, there are three main intransitive suffixes: ‘active’ *-xal*, which yields formally intransitive but semantically transitive ‘object-oriented’ verbs; ‘automomous’ *-ləx~-ílx*, which yields lexical reflexives, and ‘middle’ *-əm*, which yields either. In (7) below, I give some typical alternations involving bare root unaccusatives, derived intransitives, and transitive verbs

(7) St’át’imcets

a.	*Bare unaccusative*		*Active intransitive*		*Directive transitive*	
	c̓aqʷ	*‘get eaten’*	c̓áqʷ-xal	*‘eat (things)’*	c̓áqʷ-an̓	*‘eat s.t’*
	páqʷuʔ	*‘get scared’*	páqʷuʔ-xal	*‘scare people’*	páqʷʔ-an	*‘scare s.b’*
	sək	*‘get hit’*	sək-xál	*‘hit (things, people)’*	sə́k-ən	*‘hit s.t. or s.b.’*
b.	*Bare unaccusative*		*Autonomous intransitive*		*Directive transitive*	
	kʷis̓	*‘fall’*	kʷís-ləx	*‘lower oneself’*	kʷís-in̓	*‘lower s.t.’*
	nak̓	*‘change’*	nák̓-ləx	*‘change (into s.t.’)*	nák̓-ən	*‘change s.t.’*
	ləp̓	*‘get buried’*	ləp̓-ílx	*‘bury oneself’*	lə́p̓-ən	*‘bury s.t. or s.b.’*
c.	*Bare unaccusative*		*Middle intransitive*		*Directive transitive*	
	ʔac̓ǎ	*‘get seen’*	ʔác̓ǎ-əm	*‘see (things, people)’*	ʔác̓ǎ-ən	*‘see s.t. or s.b.’*
	qʷus	*‘get shot’*	qʷús-əm	*‘shoot (things, people)’*	qʷús-ən	*‘shoot s.t. or s.b.’*
	kʷul̓	*‘get made’*	kʷúl̓-əm	*‘make (things)’*	kʷul̓-ún̓	*‘make s.t.’*

Though there are also zero-marked unergative verbs (known as ‘control roots’ in the Salish literature), these act in a precisely parallel fashion to middles, as shown in detail in Davis (1997, 2000), who argues there that they are derived via a Ø-allomorph of *-əm*.

In contrast, there are *no* overt morphological processes in St’át’imcets or elsewhere in the family which derive unaccusative verbs from unergatives (either suffixed or unsuffixed). There is thus a striking

[9] The exception is Nuxalk (a.k.a Bella Coola) where transitivizers have fused with roots to yield lexically transitive verbs.

asymmetry in derivational morphology: transitives and unergatives (agentive intransitives) are routinely derived from unaccusatives, but unaccusatives are never derived from transitives or unergatives.

3.2. Bare root unaccusatives are not concealed transitives

I have claimed that none of the verbs in (6) license an external argument, even where the lexical meaning of the root is strongly agentive. On this point, it is important to distinguish the *semantic entailments* of these verbs from their *argument structure*. Many of them (e.g. 'get fixed', 'get used', 'get punished', 'get known') clearly entail an agent: but that agent is *not present syntactically*.

In particular, as first shown by Davis (1997), though the only available English translation for many bare patient-oriented verbs is as (get-)passives, they are not passives. Since Salish languages have a robust passive construction, this can be shown by directly comparing passives with unaccusatives. To start with, Salish passives are built on transitivized roots, whereas bare unaccusatives lack all traces of transitivity. Moreover, passives may (and frequently do) take oblique agents (marked in St'át'imcets by the prepositions *ʔə=* or *l=*), whereas when bare unaccusatives occur with an oblique adjunct, the adjunct may only be interpreted as an instrument or location. These differences are illustrated in (8)-(9).

(8) St'át'imcets

a.	**qám̓t-s-tum**	ta=twə́wẁət=a	ʔə=ta=smə́m̓ɬac̓=a
	get.hit-CAUS-PASS	DET=boy=EXIS	by=DET=girl=EXIS
	'The boy got hit by a girl (throwing something).'		
b.	**qam̓t**	ta=twə́wẁət=a	ʔə=ta=smə́m̓ɬac̓=a
	get.hit	DET=boy=EXIS	by=DET=girl=EXIS
#	'The boy got hit with a girl (e.g., thrown through the air).'		

(9)

a.	**x̌án̓-s-tum̓**	ta=twə́wẁət=a	l=ta=míx̌ał=a
	get.hurt-CAUS-PASS	DET=boy=EXIS	at=DET=bear=EXIS
	'The bear got hurt by a bear (attacking him).'		
b.	**x̌an̓**	ta=twə́wẁət=a	l=ta=míx̌ał=a
	get.hurt	DET=boy=EXIS	at=DET=bear=EXIS
#	'The boy got hurt on a bear (e.g., by tripping over a dead one).'		

I suspect that the syntactically non-agentive status of bare roots which semantically entail an agent is what Haspelmath and others find hard to accept. Their unease is understandable, because it runs counter to the intuition that there should be limits on the mapping of lexical semantic representations onto argument structure, and Salish tests those limits.

It is also true that bare root unaccusatives which entail an agent occur spontaneously in a rather limited range of contexts: in particular, where the speaker is backgrounding the agent, either because they don't know, don't care, or don't want to reveal who it is. One good place to find such verbs is in "instructional" texts, which explain how some task is accomplished without mentioning any specific agent. Many of the recently discovered St'át'imcets unaccusative verbs in (6) were produced in instructional contexts, as in the following example:

(10) St'át'imcets

nił	[ta]=s-kə́laʔ-s=a		tiʔ	ta=siṗáẓ=a	**kʷul̓**,
COP	[DET]=NMLZ-first-3POSS=EXIS		that.VIS	DET=hide=EXIS	**get.soaked**
	kʷú<ʔ>əl̓	ʔəɬ	**ʔiq̓**,	**ɬəp̓**,	**ɬə́p̓**=tiʔ
	get.soaked <INCH>	and.then	**get.scraped**	**get.hung.up**	**get.hung.up=**that.VIS
	láti ʔ	kʷu=k̓ʷín-asq̓ət			
	at+there.VIS	DET=how.many-day			

'First the hide gets soaked, it's soaked before it's scraped, and then hung up for a few days.'
(from "Tanning Hides", Mitchell 2022:531)

Another relevant context is provided by Gerdts and Hukari (2012), discussing Island Halkomelem. They refer to a class of "pseudo-transitive imperatives" consisting of bare unaccusative roots used to avoid making direct reference to an agent for reasons of politeness:

(11) (Island) Halkomelem
ʔi=ceʔ ʔə=təʔi kʷ=s=**taǩʷ**=s kʷθe=sənixʷəɬ ʔəw-kʷeyələs
AUX=FUT OBL=here DET=NMLZ=**get.beached**=3POSS DET=canoes LINK-tomorrow
'You will beach the canoes over here tomorrow.' [Literally: 'The canoes will get beached over here tomorrow.']

In short, evidence from both morphology (direction of derivation) and syntax (absence of any trace of an agent) lead to the same conclusion: v*erb roots in Salish are unaccusative: they license only internal arguments.*

4. Verb Roots in Salish Denote Achievements

Bare unaccusatives in Salish share a characteristic aspectual profile: *they have a culmination entailment.* In this respect, they differ from *all* other aspectual classes in the family. Derived agentive intransitives (in particular, object-oriented "anti-passive" type intransitives) systematically test as non-culminating throughout the family: see e.g. Bar-el (2005) on Sḵwx̱wú7mesh and Kiyota (2008) on SENĆOŦEN (a.k.a. Saanich, Northern Straits Salish: ISO 369-3 str.) More unusually, but also throughout the family, the Salish equivalents of accomplishments (known as 'control transitives') only have a culmination *implicature*, which can be canceled (see Bar-el 2005, Bar-el et al. 2005, Kiyota 2008, a.o.).

The difference between bare root unaccusatives (a) and control transitives (b) is illustrated below in St'át'imcets (12) and Sḵwx̱wú7mesh (13), from Bar-el et al. (2005):

(12) St'át'imcets

a.* **mays** ti=q̓láx̌an=a, ƛ̓uʔ ʔáy=ƛ̓uʔ kʷ=s=ka-máys=c-a
get.fixed DET=fence=EXIS but NEG=EXCL D/C=NMLZ=CIRC-get.fixed=3POSS-CIRC
'The fence got fixed, but it couldn't get fixed.' *Speaker's comment:* "Contradiction."

b. **máys-ən**=łkan ti=q̓láx̌an=a, ƛ̓uʔ ʔáy=ƛ̓uʔ kʷ=s=cúkʷ-s-an
get.fixed-CTR=1SG.SU DET=fence=EXIS but NEG=EXCL D/C=NMLZ=finish-CAUS-1SG.ERG
'I fixed a fence, but I didn't finish it.'

(13) Sḵwx̱wú7mesh

a. na **yəƛ̓q** ta=laẃ ʔi naʔ=xʷ wa yəƛ̓q-ant-as
REAL **get.painted** DET=house PART REAL=still IPFV get.painted-CTR-3ERG
'The house got painted and it's still being painted.' *Speaker's comment*: [laughs] "No good."

b. čən **yəƛ̓q-an** ta=laẃ ʔi naʔ=xʷ čən wa yəƛ̓q-an
1SG.SU **get.painted-CTR** DET=house PARTREAL=still 1SG.SU IPFV paint-CTR
'I painted the house and I'm still painting it.' *(Speaker's translation)*

The distinction between the culmination entailment of unaccusatives and the culmination implicature of accomplishments is supported by other relevant tests, in particular the interpretation of the sublexical operator 'almost' (*qiɬ* n Sḵwx̱wú7mesh, *tqiɬ* in St'át'imcets) which yields only an 'event almost happened' reading with bare root achievements (Bar-el 2005:

In other words, it seems that just as the bare unaccusative root is most basic in terms of morphology and in terms of argument structure, it is also most basic in terms of aspectual class: and the most basic aspectual class is that of an *achievement* (14a), as reflected in the lexical entry (14b) for St'át'imcets *mays* 'get fixed' in (14), from Bar-el et al. (2005):

(14) a. λx λe λw. P(x)(e)(w)
b. [[mays]]^{w} = λx λe [x gets fixed in w (e)]

Notice that this definition (which by default treats the core event argument *e* as a transition) abstracts away from duration (or progress over time), which seems largely irrelevant to the definition of an achievement in Salish. In terms of their lexical semantics, achievements may be instantaneous or take time (as with predicates such as *mays*), and may involve gradual change or an instantaneous transition: but none of this matters for culmination as far as Salish is concerned (see Kiyota 2008, who makes this point explicitly for SENĆOŦEN).

Two further points are worth (briefly) making. First, underived states form a separate lexical class of adjectives, which includes but is not confined to gradable predicates (Davis 2011). Change-of-state verbs may be derived from adjectives, but the morphology which accomplishes this is always overt, and specifically targets non-verbal predicates, as shown in (15) with the St'át'imcets suffix *-wílx̓*.

(15) St'át'imcets

	Adjective		*Derived change-of-state verb*	
a.	pəq	'*white'*	pəq-**wílx̓**	*'become white'*
	qʷic	*'rich'*	qʷic-**wílx̓**	*'become rich'*
	qə̓ḷ	*'bad'*	qə̓ḷ-**wíl̓x̓**	*'go bad'*
b.	*Noun*		*Derived change-of-state verb*	
	sƛ̓niq	*'flicker (a bird)'*	sƛ̓niq-**wílx̓**	*'become a flicker'*
	kʷúkʷpiʔ	*'chief'*	kʷúkʷpiʔ-**wílx̓**	*'become a chief'*

Second, verb roots may also be targeted by (a separate) change-of-state morpheme, as in (16), but the resulting derived verbs do *not* entail culmination. Furthermore, in some cases (at least in St'át'imcets), overtly derived inchoatives may contrast with bare root unaccusatives.

(16) St'át'imcets

Bare unaccusative		*Derived inchoative*	
ʕʷəl	'*get lit'*	ʕʷəl-**p**	*'burn'*
ɬiʕ	*'get scattered'*	ɬí**<ʔ>**əʕ̓	*'scatter'*
kəɬ	*'get removed'*	kəɬ-**p**	*'come off'*
qap	*'get softened'*	qa**<ʔ>**p	*'go soft'*
c̓aẇ	*'get washed/baptized'*	c̓á**<ʔ>**əẇ	*'wash out'*

Of further interest here is the fact that in contrast to bare root unaccusatives, overtly derived inchoatives such as those in (16) preclude not only syntactic but semantic agency – they refer to spontaneous or naturally occurring events. Together with the fact that they no longer entail culmination, this suggests that they may not be unaccusative, but unergative, with an 'anti-agentive' rather than agentive external argument.

To conclude this section, verb roots in Salish are eventive and culminate: they test uniformly as achievements.

5. Conclusion and Implications

I have now provided evidence for the three claims introduced at the beginning of this paper: that roots in Salish are categorially specified; that verb roots completely lack external arguments (even when strongly agentive); and that verb roots are uniformly eventive and culminating (they denote achievements.

These conclusions raise a number of important questions, which for reasons of space I can only touch on here. The most obvious is: to what extent are the three properties of Salish roots I have identified here interconnected?

The answer I'd like to give is: highly. To start with, a categorial distinction at the root level is a prerequisite for assigning a specific *Aktionsart* to classes of roots: only verbs denote events. It is also not accidental that verbs that lack an external argument test as achievements, though here the theoretical basis of the connection is less clear (as indeed, is true of its inverse: as discussed by Demirdache & Martin 2015, there is a pervasive connection between agency and *lack* of culmination). In other words, the cluster of properties associated with Salish roots is at least partially predictable.

A second, even larger question is to what extent the Salish pattern can be accommodated to universalist theories of lexical representation. Typologically, the Salish pattern is rare, but insofar as this paper stands as a partial proof of existence, Salish-type systems *do* exist, and as such challenge universalist theories which for example claim that all roots in all languages are uniformly acategorial, or uniformly stative. In fact, allowing for cross-linguistic variation in the properties of roots does not seem hugely problematic to me: if we do not find variation in the lexicon, whereas are we meant to account for it?

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