1. Introduction

The Salish language family comprises 23 languages which are or were spoken in the Pacific Northwest of North America; see Thompson and Kinkade (1990), Czaykowska-Higgins and Kinkade (1998) for overviews, and van Eijk (2008) for a comprehensive bibliography. All the languages are in advanced stages of endangerment, with the most ‘healthy’ possessing approximately 100 remaining fluent speakers. While the family is understudied compared to more familiar languages of the Indo-European family, in recent years there has been intensive work on the syntax and semantics of Salish, building on a rich descriptive tradition and incorporating insights from contemporary theoretical frameworks. Salish also enjoys a certain fame due to some high-profile proposals that it differs radically in various aspects of its grammar from better-known (mostly European) languages – see for example Kinkade (1983), Jelinek and Demers (1994), Jelinek (1995), Ritter and Wiltschko (2005, to appear), Davis (2006, 2009), Mattheyson (2006, to appear). Our goal in this review article is to report some recent findings from the literature on the syntax and semantics of Salish languages, with particular reference to potential loci of variation between Salish and more familiar languages.

For reasons of space, we restrict ourselves here to a relatively detailed discussion of four representative topics, one from each of the areas of lexical semantics, super-lexical syntax, semantics and pragmatics. We have chosen these topics partly because of their wider implications for linguistic theory, partly because we ourselves have worked on them, and partly because each has engendered a lively controversy in the Salishan literature. In selecting these topics, we have had to omit discussion of many other interesting questions, including the debate over lexical category distinctions, most issues of sub-lexical syntax and semantics, as well as issues in the syntax and semantics of determiners, quantifiers, aspect, anaphora, and information structure. In order to compensate for the relatively narrow focus of the paper, we provide a fairly complete bibliography of work on Salish syntax and semantics, thematically structured to allow readers to explore the literature for themselves.

The paper is organized as follows. In section 2, we present the debate about root semantics in Salish languages, and argue for the hypothesis that all Salish verb roots are (i) intransitive, and (ii) unaccusative. In section 3, we discuss configurationality. We outline the Pronominal Argument Hypothesis as applied to Salish, and present counter-arguments which show that at least some Salish languages have a fully configurational syntax with a VP constituent. Section 4 is devoted to tense and tenselessness; we argue that Salish languages are tensed, in spite of superficial evidence to the contrary. In section 5 we present arguments that at least one Salish language differs quite radically from English in its pragmatics, lacking any familiarity presuppositions.

In what follows, it is important to bear in mind that though by now descriptive grammars are available for most Salish languages, there is still a paucity of work on formal syntax and semantics, and virtually nothing written on formal pragmatics. Thus, while we endeavor to be as comprehensive as possible when reviewing literature from the entire family, most of the detailed

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1 Some Salish languages that became extinct before or just at the beginning of the era of modern linguistic research on Salish (c. 1965) are less well documented; these include Pentlatch, Nooksack and Twana from Central Salish, the southern outlier Tillamook, and most of the Tsamosan branch, with the exception of Upper Chehalis (and to, a lesser extent, Cowlitz). There is virtually no syntactic or semantic documentation of any of these languages.
arguments given here come from the better studied Central and Northern Interior branches, and we rely particularly heavily on the Northern Interior language St’át’ímctcets (Lillooet). This reflects our own research interests and experience, as well as, in some cases, the extent of the available literature. Where evidence is only available for one or two Salish languages, we adopt the default assumption that what holds for one Salish language can be extended to a generalization about the entire family. We do this in the knowledge that syntactic and semantic variation certainly exists across Salish, and any putative generalization about the entire family should be regarded as a working hypothesis, falsifiable on the basis of detailed empirical investigation of individual languages.

2. Lexical decomposition and the nature of the root

Salish languages are of interest for the investigation of decompositional theories of verb meaning, since to a much greater extent than in European languages, Salish verbs wear their derivational structure on their sleeves.\(^2\) A Salish verb typically consists of the following elements (excluding inflectional morphemes such as person marking, and passive, reciprocal and reflexive suffixes):

(i) a root (distinguishable as the domain of various morphophonological processes, including infixation and several types of reduplication).

(ii) some form of aspectual marking, which may be either prefixal (e.g., reflexes of the pan-Salish stative prefix *'?ac-'), infixal (e.g., the Interior Salish inchoative infix *'-p'), suffixal (e.g., the Interior Salish inchoative suffix *'-p'), reduplicative (e.g., Central Salish ‘inceptive’ CV- reduplication) or a mixture of these (e.g., Central Salish ‘actual’ (imperfective) morphology).

(iii) zero or more lexical suffixes, substantive elements with root-like meanings which modify the root in various ways, but do not generally affect valence, aspect, or argument structure.

(iv) a transitivizing or intransitive suffix; almost without exception throughout Salish, transitive verbs (those which take object suffixes) must be suffixed with a transitivizer; intransitive verbs fall into both suffixed and unsuffixed types. Transitivity is linked to both aspect and agent control: the latter notion refers to the ability of an agent to influence the outcome of an event (Thompson 1979, 1985).

Of these four basic ingredients, only the root is essential: every Salish language has at least some ‘bare root’ verbs. However, bare root verbs are always in the minority; the majority of verb roots for any given Salish language are obligatorily affixed with one or more of the elements in (ii-iv)

\(^2\) We assume a three way lexical category distinction between nouns, adjectives, and verbs, and focus here exclusively on the last. The issue of category neutrality in Salish has been the subject of intense debate, but the debate has largely now been settled in favor of recognizing at least a noun-verb distinction and probably an adjective-verb distinction as well. The reader is referred to the bibliography for relevant works.
above to form a complex verb stem. A few examples from St’át’imcets should give an idea of the range of possible derivations:

(1)

a. √puᵗ ‘boil’

b. (ʔǝ)s-púᵗ ‘boiled’ (stative prefix)

c. put.s-átqʷaʔ ‘boiling (of water)’ (C₂ reduplication and lexical suffix)

d. púᵗ-xal ‘boil things, do boiling’ (active intransitive suffix)

e. púᵗ-uñ ‘boil s.t. (tr.)’ (directive transitivizer)

(2)

a. √zaxʷ ‘melt’

b. zaʔ-x ‘melt (intr.)’ (inchoative infix)

c. zǝxʷzǝxʷ ‘soft, melted consistency’ (CVC reduplication)

d. zǝxʷ-xal ‘melt things, do melting’ (active intransitive suffix)

e. zǝxʷ-añ ‘melt s.t. (tr.)’ (directive transitivizer)

f. zǝxʷ-lǝx ‘stop (oneself)’ (autonomous intransitive suffix)

(3)

a. √ǝxl ‘stop’

b. ǝxl ‘stop (intr.)’ (C₂ reduplication)

c. (ʔǝ)s-ǝxl ‘stopped, staying’ (stative prefix)

d. ǝxl-xal ‘stop things, do stopping’ (active intransitive suffix)

e. ǝxl-añ ‘stop s.t., s.o. (tr.)’ (directive transitivizer)

f. ǝxl-lǝx ‘stop (oneself)’ (autonomous intransitive suffix)

The rich and (comparatively) transparent nature of verbal derivation in Salish has been a happy hunting ground for lexical semanticists, and there is a large and growing literature in several sub-areas of the field, including lexical/situation aspect, agent control, argument structure and (in)transitivity. It is beyond the scope of this survey to deal with any of these topics in detail: see the bibliography for relevant references. Instead, we will focus on one issue that continues to be debated amongst Salishanists, with potentially important cross-linguistic implications. This issue concerns the representation of verb roots, and especially the following two hypotheses (Davis 1997, 2000b, Davis and Demirdache 2000).

(4) **Intransitivity Hypothesis (IH)**

All verb roots are intransitive in Salish

(5) **Unaccusativity Hypothesis (UH)**

All verb roots are unaccusative in Salish

The IH and the UH, if true, have important implications for lexical semantics, particularly in view of increasingly popular decompositional approaches to verb meaning, in which transitives (and in many theories, unergatives, *qua* concealed transitives) are built up syntactically from monadic roots (see Hale and Keyser 2002, Ramchand 2008, etc.) However, neither has gone unchallenged: the UH, in particular, goes against most traditional analyses of Salish, which recognize unergative (‘control’) as well as unaccusative ‘non-control’ roots (the terms are from L.C. Thompson 1979, 1985); and several authors have recently claimed that it is necessary to recognize transitive roots as well, yielding a standard three-way contrast. In what follows, we will outline evidence for both the IH and the UH (principally from St’át’imcets) and
discuss some of the objections that have been raised in the literature.

First, however, it will be necessary to add a third hypothesis, since the issue of verb root semantics is dependent on the premise that roots have independent lexical semantic content.

(6) *Primacy of the root*

The root is an active semantic unit in the Salish verbal complex

The primacy of the root is assumed in virtually all early work on Salish, on the basis of its role as a domain for phonological and morphological processes (see Czaykowska-Higgins 1993 for a particularly clear exposition). However, more recently, its utility as a lexical semantic unit has been questioned: see Hess (1993), N. Mattina (1996), Willet (2003). These authors have claimed that the root is a morphophonological but not a morphosyntactic or semantic unit; as N. Mattina (1996: 24) puts it: ‘Salishan roots, as traditionally defined, are not relevant to semantico-syntactic relationships between underived lexemes and their derivate.’ Instead, the verb base (more or less equivalent to the traditional Salishan verb stem – that is, the verb root plus all derivational but not inflectional morphology) is taken as a primitive unit of lexical organization (the lexeme: see Beard 1995).

The principal arguments for a lexeme-based and against a root-and-affix-based approach to Salish verbs rely on familiar criteria of compositionality and productivity. First, the semantic relationship between roots and derivational morphemes is sometimes non-compositional; second, there are many more or less accidental gaps in the expected output of derivational operations, including many bound roots that fail to surface unless affixed. We do not find these arguments convincing, because they are based on the assumption that any irregularity in distribution or meaning precludes the existence of a derivational relationship. But there is nothing to stop both the input and the output of morphological operations being listed in the lexicon, just in case they need to be – i.e., if they show idiosyncratic properties. And, of course, the existence of idiosyncratic forms is not limited to the derivational morphology, nor even to the morphological component; phrasal idioms are paradigm cases of ‘listemes’, though their components are clearly syntactic. Likewise, exceptional non-application of a morphological process does not invalidate the process itself: it simply calls for a theory that allows particular lexical entries to block the application of otherwise general rules. We will therefore continue to uphold the traditional view that Salish roots are associated with lexical semantic content, and return to the issue of how many verb root classes we need to distinguish.

We begin with the IH, which claims that all Salish roots are intransitive. From a morphological perspective, this is motivated by a Salish near-universal: all formally transitive predicates (that is, those which may occur with object suffixes) require an overt transitivizing suffix. This is illustrated in (7) with a selection of bare root intransitive verbs in St’át’imcets

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3 A third typical argument is an appeal to speaker intuitions of what counts as a ‘word’. We are suspicious of such intuitions, given that the notion of ‘word’ involves a meta-linguistic judgement based on English grammar, with no clear-cut Salish counterpart at all.

4 Exceptions are the following: (i) Bella Coola, which has fused its object suffixes with its transitivizers; (ii) Southern Interior languages, which have developed transitive paradigms (or parts of paradigms) from nominalized intransitive predicates; (iii) two roots *√wal ‘to leave’ and √?upal ‘to eat’ which behave exceptionally in a number of languages in being able to take object suffixes without transitivizers.
together with their transitivized alternants, derived by suffixation of the directive transitivizer -\(Vn/-\(V\)\(\bar{n}\) or the causative transitivizer -\(\ddot{s}/-\(\ddot{\varepsilon}\). 

(7)  

<table>
<thead>
<tr>
<th>Intransitive</th>
<th>Transitive</th>
</tr>
</thead>
<tbody>
<tr>
<td>qa(\ddot{n})t</td>
<td>‘to get hit (by flying object)’</td>
</tr>
<tr>
<td>?u(\ddot{s})</td>
<td>‘to get thrown out’</td>
</tr>
<tr>
<td>máy(\ddot{s})</td>
<td>‘to get fixed’</td>
</tr>
<tr>
<td>(\ddot{x})iq</td>
<td>‘to get here, arrive’</td>
</tr>
<tr>
<td>ki(\ddot{c})</td>
<td>‘to get laid down’</td>
</tr>
<tr>
<td>q(\ddot{w})(\ddot{a})l</td>
<td>‘to get cooked, ripe’</td>
</tr>
<tr>
<td>zuq(\ddot{w})</td>
<td>‘to die’</td>
</tr>
<tr>
<td>x(\ddot{w})ak</td>
<td>‘to wake up, be awoken’</td>
</tr>
<tr>
<td>?a(\ddot{c})(\ddot{\chi})</td>
<td>‘to get seen’</td>
</tr>
<tr>
<td>(\ddot{t})wal</td>
<td>‘to get left behind’</td>
</tr>
</tbody>
</table>

The verbs on the left are associated with a single argument, obligatorily registered on the predicate in the form of a subject clitic (null in the non-plural third person indicative); those on the right have two arguments, registered on the predicate in the form of an object suffix (null in the third person non-plural) and a subject clitic or suffix:

(8)  

a. qa\(\ddot{n}\)t-kan  
get.hit=1.SG.SU  
‘I got hit.’

b. qa\(\ddot{n}\)-\(\ddot{s}\)-\(\ddot{t}\)umx-\(\ddot{a}\)  
ta=\(\ddot{k}\)\(\ddot{x}\)h=\(\ddot{a}\)  
get.hit-CAUS=1SG.OBJ-3ERG DET=rock=EXIS  
‘The/a rock hit me.’

(9)  

a. ?a\(\ddot{c}\)\(\ddot{\chi}\)(=\(\ddot{\emptyset}\))  
ta=m\(\ddot{\chi}\)\(\ddot{\emptyset}\)\(\ddot{a}\)=\(\ddot{a}\)  
get.seen(=3SU) DET=bear=EXIS  
‘The/a bear was sighted.’

b. ?a\(\ddot{c}\)\(\ddot{\chi}\)-\(\ddot{n}\)(=\(\ddot{\emptyset}\))=\(\ddot{\emptyset}\)kan  
ta=m\(\ddot{\chi}\)\(\ddot{\emptyset}\)\(\ddot{a}\)=\(\ddot{a}\)  
get.seen-DIR(-3OBJ)=1SG.SU DET=bear=EXIS  
‘I saw a/the bear.’

The pattern shown in (7-9) constitutes prima facie evidence that the intransitive alternant is basic and the transitive alternant is derived by a process of causativization, mediated by the transitivizer. (We leave aside the important issue of whether this process is syntactic, lexical, or ‘l-syntactic’: see Jelinek 1994 for a syntactic approach, Davis and Demirdache 2000 for a lexical (event-structure) approach, and Wiltschko 2001 for a mixed account.) However, a number of researchers (Gerdts 1988, S. Thomason and Everett 1993, S. Thomason et al. 1994, L. Thomason 1994, N. Mattina 1996, and most recently Gerdts 2006, Gerdts and Hukari 1998, 2006a, b, to appear) have argued that in spite of surface morphology, it
is necessary to recognize transitive as well as intransitive verb roots. Gerdts and Hukari, who
have undertaken the most systematic investigation of the combinatorial properties of roots for
any Salish language, base their findings on a sample of 489 verb roots from Island Halkomelem.
Their principal arguments are based on the following considerations. First, though 93% of the
roots in their sample appear with the unmarked -t transitivizer (the equivalent of Stʼátʼimcets
-\( V_n \)), 19% of these do not have a bare root alternant. Second, in another 8%, the bare root
alternant only appears in a very restricted context (referred to by Gerdts and Hukari as ’pseudo-
transitive imperatives’). They conclude that only transitives which freely alternate with bare
intransitives should be treated as derived from intransitive roots; otherwise, the root should be
treated as transitive.\(^5\)

These arguments seem to us to be problematic for two reasons. First, the division
between alternating (intransitive) and non-alternating (transitive) roots means that the -t
transitivizer must be given a non-unitary representation — with intransitive roots, it adds an
argument, while with transitive roots, it redundantly signals an already existing transitive
relation.\(^6\)

Second, the idea that the productivity of an alternation should be judged by a count of the
number of forms that undergo it reflects a static notion of the mental lexicon, which we suspect
underdetermines the morphological resources of fluent speakers. Under this view, the lexicon is
much like a dictionary, consisting of a set of actual words: the non-existence of a particular
lexical entry is taken at face value, and therefore if a transitive form has no intransitive alternant,
its root must be transitive.\(^7\) However, we prefer to emphasize the dynamic nature of
morphological alternations, as represented in the minds of fluent speakers, and reflected in the
set of possible words. This involves asking the following question: if a non-alternating transitive
had a bare root alternant, what would it mean? The fact that our consultants can answer these
questions coherently (and consistently) testifies to their intuitions about possible words and their
meanings; and the investigation of such intuitions is parallel to the investigation of ‘possible
sentences’ and their meanings — i.e., the enterprise of generative syntax.

That the domain of possible words (or in this case, possible roots) is of more than
hypothetical interest is shown by the fact that the class of non-alternating transitives is not
necessarily fixed, either for a language or even for an individual speaker. For example, if we
consult van Eijk’s comprehensive (1987) dictionary of Stʼátʼimcets, we find, as in Halkomelem,
a set of transitive verbs with no bare root alternant: these include māy̓sən, kíč̱ín̓, and t̓w̓əl̓ən, all
of which appear in the list in (7) above with a bare root alternant. At the point at which van Eijk
compiled the dictionary, the bare root alternants of these verbs had never been recorded — but

\(^5\) Note that the notion of underlying transitivity can be construed in various ways. These include:
a quasi-semantic approach based on thematic or aspectual roles; a classical argument structure
approach (realized either configurationally or non-configurationally); and a purely
morphosyntactic (‘inflectional’) approach employing e.g., case-licensing. Gerdts and Hukari do
not take a stand on this question.

\(^6\) This point holds irrespective of which notion of transitivity is chosen.

\(^7\) Of course, this approach is appropriate in the domain of lexicography, as opposed to that of
grammatical theory; in compiling dictionaries, decisions have to be made about actual rather than
possible words. It should be remembered, however, that any dictionary contains a subset of the
set of possible words, and therefore is bound to under-represent the lexical resources of fluent
speakers.
they are all perfectly comprehensible to any fluent speaker, including those who have neither
used nor heard them before. And such forms continue to emerge; quite recently, while editing a
text collection from a speaker with whom we have worked for many years, we came across the
following phrase (produced by the speaker as the title for one of her stories):

(10) ti=táp=a  čúqʷaž  látiʔ  qíʔq=a
det=forgot=exis  fish  there  seat=exis
‘the fish that got forgotten on the sofa’

Neither Jan van Eijk (p.c. 2008) nor we had ever previously recorded the bare root *táp*, though
its transitive alternant *tápaʔ* ‘to forget s.o, s.t.’ is very common. Subsequent elicitation
confirmed the acceptability of the bare root and revealed its characteristic (telic, patient-oriented)
profile.

What, then, of the 19% of transitives that fail to alternate in Gerdts and Hukari’s sample
of Halkomelem? We suspect that this group exists because it is often difficult to find an
appropriate real-world context of use for the bare root alternant. Bare roots in Salish (with the
exception of the ‘control roots’ discussed below) have a very particular cluster of thematic and
aspectual properties. In particular, they are non-agentive, in the sense that their single argument
is a theme/patient, even when the lexical content of the root itself often strongly implies real-
world agency (as with ‘forget’, ‘fix’, ‘abandon’, ‘throw away’, and others). Speakers often
prefer to employ passivized transitives for patient-oriented readings of these predicates, since
passives linguistically entail an agent, which may be expressed as an oblique argument; in
contrast, with bare roots, obliques may only be interpreted as instruments. This can be seen in the
contrast in (11):

(11) a. qaƛt  ta=twówʷwəʔ=a  ṣə=ta=šqúnč=a
get.hit  det=boy=exis  obl=det=ball=exis
‘The boy was hit by/with a ball.’

b. qaƛt  ta=twówʷwəʔ=a  ṣə=ta=smóʔtlač=a
get.hit  det=boy=exis  obl=det=girl=exis
‘The boy was hit by/with a girl (flying through the air).’

c. qaƛt-š-tum  ta=twówʷwəʔ=a  ṣə=ta=šqúnč=a
get.hit-CAUS-3SG.PASS  det=boy=exis  obl=det=ball=exis
‘The boy was hit by/with a ball.’

8 In this regard, Tom Hukari (p.c., 2009) remarks of his Halkomelem consultants that ‘the issue
[…] is whether the world as they perceive it will sustain the meaning of the predicate as they
understand it without outside agency. If their understanding of the meaning of the predicate is
such that the described event cannot come about without an agent, then the root fails as a word.’
This points to an interesting possible cross-linguistic difference between Halkomelem and
St’át’imcets, since, as noted above, our St’át’imcets consultants have no difficulty in accepting
(and producing) bare root versions of predicates which strongly entail real-world agency, as long
as the agent is not salient in the discourse context.
d. qámí-t-š-tum ta=twáw=wä=t a ?ø=ta=šmāmla=c=a
get.hit- CAUS-3SG.PASS DET=boy=EXIS OBL=DET ball=EXIS
‘The boy was hit by a girl (throwing something).’

Notice that the passive covers all the meanings of the bare root, but not vice-versa. In fact, the only circumstance where a bare root would be appropriate, but a passivized transitive would not, is where there is no possibility of real-world agency. In cases of bare roots whose lexical content strongly implies agency, this contingency is unlikely ever to occur. However, a bare root of this type might still be used where the speaker wished for some reason not to mention an agent that was nevertheless present in the speech situation. Strikingly, this corresponds precisely to Gerds and Hukari’s ‘pseudo-transitive imperative’ construction in Halkomelem. Here, bare roots show up when the speaker wishes to frame a polite request without making any direct reference to the agent, as in (12):

(12) ?í=ce? ?ø=taʔi kʷ=s=taxʷ=s kʷθø=sənixʷøŋ ?ø=kʷeyələs
  AUX=FUT OBL=here DET=NOM=beach=3POSS DET=canoes LINK-tomorrow
  ‘You will beach the canoes over here tomorrow.’
  [Literally: ‘The canoes will beach here tomorrow.’] (Gerds and Hukari to appear a)

Thus, rather than undermining the generality of the bare root-transitive alternation, the 8% of bare roots in Gerds and Hukari’s sample which only surface in the pseudo-transitive imperative construction might actually provide evidence for its generality, and therefore for the IH.9

We conclude that Gerds and Hukari’s arguments do not invalidate the IH for Salish, and turn to the UH, which claims that an unaccusative root of the type seen in (7) underlies all verbal predicates in Salish.

Unlike with the IH, surface morphological evidence seems to argue against the UH, due to the existence (in every Salish language where the topic has been investigated in detail) of a set ‘control roots’ alongside the unaccusative ‘non-control’ roots we have been investigating so far. Typically, control roots comprise a sizeable minority of all unsuffixed intransitives (there are more than a hundred in Stát’imcets: see Davis 2006b for a more or less complete list), and though they fall into several subtypes (some object-directed, some lexically reflexive), they are all clearly distinguished from unaccusative bare roots in being agentive.10 A typical selection from Stát’imcets is given below:

(13) *Some control roots* in Stát’imcets

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9 Tom Hukari (p.c. 2009) comments that ‘I would be inclined to say that those [unaccusative roots] that appear in pseudo transitives, when they appear in that context, have intransitive unaccusative argument structure but possibly are assigned some sort of semantic agent.’ This is in line with our own interpretation, and seems to indicate that Halkomelem speakers do tolerate at least some bare roots with strongly agentive meanings (pace footnote 8), albeit in more restricted contexts than Stát’imcets speakers are willing to allow.

10 Note that agency does not necessarily imply a human or even an animate agent, but simply an ‘actor’; for example, substances such as medicine, poison, and disease, which act on patients, may be the subjects of control intransitives. The traditional term ‘active’ is perhaps more appropriate than ‘agentive’ for this reason.
As has been noted by several researchers, control roots semantically parallel unergatives in more familiar languages (see in particular Gerds 1998, 2006). It might appear, then, that we need to distinguish at least two ‘macro-classes’ of intransitive root: unaccusatives (the non-control roots participating in the intransitive-transitive alternation exemplified in (7)) and unergatives (the control roots exemplified in (13)). This is the conclusion reached by Gerds and Hukari (2006a, forthcoming) on the basis of their 489-root survey: they point out that 7% of their roots show an alternation between a -t transitive and an agentive intransitive, rather than the patient-oriented intransitive predicted by the UH.  

In spite of the prima facie evidence, however, Davis (1997, 2000b) argues that all control roots in St’át’imcets are derived, by zero affixation from an underlying unaccusative root (specifically, via a zero-allomorph of the pan-Salish middle marker –Vm). The basic thrust of the argumentation is as follows. 

First, every Salish language possesses an inventory of intransitive suffixes that alternate quite productively with transitivizers. In St’át’imcets (which is fairly typical in this regard), there are three main intransitive suffixes: the active intransitive -xal, which derives ‘object-directed’ intransitives, the autonomous intransitive -lox-ílx, which derives reflexives, and the middle marker –Vm, which is ambiguous between the two. 

Next, Davis shows that syntactically and semantically, control roots pattern identically to either object-directed or lexically reflexive middles. On the semantic side, there are many synonymous or near-synonymous pairs of predicates, one suffixed with a middle marker, the other zero-marked. Some of these are differentiated dialectally: for example, the Lower St’át’imcets word for ‘work’ is the middle-marked form k“zu¡ß¢m, while its Upper St’át’imcets counterpart is the zero-derived form “alkßt. On the syntactic side, zero-marked intransitives show identical behavior to their middle-marked counterparts. For example, active intransitives, object-directed middles and object-directed ‘control roots’ may all occur with overt theme DPs (though not with object suffixes: see Davis and Matthewson 2003b); they are the only intransitive predicates to do so. Furthermore, the same three classes of intransitive verb all undergo an operation of predicate nominalization, yielding a derived nominal predicate whose agent is marked by possessive morphology, as shown in (14): 

(14)  

a. active-marked  

?áma=“u? lákw?a ti=ß-x“úx“ß=a  
good=PART NONVIS.DEIC DET=NOM-smell-3POSS=EXIS

Gerds and Hukari also make the important observation that many of the roots in their survey (a full 48%, in fact) are what they term ‘swingers’ – that is, they can either show unaccusative or unergative characteristics, depending on the context of use. For us, this simply reflects the free availability of the zero-middle marker introduced below, whose distribution is constrained only by ‘encyclopedic’ considerations – that is, whether a pragmatically appropriate set of contexts exists for the expression of a zero middle or a bare root unaccusative.
Not only do we find semantic and syntactic parallels between control roots and middles, we also find alternations between the two. This can be seen clearly with agentive intransitives containing lexical suffixes, which normally take a middle marker; in many cases, the middle is in free variation with a zero-affixed form, as shown in (15).

(15) a. wá? ʰúqʷ-alqʷ(-əm) ʔi=wá?  zík-alč
   IMPF peel-log(-MID)  PL.DET=IMPF fell.log-house
   ‘The ones building the log house are peeling logs.’

   b. xʷuʔ ʔayɬ pum-áka?/pum-ák?-am) ʔi=ʔuxʷalmíxʷ=a
   IMPF now pound-hand/pound-hand-MID PL.DET=people=EXIS
   ‘Then the people began to drum.’

   c. xʷʔaʔxʷ=ʔuʔ kʷ=ə=q áyu-č(-ən)
   NEG=PART DET(NOM)=IMPF=3POSS answer-mouth(-MID)
   ‘S/he’s still not answering.’

These systematic parallels between middles and control intransitives stand in stark contrast to the situation with unaccusative intransitives: there are no overt intransitive suffixes which yield derived unaccusatives.\(^\text{12}\) This striking asymmetry can easily be understood if the direction of

---

\(^\text{12}\) As documented in Davis (2000b), there are some inchoative verbs in St’át’imcets marked with autonomous (lexical reflexive) morphology (e.g., nák-ləx ‘to change’, ñw-ilx ‘to get close (of weather)’, xúp-ləx ‘to twist’). However, these verbs differ in thematic and aspectual properties from bare unaccusatives: they describe spontaneous events (i.e., they are necessarily non-agentive), and they do not necessarily culminate, unlike bare root unaccusatives. In these respects, they parallel verbs marked either with inchoative morphology or by C\(_2\) reduplication, and, in fact, they often freely alternate with forms which undergo one or the other of these
derivation goes from unaccusative root to derived intransitive (including zero-derived ‘control roots’) and transitives, but is a mystery otherwise. Davis concludes in favor of the UH, and we see no reason to alter that conclusion.

Where does this leave Salish in terms of the typology of possible roots? On the one hand, there is no doubt that the existence of bare unaccusatives with strongly agentive lexical content, including many of the forms in (7), gives Salish a thoroughly exotic feel (for example, such forms fall outside the typological parameters countenanced by Haspelmath 1993 in his cross-linguistic study of the causative-inchoative alternation). On the other hand, strongly decompositional theories of verb meaning such as that of e.g., Ramchand (2008) posit abstract atoms which correspond rather closely to the morphologically distinguished atomic elements of the Salishan verb. It may be, then, that the only unusual thing about the lexical semantics of the verb in Salish is the extreme transparency of its morphology, which provides a window into derivational operations which are largely obscured in more familiar languages.

3. Configurationality

Any linguist with a passing acquaintance with the syntactic literature on Salish is probably aware of the radical claim, embodied in a series of papers by Eloise Jelinek and Richard Demers, that some Salish languages are of the pronominal argument type (see in particular Jelinek and Demers 1994, Jelinek 1995, 1996, 1998a).

In this section, we briefly review Jelinek and Demers’ arguments for the Pronominal Argument Hypothesis (henceforth PAH) as applied to Salish, and the debate which ensued amongst Salishanists over the structure of the clause. We conclude that in spite of superficial morphological and syntactic evidence for the PAH, there is overwhelming evidence from a variety of syntactic diagnostics that certainly some and probably all Salish languages are processes: thus nákək’ also means ‘to change’, ƛ̱w-p means ‘to get close (of weather)’, and ƛ̱ɨp.ƛp means ‘to twist’). Note also that Gerdt (2006) describes a parallel set of ‘inchoative reflexives’ marked with the limited control reflexivizer -namat; however, these have a telic interpretation and are translated as ‘finally’ or ‘just now’.  

13 This derivational asymmetry is also the reason why the zero-middle approach constitutes a genuinely empirical (i.e., falsifiable) alternative to the conventional division of intransitive roots into control and non-control classes. The latter makes no predictions about the direction of derivation – it is just as likely under this view for there to be overt morphology deriving unaccusatives as unergatives, contrary to fact. More generally, the zero-middle analysis is compatible with a fully monotonic view of morphological composition, whereby once introduced, argument structure may not be subsequently deleted.

14 But not entirely so. One of the most intriguing properties of unaccusatives in Salish is that they have a uniformly telic event structure – unlike other Salish Aktionsarten, they entail culmination (Bar-el 2005, Bar-el et al. 2005, Kiyota 2008). This is at odds with most aspectually-driven decompositional theories, which assume that states (as the most primitive type of eventuality) are basic, with transitions added compositionally by predicates such as CAUSE. We do not currently know whether the ‘atomic state’ theory can be reduced to the ‘atomic transition’ theory, or vice-versa, or whether this represents a genuine parametric difference between roots in Salish and in other languages.
conventionally configurational in their underlying structure.

Though there are multiple versions of the PAH, the intuition behind them is quite simple: in languages where core arguments are obligatorily marked on the predicate complex by pronouns, and lexical arguments are optional, it is the pronouns which are responsible for saturating argument positions; associated ‘argument’ phrases are actually adjuncts. There are two core predictions of the PAH:

(i) Every argument position must be occupied by a pronoun.
(ii) No non-pronominal constituent can be in an argument position.

In ‘radical head-marking’ systems such as Salish, where pronominal morphology takes the form of affixes and clitics, (i) translates into the claim that pronominal argument languages will have full and obligatory agreement paradigms. This is indeed a characteristic property of all Salish languages, which have up to four subject and two object paradigms. Two representative partial paradigms are given below, showing transitive indicative pronouns in St’át’imcets (Northern Interior), and the Lummi dialect of Northern Straits (Central Salish), the language on which Jelinek and Demers based their pronominal argument analysis. Both languages also have nominalized (possessive) and subjunctive (a.k.a. ‘conjunctive’) subject paradigms, and partially distinguish intransitive from transitive subject pronouns.

(16) ST’ÁT’IMCETS TRANSITIVE INDICATIVE PRONOUNS

<table>
<thead>
<tr>
<th>SUBJECT</th>
<th>1SG</th>
<th>2SG</th>
<th>1PL</th>
<th>2PL</th>
<th>3</th>
<th>3PL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1SG</td>
<td>-či(n)=kan</td>
<td>tumi(n)=kan</td>
<td>tumul=kan</td>
<td>=ikan</td>
<td>-tanı=kan, -wit=kan</td>
<td></td>
</tr>
<tr>
<td>2SG</td>
<td>-č=kax̌, tumx=kax̌</td>
<td>tumul=kax̌</td>
<td>=lkax̌</td>
<td>-wit=kax̌</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1PL</td>
<td>* (passive)</td>
<td>* (passive)</td>
<td>* (passive)</td>
<td>* (passive)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2PL</td>
<td>-č=kafap, tumx=kafap</td>
<td>tumul=kafap</td>
<td>=lkafap</td>
<td>-wit=kafap</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3SG</td>
<td>-č-äš, tumx-äš</td>
<td>-či-šaš, -či-šaš</td>
<td>-tam-šapaš</td>
<td>-aš</td>
<td>-aš</td>
<td></td>
</tr>
<tr>
<td>3PL</td>
<td>čal-itaš, tumxal-itaš</td>
<td>či-šaš-wit, -či-šaš-wit</td>
<td>-tam-šapaš-wit</td>
<td>-itaš, -twiša</td>
<td>-itaš, -twiša</td>
<td></td>
</tr>
<tr>
<td>PAS</td>
<td>čal-šan, tumxal-šan</td>
<td>či-m, tum-im</td>
<td>-tam-kafap</td>
<td>-šan, -tum</td>
<td>-tanšan, -tanšan</td>
<td></td>
</tr>
</tbody>
</table>

(17) NORTHERN STRAITS (LUMMI) TRANSITIVE INDICATIVE PRONOUNS

<table>
<thead>
<tr>
<th>SUBJECT</th>
<th>1SG</th>
<th>2</th>
<th>1PL</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1SG</td>
<td>-čiš=šn</td>
<td>=šn</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2SG</td>
<td>=šx̌=šx̌</td>
<td>=šx̌=šx̌</td>
<td>=šx̌=šx̌</td>
<td></td>
</tr>
<tr>
<td>1PL</td>
<td>=šx̌=šx̌</td>
<td>=šx̌=šx̌</td>
<td>=šx̌=šx̌</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>* (passive)</td>
<td>* (passive)</td>
<td>* (passive)</td>
<td>-šs</td>
</tr>
<tr>
<td>PAS</td>
<td>-š=šn</td>
<td>-š=šx̌</td>
<td>-š=šx̌</td>
<td>-š=šx̌</td>
</tr>
</tbody>
</table>

Turning to (ii), the second obvious consequence of the PAH is that lexical (DP) arguments will be freely omissible in a pronominal argument language, since they have the status of adjuncts. This is also true of all Salish languages: once introduced, discourse referents are
generally referred to by null pronouns rather than by overt DPs. In fact, transitive clauses with
two overt DPs are dispreferred throughout the family, and barred altogether in some Central
Salish languages (notably, Lushootseed and Twana).

Third, in a pronominal argument language, lexical DPs will show the same word order
freedom (or lack of it) as adjuncts. To the extent that this has been systematically investigated,
this is also true of Salish. All Salish languages are basically predicate initial, though many allow
subjects, and some also objects and adjuncts, to precede the predicate. Post-predicatively,
adjuncts (both clausal and phrasal) may generally be freely interspersed with arguments; in the
following St'át'imcets sentence, for example, every permutation of post-predicative word order
is possible (Gardiner, Matthewson and Davis 1993):

(18) čaqʷ-ən(-Ø)-iτaš ʔi=šqʷəl=a ʔi=škʷəməkʷúʔəmiʔt=a
eat-DIR(-3OBJ)-3PL.ERG PL.DET=berry=EXIS PL.DET=children=EXIS
l=ta=ləpəxáltən=a ʔi=nátxʷ=aš
in=PL.DET=garden=EXIS when(PAST)=day=3CONJ
‘The children ate the berries in the garden yesterday.’

Pre-predicatively, both adjuncts and arguments are more or less restricted, depending on the
language. In some Central Salish languages, they may not be fronted unless clefted or dislocated;
in others, particularly in the Southern Interior, both may be freely topicalized. The point is, there
is no sharp argument-adjunct distinction in word order possibilities.

So far, then, the surface morphological and syntactic properties of Salish languages make
them strong candidates for pronominal argument status. At the same time, however, it is
important to point out that none of these properties provide knock-down arguments for the PAH
– there are perfectly well-behaved configurational systems with rich agreement morphology,
extensive use of null arguments, and relatively free word order. Examples of head-initial
languages of this type include Malayo-Polynesian languages such as Chamorro (Chung 1998)
and various Mayan languages with variable post-predicative word order (including Tzotzil,
Tz'utujil, Yukateko, and Lakandon: see England 1991); in fact, it is even possible to view certain
Romance languages with post-verbal subjects, null arguments, and extensive clitic-doubling as
falling into this class.

Accordingly, we will now turn to a second series of predictions of the PAH, based on more
subtle syntactic diagnostics. Strikingly, we shall see that all of them yield the wrong results for
Salish.

We begin with the existence of unregistered arguments: that is, argument DPs which have
no corresponding pronominal affix or clitic.15 In most Salish languages, arguments which are not
registered by pronominal morphology are marked oblique. However, in several languages, the
oblique marker is optionally omitted, and in St’át’imcets it is obligatorily absent on unregistered
DP objects, including the themes of both active (‘anti-passive’) intransitive and ditransitive
predicates, as discussed in Davis and Matthewson (2003b). Ditransitive themes in St’át’imcets
constitute particularly strong counter-evidence to the PAH prediction that all argument DPs
should be registered on the predicate by pronominal morphology, since though unregistered, they

15 See Austin and Bresnan (1996) for parallel arguments against the PAH for Australian
are obligatorily present, either in the form of an overt DP (19a) or a null pronoun \((pro)\) (19b).

\[(19) \quad \begin{aligned}
\text{čúf-xi(t)-č-aš} & \quad \text{ta=kúkwpi7=a} \\
\text{point-IND-1SG.OBJ-3ERG} & \quad \text{DET=chief=EXIS} \\
\text{DET=1SG.POSS-wife=EXIS} & \\
\text{‘My wife pointed out the chief to me.’}
\end{aligned} \]

Furthermore, the interpretation of overt theme DPs in ditransitives is unrestricted: they may be quantified, as in (20), or even represented by demonstratives, as in (21). This is important because it preclude a potential alternative analysis of unregistered nominals as predicate modifiers, which would not saturate an argument position, and would therefore not need to be registered by pronominal morphology.

\[(20) \quad \begin{aligned}
\text{náš-xit(-O)=kan} & \quad \text{?i=škʷəmʔúkʷmi=t=a} \\
\text{go-IND(-3OBJ)=1SG.SU} & \quad \text{PL.DET=children=EXIS} \\
\text{[tákəm \text{?i=šáyšiʔtən=a}]} & \\
\text{‘I brought the children all their toys.’}
\end{aligned} \]

\[(21) \quad \begin{aligned}
\text{čúf-xi(t)-tani=Íkán=tí?} & \quad \text{DEM} \\
\text{point-IND-3PL.OBJ=1SG.SU} & \\
\text{‘I pointed that out to them.’}
\end{aligned} \]

We conclude, following Davis and Matthewson (2003b), that the unregistered theme arguments of ditransitives constitute strong evidence against the PAH for Stát’ímctw.

A related problem concerns differences in interpretation between DPs and pronouns. The PAH predicts that their interpretation should be identical, since overt DPs are simply optional adjuncts to pronominal arguments. But as Jelinek and Demers (1994: 732) concede, this is not the case in Northern Straits Salish: object pronouns are definite, while overt object DPs can be either definite or indefinite:

\[(22) \quad \begin{aligned}
\text{a. } & \quad \text{leŋ-t=sən} \\
\text{see-TR=1SG.SU} & \\
\text{‘I saw her/him/it/their.’} & \quad (\text{not ‘someone/something’})
\end{aligned} \]

\[(22) \quad \begin{aligned}
\text{b. } & \quad \text{leŋ-t=sən} \\
\text{see-TR=1SG.SU} & \quad \text{DET=deer} \\
\text{‘I saw the/a deer.’}
\end{aligned} \]

---

\(^{16}\) This leaves open the (remote) possibility that the ditransitive theme might be registered on the predicate by non-overt pronominal agreement. However, if we were to assume the existence of this type of agreement, it would have to be uniquely restricted in both its form (obligatorily \(Ø\)-marked) and distribution (confined to third person). We do not find an agreement ‘paradigm’ consisting of a single phonologically empty cell very plausible.
It might be possible to appeal to a predicate modifier analysis to handle the indefinite interpretation of DPs, but this would be problematic for the treatment of determiners, which would have to be vacuous on the indefinite reading, and semantically active on the definite reading.

A further set of counter-arguments to the PAH analysis of Salish is provided by syntactic diagnostics that show two kinds of asymmetry: those between adjuncts and arguments, and those between subjects and objects. Adjunct-argument asymmetries are problematic because they should not exist: if all non-pronominal arguments are adjuncts, then the two should behave identically. Subject-object asymmetries are problematic because lexical DPs are not in conventional, hierarchically distinguished positions in pronominal argument languages: instead, they are clausal adjuncts which should show no structural asymmetries.

The clearest case of an adjunct-argument asymmetry in Salish is provided by WH-movement. Though, as pointed out by Jelinek (1998b), the Salish WH-phrase itself (a predicate) does not move, A'-movement of an operator certainly does take place in its sister, which has the form of a headless relative clause. This movement leaves an obligatory gap and can take place across a complement clause, as shown for Stát’ímcets in (23):

(23) štám [kʷu=š-čút-šu] [kʷ=š=ʔáχ-ən-axʷ]
    what [DET=NOM-say-2SG.POSS] [DET=NOM=see-DIR-2SG.ERG]
    ‘What did you say you saw?’

WH-movement is subject to a standard range of island effects in the Salish language where these have been investigated (Davis, Gardiner and Matthewson 1993, Gardiner 1993, Baptiste 2002, Davis 2008); most significantly for our purposes, it is sensitive to the Adjunct Island Condition, which bars movement from inside an adjunct, such as the temporal clause in the Stát’ímcets example in (24):

(24) * štám [kʷu=š-čúl-šu] [ʔi=ʔáχ-ən-axʷ]
    what [DET=NOM-run.away-2SG.POSS] [when(PAST)=see-DIR-2SG.ERG]
    ‘What did you run away when you saw?’

The contrast between examples like (23) and (24) is unexpected under the PAH, where there is no structural distinction between complement and adjunct clauses, since both are adjoined at the clausal level.17

Turning to subject-object asymmetries, a number of standard c-command-based tests clearly distinguish the hierarchical position of subjects and objects. They include the following: intra-clausal Condition C effects (Matthewson, Davis and Gardiner 1993 on the Northern Interior Salish languages Stát’ímcets, Secwepemctsin (Shuswap), and Nlhéʔkemxwtsin (Thompson River Salish), Hukari 1996 on Halkomelem, Koch 2006 on Nlhéʔkemxwtsin, Davis 2006a, 2009 on Stát’ímcets); strong crossover effects (Demirdache 1997, Davis 2006a, 2009 on Stát’ímcets), weak crossover effects (Gardiner 1991 on Secwepemctsin, Davis, Gardiner and Matthewson 1993 on the three Northern Interior languages, Davis 2005 on Stát’ímcets, Hukari 2006a, 2009 on Stát’ímcets).

17 This does not apply to versions of the PAH such as that of Baker (1996), where only DPs must be adjoined, since they are required to be licensed by Case; clauses need not be Case-marked and therefore show normal adjunct-argument asymmetries.
1996 on Halkomelem); the interpretation of bound variable pronouns (Davis 2005 on St’át’imcets); and superiority effects (Davis, Gardiner and Matthewson 1993 on the Northern Interior languages, Davis 2008 on St’át’imcets). To take just one example, (25) and (26) illustrate the effects of weak crossover in St’át’imcets. In (25) we see that covaluation is possible between a name and a null pronoun (pro) inside a relative clause, whether in object or subject position; in contrast, in (26), we see pro inside a relative clause in object position may co-vary with a WH-phrase associated with a trace in subject position, but a pro in a relative clause in subject position may not covary with a WH-phrase associated with a trace in object position.

(25) ćuniqs-án-aš kʷ=š=Mary [ta=wa? ɣy-š-ás šqayxʷ]
      kiss-DIR-3ERG DET=NOM=Mary [DET=IMPF love-CAUS-3ERG man]
(i) ‘Mary, kissed the man shei loved.’ or
(ii) ‘The man shei loved kissed Mary.’

(26) šwat kʷu-ćuniqs-án-aš ta=wa? ɣy-š-ás šqayxʷ]
      who DET=kiss-DIR-3ERG DET=IMPF love-CAUS-3ERG man]
(i) ‘Who, kissed the man shei loved?’ or
(ii) ‘Who, did the man shei loved kiss?’

The relevant case is the missing bound reading in (26ii).

A related set of tests directly probes for the position of lexical DPs, by picking out a constituent (VP) that contains the (DP) object and the verb, but systematically excludes the subject. The existence of a conventionally defined VP is unexpected under the PAH, since all DPs are adjuncts, and should be outside the VP (if one exists). In St’át’imcets, three grammatical processes pick out the VP: VP-coordination, VP-pronominalization (Davis 2005), and VP ellipsis (Davis 2004, 2005, 2009). The last provides perhaps the most compelling evidence for a VP constituent (though it appears to be confined to St’át’imcets), since it rather strikingly resembles its English counterpart. It is licensed by an auxiliary, strands the subject (whether pronominal or lexical), elides all material in VP (including the verb, its object(s) and VP-level adjuncts), and allows both strict and sloppy readings, as shown in (27).

(27) xʷúʔ=¡kan xʷúʔ=múta? ɣúʔ=÷i=n=šna=kʷúʔ=š=Lisa
      going.to=1SG.SU invite-DIR all PL.DET=1SG.POSS=friends=EXIS
      and going.to=PART also DET=NOM=Lisa
(i) ‘I’m going to invite all my friends and Lisa is going to (invite all my friends), too.’
      (strict interpretation)
(ii) ‘I’m going to invite all my friends and Lisa is going to (invite all her friends), too.’
      (sloppy interpretation)

18 Different versions of the PAH make different predictions about weak crossover, depending on whether A’-movement is allowed. Theories such as that of Jelinek and Demers (1994), which disallow it, predict no effects, while theories which allow it, such as that of Baker (1996), predict effects with both subject and object. The point is that no version of the PAH predicts the subject-object asymmetry shown in (26).
We conclude that at least for St’át’imcets, the evidence for a conventional hierarchical clausal structure with a VP-external subject asymmetrically c-commanding a VP-internal object is very strong indeed; and to the extent that parallel tests have been carried out in other Salish languages, they support the same conclusion.

With respect to the last point, it is important to acknowledge that not all the relevant tests have been carried out on all Salish languages; in fact, for most languages, we have incomplete data, and in some cases, no information at all. Worse, more than half of all Salish languages are now moribund or extinct, with no hope of recovering the relevant data, and all the remaining extant members of the family are in peril, with a five to fifteen year window of opportunity to carry out further meaningful syntactic and semantic research. This means it is impossible to be absolutely certain that conclusions drawn from a few Salish languages are applicable to others where the relevant investigation has not been — and may never be — undertaken. Nevertheless, with respect to the PAH, we think it is possible to generalize our conclusions to less studied languages. This is because in surface syntactic and morphological characteristics, Salish languages are quite homogeneous: the superficial evidence for the PAH reviewed above is common to virtually every member of the family. This means in turn that the more subtle and deep-seated syntactic evidence against the PAH which we have reviewed here is also unlikely to vary. The reason has to do with the learnability of ‘macro-parameters’, such as that distinguishing pronominal argument systems from conventional ‘lexical argument’ systems. If Salish languages were split into pronominal argument and non-pronominal argument grammars then the learner would need access to ‘triggering data’ – surface-accessible cues as to pronominal argument status. But as far as we know, there are no such cues. The safest bet, in the absence of any positive evidence for the PAH, is to assume that no Salish language is a pronominal argument language.

In order to make this discussion more concrete, we have constructed the following table, bringing together all the relevant superficial and non-superficial predictions of the PAH for Salish (including several which we have not had space to discuss here).

(28) Predictions of the PAH for Salish

<table>
<thead>
<tr>
<th>Surface-accessible properties</th>
<th>NORTHERN STRAITS</th>
<th>OTHER CENTRAL</th>
<th>ST’ÁT’IMCETS</th>
<th>OTHER INTERIOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) full and obligatory agreement paradigms</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>(b) optional overt DPs</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>(c) no argument-adjunct word order distinctions</td>
<td>√ (?)</td>
<td>√ (?)</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>(d) no unregistered argument DPs</td>
<td>√</td>
<td>*</td>
<td>*</td>
<td>?</td>
</tr>
<tr>
<td>(e) no unregistered argument CPs</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>(f) no interpretive differences between pronouns and overt DPs</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>(g) no VP ellipsis</td>
<td>√</td>
<td>√</td>
<td>*</td>
<td>√</td>
</tr>
<tr>
<td>(h) no VP coordination</td>
<td>?</td>
<td>?</td>
<td>*</td>
<td>?</td>
</tr>
<tr>
<td>(i) no pro VPs</td>
<td>?</td>
<td>?</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>(g) no DP anaphors</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>(h) no NP movement</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>(i) no infinitives</td>
<td>√</td>
<td>√</td>
<td>*</td>
<td>*</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Surface-inaccessible properties</th>
<th>NORTHERN STRAITS</th>
<th>OTHER CENTRAL</th>
<th>ST’ÁT’IMCETS</th>
<th>OTHER INTERIOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>(j) no adjunct island effects</td>
<td>?</td>
<td>?</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>(k) no Condition C effects</td>
<td>?</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>(l) no strong crossover</td>
<td>?</td>
<td>?</td>
<td>*</td>
<td>*</td>
</tr>
</tbody>
</table>
Two things are particularly striking about the table in (28). The first is the number of question marks, particularly in the section on surface-inaccessible properties, and particularly in the column for Northern Straits Salish, the language on which Jelinek and Demers based their pronominal argument analysis of Salish. Second, in spite of the gaps in our knowledge, there appears to be no variation in surface-inaccessible properties. There are two logically possible interpretations of this finding: either all Salish languages are of the pronominal argument type, or none are. Given the evidence we have presented in the rest of this section, our conclusion is clear: no Salish language is a pronominal argument language.

4. Tense

We now turn from a much-debated syntactic question to a controversial semantic issue in the study of Salish: the question of whether Salish languages are tensed or tenseless.

4.1. Past and present

In Salish languages, there is no obligatory overt distinction between past and present tense. Each language possesses optional elements which indicate past time; some are illustrated in (29-31).

(29) nks + t + l t s-múy-ši-t-anx t mě:lmx
HAB + DET + PAST DET IMPERF-pay-APPL-TR-1SG.SUBJ DET children
'I was paying it for children.' (Cowlitz; Kinkade 2004: 248)

(30) wík-tn a'y Paul
wík-tl-n a'y Paul
see-TR-(3AB)-1SS + PAST Paul
'I saw Paul.' (Moses-Columbia; Willett 2003: 320)

(31) kʷən-t-éfənân lə? sən
see-CTRAN-3OBJ(Ø)-DESID PAST 1SUBJ
'I wanted to see it.' (Saanich/Sənčáθən; Montler 1986: 210)

In the absence of overt temporal marking, the aspectual class of the predicate gives rise to predictable default temporal interpretations. Stative predicates across the family prefer a present tense interpretation, while temporally unmarked achievements or accomplishments are by default interpreted as past:

(32) a. kʷəy tə Jack
get.hungry DET Jack
'Jack is hungry.'

[STATIVE: PRESENT] (Sənčáθən; Kiyota 2008: 28)

19 The root in (32a) is glossed as ‘get hungry’, because Kiyota argues that stage-level states in
The influence of aspectual class on temporal interpretation might lead one to infer that Salish systems are ‘aspect-driven’ rather than ‘tense-driven’, and that tense is a by-product of aspect in these languages cf. Smith et al.’s (2003) approach to Navajo, or Smith and Erbaugh (2005) on Mandarin Chinese. However, the default temporal interpretations can be overridden by context in at least St’át’imcets (Matthewson 2006b), Skwxwú7mesh (Bar-el 2005), and Sən̓áqəʔən (Kiyota 2008).

Furthermore, the default temporal interpretations vary from language to language. For example, in Sən̓áqəʔən, activity predicates without past marking must be interpreted in the present tense (Kiyota 2008: 31), but in St’át’imcets, temporally unmarked activities are freely interpreted as either past or present (Matthewson 2006b, Davis 2006b; see also Currie 1996 for Skwxwú7mesh). This cross-linguistic variation casts doubt on an aspect-driven approach, because it shows that the correlation between aspectual class and temporal interpretation cannot be provided by a universal default mechanism.

Another interesting feature of Salish past tense marking is that it is not restricted to the verbal domain, but freely appears on nouns within noun phrases (see Burton 1997, Wiltschko 2003, Matthewson 2005 for theoretical discussion, and almost any descriptive grammar for similar facts (e.g., Hess 1995: 63 for Lushootseed, Suttles 2004: 370 for the Musqueam dialect of Halkomelem). Past tense on an animate noun often indicates that the individual has passed away.

Sən̓áqəʔən actually encode an initial change-of-state. See Bar-el (2005) for the same proposal for Skwxwú7mesh (a.k.a. Squamish).
‘I remember my grandfather and my grandmother who raised me.’

(Lushootseed; Bates 2002: 18, from Bierwert 1996: 150-151)

b. imex te-l si:lá-lh
walk DET-1SG.POSS grandfather-PAST
‘My late grandfather walked.’

((Upriver) Halkomelem; Wiltschko 2003: 662, from Burton 1997: 73)

The presence of past marking inside noun phrases is one of Wiltschko’s (2003) motivations for arguing that Halkomelem lacks a Tense head. Wiltschko follows Pesetsky and Torrego (2001) in assuming that universally, nominative Case results from an uninterpretable T(ense) feature on a determiner which needs to be checked and deleted. Tense marking within noun phrases as in (34b) is argued to show that in Halkomelem, the T feature on D is *interpretable*. This has the consequence that Halkomelem lacks nominative Case, and that Tense is not necessary as a syntactic head. The absence of the T head in turn derives the optionality of overt past tense marking.

In a reply to Wiltschko’s paper, Matthewson (2004) argues that in neither Halkomelem nor St’át’imcets is there evidence for interpretable T features on the determiners. Matthewson argues that the presence of temporal elements within the noun phrase does not fundamentally differentiate Salish from English, which also allows cross-categorial temporal modification – for example with the element *then*, which can appear inside DPs and modify the predication time of the noun. Matthewson further observes that the temporal interpretation of the main predicate of the sentence can clash with that of the DP, as in (35). These data are hard to reconcile with the idea that an interpretable T feature inside DP is taking over the clausal function of tense.

(35) a. č?aš láti? ta=kʷúkʷpiʔ=a=tuʔ naš nka?
come DEIC DET=chief=EXIS=PAST20 go get.stuck
‘Here comes the ex-chief who’s going to jail.’

(St’át’imcets; Matthewson 2004: 13)

b. el-‘eliyemet-tsel-cha the-l si:l-á:-lh
REDUP-dream.about-1SG.SUBJ-FUT the(FEM)-my grandparent-PAST
‘I’ll be dreaming about my late grandmother.’

(Halkomelem; Matthewson 2004:13, citing Nordlinger and Sadler 2004: 782)

A second tenseless analysis of Halkomelem is proposed by Ritter and Wiltschko (2004, 2005, to appear), who argue that Halkomelem encodes spatial rather than temporal notions in its Infl node. Instead of encoding temporal (non-)coincidence with the utterance time, Halkomelem Infl – instantiated by auxiliaries – encodes spatial (non-)coincidence with the utterance location.

(36) a. [+distal]
li qw’eyílex tú-tl’ò
AUX dance he

---

20 The element *tuʔ*, glossed here as ‘past’, is actually analyzed by Davis and Matthewson (2003a) and Matthewson (2006b) as a temporal adverbial similar to English *then.*
‘He was dancing (there).’

b. [-distal]

í qw’eyílex tú-tl’ò

AUX dance he

‘He was dancing (here).’ (Halkomelem; Ritter and Wiltschko to appear)

While Ritter and Wiltschko do provide evidence that spatial notions play an important role in interpreting Halkomelem clauses, they do not provide any convincing evidence that tense information is absent. For example, Matthewson (2006b) argues that there are obligatory temporal shifting effects in St’át’imcets embedded clauses which crucially derive from the presence of a tense morpheme in the matrix clause (see below for discussion of Matthewson’s analysis). For a tenseless analysis to be convincing, we would either have to see that such temporal shifting effects are absent in Halkomelem, or that they can be reanalyzed successfully within a location-based system.

A third tenseless analysis of Salish is that of Currie (1997) (although the main focus of Currie’s research on Skwxwú7mesh was the distinction between event-time and topic-time adverbials, not the tense node itself). Currie adopts a framework in which tense is a relational head that takes the utterance time and the topic time as its arguments and orders them (see Demirdache and Uribe-Etxeberria 2007). Since Skwxwú7mesh lacks obligatory morphological tense distinctions, Currie argues that the relation between the utterance time and the topic time is not specified by the tense head in this language. Instead, the topic time is specified by a temporal adverbial at the right edge of the sentence, or, if no overt temporal adverbial is present, then it is a pro, and it must receive its value from a topic time set up by a prior utterance.

While Currie’s observed syntactic distinction between the event-time and topic-time interpretations of temporal adverbials in Skwxwú7mesh is fascinating and deserves further attention, we are not convinced by her arguments for the lack of a tense head. In support of the claim that the topic time is provided only by a temporal adverbial or by a prior utterance, Currie writes that (37) is ‘uninterpretable if no topic time is available from the discourse’ (1997: 77).

(37) chen ilhen
1SG.SUBJ eat

‘I eat / I’m eating (these days) / I ate.’ (Skwxwú7mesh; Currie 1997: 77)

However, it is not clear that (37) is actually uninterpretable; in fact, Currie herself in an earlier paper offers the three translations given in (37) and implies that they were volunteered by her Skwxwú7mesh consultants (Currie 1996: 23). It seems that (37) is simply ambiguous or vague if uttered out of the blue; this would make (37) parallel to utterances containing pronouns whose reference is unclear in out of the blue contexts. Importantly, the temporal vagueness of (37) does not mean that it contains no tense morpheme. On the contrary, Matthewson’s (2006b) tensed analysis of St’át’imcets, to which we now turn, directly accounts for Currie’s facts.

Matthewson (2006b) argues that St’át’imcets is tensed: it possesses an obligatory tense

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21 The topic time (a.k.a. reference time) is the time about which an assertion is made, and may or may not coincide completely with the time of the event itself. Past tense orders the topic time before the utterance time. See Klein (1994), among many others, for discussion.
morpheme, which is phonologically null but present in every finite clause. This tense morpheme restricts the topic time to being non-future, and its exact value is narrowed down by temporal adverbials or context (just as the exact value of a past topic time in an English sentence like John arrived is provided by context). The lexical entry for the tense morpheme is given in (38); the framework adopted is that of Kratzer (1998).

\[(38) \quad \TENSE_i]^{g,c} \text{ is only defined if no part of } g(i) \text{ is after } t_c. \text{ If defined, } [[ \TENSE_i ]]^{g,c} = g(i).\]

According to (38), the TENSE morpheme requires that no part of the topic time provided by the assignment function g follows the utterance time. If this presupposition is satisfied, the TENSE morpheme denotes the non-future topic time. The analysis is applied to an example in (39).

\[(39) \quad \text{a. matq } k^w=\bar{s}=\text{Mary} \]
\[\text{walk } \text{DET=NOM=Mary} \]
\[\text{‘Mary walked / Mary is walking.’} \]

\[\text{b. TP} \]
\[\text{3} \]
\[\text{T} \quad \text{AspP} \]
\[g \quad 3 \]
\[\text{TENSE}_i \quad \text{Asp} \quad \text{VoiceP} \]
\[g \quad 3 \]
\[\text{PERF} \quad \text{matq } k^w=\bar{s}=\text{Mary} \]

\[\text{c. } [[(39a)]^{g,c} = \lambda w \exists e \left[ \text{walk(e)(w) & agent(Mary)(e)(w) & } \tau(e) \subseteq g(i) \right] \text{ (where no part of } g(i) \text{ follows } t_c). \]

\[\text{d. There is an event } e \text{ of Mary walking, whose running time } \tau \text{ is included in the contextually salient non-future topic time } g(i). \]

According to this analysis, the St’át’imcets tense system shares fundamental similarities with that of English. The systems differ only in the semantic (under-)specification of the tense morphemes, and in phonological covertness. Both of these differences are uncontroversially admitted by standard theories: covert morphemes exist, and languages encode greater or lesser degrees of specification in their functional elements.\(^{22}\)

Returning to the Skwxwú7mesh data in (37) above, Matthewson’s underspecified analysis correctly predicts that in an out of the blue situation, the temporal reference will be underdetermined. The tensed analysis predicts that Salish tenses will pattern just like pro in languages with pro-drop for nominal arguments: discourse-initially, utterances containing pro are difficult to interpret, but we do not therefore assume that there is no pronominal present.

### 4.2. Future

\(^{22}\) In fact, Chung and Timberlake (1985: 204) observe that ‘[t]he direct encoding of three tenses is not particularly common. It is more usual to find only a two-way distinction in tense, either future vs. non-future or past vs. non-past.’
In contrast to past marking, future marking is obligatory in at least some Salish languages. (40) shows that in St’át’imcets, the morpheme kət enforces a future interpretation, and (41) shows that sentences which are unmarked for future may not be interpreted as future and are therefore incompatible with future time-adverbials.

(40)  
a. tayt=kán=kət  
hungry=1SG.SUBJ=FUT  
‘* I was hungry / * I am hungry / I will be hungry.’

b. ˚ax-a˘=lkán=kət  
dry-DIR=1SG.SUBJ=FUT  
‘* I dried it / * I am drying it / I will dry it.’

(St’át’imcets; Matthewson 2006b: 277)

(41)  
a. * táyt=kan  
hungry=1SG.SUBJ  
one.day.away / one.year.away  
‘I will be hungry tomorrow / next year.’

b. * ˚áx-a˘=kan  
dry-DIR=1SG.SUBJ  
one.day.away / one.year.away  
‘I will dry it tomorrow / next year.’

(St’át’imcets; Matthewson 2006b: 277)

Across the Salish family, languages seem to differ in whether future tense requires obligatory overt marking. St’át’imcets represents one extreme, where even a future adverbial cannot license a future interpretation in the absence of a dedicated future morpheme.23 For Skw̱uŋk’w̱a7mesh, Currie (1996: 24) states that a future adverbial alone is sufficient to license a future interpretation, and Ritter and Wiltschko (to appear) state that Upriver Halkomelem allows future interpretations in the absence of any marking of future at all:

(42)  
áhtel  
et  
swíyeqe  
‘The man is eating.’ / ‘The man was eating.’ / ‘The man will be eating.’

(Upriver Halkomelem; Ritter and Wiltschko to appear)

Even within Halkomelem, there may be dialect differences. According to Gerds and Hukari (to appear), some marking for future is obligatory, which may be merely a future adverbial. However, Donna Gerds (p.c.) observes that the cases involving future adverbials may actually all contain some other temporal or aspectual marking (e.g., a motion verb, ‘going to’, or the perfect). Suttles (2004: 508) says of the Musqueam dialect that ‘The use of -ət to express the past is not obligatory, but the use of ceʔ for the future may be.’ Clearly, there is work to be done across the family on the issue of the (non-)optionality of future marking.24,25

23 The future morpheme is usually kət, but xʷuʔ ‘be going to’ or a motion verb such as nas̓ ‘go’ will also do the trick. See Glougie (2007) for discussion of St’át’imcets xʷuʔ, which she argues is not a progressive future (as assumed by Matthewson 2006b), but a prospective aspect.

24 Brent Galloway (p.c. 2008) disagrees that (42) can have a future interpretation in Upriver
It is important to note that the possibility of future interpretations in the absence of a future marker is not in itself problematic for a tensed analysis, as English also allows such constructions:

(43)  a. I take the exam tomorrow.
    b. I’m meeting him next week.

On the other hand, any language in which a future interpretation requires obligatory overt marking is problematic for a tenseless analysis, since as argued by Matthewson (2006b), a tenseless analysis cannot adequately explain the restriction of non-future-marked sentences to non-future times. For example, Currie’s analysis of Skw̱wú7mesh predicts that any sentence without overt temporal marking can (in fact, must) receive the topic time of the preceding utterance. But this does not seem to be correct for futures, as shown in (44). Even though the first sentence sets up a future topic time, the second sentence is interpreted as past (and the sentences are therefore not viewed as a coherent discourse).

(44)  nam’ chen ek’ txw̱nach’aw’txw lhe-n sata7 k kway1-es
go I Fut go.next door det-my aunt subj next.day-3.conj
‘I’m going next door to visit my auntie tomorrow.’
chen nam’ p’i7-t ta sts’ukwi7
I go take-tr det fish
‘I went to get the fish.’ (Skw̱wú7mesh; Peter Jacobs, p.c. 2008)

(44) strongly suggests that we cannot simply derive temporal interpretation from preceding context. On the other hand, a tensed analysis correctly predicts (44), since the restriction to non-future times in the second sentence is lexically encoded by the non-future TENSE morpheme.

The reader might imagine that the non-future status of temporally unmarked clauses in at least some Salish languages follows from a distinction between realized vs. unrealized events. Unfortunately for this idea, Salish future markers are demonstrably not general irrealis markers but are specific to future readings (see argumentation in Matthewson 2006b, and cf. Suttles 2004: 375 on the Halkomelem future clitic: ‘This simply indicates future time.’). Nor is it relevant to argue that the future markers encode modal semantics, since the same is true of English future will. In fact, it is standard to assume that will itself is a modal, which co-occurs with a tense (cf. Abusch 1985 and much other work), and exactly the same can be said of the Salish future markers. Rullmann et al.’s (2008) analysis of the St’át’imcets future kəf is given in (45). For current purposes, the relevant feature of the analysis is that kəf induces both quantification over worlds (as it is a modal) and a temporal ordering restriction (as it is a future).

(45)  [[kəf]]c,w,t is only defined if c provides a circumstantial modal base B.

Halkomelem; he claims that the future tense marker is obligatory here. This disagreement about the data may result either from language change, or from differing elicitation techniques.

21 N. Mattina (1999) discusses several strategies for marking future in Colville-Okanagan, but does not explicitly discuss whether they are obligatory. None of her future-time examples involve just an adverbial.
The idea that the future markers co-occur with tense also accounts for so-called ‘past-future’ readings, which in English surface with *would* as in (46). In these cases, the future morpheme places the topic time after some earlier time, rather than after the utterance time.

(46) a. A child was born who *would* become ruler of the world. (Kamp 1971)

b. Susan said two weeks ago that she *would* leave her husband in one week.

Past-future readings appear in at least St’át’imp’cets, Lushootseed (Bates and Hess 2001) and Halkomelem (Gerdts and Hukari to appear b), and probably other Salish languages.

(47) Situation: Mike Leech is currently chief of T’ít’q’et. His (deceased) mother was called Julianne.

zwát-әn-aš  s=Julianne  [kʷ=wa=ʃ  kʷúkʷpiʔ=kọf
  know-DIR-3ERG  NOM=Julianne  [DET(NOM)=IMPF=3POSS  chief=FUT
  ta=ʃkʷúzaʔ-ʃ=a  ʔi=kʷíʃ=aʃ
  DET=child-3POSS=EXIS]  when.PAST=fail=3CONJ

‘Julianne knew when he was born that her child would become chief.’

(St’át’imp’cets; Matthewson 2006b: 689)

(48) sis ʔәw  yә-әey-әm  teʔhә-әm  toniʔ  ʃniʔs  ceʔ  kʷs  nem-s
  SUB LINK  SER-make(IMPF)-TR-PAS  clear(IMPF)-TR-PAS  here  place  FUT  that  go-3POS
  yә-ʔi̥mәs-st-әm  toniʔ  ceʔ  xʷkʷas-t-әm  ʔi̥  ɡәɬwәf  xʷәәs
  SER-walk-CS-PAS  here  FUT  drag(IMPF)-TR-PAS  big  war.canoe  heavy

‘They cleared a path to make way to drag this big canoe, the heavy one.’

(Halkomelem; Gerdts and Hukari to appear b)

Bates and Hess (2001) give similar examples from Lushootseed, and argue that Lushootseed *tu*- is a relative future tense marker which places the topic time after an evaluation time (by default, the utterance time). Of course, (46) shows that the Salish futures do not (pace Mithun 1999) differ from the English future in giving rise to past-future readings. The difference between Salish and English lies not in the future modal/temporal ordering operator, but in the co-occurring tense. In English, *will* changes to *would* in the past-future, but a language with a single non-future tense is predicted to use the same surface string for both an ordinary future and a past-future. On the other hand, it is quite difficult to see how a location-based analysis (as in Ritter and Wiltshcko to appear) would deal with past-futures.

Tom Hukari (p.c., 2009) confirms that the past-future reading appears spontaneously in stories in (Island) Halkomelem.

Bates and Hess actually say that the prefix places the situation time after the reference time, but this does not accord with the standard way of using the terms in the tense literature. Bates and Hess state that *tu-* is optional, and Dawn Bates (p.c. 2008) confirms that at least in narratives, the future marker may be omitted on some predicates that signal time posterior to the moment described at that point in the narration.
One fascinating and as-yet unexplained issue in Salish tense is that some languages can encode future interpretations by means of word order; see Currie (1996) on Skwxwú7mesh, Ritter and Wiltschko (to appear) on Halkomelem, and Bar-el et al. (2004) on Halkomelem and Skwxwú7mesh. For example, the intended future interpretation of the second sentence in Skwxwú7mesh (44) above is obtained by changing the word order so that the verb precedes the person clitic (Peter Jacobs p.c. 2008). The Halkomelem facts are schematized in (49); note that these schemas lack any overt spatial auxiliary:

(49) clitic-verb → past
    verb-clitic → future (Ritter and Wiltschko to appear)

Ritter and Wiltschko provide convincing arguments that in the clitic-verb order, there is a null auxiliary (which they analyze as +distal); see also Davis (2000a) for arguments that clitic-first orders in St’át’imcets involve a null auxiliary. Ritter and Wiltschko explain the future interpretation with the verb-clitic order by suggesting that in this order, the verb must raise to Infl because there is no auxiliary (not even a null one). The absence of a locative auxiliary means that the event is not located in the actual world, and this gives rise to a future interpretation, since future events are not located in the actual world.

It is true that there is a connection between future time and irrealis. For example, in Nlhe7kepmxtsín, the difference between ‘yesterday’ and ‘tomorrow’ is encoded solely by a distal vs. an irrealis determiner: lh spi7hawt ‘yesterday’ versus k spi7hawt ‘tomorrow’ (Karsten Koch p.c. 2008). However, events which are not located in the actual world are not limited to the future; they include any kind of possible-world event. The possible-world analysis therefore predicts that the verb-clitic order could be interpreted as any kind of modal statement, including a counterfactual, a possibility assertion, and so on. The crucial fact that the event in the verb-clitic order is placed after the utterance time is left unexplained by a tenseless analysis.

No-one has as yet attempted a tensed analysis of the use of word order to reverse temporal orderings in Skwxwú7mesh or Halkomelem. The issue remains open for now.

4.3. Summary

We conclude is that there is no convincing reason to analyze the tense systems of Salish languages as radically different from those of languages like English. The cross-linguistic variation between English and Salish can be analyzed as consisting only in (a) the (under-) specification and (b) the phonetic covertness of the tense morphemes. The tensed analysis accounts for a larger range of facts than any extant tenseless analysis, and is consistent with our overall belief that there is no radical syntactic parametrization differentiating Salish and Indo-European.

5. Presuppositions

The Skwxwú7mesh facts as reported by Currie (1996) are broadly similar, but involve some subtleties based on aspectual class. For example, Currie says that the verb-clitic order with a stative predicate gives a present-tense interpretation.

In St’át’imcets, the two possible orderings of clitic and verb correlate with imperfective versus perfective aspect, rather than tense.
In the previous section we argued that Salish languages do not differ fundamentally from English in their tense systems, but merely in the lexical semantics of their tense morphemes. The same theme repeats itself in other areas of the semantics which have been investigated in depth in Salish. For example, Rullmann et al. (2008) argue that while modals in St’át’ímcets differ systematically from those of English in their denotations, the differences are non-fundamental and relate merely to which aspects of meaning each language chooses to lexically (under-) specify. Similarly, Matthewson et al. (2007) analyze evidentials in St’át’ímcets as epistemic modals which are basically similar to epistemic modals in English, but differ in imposing additional constraints on information source which are not lexically encoded by English modals.

In this section, we review a cluster of semantic/pragmatic differences between St’át’ímcets and English which we argue do not reduce to mere lexical (under-) specification. The phenomena reviewed in this section instead reflect a much deeper cross-linguistic difference. In particular, we argue (following Matthewson 2006a, to appear) that St’át’ímcets lacks any presuppositions which place constraints on the hearer’s knowledge or belief state at the time of utterance. If this proposal is correct, it constitutes a (rather radical) pragmatic parameter differentiating St’át’ímcets from languages like English.

The first difference in presuppositional status relates to determiners, and is known to extend beyond St’át’ímcets to a variety of Salish languages. As argued by Matthewson (1998) and as supported by all available descriptions of the languages, Salish determiner systems lack definite determiners (determiners which presuppose familiarity or uniqueness). This is illustrated for two languages in (50-51). We see in each case that the determiner which is appropriate for introducing a novel entity is also appropriate when referring to a familiar entity. This differentiates the Salish determiner systems from that of English, which must use an indefinite article for the novel case and a definite for the familiar.

(50) a. t’i súxwt-as [lhe ʔúlhkaʔ slhánay]i …
   FACT saw-he [DET snake woman] …
   ‘He saw [a snake-woman]i …’
   [NOVEL]

(51) a. huy, šu-dxʷ-oxʷ [tiʔiʔ čxʷ̣aluʔ?]
   then see-TR-now [DET whale]
   ‘They saw [a whale]’
   [NOVEL]

   b. bapa-d-oxʷ əłgʷʔ? [tiʔiʔ čxʷ̣aluʔ?]
   pester-TR-now 3PL [DET whale]
   ‘They pestered [the whale]’
   [FAMILIAR]

Matthewson (1998) gives examples making the same point from St’át’ímcets, Secwepemctsin (Kuipers 1974), and Sné̓c̓á ḣʔən (Montler 1986).
We could analyze the absence of a definite determiner in Salish languages as merely a case of lexical semantics, as we did with tense. However, Matthewson (1998) proposes that there is a deeper parameter at work here, whereby determiners are banned in Salish from accessing the common ground of the discourse in any way. This means that Salish determiners may not encode any distinction which places a constraint on the belief-state of the hearer of the utterance, with definites being ruled out as one sub-type of a common ground determiner.

Subsequent research in a range of areas has revealed that other Salish constructions and elements also fail to encode presuppositional notions or place constraints on the common ground. For example, Davis et al. (2004) show that the cleft construction in Straits and St’át’imcets is non-presuppositional. While in English clefts introduce existence presuppositions, the same is not true in the Salish languages, as illustrated in (52) for Northern Straits. The consultant judges the clefted sentence as felicitous, even though the discourse context does not license an existence presupposition. Note the infelicity of the English translation:

(52) Context: I am looking after my daughter, Mary, as well as two other children, Bill and Jill. Mary and Jill got slightly hurt when playing. When my wife comes home, this is what I say:

\[ \text{ni\'k} \text{\kappa\'s\'o} \text{Mary} \text{\hi?} \text{Jill} \text{\to} \text{m\'e\'k\'w\'t} \]

‘It was Mary and Jill that got hurt.’ (Northern Straits; Davis et al. 2004: 114)

If the Salish non-presuppositional effects were limited to determiners and clefts, we could still actually analyze the issue as being restricted to determiners, as long as we adopt an analysis of clefts according to which they involve concealed definite descriptions (as in Percus 1997, Hedberg 2000). However, the non-presuppositional phenomena are even more widespread. Matthewson (2006a) argues that even prototypical presupposition triggers such as elements corresponding to ‘again’, ‘more’, ‘also’ and ‘stop’ do not place constraints on the hearer’s belief state in St’át’imcets. The core fact which leads Matthewson to this conclusion is that von Fintel’s (2004) ‘Hey, wait a minute!’ (HWAM) test fails to apply in St’át’imcets.

The HWAM test is illustrated in (53) for the familiarity presupposition of English the. It is felicitous to challenge a failed presupposition with an expression of surprise, but it is not felicitous to challenge a previously unknown assertion in the same way. The test thus specifically detects presuppositions as opposed to asserted material.

(53) A: The mathematician who proved Goldbach’s Conjecture is a woman.
   B: Hey, wait a minute. I had no idea that someone proved Goldbach’s Conjecture.
   B’: #Hey, wait a minute. I had no idea that that was a woman. (von Fintel 2004: 271)

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30 The common ground is the set of propositions believed by both speaker and hearer (Stalnaker 1974).

31 It has been argued that the ‘clausal remnant’ of clefts in at least some Salish languages (including St’át’imcets) is a bare CP rather than a full relative clause (Davis et al. 2004, Koch 2008). If so, the Hedberg/Percus analysis cannot in principal be extended to Salish, because it crucially depends on the semantics of the determiner which introduces the remnant. Thanks to Karsten Koch (p.c., 2008) for reminding us of this.
In English and other European languages, it is fairly easy to replicate HWAM results in a fieldwork situation. In St’át’imcets, in contrast, failure of the hypothesized presuppositions for presupposition triggers are never challenged by consultants in a way that distinguishes failed presuppositions from new asserted information. One example is given in (54). At the time of A’s utterance, B had just walked into A’s house and there had been no prior conversation apart from greetings. In spite of this, B did not challenge A’s use of hu7 ‘more’.

(54) A: wáɬʔ=ɪkaxʷ=ha χá̱x-mín kʷu=húʔ kʷu=tíh
   IMPF=2SG.SUBJ=YNQ want-APPL DET=more DET=tea
   ‘Would you like some more tea?’

B: iy
   ‘Yes.’ (St’át’imcets; Matthewson 2006a)

The reader is referred to Matthewson (2006a) for similar results for a range of other presupposition triggers, as well as arguments against a cultural analysis of the absence of HWAM responses. For example, Matthewson shows that St’át’imcets consultants are perfectly able and willing to challenge other types of infelicitous utterance, including utterances with unclear noun phrase reference, or utterances which entail pragmatically odd claims (such as that there are two suns).

The absence of familiarity presuppositions throughout St’át’imcets extends even to third-person pronouns. Davis (2006a) and Matthewson (to appear) provide evidence that third-person pronouns in St’át’imcets can be uttered in indefinite contexts; examples are given in (55-56) (note the infelicitous English translations).

(55) šúxʷt-ən-aš ta=kʷúkʷpiʔ=a proERG-
   recognize-DIR-3ERG DET=chief=EXIS proERG-
   tá̱l-łox ʔayʃ s=Mary
   stand.up=AUT then NOM=Mary
   ‘She recognized the chief. # Then Mary, stood up.’ (St’át’imcets; Davis 2006a)

(56) na=š-pálaʔ=s=ə [tá̱yʔ=wit], niɬ [š=waʔ=ʃ
   DET=NOM-one-3POSS=EXIS [hungry=3PL] then [NOM=IMPF=3POSS
   xʷỉ̱t-əm kʷu=šʔiʔɬən ta=n̓k̓yáʔ=ə múʔa? ta=šχ̓ʷáɬxʷ=ə
   seek-MID DET=food DET=coyote=EXIS and DET=fox=EXIS
   # ‘Once upon a time, they; were hungry, so [a coyote and a fox], went looking for food.’

32 There are many subtleties to the application of the HWAM test, given the possibility for accommodation of a failed presupposition. The presupposition should not be too easy to accommodate by virtue of being too uncontroversial, unsurprising, or unimportant to the hearer. On the other hand, the relevant proposition cannot be too controversial, otherwise a ‘surprise’ response arises even with an unknown assertion. The personal relationship between the interlocutors and their relative social status also affect results. Nevertheless, there is a striking difference between the ease with which one can elicit HWAM responses in English, and the complete impossibility of eliciting them in St’át’imcets.
Data such as these lead us to conclude that St’át’imcets, unlike English, does not require presuppositions to be shared knowledge between speaker and hearer. Presuppositions do still exist in St’át’imcets, but of a different type from those in English. Following Matthewson (2006a), we adopt Gauker’s (1998) analysis of presuppositions for St’át’imcets; this approach says that a presupposition merely represents the speaker’s own take on the propositional context (where the propositional context contains propositions that ‘are relevant to the conversational aims of the interlocutors, whether they are aware of these facts or not’ (Gauker 1998:150)). The effect of this is that it looks in St’át’imcets like presupposition accommodation always takes place. This means that although presuppositions exist in St’át’imcets, we will not detect them as easily as in English. The claim that St’át’imcets lacks any presuppositions which place constraints on the hearer’s belief state is a fairly radical one, involving cross-linguistic variation in the pragmatic component of a kind which we suspect many researchers would be reluctant to countenance. However, it is striking that every new area of St’át’imcets semantics which we investigate turns out to display the same absence of familiarity effects. The latest example involves discourse particles, which are frequently analyzed as placing constraints on the hearer’s knowledge or belief state (cf. Kratzer 2004, Zimmermann 2007, among others). Research in progress by Angelika Kratzer and Lisa Matthewson suggests that even discourse particles in St’át’imcets do not encode anything about the hearer’s knowledge. In short, we are fairly convinced that the most fundamental way in which the semantics/pragmatics of Salish languages differs from that of Indo-European languages lies in the absence of familiarity presuppositions in Salish.

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33 We do not adopt Gauker’s analysis for English, since otherwise we could not explain the differences between English and St’át’imcets with respect to the HWAM test. See also arguments by von Fintel (2000) against applying Gauker’s approach to English.

34 Systematic work has not yet been done on whether other Salish languages lack English-style presuppositions, although the pan-Salish absence of definite determiners and the cleft properties discussed above suggest that the lack may hold family-wide. However, Koch (2008: 90-91) shows that in Nlhe?eko?m?xts?ín, use of the contrastive emphatic marker m’ and the contrastive demonstrative x7e in a condition where there is no contrasting element leads to challenges from consultants like ‘What is the other thing you are talking about?’ Such challenges potentially constitute HWAM responses. However, before we can conclude that Nlhe7kepmxtsín possesses a HWAM effect, we would need to ascertain whether the consultants also challenge asserted instances of the same propositional content, given that the crucial property of the HWAM test is not simply that it elicits a challenge, but that it distinguishes between presupposition and assertion.
References cited


Montler, Timothy 1986. *An Outline of the Morphology and Phonology of Saanich, North Straits Salish. UMOPL* 4, Missoula, MN.


von Fintel, Kai 2000. What is Presupposition Accommodation? Ms., MIT.


Bibliography of Work on Salish Syntax and Semantics

This bibliography contains a fairly comprehensive selection of descriptive and theoretical work on Salish morphosyntax, syntax, semantics, and pragmatics, organized by theme. It includes monographs, journal articles, book chapters, working papers, Ph.D. dissertations, and M.A. theses. We have not included texts, collections of papers, dictionaries, grammars, or general overviews of Salish: to reference these, the reader should consult Jan van Eijk’s comprehensive (2008) bibliography of work on Salish languages. In order to ensure accessibility, we have also excluded papers that were only read at conferences but not published. Where papers were published first in conference proceedings or working papers and later in a journal without significant changes, we have included only the later version here. Many items are cross-listed, and therefore appear under two or more headings.

Applicatives / Ditransitives


Adverbials


Auxiliaries


Clause chaining


Clitics


Cognitive Semantics


Complementation


University of Chicago.


*Configurality*


Control and Out of Control


Jacobs, Peter. 2007. Txw as an Out of Control Marker in Skwxwú7mesh. Papers for ICSNL 42: 256-284. UBCWPL 20, Vancouver, B.C.


Coreference and Binding

Ergativity


Grammatical Relations and Thematic Roles


Imperatives


Information Structure: Topic and Focus


Intonation and Syntax / Semantics


(In)transitivity


Dilts, Philip 2006. An Analysis of the Okanagan “Middle” Marker -m. Papers for ICSNL 41: 77-98. UBCWPL 18, Vancouver, B.C.


OR.


1989 Lawrence, KS.

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2080

2081

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Lexical aspect (Aktionsarten)


2009 UBCWPL 17, Vancouver, B.C.


2032 Steilacoom, WA.

185-196. University of British Columbia, Vancouver, B.C.


Lexical Categories


Beck, David 1999a. Adjectives and the Organization of Lexical Inventories. TWPL 17:18-57, Toronto, ON.


Lexical Suffixation


Locatives


Miscellaneous morphology


Mood and modality


Davis, Philip W. and Ross Saunders 1985. How to Get Things Done in Bella Coola: The


Negation


Kroeber, Paul D. 1999. The Salish Language Family: Reconstructing Syntax. The University of Nebraska Press, Lincoln, NE.


Noun Phrase and Determiner Syntax and Semantics


UBCWPL 3, Vancouver, B.C.
Wilschko, Martina to appear. What’s in a Determiner and How Did It Get There? In

Passive and Inverse


**Person Hierarchies**


**Plurality and Number Marking**


Wiltschko, Martina 2004. On Number of Halkomelem Salish or The Problem with “the two man”. *Proceedings of WSCLA 9*: 143-158. UBCWPL 15, Vancouver, B.C.


Possession


Pragmatics


**Pronouns / Agreement**


Available online at: http://cslil-publications.stanford.edu/HPSG00.


UBCWPL 14, Vancouver, B.C.


Reflexives and Reciprocals


Thompson, James J., and Peter Jacobs. 2004. Prolegomenon to a New Analysis of Salish /*-


**Relative Clauses / Attributive constructions**


**Tense**

Bar-el, Leora, Carrie Gillon, Peter Jacobs, Linda Tamburri Watt, and Martina Wiltzchko. Subject Clitics and their Effect on Temporal Interpretation: A Case Study of Skwxwú7mesh and


Verb movement / Predicate Raising


**Viewpoint Aspect**


**WH-Questions**


**Word order**


