A Fresh Look at Tillamook Inflectional Morphology

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1.0 Introduction
Tillamook was a Coast Salish language spoken in an enclave among Oregon’s Penutian and Athabaskan languages, isolated to the south of the Coast Salish continuum in the Pacific Northwest. Tillamook was one of the first Salish languages to die; perhaps only Pentlach can rival it for that dubious distinction. Edel's (1939) grammar of Tillamook also was one of the earliest for Salish languages, before much was known of their complexities and idiosyncrasies. Published treatment on Tillamook otherwise has been limited to one article on its phonology (Thompson and Thompson 1966), with occasional references to Tillamook in comparative articles. Tillamook deserves a fresh look, given the quantum leap in understanding Salish languages and important research on the language itself since Edel (1939).

The material for this article was taken from the field notes of Laurence C. Thompson and M. Terry Thompson, the product of their field work with some of the last Tillamook speakers in the 1960s. The field situation was not ideal. Use of the language had long fallen from everyday use. Material had to be coaxed from the consultants’ memory, often without success. That context explains certain holes in the paradigms and questions left unanswered. The material nonetheless greatly helps to unravel the mystery of this little studied Salish language, interesting for both its similarities to its congeners and its differences. This article treats only a slice of Tillamook, its inflectional morphology. The Thompsons’ material and occasional reanalysis of Edel (1939) allow a fresh look at the inflectional morphology, revealing Salishan attributes (especially Coast Salish) obscured in Edel (1939).

2.0 Phoneme inventory
The phoneme inventory presented in Thompson and Thompson (1966:314) requires some revision, given that aspiration turns out to be distinctive in Tillamook. Before vowels, although not elsewhere, aspirated stops contrast with unaspirated stops/affricates. An unaspirated stop series is added. A series of glottalized resonants (n’ l’ y’ w’) also is added. The revised inventory below is consistent with Thompson and Thompson’s (1985:144) later treatment of Tillamook phonology.

| CONSONANTS | d | g | g’ | [g] |
| t | [t] | [t’] |
| c | [c] |
| [c’] |
| k | [k] |
| k’ | [k’] |
| q | [q] |
| q’ | [q’] |
| I | [I] |
| s | [s] |
| x | [x] |
| x’ | [x’] |
| y | [y] |
| y’ | [y’] |
| w | [w] |

| VOWELS | i | u |
| e | a |

Tillamook’s (limited) three-way distinction among the stops parallels that of its Athabaskan neighbors. It is unclear if voiced uvular stops g and g’ (IPA G and G’), respectively are phonemic or predictable allomorphs of q and q’, respectively, as a dissimilatory change in reduplicative affixation (dubbed a “Grassmann’s law” for Salish in Thompson and Thompson (1985)).

3.0 Phonological changes

3.1 Synchronic changes
The salient phonological processes impacting morphological analysis ultimately involve stress assignment in the underlying form. Valences for stress (i.e., weak versus strong) and interaction of roots and suffixes concerning stress retention or loss, if any, have yet to be worked out. There is a
very strong tendency toward penultimate stress, however, with attendant vowel reduction and consonantal adjustments. Some very general rules will help to understand the morphological analysis below. Consonants in reduplicated affixes deaspurate and deglottalize, characterized as a Grassmann's law for Salish (Thompson and Thompson 1985), e.g., 'it'si'mi 'eat,' dan'si'mi 'ears'; dan'si'kna 'parents.' Sibilants may palatalize neighboring sibilants (e.g., s > z; c > ç; e > ç'ç'), but some morphemes do not so assimilate (e.g., -i- desiderative before -n- nominalizer). Geminates may reduce to a single consonant, including geminates resulting from assimilation; e.g., n'n > n'n > n'; ç ç > ç'. n is lost before n in suffix combinations. t coalesces with following ç (ç ç), e (ç ç) and is absorbed into following ç and ç ç. ay may coalesce to ç; aw may coalesce to u. h is deleted before a consonant (i.e. h > w -c) in the underlying form, preceding vowel reduction but not after. g' is unrounded to g before i (see example 87). The static prefix e- is realized as -n- before roots beginning with apical consonants (b, d, f, s, t, ç); cf. Edel (1939:17).

One phonological rule is necessary to allow the pieces of the morphological puzzle to fit together and still follow the rule fixing penultimate stress. Certain vowel affixes, such as CV-of > f, occur before stress is fixed on the penultimate vowel. Consider the following passive predicates, one with -an-t-f causative, the other with -stx- basic transitive, (a) f c/qesi-an-t-aw (ST/chase-DRV-TR-PAS) > /c/qesi-4n-t-aw > /c/qesi-st-t-aw > /c/qesi-4t-t-aw f > /c/qesi-t-i-aw 'they chased it away'; f /c/g"stas-stx"-aw (ST/kill-CAU-PAS) > /c/g"stas-sti-aw > /c/g"stas-sti-wf > /c/g"stas-stiw 'he killed it.'

3.2 DIACHRONIC CHANGES
A brief outline of diachronic changes in phonemes from Proto-Salish (PS) to Tillamook will clarify the relationship of certain Tillamook morphemes with their cognates in other Salish languages. Most of the comparative data in the outline is drawn from distantly related northern Interior Thompson River Salish (Th) and other Interior Salish (IS) languages (most removed), with secondary reference to Coast Salish (CS) cognates. The salient historical changes are:

(a) PS *m > Th w; e.g., Ti /waa/, /waa/ (Edel 1939:24) 'four.' Th /waa/ 'four.'
(b) PS *p, *p' > Th h (ç ç /ç/); e.g., Ti sh‘kén 'skunk,' Th s-pa-¿ladat 'skunk'; Ti (dë) h invited (ART) 'bobcat,' Ld (southern) /p¿l¿b/ (Hess 1976) (PS *m > Ld b); Ti /hulul/ 'tip over in boat,' Twana p¿l¿l¿ /p¿l¿c/ 'capsize' (Drachman 1969:220).
(c) PS *k, *k' > Th ç, ç; e.g., Ti sh‘kén 'year,' Th s/-tik 'winter'; Ti c/-lóq 'man’s mother,' Columbiaan s/-tk 'man’s mother' (Kinkade 1981a:77); Ti /lód/ 'bad'; Th /ls/ 'bad.'
(d) PS *r > Th çf; e.g., Ti sh‘kén 'rock,' Th çfw ¿l¿t 'rock.'
(e) PS *w > Th g (g ç /ç/); e.g., Ti s¿g¿d 'road,' Th ls¿g¿d 'road.'
(f) PS *u > Th i (in certain cases); e.g., Ti sh‘kén 'woman,' Th s¿m¿l¿c 'woman.' Th /sw- 'smell.'
(g) PS *s > Th (incomplete shift, apparently impeded in a rounding environment); e.g., PS *-ani'il 'cat,' Th *-ani'il 'cat'; PS *-aksí 'hand,' Th *-ači.

4.0 Word formation
Tillamook has two types of words: full words and particles. Full words are predicative, particles are not. Morphemes within full words are lexical or grammatical. Lexical morphemes designate entities, events, and concepts; they are mostly roots, the central components of predicatives. There are also numerous lexical suffixes (about fifty) attached to roots, which add lexical material. Grammatical morphemes are particles or affixes, which designate or show relationships between the lexical morphemes.

To stems (e.g., root plus aspectual and/or lexical suffixes) may be added grammatical affixes, which include both derivational and inflectional elements. A variety of reduplication affixes can be added to the root, to convey augmentative (e.g., CV₁CV₂, or CV₂), continuative (CV₁V or CV₂V), diminutive (e.g., CV₁V⁻¹ or CV₂), or out-of-control (CV₂) notions. Tillamook is a suffusing vis-à-vis prefixing language, but several prefixes (in addition to the reduplicative prefixes above) are worth mentioning: -e verbal, (a) n- localize, (b) -n- nominalizer, and (c) desiderative. One common infix, actual [f], indicates an activity is ongoing or incomplete. The following gives a general framework for word formation in Tillamook.

(a) prefixes (e.g., -n- nominalizer, -st- stative)
(b) root + aspect (e.g., actual [f], out of control -CV₂)
(c) lexical suffixes (e.g., -e 'hand,' -aw 'throat')
(d) middle (-aw) or transitive marking (various affixes)
(e) object suffixes (e.g., 1s.OBJ - wá, reciprocal -x‘aw, or reflexive -x‘)
(f) subject pronouns (e.g., 1s.SBJ)

The following exemplify that general pattern.

1) de /nálií-t-aw/-st ART LOC/attach-throat-RFL
   ART ST-CNT/-turn-hand-DRV
   'He cleared his throat.'
   'He is cheating on him.'
2) g' /k /síí/-x‘aw/-st ART LOC/put-bak-REL-IND-1S.OBJ-IMP-s
   'You pay me!'
3) /dá c-g‘ó/-x‘el/-x‘á/-s/-sn ART ST-AG/-look-pit-1C-DRV-1S.SBJ
   'I am baking them [clams] in an earth oven.'
4) /c-g‘ó/-x‘el/-x‘á/-s/-sn ART ST-AG/-look-pit-1C-DRV-1S.SBJ
   'I shot him in the belly.'
5) /c-g‘ó/-x‘el/-x‘á/-s/-sn ART LOC/shoot-LIC/belly-DRV-1S.SBJ
   'I shot him in the belly.'
   'I shot him';
   'belly'

5.0 Personal inflection
The phonological system draws on elements from different parts of the grammatical system: subject suffixes, two sets of object suffixes, possessive affixes, independent pronouns, and conjunctive clitics. The system distinguishes three persons and two numbers. Strictly speaking, these items are not pronouns, but person markers.

5.1 PRONOMINAL SUBJECTS AND OBJECTS
Tillamook's pronominal system remains typically Salish, although simplified relative to other...
Salish languages. Kinkade (1990:341) succinctly describes Salish pronominals: "Salishan languages are ... pronominal argument languages; a predicate (equivalent to an English verb) must include pronominal affixes to express its arguments." Kinkade (1990:343) explains: "Pronominal arguments in Salishan languages include first, second, and third persons, singular and plural. There are separate paradigms for subject, object, and possessive, sometimes depending on such things as causative/noncausative, aspect, or dependency. Plural for third person is nonobligatory, although it is commonly used in some languages, especially when it is not redundant."

That describes Tillamook. Tillamook also has conjunctive pronominals used in dependent clauses and independent subject pronominals used for emphasis. One can begin with the intrusive subject pronominals. Newman’s (1980:156) Proto-Salish reconstructions, which include an initial k element not used to form such pronominals in Tillamook, are given for comparison.

### Intransitive Subject Pronominals

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<td>2nd</td>
<td>-as</td>
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<tr>
<td>3rd</td>
<td>-k̓sil (kat)</td>
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The above are ‘conjugated’ with the root ilut ‘eat’; k’ai c/it’s-in ‘I (male) am eating,’ k’ai c/it’s-im ‘I (male) am eating;’ k’ai c/it’s-im ‘I (male) are eating,’ k’ai c/it’s-im ‘I (male) are eating;’ k’ai c/it’s-im ‘I (male) are eating,’ k’ai c/it’s-im ‘I (male) are eating.’

Except for 3.SBJ, the transitive subject pronominals are identical to their intransitive counterparts. Tillamook has generalized those two sets of suffixes.

### Transitive Subject Pronominals

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Perhaps consistent with that generalization of suffix sets, the status of I-as as marking transitive 3.SBJ is tenuous (and bracketed accordingly). 3.SBJ is unmarked for intransitives. In simple transitive or causative predicates (i.e., -3.OBJ-3.SBJ: #0), 3.SBJ is not marked. (6) de s/tc’tus ART ST/hit-DIV 'He hit him.'

(7) te s’tes-(s)tx’ ART ST/care-CAU ‘She took care of him.’

(8) de s’tes-(s)tx’ ART ST/hit-DRIV ‘He hit him.’

### F-as

F-as is found only sporadically in the Thompsons’ material in predicates with object prefixes. (10) g’s h’k̓-s’-wa-s FUT /hit-PUR-2s.OBJ-3.SBJ ‘he hit you.’

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<td>1st</td>
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<td>2nd</td>
<td>-ka (*-al)</td>
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<tr>
<td>3rd</td>
<td>-k̓sil (*-al)</td>
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### F-oBJ

F-oBJ is more regularly represented with both the transitive and causative object pronominals. (12) ci ḥ’k̓-ani’t-w1-i-as DEM /fut-exit-RLT-TR-3.SBJ ‘If they hear me, ...’

(13) ci ḥ’k̓-oh-st-as-w1-s-as DEM AUG? /call-PUR-1s.OBJ-3.SBJ ‘If they call me, ...’

At present, the inconsistent surfacing of I-as in the Thompson’s material and Edel (1939), too, is not understood. The data in Edel (1939:39) may suggest that I-as 3.SBJ occurs only in dependent clauses. The sporadic presence of I-as 3.SBJ would then be especially interesting from a historical-comparative perspective, because Lushootseed has recast completely its cognate morpheme F-as, such that it is entirely lacking in matrix clauses (Thom Hess, p.c.). Lushootseed transitive and intransitive predicates lack it; in one type of subordinate clause, however, it occurs with both transitive and intransitive predicate heads (Thom Hess, p.c.). A parallel development may have occurred or been in progress in Tillamook.

The more regular I-as 3.SBJ in Edel (1939) also might reflect dialectal conservatism; Edel (1939:3) comments that her “best informant ... talked funny,” that is the Nehelim form of the dialect.” Perhaps showing similar conservatism, Edel (1939:39) has examples of transitive 1s.SBJ as I-as (although elsewhere F-as). Edel’s ... (which reflects ...-s-c-a-n < -s-an-c-a-n) in the Thompsons’ material I-as always is F-as (although g’m in I-as-CIV exists, reflecting the same PS subject pronominal *-as). Edel’s I-as 1s.SBJ more transparently reflects PS *-as, whereas F-as 1s.SBJ represents an innovation.

The sporadic surfacing of I-as 3.SBJ in the Thompson’s material may indicate that the morpheme was unproductive or becoming so. Conditioning based on aspectual differences, such as completive versus continuative as in I-as, is more regularly represented with both the transitive and causative object pronominals.

There are two sets of object suffixes. One set is used with specializing suffixes preceding F-as basic transitive: F-as-directive, F-as-relational, F-as-indicative, and F-as-purposive; hence the term transitive set. Newman’s (1980:156) suggested PS forms for the object pronominals also are given. (11) g’s h’k̓-t’-wa-s FUT /hit-fade-DRIV-2s.OBJ-3.SBJ ‘he shot you.’

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Egesdol causative object pronominals, but not do so with the passive. Moreover, there is an interesting, logically would be in the transitive set (which otherwise would reflect *·n·aw,16 Tillamook independent pronominals have full predicative force. They may refer to agents, patients, or possessors, providing them with a special emphasis.20 Newman’s (1977:304) suggested PS forms are added for comparison.

1s ʃoncá ʃoncá 1p lwi(f) (?) *nimáč
2s ʃongl’I ʃonwI 2p g’al·í-g’aló *wálap
3s káncá káncá 3p cáI(m) ·jí-kánčí (?) 21 —

Tillamook retains the original stress of PS, which explains why the forms do not show expected penultimate stress. In addition to retention of original stress, a conservative inclination concerning the proto-forms is apparent in the Tillamook reflexes, except for the *w > g’ and loss of *p > h > 0. The independent pronouns may act as the predicative head of the sentence. They may emphasize agents, patients, or possessors.

(21) ʃoncá to nucmáncy ʃó dé sI/ti Jjócní /EMPH.1s ART /well-1s.SBJ but ART NOR/ill /EMPH.3
‘I am well but he is ill.’

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<td>f·wöł</td>
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5.4 Conjunctive Pronominals

Tillamook has an additional set of pronominals used in dependent or conjunctive (i.e., closely related clauses). The conjunctive pronouns reflect PS subject pronouns attached to PS *w(a)2, a subordinator (Thompson 1979:727; Newman 1980:163). The Tillamook reflexes below are compared parenthetically with the PS transitive subject pronouns from Newman (1980:156).22

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6.2 Developmental f-ill

Developmental f-ill may create intransitive stems, indicating a change in status. Consider these developmental stems: 3f-anw-ij 'get hurt,' /fag-ill 'get hungry,' /fag/-f/-ill 'fame black' (with actual /7/), 3f-ek-il 'get dark.' The suffix otherwise creates intransitive stems indicating motion, especially locomotion; e.g., /gac-ill 'swims,' ne-hejill 'run,' (with (continuative CV- and actual /7/), 3f-ek-il 'come down [a hill or tree],,' /fag-il 'climb up on s.t.,' /fas-ill 'dive in,' /fag-il 'catch a ride,' /laj-ef-il 'go upriver.' Edel's (1939:41) suggests that developmental stems can be transitted with a suffix -s following -ill, with consequent loss of l. Several parallel examples might occur in the Thompsons' material.

(36) g"s t hqg-il
FUT ART /catch.ride-DVL-PUR
't will catch a ride [with someone].'

(37) do hteq-4-s-i
ART to.LOC/descent-DVL-PUR-1s.SBJ
't climbed down [the ladder].'

(38) da hteq-4-s-wol
ART ART ST/descent-DVL
'He went down.'

(39) s-heq-i-s-i
ST/ST-DVL-PUR-1s.SBJ
'do sit down beside him.'

Hess (1967:16) advances a similar rule for cognate Lushootseed f-ill 'inceptive'; Hess (1967:10) calls -s suffix "purposive," which appears parallel with Tillamook -s. It remains unclear for Tillamook whether -s should be treated as a component of f-stx/FCA causative, with which it apparently occurs, or a separate transitive suffix. The present analysis treats the -s element as a separate suffix f-saf purposive. Alternatively the -i in examples 36-39 might represent an independent suffix, to which a reformulated f-ill developmental or f-saf purposive could attach. The present analysis follows Hess's (1967:16) lead, however, in treating the morphophonemic process as f-ill > -saf.

The developmental stem in example 39, hteq-il- 'sit,' suggests that f-ill developmental is cognate with Thompson -iy (from earlier *-il; PS *I > Thy), a suffix forming intransitive stems (termed 'autonomous'); cf. Thompson /hag-il 'he sits down' (hit-AUT). That correspondence (Coast Salish Tillamook with Interior Salish Thompson) suggests intransitive suffix PS *-iy.

6.3 Out of Control. f-ocJ

The reduplicative affix -ocJ indicates various nuances, referred to collectively here as out-of-control (O.C.). -ocJ reduplication may reflect an accidental or spontaneous occurrence, natural phenomena, or a lack of control by an agent or action or event. Carlson and Thompson (1982) discuss those general categories for -ocJ reduplication in Thompson and Spokane; they also briefly touch on Edel's (1939:16) -ocJ data (her "inchoative"). Their categorization works for Tillamook. An inceptive nuance also may be important for Tillamook -ocJ (Kroeber 1988:165). No clear delineation between those categories is necessary, as the following stems indicate: /wan-3 'get burned accidentally,' /hag-il 'be lazy,' /iag-aj- 'jump,' /hol-al 'be lost,' /las-il 'get angry,' /q'el-al 'cook in earth pit,' /iagil 'big, alive,' /Iu-w 'sad,' /haj-at 'become next to,' /wan-3 'be left behind,' /lar-as 'getting bad, /lar-as 'get hurt.' The intransitive subject pronouns directly follow the -ocJ stem: de /las-il 'I got angry' (ART /angry-O.C-1s.SBJ).

The out-of-control forms can be transitted variously. See examples 4, 24, 40, 49, 51, 55, 57, 76, 97, 104, and 119.

7.0 The transitive system

7.1 Basic transitive f-on-f

f-on-f basic transitive marks predicates with only two arguments, an agent and a direct patient or goal. No perfect paradigm of Tillamook transitive inflection exists. A patchwork quilt of examples below, however, illustrates the combination of directive and basic transitive f-on-f, with the transitive object and subject pronouns for various roots. The article de is provided only when the predicative does not take primary stress; the particle g"s also is supplied where appropriate.
In the examples, only 'we left you.' Strictly mechanical assignment of stress on the 
'I-an/' is not yet certain; if retention conditions deletion of 
transitive. Those same suffix pronominal combinations apply for the indirective and relational. 
Stress assignment and the consequent surface forms after vocalic and consonantal adjustments are 
straightforward, except for clwi-'n-c-ya'f 'we left you.' Strictly mechanical assignment of stress on the 
on the underlying penultimate vowel would yield *cwi-'n-c-ya'f (< I cwi-'an-t-c-ya'f ij); that does not 
occur. Compare cwi-'n-c-ya'f 'I left you' < I cwi-'an-t-  
That apparent inconsistency reflects a 
morphophonemic process not yet understood.

7.2 INDIRECTIVE /I-asl/

/I-asl/ indirective is a specializing transitive suffix, preceding /I-uf/ transitive. /I-asl/ indicates the 
predicative has three arguments, an agent and two patients for the predicate’s action; hence the term 
ditransitive. It can identify benefactive and malefactive activities, or connote neither benefit nor 
[Formulas and examples given]

7.3 RELATIONAL /I-awif/
The relational is analyzed as /I-awif/ instead of /I-owif/ on the basis of the following forms. 
/I-awif/ is analyzed as the combination of /I-an/ relational and /I-asl/ purposive; i.e., /I-awif/ (RLT-DRV). 
That combination then surfaces as /I-awif/ or simply /I-owif/, depending on morphophonemic 
conditioning before /I-uf/ transitive. /I-awif/ relational is a very common specializing transitzizer, preceding /I-uf/ transitive. The 
relational has various functions. It indicates the predicate has essentially two arguments, an agent 
and a direct patient, but it also indicates that the action is related to a third object, instrument, or 
goal. Relational transitives tend to be more abstract than /I-uf/ transitives. Perhaps the 
relational's original function was to transitivize activities not normally able to be transitivized; e.g., 
sing + relational = 'sing for someone'; jump + relational = 'jump over something'; poison power + 
relational = 'kill with poison power' (see example 9). Vestiges of that original use still are evident. 
[Formulas and examples given]
The relational can transitivize a middle stem. Consider also: 

\[(66)\text{de } \text{chawt}'-\text{m}-\text{swi-n} \]  
\[\text{ART ST/cry-RLT-DRV} \]  
\[\text{ART ST/cry[ALT]} \]  
\[\text{He made him cry.} \]  
\[\text{He is crying.} \]  
\[\text{He rescued him.} \]  
\[\text{He will kill him.} \]  
\[\text{He will die.} \]  
\[\text{Someone made him laugh.} \]  
\[\text{He laughed.} \]  

The final examples might show that the relational also can redirect a reciprocal to another element in the sentence. For assignment of penultimate stress in the underlying form, /I-stxWII does not have /I-txw/I analysis accordingly was abandoned. /I-stxw/I is treated as an independent morpheme. There is no clear phonological reason why /I-wii-n/ (RLT-DRV) would surface as -wi-n, instead of -swi-n as in example 69.

### 7.4 Reflexive /I-sit/ 

/I-sit/ reflexive marks a predicate with a single participant, which acts as both agent and patient. The reflexive follows /I-on-\textbf{-u}/ basic transitive as /I-on-\textbf{-sit}/, which shows two surface forms, -\textbf{c}\textbf{-u} or -\textbf{-u}/. 

\[(70)\text{de } \text{stw}-'\text{m}-\text{s}\]  
\[\text{ART ST/burn-DRV-RFL} \]  
\[\text{ART ST/burn-DRV-RFL-1p.SBJ} \]  
\[\text{He burned himself.} \]  
\[\text{We burned ourselves.} \]  

Different penultimate stress conditions the surface forms -\textbf{-u}/ or -\textbf{-c}\textbf{-u}. Underlying /I-\textbf{-u}/ directive is posited to account for \textbf{a}/ before the reflexive allomorphs -\textbf{-s}\textbf{-u}/ and -\textbf{-c}\textbf{-u}. Compare the basic transitive for the same root /I-stxw/I 'burn': (de) st-w'\text{m}-\text{swi-n} i 'I burned it' (ART ST/burn-DRV-1s.SBJ). The underlying form of that predicative would be st\textbf{-s}\textbf{-w}i-\text{swi} /I-stxw/I causative then was broken into two components, /I-stxw/I as allomorphs of /I-as/l purposive, they do not show any preceding vowel; e.g., /I-b\textbf{-w}i\textbf{-s}/ /I-stxw/I 'I am warm' ART /I-as/l purposive. 

Underlying /I-\textbf{-u}/ is posited to account for /I-\textbf{-s}/ before the reflexive allomorphs -\textbf{-s}\textbf{-u}/ and -\textbf{-c}\textbf{-u}. Compare the basic transitive for the same root /I-stxw/I 'burn': (de) st-w'\text{m}-\text{swi-n} i 'I burned it' (ART ST/burn-DRV-1s.SBJ). The underlying form of that predicative would be st\textbf{-s}\textbf{-w}i-\text{swi} /I-stxw/I causative then was broken into two components, /I-stxw/I as allomorphs of /I-as/l purposive, they do not show any preceding vowel; e.g., /I-b\textbf{-w}i\textbf{-s}/ /I-stxw/I 'I am warm' ART /I-as/l purposive. 

### 7.5 Purposive /I-\textbf{-a}d/ 

/I-\textbf{-a}d/ purposive was treated as an allomorph of /I-\textbf{-s}\textbf{-t}/ causative. That was done largely because /I-\textbf{-a}d/ occurs with the causative suffixes, as does /I-\textbf{-s}\textbf{-t}/ causative. Conditioning for -\textbf{a} and -\textbf{-s} versus /I-stxw/I as allomorphs of /I-\textbf{-a}d/ was not clear. The allomorphic shape -\textbf{-a}/ from /I-\textbf{-a}d/ was not susceptible to any clear or cogent morphophonemic conditioning. Moreover, when the causative object pronoun follows /I-\textbf{-a}d/ purposive, they do not show any preceding /I-u/ element, as when /I-\textbf{-s}\textbf{-t}/ causative precedes them. /I-\textbf{-a}d/ purposive and /I-\textbf{-s}\textbf{-t}/ causative, assuming that they could combine as /I-\textbf{-s}\textbf{-t}/. That analysis also was problematic. For assignment of penultimate stress in the underlying form, /I-\textbf{-s}\textbf{-t}/ does not have any vowel; e.g., /I-b\textbf{-w}i\textbf{-s}/ /I-\textbf{-s}\textbf{-t}/ 'I scolded him' (ST/scold-CAU-1s.SBJ). The /I-\textbf{-s}\textbf{-t}/ pursuasive, however, does have a vowel that affects or takes assignment of penultimate stress. The /I-\textbf{-a}d/ + /I-\textbf{-s}\textbf{-t}/ analysis accordingly was abandoned. /I-\textbf{-s}\textbf{-t}/ is treated as an independent morpheme. Diachronically, the /I-\textbf{-s}/ element in /I-\textbf{-s}\textbf{-t}/ may reflect the same /I-s/ element in /I-\textbf{-a}d/. Further research may provide a more elegant alternative.
Egesdal 1-as-t-ce-iH
causative may have indicated a predicative had two arguments, an agent and a patient, referring to a
Examples 36-39 above also show transitive, indicating an agent and direct patient.

In Tillamook, however, whether that configuration would accord with example 51, (written also example in footnote 29.) Edel (1939:33) similarly shows that second suffix combination f). The causative is somewhat of a misnomer for Tillamook which apparently shows

(84) de cl5°akt-2st-xw-t-i
ART ST/scold-CAU-1s.SBJ
'I scolded him.'

Examples 36-39 above also show f-as/t purpose transitive developmental stems. If f-as/t is followed by f-as/t transitive, the transitive object pronominals are used (as also exemplified above).

(82) g° l-2s-3n-s-c-t
FUT /speak-PUR-2p.OBJ-1p.SBJ
'We will speak with you folks.'

In examples 82 and 83, it is not clear what the underlying suffix configuration is; it probably is f-as-t-ca-wf (PUR-TR-2s.OBJ-1s.SBJ), without f-as/t directive before f-as/t transitive. It is unclear, however, whether that configuration would accord with example 51, 'i-enl-s-a-t-i 'I am going to call him.' (Edel 1939:39) similarly shows that second suffix combination -s-t-i (written -se t).

7.6 Causative f-stxwi

The term causative is somewhat of a misnomer for Tillamook f-stxwi, vis-a-vis other Salish languages (e.g., Lushootseed); f-stxwi rarely (if ever?) indicates causation, even in an oblique manner. Instead, f-stxwi transivitizes a stem without any causative nuance. In Proto-Salish, the causative may have indicated a predicative had two arguments, an agent and a patient, referring to a third object or goal toward which the activity was directed. In Tillamook, f-stxwi acts as a direct transitive, indicating an agent and direct patient. f-stxwi has two allomorphs, -st and -ati. The initial s of those allomorphs is obscured when the preceding stem ends with ʃ, s, c, or e (and perhaps t). In word final position or before 3.OBJ f-as/t (plus subject affixes, the -stxwi allomorph is used. Before the other object suffixes or f-as/t passive, the -ati allomorph is used.

(84) de cl5°akt-2st-xw-t-i
ART ST/scold-CAU-1s.SBJ
'I scolded him.'
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7.8 Reciprocal f-ag-awl

f-ag-awl reciprocal indicates two arguments, participants often acting as both a patient and an agent in the activity indicated by the stem. It primarily has two forms, basic transitive f-ag-awl, noncontrol f-ag-awl, but it also can occur following f-ag-awd purposive. The non-control reciprocal likely reflects earlier *-awl noncontrol plus *-awl reciprocal (< PS *-awd", Kinkade 1989:30), which developed as *naw-waf > *-nawal > -nag-wal (PS *w > Ti g). Cf. Saanich -nawal 'noncontrol reciprocal' (Montler 1986:183). That historical development would explain why Tillamook noncontrol reciprocal is -nag-xal, not -nag-wal (with other object pronouns, the allomorph of f-naxwal noncontrol is -nu). The noncontrol reciprocal accordingly might better be treated as a unit -nag-wal (-NCT.RCP) instead of -ag-wal (-NCT.RCP); the latter analysis is used, perhaps somewhat artificially, to show parallelism with the basic transitive reciprocal -ag-wal (-TR.RCP). No examples of f-ag-awl reciprocal have been recorded with f-stxw causative.

(90) he(e)n-ival-wa-y

(91) he(e)n-ival-wa-y

/cause[ATL]Know?-2s.OBJ-1s.SBJ

/cause[ATL]Know?-2s.OBJ-2s.SBJ

'I know you.'

'Tyou know me.

(92) fag-wal

(93) de he(e)n-ival-wa-y

/cause[ATL]Know?-3s.OBJ-1s.SBJ

ART /cause[ATL]Know?-PAS-1s.SBJ

'The only refers to him.'

'The only knows him.'

Another example with a he(e)n compound stem shows a conjunctive subject pronoun preceded by the i element and no object pronoun.

(94) to g'sila/nax-i

ART FUT/cause-eye-? 2s.CV

If she sees him, ....

Examples 90-94 (and examples in the he(e)n paradigm above) support the analysis of the i element as a separate morpheme f-i as part of the combination f-ii. Such an f-i morpheme may have interesting implications for Proto-Salish. f-ii would reflect PS *-iw, as part of suggested PS *-iw causative. PS *-iw would comprise elements *-i-aw, perhaps PUR-TR-?. The same *-aw may be a component in PS *-iw noncontrol, as *-n-aw, perhaps DRV-?.

7.7 Non-control Transitive f-naxwal

f-naxwal indicates lessered control over an action by the agent. f-naxwal takes the causative set of pronominal objects. f-naxwal has several surface forms, -nax-, -ni, and -a (roughly parallel to the allomorphs for f-stxw causative). Word final or before f-ii 3.OBJ (plus subject affixes) the allomorph is -nax- or -a. Before the other object suffixes or the passive the form is -ni. -nax- and -ni ultimately may be analyzable as -n-aa and -ni, respectively, as for the causative.

(95) de c/ihوات-bal-sa-si

(96) to cyona?-nax-si

ART ART ST/de-NCT-1s.SBJ

ST/coup-NCT-1s.SBJ

'I lost him.'

'I'm feeling worse.'

(97) náwi-tu-w-ni-wó

(98) náwi/í[wat-nil-wó

LOC/ad-0c-NCT-1s.OBJ

LOC/proud-NCT-1s.OBJ

'I'm sad.' [It saddens me.]

'It makes me proud.'

(99) qe g'só do $i[a]t-nil-wó

UNR FUT ART LOC/fail-NCT-1p.OBJ

maybe

'might fall on us.'

f-naxwal also may indicate success at an activity only after some effort.

(100) te c/ti/haw-*nax-si

(101) g'só /han-(ni)wi-it

ART ART FUT

ST/pursue-NCT-1s.SBJ

/cause-NCT-2p.OBJ-1s.SBJ

'I finally caught up with her.'

'I will catch up with you folks.'

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The reciprocal also occurs with he(e)n compound stems. The compound set he(e)n-is: 'see' takes the causative pronominals (as set out above), as does the compound stem he(e)n-awd: 'know.'

(114) cu he(e)n-s-i-gwal

ART /cause-eye-?-RCP

ST/cause/know-?-RCP

'He came to see him.'

'He knows him.'

Examples 90-94 (and examples in the he(e)n paradigm above) support the analysis of the i element as a separate morpheme f-i as part of the combination f-ii. Such an f-i morpheme may have interesting implications for Proto-Salish. f-ii would reflect PS *-iw, as part of suggested PS *-iw causative. PS *-iw would comprise elements *-i-aw, perhaps PUR-TR-?. The same *-aw may be a component in PS *-iw noncontrol, as *-n-aw, perhaps DRV-?.

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(96) to cyona?-nax-si

ART ART ST/de-NCT-1s.SBJ

ST/coup-NCT-1s.SBJ

'I lost him.'

'I'm feeling worse.'

(97) náwi-tu-w-ni-wó

(98) náwi/í[wat-nil-wó

LOC/ad-0c-NCT-1s.OBJ

LOC/proud-NCT-1s.OBJ

'I'm sad.' [It saddens me.]

'It makes me proud.'

(99) qe g'só do $i[a]t-nil-wó

UNR FUT ART LOC/fail-NCT-1p.OBJ

maybe

'might fall on us.'

f-naxwal also may indicate success at an activity only after some effort.

(100) te c/ti/haw-*nax-si

(101) g'só /han-(ni)wi-it

ART ART FUT

ST/pursue-NCT-1s.SBJ

/cause-NCT-2p.OBJ-1s.SBJ

'I finally caught up with her.'

'I will catch up with you folks.'

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Tillamook Morphology

The reciprocal also occurs with he(e)n compound stems. The compound set he(e)n-is: 'see' takes the causative pronominals (as set out above), as does the compound stem he(e)n-awd: 'know.'

(114) cu he(e)n-s-i-gwal

ART /cause-eye-?-RCP

ST/cause/know-?-RCP

'He came to see him.'

'He knows him.'

Examples 90-94 (and examples in the he(e)n paradigm above) support the analysis of the i element as a separate morpheme f-i as part of the combination f-ii. Such an f-i morpheme may have interesting implications for Proto-Salish. f-ii would reflect PS *-iw, as part of suggested PS *-iw causative. PS *-iw would comprise elements *-i-aw, perhaps PUR-TR-?. The same *-aw may be a component in PS *-iw noncontrol, as *-n-aw, perhaps DRV-?.
The suffixed i element in the *yeh* compounds in examples 114 and 115 was discussed above.

### 7.9 Passive *I-aw*


(116) *Edel-nt-t-aw*
/
Float-RLT-TR-PAS
'It [raft] is floating downriver.'

(117) *Edel-nt-aw-t-aw*
/AUG/dislike-RLT-TR-PAS
'Nobody likes it [dog].' *Edel* (1939:36) and one from the Thompsons' material, suggest that passives can take the intransitive subject pronominals.

(118) *do ná cíg*s'is*sti-(s)ii-w*
/ART past? ST/beat-CAU-PAS
'He's been beaten up.'

(119) *c'icWáh-sh-ni-w*
/ST/miss-OC-NCT-PAS
'They missed him.' (Edel 1939:33) They invited

(120) *c-g'ís-g'ís-hš-šs-aw*
/ST-AUG?/call-CAU-PAS
They invited X.' (based on Edel 1939:33)

The i vowel in the passive in example 120 appears anomalous; only -sw would be expected (cf. example 121). It probably reflects Edel's writing i for a high allophone of *st* following *sh*, which conditionally allophonic realization is discussed in Thompson and Thompson (1966). Two further examples, one from Edel (1939:36) and one from the Thompsons' material, suggest that passives can take the intransitive subject pronouns.

(121) *g'áu* /lyet-i-s-aw-wídu*
/FUT /attack-DVL-PUR-PAS-2p.SBJ
'You will be attacked.'

(122) *EsEt-sh-ní-w*
/to.LOC/spill-NCT-PAS-1s.SBJ
'It is spilled on me.' 'I will spill it.'

See also example 93 above. If the analysis of *I-aw* passive plus intransitive subject pronoun is correct, that construction would parallel passive formations in other Coast Salish languages, such as Lushootseed (Hess 1970), Saanich (Montler 1986:179-181), and Klallam; i.e., with cognates of Tillamook *I-aw* passive and those languages' intransitive subject pronouns.

### 8.0 Imperative *I-aw*.

Imperatives are formed the same way for intransitives and transitives. The singular is formed by adding -a; the plural imperative is formed similarly by adding -g'a. The plural imperative *g'áu* probably reflects elements *g-i-aw*. Cf. Th. *imp. p.* -e < *I-aw* -el *imp. p.*

(123) *de nálitk*-a-ay-šn-a*
/ART LOC/put-fire-DRV-IMP.s
'Throw it into the fire!'

(124) *g'áu nálitk*-š-
/FUT LOC/get-water-MDL-IMP.s
'Go fetch some water!'

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(125) *nalaw-úg*s*
/LOC/obey-MDL-IMP.p
'Obeys, you folks!'

(126) *hýut-ú-títgl*s*
/ST/stand-DRV-RFL-IMP.p
'Stand up, you folks!'

### 9.0 Topic maintenance

#### 9.1 Topical object *I-aw*.

Kinkade (1990) has developed the notion of topic maintenance in discourse in several Salish languages, identifying Tillamook as one language showing that feature. Those half-dozen Salish languages distinguish two kinds of third person objects. Kinkade (1990:343) explains:

"The main function of the topical object as contrasted with the plain (often zero) third-person object is to keep track of a topic in a section of discourse when there is more than one third-person referent present and the one that is the topic has been shifted into a patient role and designated by a pronominal object marker. In order to maintain its topicality, it is specially marked."

Tillamook's topical object suffix is *I-ag*o, homophonous with *I-ag*o reciprocal. Edel (1939:35) characterizes this suffix as an obviative, confusing it with the reciprocal. Kinkade (1989) gives many fine examples of the use of *I-ag*o as marking topical object in Tillamook. Edel's (1939:52) illustrative text also provides an example of the topic object in its first several lines. *C'axiń* (Ice, a mythological traveler) is the topic character. Wren complains to the Heavens that Ice has burned his belly. Wren is told that the Heavens will get even (with Ice) for having burned Wren's belly. Ice is the topic (previously an agent burning Wren's belly), who shifts to a patient (object of revenge), when the Heavens tell Wren:

(127) *háni g'a /tin-aw-i-s-ag*Ú *da ná* sámu*n* da da-lígij
g'o /take-RLT-TR-TOP.OBJ soon /FUT /hake-RLT-TR-PAS
'Heavens' command?/cedar 'Soon Bullrush will take him (Ice) this cedar log.'

Finally, *I-ag*o topical object apparently reflects PS *wall* (Kinkade 1989:28).

#### 9.2 Passive in discourse.

Use of *I-aw* passive is another means to maintain the topicality of a character in narrative or discourse. The same device (i.e., cognates of *I-aw* passive in Salish, such as in Klallam, Thompson, Spokane) may be a general feature in Salish. Use of *I-aw* basic transitive passive is especially common, for instance, in Tillamook narrative to identify who is talking, i.e., topical character or non-topical character. When the topical character speaks, an intransitive or basic transitive is used (*cyáwin*); when the non-topical character speaks, the passive is used (*cyáwin*-t-*aw*). The first few lines of Edel's (1939:52) illustrative text *G'áxwíri* (Ice) exemplify the *cyáwin* _cyáwin*-t-*aw* device. When the subject character Wren speaks, *cyáwin* is used to introduce his speech; when Wren is responded to by the Heavens, *cyáwin*-t-*aw* is used to introduce the Heavens' speech.

*I-ag*o topical object and *I-aw* passive may be used together in narrative toward the same end, topical maintenance of a character. The difference in use of *I-ag*o topical object over *I-aw* passive may be simply stylistic. There may, however, also be some interplay of the two devices. In
the above examples of Edel's (1939:52) illustrative text, the passive keeps track of Wren's talking vis-
à-vis the Heavens' talking, while the topical object in the same segment keeps track of Ice as topic in
the overall story line.

10.0 Conclusion

This fresh look at Tillamook provides several significant points concerning Tillamook's place as a
Salish language. First, Tillamook still reflects the salient components of what must have been a
complex Proto-Salish transitive system: PS *n-i directive, Ti f-an-ul; PS *x-i indirective, Ti f-ixl; PS
*m-i relational, Ti f-owl; PS *s-tow causative, Ti f-stx'i; PS *naw non-control transitive, Ti
f-nax'. Tillamook may have changed the orientation of the PS system somewhat. Tillamook
f-s-tx'i causative apparently has lost its function as a true causative, which function f-owl
relational and ye-h compound stems have assumed. Tillamook also reflects PS *y-m middle, Ti
f-owl; PS *x-x development or autonomous, Ti f-fil; and PS *v-2 out-of-control or inceptive, Ti
f-oc-

Second, the analysis above raises some interesting questions on the building blocks for the Proto-
Salish transitive system. For instance, should PS *s-tow causative be analyzed as *s-t-ow, based on
Tillamook components -i-t (perhaps -pur-tr?-). Similarly, should PS *naw noncontrol be analyzed as
*n-aw, based on apparent Tillamook components *n-i (perhaps -drv-?). It will be important to
compare the permutations of the PS transitive building blocks in Tillamook with those in other Salish
languages. For instance, southern Interior Salish Okanagan shows -m-i -RLT-CAU, but not -m-x
-RLT-IND (Mattina 1982:429-430). Northern Interior Salish Thompson shows -m-i -RLT-IND, but not
-m-i -RLT-ST. (Tillamook may parallel Okanagan in showing -awi-t (-RLT-PUR-TR), but not
awi-t (-RLT-IND-TR).

Third, Tillamook has simplified significantly the PS pronominal system. The transitive and
intransitive subject pronouns have become generalized. Transitive 3.SBJ -as (PS *as) has become
marginal. The i vowel in earlier Ti causative allomorphs *-xi- and Ti noncontrol transitive *mi-
may have become reanalyzed as part of the directly following causative object pronouns. PS transitive
1p.OBJ and 2p.OBJ have been replaced in Tillamook by their causative object counterparts,
reanalyzed as f-owl. Transitive and intransitive 1p.SBJ has been replaced by 1p.PSV -ofh (PS *-of),
perhaps analogizing to the shared shape of 2p.PSV and 2p.SBJ as fyalal (PS *-alal). At the
same time, the emphatic pronouns are relatively intact, even showing original PS stress.

Fourth, Tillamook l-ag-ol reciprocal reflects PS *-awal* (Kinkade 1989:30) (PS *r > Ti g').
Tillamook homophonous suffix l-ag-ol topical object likewise reflects PS topical object *wali
(Kinkade 1989:28). Tillamook apparently developed a passive construction paralleling that in other
Coast Salish languages (PS *-r-y-m + intransitive subject pronoun). That passive construction
differed from the cognate analogue of Interior Salish, which does not form the passive with the
intransitive subject pronouns. In Interior Salish Thompson, for instance, the topicalized object is
indicated with the regular object suffixes, which combine with indefinite dependent subject suffixes.

Fifth, the analysis above reveals Tillamook's essentially Coast Salish character. That revelation
indicates that Coast Salish languages such as Lushootseed and perhaps Twana may be the best
guides for future research on Tillamook. It also suggests that historically Tillamook may have been

part of a south Coast Salish continuum, until it was cut off by insurgent non-Salish languages or until
it migrated southward outside that continuum (perhaps by a).
Endnotes

1. The authors' research on Tillamook and other Salish languages has been supported generously by the National Science Foundation, the National Endowment for the Humanities, and the Melville and Elizabeth Jacobs Research Fund. The authors have benefited from discussions on Tillamook with Joan Romick, former graduate student at the University of Hawaii, and M. Dale Kinkade of the University of British Columbia. The authors received very helpful comments from Thom Hess of the University of Victoria, especially concerning comparative data from Lushootseed. Paul Kroeger of the University of Wyoming caught an important error in analyzing the stative -c before stems beginning with apical consonants. The Thompsons relied on Melville Jacobs's field notes to account for examples


3. Data from Edel (1939) are converted to modern spelling and, to the extent possible, analyzed consistent with the Thompsons' material and Thompson and Thompson (1966;1985). The Thompsons' field notes are the basis for a Tillamook dictionary in progress at the University of Wyoming Salish Lexicography Project (Thompson and Thompson [1991 ms.]). The data in Edel (1939) also were checked against Jacobs's (1933) unpublished field notes.

4. Recent scholarship includes Newman (1975-1980), Carlson and Thompson (1982), Thompson and Thompson (1985), and Kinkade (1989). Earlier scholarship is cited in Thompson and Thompson (1966;313-314). The Thompsons' field notes are the basis for a Tillamook dictionary in progress at the University of Wyoming Salish Lexicography Project (Thompson and Thompson [1991 ms.]). The data in Edel (1939) also were checked against Jacobs's (1933) unpublished field notes.

5. E.g., g?sa?/tu(n)-'a'-ts'-ya Sounds 'you folks will go with him' (Iun- 'accompany' + -na noncontrol transitive); g? k 3lh- 'a'-g'a?(s)-li-c-a- 'pay me!' (-g'a'st 'side, back' + -xl indirective). The lost member of a geminate pair may be shown parenthetically for analytic clarity.

6. Forms are given in surface phonemics, with broad phonetic reality. Morphological boundaries are indicated with these symbols: roots/stems are marked with slanted bar [/]; grammatical affixes with single hyphen [-] (except unmarked before the root/stem mark); lexical suffixes with double hyphen [--]; and reduplication with raised bullet [·]. Infixed are shown inside brackets [...]. The following abbreviations are used to present the Tillamook data: ATL actual, ART article, AUG augmentative, CAU causative, CVJ conjunctive, CNT continuative, DNM diminutive, DRV directive, DSD desiderative, DVL developmental, EMPH emphatic, FMV formative, FUT future, HBT habitual, IMP imperative, IND indirective, IN Instruments, LOC locative, MDL middle, MCT non-control transitive, NOM nominalizer, OBJ object, O.C out-of-control, PAS passive, PSV possessive, PUR purposive, QN question, RCP reciprocal, RFL reflexive, RLT relational, SBJ subject, ST stative, TOP topical, TR transitive, and UNR unrealized. Person is indicated with 1, 2, and 3; number by [singular] and [plural]. Abbreviations for languages are: FI Flathead, KI Klahlam, LD Lushootseed, Sa Saanich, TH Thompson River Salish, and Ti Tillamook.

7. Lexical suffixes extend roots, adding a variety of nuances. Lexical suffixes may add subtle or highly specialized nuances to the root, through metaphorical extension of the lexical suffix's basic meaning. Some examples of lexical suffixes are: -aK 'basket,' -aK 'house,' -cin' 'mouth,' -eg'i' canoe,' -wI 'people,' -Ian 'foot,' and -yes 'day.'

8. na- likely comprises prefixes na- and t-, which also occur separately, providing general localizing or instrumental nuances. All such prefixes are referred to as LOC (localizer) in this analysis. Ti na- reflects PS *n(I)-'on, at, in'; Ti i- reflects PS *t(- > *t > Ti i) 'location, this place'; the PS *n(I)- *t(- prefix combination is common in Coast Salish (Newman 1975:234). na- LOC is used over na- to account for examples such as /na(n)-n/ék 'bad weather' [fit, it is weathering bad] (weather-LOC/bad)

9. In all Salish languages except Tillamook and Bella Coola, the subject pronouns are attached to a particle *k (Thompson 1979:737). The initial k element in Newman's (1980:156) PS forms should be disregarded in comparing them with the Tillamook reflexes.

10. Tillamook intransitive subject pronouns show considerable divergence from their PS counterparts reconstructed by Newman (1980:156). Ti i-df 1s.SBJ probably reflects PS *an through vocalization (PS *an > *a > Ti i). The following data suggests that the underlying form of 1s.SBJ is vocalic i-df, not consonantal f-df, given Tillamook's penultimate stress pattern: da nalag=?-an'-y'I/(I washed my ears' (ART LOC/wash-ear-1s-SBJ); the underlying form is i nalag==?-an'-y'I, viz., i-df 1s.SBJ counts as a vowel for assigning penultimate stress. Ti i-df 2s.SBJ reflects delabialization and palatalization of PS *ar : *a I I > *i > I (PS *t > Ti i). Ti yofd? 1p.SBJ probably does not derive from the possessive paradigm, Ti yofd? 1p.POS (PS *@, but vice versa. Ti yofd? reflects PS transitive 2s.SBJ *alap (PS *p > Ti k); the apparent addition of the initial y element is not understood.

11. 2s.SBJ yofd? surfaces with final h only rarely, e.g., de csiq'i-wo-y?/Ish 'you folks [two] are walking' (ART ST/walk-MDL-2p.SBJ[ATL]). Most often yofd? is realized as yala.

12. Stem-initial /I/ is dropped following the ST c- prefix. Added to articles da and ta here is the temporal particle?: da + ? > da?, ta + ? > te?.

13. There are problems with reconstructing PS pronouns. Transitive 1s.OBJ perhaps is better reconstructed as *cam, for instance, based on reflexes in Northern Interior Salish languages, combining with transitive -s *cam. The plural causative pronouns are particularly messy. Newman's (1979b, 1980) reconstructions for them are based primarily
on Columbian and Upper Chehalis forms (Newman 1979b:300-303). That may be too slender a reed. In any case, Newman (1979b, 1980) provides a starting place to understand how the Tillamook pronominal system may have developed.

14. /taw/ may be realized phonetically as [a], often transcribed a in the Thompsons’ material. Stressed /taw/ before /t-d/ is SBJ, for example, is transcribed -w-d, stressed a in /tawin/ relational often is transcribed -awin. Consistent with Thompson and Thompson (1966:318-319), however, such a forms are regularized as allomorphs of /taw/ and written in surface phonemics with broad phonetic reality as a. Consider also the following alternative forms for /t-Chuf/: -2s.OBJ-1s.SBJ, showing reduction to -cs. (g"a) /tk"-"ag*(s)-3-c-s-y
"/tk"-"ag*(s)-3-c-t-1 'I will pay you' (/put-side-IND-2s.OBJ-1s.SBJ).

15. Assuming Newman (1979b, 1980) is correct, that analogical innovation apparently occurred more generally in Coast Salish, as those languages typically reflect PS *mut for transitive and causative 1p.OBJ, 2p.OBJ in some form (Newman 1979b:302).


17. The i vowel in Tillamook -stOBJ and -niOBJ is consistent with PS *-stw > *-stu > -st; PS *-now > *-nu > -ni. Cf. PS reflexive *-st > Ti-st, showing a change of PS *u > Ti i; PS *mut-2p.OBJ-2p.OBJ > Ti -wif id. Lushootseed shows -su as an allomorph of cognate /t-Chuf/ non-control transitive (PS *n > Ld d) and -tu as an allomorph of cognate /t-Chuf/ causative (Hess 1967:10, 13; 1976:142, 156).

18. Mutita mutandis, Lushootseed shows the same pattern. Hess (1967:23-24) gives 1p.OBJ following /t-d/ transitive as -ubut, but -but after /t-Chuf/ non-control. That distribution suggests the same kind of reanalysis as with Tillamook cognates -invit (= Ld. -iubut) and -ni-wit (= Ld. -dubut); PS *n > Ld d, PS *n > Ld b; PS *u > Ti i (here).

19. Other Coast languages apparently show a parallel reanalysis of *-stu-OBJ, *-nu-OBJ to -st-OBJ, -nu-OBJ. Klallam noncontrol transitive + 1p.OBJ is treated as -ndiit (Thompson and Thompson 1971:284) (< *nu-mut); PS *m > Kl ɣ. Saanich causative + 1s.OBJ is treated as -st-ðaðs (Monter 1986:150-151, 158) (< *st-ðaðs); PS ñ > Sa ã (Thompson, Thompson, and Elrat 1974:184, 195).

20. The EMPLhp and EMPLhp forms are based on Edel (1939:44); Jacobs [1933:156] also supports the form given for EMPLhp.

21. Jacobs (1933:156) writes the form as dzsvide, which likely represents cs[k]n-čsń, showing the actual infix [č]. Edel (1939:44) writes the form as dzsidzsid, which likely represents cs[k]n-čsń. The form does not occur in the Thompsons’ material. Cf. Twana czed-čsń ‘they’ (Drachman 1969:268) (PS *ñ > Twana d).

22. The survival of the PS subject pronouns in the conjunctive set is especially interesting. The conjunctive pronominal counterparts in the subject suffix paradigm show considerably greater change from the PS forms.

23. Edel (1939:37) writes galála, which likely represents g"ə-stlo or igh"ə-stlo. The form igh"ə-stlo is chosen here as parallel to igh"ə-stlo 2p.EMPH from PS *wəolp.

24. Ti 1s.CJV is reduced from g"aw to k" (with additional devoicing). Edel (1939:37) gives as variants of 1s.CJV, -a, -k (g"o and k" in modern spelling). Both show loss of final n from expected g"an. The Thompsons’ material also shows reduced g"o 1s.CJV: g"u hiš g"u yeh-s-i-wə-s-γ "when I come back, I will see you.’ (FUT /return 1s.CJV /cause-eye-?.(ATT.2s.OBJ-1s.SBJ).)

25. A further example: g"u hiš g"a g"a yeh-s-i-wə-s-γ ‘when you come back, you will see me’ (FUT /return 2s.CJV FUT /cause-eye-?.(ATT.2s.OBJ-2s.SBJ).)

26. This predicative is a compound stem (i.e., root + root). yeh ‘cause’ is found in other compounds: /ye-g"o-γ/ /k"iel-aw 'have a baby' (cause-DIM/child-MDL); /ye-s"in'än-aw 'get married' (cause-NOM/husband-MDL); /ye-s"i-γ"aw-aw 'get married' (cause-NOM/wife-MDL); /g"o yeh-siq’h-św-i 'I will get firewood' (FUT /cause-NOM/wood-MDL-1s.SBJ); də syyk’sʔalat-śiw-as ‘I am a cook’ (ART NOM/cause-NOM/food-RLT-INS-1s.SBJ); yeh/pec’γ-yaw ‘bury dead person’ (cause/dead-MDL), cf. /pec’i- ‘dead.’ Further examples of yeh compounds, which Edel (1939:18-19, 21) under the headings for ‘prefixes’ ya= (= yeh/h ‘cause’), yuh= (= yeh-t /cause-LIG), and i=- (= yeh(h) NOM/cause-).

27. g"u is a combination of g"o ‘future, conjunctural and directional particle u. Cf. Edel (1939: 12). Elsewhere g"o occurs as g"oγ, with temporal particle f. Such combinations are treated collectively as FUT in this paper.

28. Cf. yeh-s’el-ś-s-ś-l ‘I made him a present’ (cause-NOM/present-PRP-DRV?–1s.SBJ); (ye-s’el-ś-ś-l ‘present’).

29. Mattina (1982) analyzes the relational cognate in Okanagan as /t-mil/. Montler (1966:172) analyzes the relational cognate as /t-giy/ in Saanich. The authors have analyzed the relational cognate in Thompson (and Spokane) as /t-ma/. The Tillamook data support an analysis in Thompson as /t-ma-n, /RLT-DRV-. Thompson examples such as /t-śon-ma-č-s ’he is strong for me’ (hstrong-RLT-IND-1s.OBJ-3s.SBJ) also support that alternative analysis; there is no -n-DRV in the surface form, and no phonological or morphophonemic rule is required to delete -n from the underlying form. That alternative analysis of relational as /t-ma-n (over /t-ma-n) in Thompson would allow for parallel morphological positioning of semantically opposed indirective -śf and directive -n after the relational -mi; i.e., -mi-s versus /t-ma-n.
30. Cf. de c̣hwaʔaʔ-aw 'he is tired' (ART ST/teat-CAU-1s.SBJ).
31. Cf. middle stem n̄ṣ'aʔ-aw-i 'I am afraid' (LOC/afraid-MLD-1s.SBJ).
32. Cf. de c̣hwaʔaʔ-i-ʔav na ṣalʔaʔ-dow 'I am walking on the beach.'
33. The expected stress would be on the final syllable as ...-e- from -h-o- if (-2s.OBI-
34. Cf. also ʔaʔ-aw-ṣ-ṭi-ʔi-n 'he bandaged himself [to cover wound]' (wrap-DRV-RFL-
35. Analogous rules account for cognate reflexive allomorphs Th -e-st and -e-it and Fl 
36. The prefix ṭ- here is not the LOC ṭ- prefix; it is ṭ- desiderative. E.g., de ṭ-ʔaʔ-aw-n 'he wants to break it'; de ṭ-ʔaʔ-aw-i 'I want a rest'; de ṭ-ʔaʔ-aw-i 'I want to eat' (Edel 1939:17).
37. The Lushootseed cognate root ṭ-aʔ- 'suck' (PS *w > ḳ) suggests that Tillamook 
38. ʔeh-ah- 'see' often is realized as ʔah-ah- (or ʔah-). ʔeh-ah- provides the most 
39. Vogt (1940) first used the term indefinite dependent form instead of passive, 
followed by Thompson and Thompson (1992), for Interior Salish cognates of Ti ʔaʔ-aw.
40. Cf. causative de c̣hwaʔaʔ-(ṣ)at-aw-i 'I killed it' (ART ST/teat-CAU-1s.SBJ).
41. E.g., Ld ḥiihil-ʔi-b ʔam 'I was told,' COMPLETIVE/tell-TR-PAS 1s.SBJ (Hess 1976:193); 
42. Thompson (1979:743) reconstructs PS imperative suffix *-waʔ / *-aʔ (distribution 
43. Kinkade (1989) discusses the use of the passive to maintain topic reference in certain 

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