

Overt third person object agreement in ʔayʔajuθəm*

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Abstract: Though arguments have been made for overt third person object agreement in other Coast Salish languages, like Halkomelem (Wiltschko, 2003) and Squamish (Jacobs, 2011), a similar analysis has not yet been considered for ʔayʔajuθəm. However, the discovery of a non-control stative construction marked by raised pitch in ʔayʔajuθəm provides evidence for a reanalysis of transitivizer and object suffix morphology. This paper introduces new morphophonological evidence for an overt third person object suffix, *-xʷ*, in ʔayʔajuθəm. This analysis is better able to account for stative allomorphy, particularly the under-described non-control stative, and the mapping between underlying forms and surface representations in the transitivizer-object paradigms. In the light of the proposed reanalysis, I propose revised underlying forms for transitivizer and object morphology. Overall, this paper provides morphophonological evidence for the innovation of overt third person agreement in a Coast Salish language, which complements the morphosyntactic arguments in Wiltschko (2003) and Jacobs (2011).

Keywords: object suffixes, third person, overt agreement, Comox, stative, transitivizer suffixes

1 Introduction

Most Salish languages, including the reconstructed Proto-Salish, lack overt third person object pronominal morphology (Newman, 1979). The only clear exception to this generalization is Bella Coola, which has innovated an overt third person object suffix, *-i* (Nater, 1984:38). Previous accounts of pronominal morphology in ʔayʔajuθəm, also known as Comox-Sliammon, have described the language as fitting with the general Salish pattern, taking a zero-marked third person object (Davis, 1978; Watanabe, 2003).

Watanabe (2003:201) provides full paradigms and supporting examples that demonstrate the full range of transitivizer and object suffix combinations. However, it is not clear how the surface forms, given in Table 1, are derived. In particular, problems arise when mapping underlying forms to the resultant non-control stative surface forms with a third person object, which behave as though

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they contain a full vowel in the input despite there being no possible source. Further, there are paradigmatic asymmetries between forms that are purported to have the same input, which cannot be readily explained by the phonology. For example, [x^w] is a conditioned surface alternation of //g// that only occurs when in a word-final position (Blake, 1992; 2000). However, the //g// in the NTR and CTR transitivizers consistently surface as [x^w] with a third person object, even if overt subject morphology follows. Additionally, the //g// in the causative transitivizer is retained with a third person object and //t// is deleted. With any other object suffix, it is the //g// that deletes.

Table 1: Transitivizer and Object Morphology in Watanabe (2003)

	CTR - //t//	NTR - //ng//	Causative - //stg//
1SG.OBJ	-θ	-nu-mš	-stu-mš
2SG.OBJ	-θi	-nu-mi	-stu-mi
3OBJ	-t-∅	-(n)əx ^w -∅	-sx ^w -∅
1PL.OBJ	-t-umuł	-n-umuł	-st-umuł
2PL.OBJ	-t-anapi	-n-anapi	-st-anapi
Reflexive	-θut	-nu-mut	-st-namut
Reciprocal ¹	-t-awł	-nx ^w -igas	-st-awł

An alternative analysis, explored in the present paper, is that ʔayʔajuθəm, like Bella Coola, has developed overt third person object agreement. A similar claim has been made for other Central Salish languages. Wiltschko (2003) argues, on the basis of passive and reciprocal constructions, that the transitivizer *-nəx^w* should be reanalyzed as a combination of a transitivizer *-n* and an overt third person object agreement suffix, *-əx^w*, in Halkomelem. Jacobs (2011) presents an analogous treatment of this transitivizer in Squamish, also suggesting that *-əx^w* is a third person object. ʔayʔajuθəm has a comparably shaped non-control transitivizer (NTR), *-əx^w*. While this allomorph also occurs exclusively in the context of a third person object, a similar overt object agreement analysis has not been considered for ʔayʔajuθəm.

Wiltschko (2003) and Jacobs (2011) construct their arguments on the reinterpretation of existing morphological facts, rather than introducing new empirical evidence to support their conclusions. Further, their arguments come almost exclusively from the domain of morphosyntax. The present paper provides new phonological evidence for an overt third person object suffix in a Coast Salish language, which largely complements the conclusions of Wiltschko (2003) and Jacobs (2011) for Halkomelem and Squamish, respectively. More specifically, the paper introduces new evidence from the distribution of stative

¹ Note that the control and the causative reciprocal suffixes match where the non-control differs from them. The non-control and causative pattern together elsewhere, in contrast to the control forms, so this is an interesting exception.

marking on verbs suffixed with the non-control transitivizer. I will show that treating $-x^w$ as third person object agreement and further revising the underlying forms for transitivizer and object morphology can account for the derivation of surface forms in ʔayʔajuθəm, both generally and in the formation of the non-control stative. The derivation of the non-control stative, which is marked by contrastive pitch, provides a morphophonological argument for overt third person agreement in a Coast Salish language.

2 Stative Morphology and the “Marginal” Non-Control Stative

Stative aspect in ʔayʔajuθəm is marked on a predicate in three main ways. As shown in Table 2, these include the affixation of an $-it$ suffix, /i/-infixation, and raised pitch². With the exception of suffixation, where $-it$ attaches to the right edge of the root, the formation of the stative is generally more complicated than simple linear affixation. Further, raised pitch is found across all stative forms, even if other segmental stative morphology is present. While Watanabe (2003:410–449) offers an overview of the stative allomorphy and Blake (2000:111) describes an exceptional stress pattern that is associated with the $-it$ suffix, the overall morphophonology of the stative has not previously been analyzed.

Table 2: Stative Morphology (Adapted from Watanabe, 2003)

Root and Morpheme Combination	Stative Marking
CVC Root (Intransitive)	-it
CVCC Root (Intransitive)	CVC[i]C
Root + // -ʔəm// (Active Intransitive)	-ʔ[i]m
Root + // -Vm// (Middle)	-[i]m
Weak Root + // -t// (Control Transitive)	-[i]t
Strong Root + // -t// (Control Transitive)	Raised Pitch on Vowel
Root + // -ng// (Non-Control Transitive)	-n[i]x ^w
Root + // -stg// (Causative)	-it and -st[i]x ^w

The data in Table 2 provide evidence for two generalizations. The first of these is that the $-it$ suffix is limited to cases where the stative morpheme is attached to intransitive and causative markers. Second, there is a stative morpheme /i/ that applies with all the other intransitive and transitive suffixes. The only exception to this is the control stative with a strong, that is, full vowel, root. The strong root control transitive is only distinguished from its non-stative counterpart by raised pitch (Watanabe, 2003:433). Therefore, /i/-infixation applies when the transitivizer morpheme has either no vowel or a schwa. With a full moraic vowel, the surface variant of stative marking is raised pitch.

² Lexical suffixes can also mark stativity with glottal phenomena, such as /ʔ/-insertion or placement and displacement of glottalization (Watanabe, 2003:328–331).

Given the assumptions above, the alternation between [i] and raised pitch alone can be accounted for in a constraint-based analysis, such as Optimality Theory (Prince & Smolensky, 1993). I assume that schwa is non-moraic, as in Blake (2000). Stative marking can then be derived with two markedness constraints, two gradient alignment constraints, and two faithfulness constraints, all given in (1).

(1) Constraints for the Stative [i] ~ [∅] Alternation

- ONSET: All syllables must have an onset. Assign a violation mark for any syllable that does not have an onset.
- FT-BIN_{Syll}: Feet should be binary at the level of the syllable. Assign a violation mark for any foot that does not have exactly two syllables.
- ALIGN-R(Transitivizer, Stem): *[ALIGN-R(T,S)]* The right edge of a transitivizer morpheme must align with the right edge of the stem. Assign a violation mark for every segment between the right edge of the transitivizer and the right edge of the stem.
- ALIGN-R(Stative, Stem): *[ALIGN-R(S,S)]* The right edge of a stative morpheme must align with the right edge of the stem. Assign a violation mark for every segment between the right edge of the stative morpheme and the right edge of the stem.
- MAX_μ: Every mora in the input must be present in the output. Assign a violation mark for every mora in the input that is not present in the output.
- MAX: Every segment in the input must be present in the output. Assign a violation mark for every segment in the input that is not present in the output.

The constraint ONSET requires every syllable to have an onset. There is no evidence that this constraint is ever violated in the language (Blake, 2000:126), suggesting that it is highly ranked. FT-BIN_{Syll} desires binary feet at the level of the syllable. This is also motivated elsewhere in the language, as the most optimal foot in ʔayʔajuθəm is binary at both the level of the syllable and the mora (Blake, 2000:202).

Alignment constraints, as in McCarthy and Prince (1993), determine where the stative morpheme is positioned, relative to the transitivizer. Both make

reference to the morphological stem, which is defined as the verb root and derivational suffixes, following Davis and Matthewson (2009:1011)³. ALIGN-R(T,S) motivates the alignment of the right edge of a transitivizer morpheme with the right edge of the stem and ALIGN-R(S,S) requires the same of the stative morpheme. Violation marks are assigned for every segment that interferes the right edge of the suffix and the right edge of the stem. The faithfulness constraints MAX_μ and MAX punish mora and segment deletion, respectively, between the input and the output forms (McCarthy & Prince, 1995).

(2)

yəp̄+[í _μ]+ʔəm] _{stem}	MAX _μ	ALIGN-R(T,S)	ONSET	FT-BIN _{Syll}	ALIGN-R(S,S)	MAX
a. yəp̄íʔəm]				*!	***	
b. yəp̄ʔəm]	*!					*
c. yəp̄ʔəm]	*!					*
d. yəp̄ʔəim]			*!	*!	*	
e. yəp̄ʔəimí]		*!		*!		
f. yəp̄ʔim]					*	*
g. yəp̄ʔəm]í				*!	*	

A tableau for an active intransitive stative stem based on the root yəp̄- ‘to break’ is shown in (2), demonstrating that the /i/-infixation stative forms can be derived if ALIGN-R(S,S) and MAX are ranked below the other constraints. Otherwise, the constraints cannot be ranked relative to each other. Raised pitch is denoted by an accent, [´]⁴. Candidates (2b) and (2c) fatally violate MAX_μ, by deleting the moraic /i/ of the stative morpheme. Candidate (2d) has vowel hiatus, which results in a fatal violation of ONSET. Candidate (2e) has the stative morpheme aligned with the right edge, resulting in a fatal violation of ALIGN-R(T,S). (2d) and (2e) also violate the high ranked prosodic constraint, FT-BIN_{Syll}. Candidate (2a), which positions the stative morpheme between the root and the active intransitive suffix, is eliminated by FT-BIN_{Syll}. The attested candidate, (2f), with the stative morpheme infixated into the active intransitive suffix, only violates lower ranked alignment and faithfulness constraints and is subsequently selected by EVAL. This supports the crucial ranking of MAX and ALIGN-R(S,S)

³ The stem boundary is between transitivizer and object suffixes in the present analysis.

⁴ There is reason to suspect that the language has developed sensitivity to pitch and, as such, I refrain from disambiguating pitch as a stand-alone feature from pitch as a possible correlate of stress. This is an issue for future phonetic work.

below the other constraints because the winning candidate violates each constraint once.

The contrastive pitch marking stativity on the control transitive (CTr) can be derived with the same constraints, though it requires MAX_μ to be ranked below ALIGN-R(T,S) and ONSET. This is shown in the derivation of the control stative with the root *yal-* ‘to call’ in (3). The candidates with no deletion, (3a) and (3d), fatally violate either ONSET and ALIGN-R(T,S) along with FT-BIN_{Syll}. Candidate (3e), which places the stative infix outside of the stem, fatally violates FT-BIN_{Syll}. The remaining two candidates, which feature the deletion of one of the full vowels, equally violate MAX_μ. The attested candidate, (3c), vacuously satisfies the stative alignment constraint by deleting the segment, allowing it to win. Though not included in the present tableaux, the persistence of raised pitch, even with the loss of the original host segment, supports the existence of a high-ranked faithfulness constraint that penalizes the deletion of suprasegmental material. This motivates the re-association of high tone (raised pitch) to the transitive vowel, despite the deletion of /i/. The constraint ranking in (3) captures the generalization that /i/-epenthesis does not occur when the underlying form has a full, moraic, vowel. The ranking of MAX_μ over MAX means that it is preferable to delete a non-moraic segment, like a schwa, instead of a full vowel associated with a mora. In cases where there is no underlying vowel, such as weak CəC roots combined with the control transitive // -t//, /i/ is retained.

(3)

	ya _μ l+[i _μ]+a _μ t] _{stem}	ALIGN-R(T,S)	ONSET	FT-BIN _{Syll}	MAX _μ	ALIGN-R(S,S)	MAX
a.	yalíat]		*!	*!		**	
b.	yalít]				*	*!	*
c.	yalát]				*		*
d.	yalatí]	*!		*!			
e.	yalat]i			*!		*	

Consistent with the generalizations about stative /i/-epenthesis, Watanabe (2003: 442) suggests that the non-control stative is marked by *-nix^w*, where the stative *-i-* is infixes into the non-control transitive, *-nx^w* (from // -ng//). However, this claim is based on only one root, *təχ^w*- ‘to know’. The non-control stative form *təχ^wnix^w* is odd, however, in that it retains the nasal from the underlying form //ng// of the non-control transitive, which is otherwise deleted before a third person object. Since *təχ^w*- is also the only inherently stative root to take stative morphology, and therefore appears to be semantically as well as morphologically anomalous, it seems safe to set it aside as an exceptional case.

Setting *təχ^w*- aside, there is an unexplained gap in the formation of stative predicates that has no clear semantic motivation. There is no reason why the aspectual properties of non-control and stativity would be incompatible. The absence of non-control stative forms is unexpected.

However, contrary to previous description, there is evidence for non-control stative forms that take an alternate form of stative marking: contrastive pitch. This means that the absence of *-nix^w* forms is not the result of semantic mismatch or chance, but instead the result of divergent morphology. Non-control and stative aspect can co-occur, as would be expected from their semantic properties: the gap is not indicative of a non-productive or marginal combination, but instead the result of an unexpected stative marking strategy. In particular, the non-control stative, *-núx^w*, is productively formed with raised pitch on the transitivizer vowel.

The data given in (4) are minimal pairs that exemplify a suprasegmental contrast in the non-control paradigm. The verbs in (4) are distinguished solely by pitch, and therefore are comparable to the strong root control stative forms described in Table 2. The transitivizer in the non-control predicate does not generally have raised pitch when paired with an auxiliary of rate, such as *hahays* ‘slowly’. Watanabe (2003:413) claims that stative predicates are not accepted when accompanied by an auxiliary of rate since statives denote “a durative (possibly imperfective) situation that is not ongoing”. A preliminary comparison shows that the distribution of raised pitch on the NTR morpheme corresponds to the stative. In other words, the alternation between high and low pitch shown in (4a) and (4b) represents a contrast between stative and non-stative forms.

(4) Non-Control Stative/Non-Stative Minimal Pairs – Auxiliary of Rate⁵

- a. [hahays pənox^w q^wassəm]
 hahays pən-ng q^wassəm
 slowly bury-NTR flower
 ‘She slowly planted the flower.’
- b. [čič pənóx^w q^wassəm]
 čič pən-ng q^wassəm
 just.now-1SG.IND bury-NTR flower
 ‘I just planted the flower.’

A similar alternation is shown in (5a) and (5b) between an event that happened in the past and one that has just occurred. In (5a), where the seal was caught the day before, the transitivizer does not have raised pitch. However, in (5b), where the seal was just caught, the transitivizer does demonstrate raised pitch, as expected for a stative. This interpretation is concurrent with a hypothesis of stativity as stative morphology refers directly to the result state of

⁵ The first line in each of these examples represents a phonetic transcription and the second line is a morphemic breakdown.

an action. If an event has just occurred, the result state is more likely to hold. However, the addition of the time adverbial *sʃəsot* ‘yesterday’ decreases the chance that the result state will still hold and therefore speakers are less likely to produce stative forms.

(5) Non-Control Stative/Non-Stative Minimal Pairs - Time of Event

- a. [maʔax^wan ʔasx^w]⁶
 maʔ-ng-an ʔasx^w sdʒəsot
 get-NTR-1SG.ERG seal yesterday
 ‘She caught a seal yesterday.’

- b. [čič maʔáx^wan ʔasx^w]
 čič maʔ-ng-an ʔasx^w
 just.now-1SG.IND get-NTR-1SG.ERG seal
 ‘I just caught a seal.’

Minimal pairs with contrastive pitch, such as those in (4) and (5), can be elicited for virtually any root. Almost every root can take the non-control stative raised pitch if given in a plausible and relevant context. Further, the addition of a time adverbial or auxiliary of rate can force a particular form. The use of contrastive pitch to signal stativity is highly productive, reinforcing the claim that there is no gap in the non-control stative paradigm. The combination of non-control and the stative aspect is not marginal.

3 NTR Stative: A Barrier to a Cohesive Analysis of Stative Morphology

Though contrastive pitch on the non-control transitivizer in (4) is analogous to that on the strong root control stative, it does not fit with the patterns in Table 2 and therefore proves problematic under the constraint ranking in (3). Watanabe (2003) suggests that the underlying form for the non-control transitivizer is //ng// and that the variation between surface forms arises from the alternation between [g], [w], [x^w], and [u], which is described in Blake (1992, 2000). Under this analysis, the x^w in the non-control transitivizer must come from //g// when before a null third person object. This means that the vowel in the non-control transitivizer suffix -ax^w must be epenthetic.⁷ However, the high tone alternant

⁶ The quality of the vowel in the non-control transitivizer differs from its usual value of [o] due to progressive vowel harmony across a glottal stop.

⁷ The predicted form of the non-control stative is in fact the marginally attested -nix^w, given the generalization that morphemes without an underlying full vowel are marked for stative with /i/-epenthesis and is further predicted by the analysis that accounts for the other stative forms in (2) and (3). This is shown in (5), where the attested form incurs a violation under MAX_i and subsequently loses to the form with /i/-epenthesis.

surfaces with [ú], not [í], meaning that it cannot be epenthetic and must be moraic.

In other words, the behaviour of the non-control stative predicts a full vowel in the underlying form. However, if //ng// is the underlying form of the non-control transitivizer, there is no possible source for this vowel, given that //g// is the only possible candidate, being able to become /u/ in a nuclear position (Blake, 1992). However, there is already an x^w in the surface form, which has no possible source aside from //g//, which becomes / x^w / word finally. That in turn means that //g// cannot be the source of a full vowel and therefore that the transitivizer vowel can only be an epenthetic schwa. But if this is true, the non-control stative should be $-nix^w$, with /i/ replacing the schwa in the stative forms, following the general stative pattern shown in Table 2. With the availability of the /i/-infix to improve prosodic structure by breaking up consonant clusters, there is no clear motivation for the addition of an epenthetic vowel in the stative forms.

The retention of the vowel in the NTR morpheme, at the expense of the full stative vowel, argues that the transitivizer vowel is actually moraic, like the vowel in the strong root control statives. This is not consistent with the proposed underlying forms. Since the vowel in the non-control transitivizer, previously argued to be /ə/, is rounded and realized as [o], the general allophonic rules suggest that /u/ might be a more apt underlying form (Watanabe, 2003). However, it is unclear where /u/ could come from because the //g// cannot be the source and /u/ is not generally an epenthetic vowel in $ʔayʔajuθəm$ (Blake, 2000:11), or any other Salish language.

(6)

	$yəp+[i_\mu]+ng]_{stem}$	ALIGN-R(T,S)	ONSET	FT-BIN _{Syll}	MAX _{μ}	ALIGN-R(S,S)	MAX
	a. $yəp\acute{i}nx^w]$					**!	
ə	b. $yəp\acute{n}ix^w]$					*	
ə	c. $yəp(n)\acute{x}x^w]$ ⁸				*		*!(*)
	d. $yəp\acute{n}x^w\acute{i}]$	*!				*!	


The derivation of a non-control stative with the root $yəp'$ ‘to break’ in (6) demonstrates how EVAL would select the incorrect form, with /i/-epenthesis, if the x^w is analyzed as part of the non-control transitivizer in the third person

⁸ The (n) is bracketed in this example because it does not appear in the surface form, but the cluster simplification is motivated by additional constraints that are not included in the present analysis.

paradigm. Candidates (6a) and (6d) are eliminated for violations of the alignment constraints. The winning candidate, (6b), incurs a violation mark under the stem constraint, while the attested candidate, (6c), violates both MAX_{μ} and MAX. This results in EVAL selecting the wrong candidate. In order for the attested form to win, ALIGN-R(S,S) should be ranked above MAX_{μ} . This creates a ranking paradox, as it would predict that the stative infix should be deleted whenever a schwa is present, predicting the incorrect form in (6).

This paradox can be resolved by reconsidering the input forms, rather than the constraints. The contrastive pitch pattern is more compatible with analyzing $-x^w$ as an object suffix, rather than as part of the underlying NTR //ng// morpheme. Under an overt third person object agreement analysis, the vowel in the NTR is not an epenthetic schwa. It comes from //g// and surfaces as /u/ because it is in a nuclear position. This /u/ is a full vowel, rather than a non-moraic epenthetic schwa, like in previous analyses: therefore it is unsurprising that it would act like the strong root control statives, which have a full link vowel that receives raised pitch rather than being replaced by /i/, as shown in Table 2. As shown in (7), reanalyzing the x^w as an object suffix allows for the derivation of the correct form. Candidates (7e) and (7f) maintain both vowels, resulting in vowel hiatus. This incurs violations under ONSET, as well as FT-BIN_{Syll}. Candidates (7a) and (7d), which maintain both vowels in non-adjacent positions, fatally violate FT-BIN_{Syll} due to having three syllables that cannot be parsed fully into binary feet. Candidate (7b) is eliminated for violating ALIGN-R(T,S) because the transitivizer is one segment from the right edge of the stem. This means that candidate (7c), the attested form, wins. Treating $-x^w$ as an object suffix accounts for why the non-control stative is marked with contrastive pitch, analogous to strong root control statives, and allows for a cohesive account of stative morphophonology. Though not explored in the present analysis, the reassignment of stative pitch to the full vowel can be accounted for with a faithfulness constraint that penalizes the deletion of suprasegmental features.

(7)

	$y\acute{o}p^+ [i_{\mu} + ng]_{stem} + x^w$	ALIGN-R(T,S)	ONSET	FT-BIN _{Syll}	MAX_{μ}	ALIGN-R(S,S)	MAX
	a. $y\acute{o}p^i nu x^w$			*!		**	
	b. $y\acute{o}p^i n i x^w$	*!			*	*	*
	c. $y\acute{o}p^i (n) \acute{u} x^w$				*		*(*)
	d. $y\acute{o}p^i nu x^w i$			*!		**	
	e. $y\acute{o}p^i nu i x^w$		*!	*!			
	f. $y\acute{o}p^i nu i x^w$		*!	*!			

3 Paradigmatic Evidence for Reanalysis

Previous descriptions of ʔayʔajuθəm state that the third person object suffix is a null morpheme (Davis, 1978; Blake, 1992; Watanabe, 2003). Table 1 summarizes the surface forms of transitivizers and objects under the null third person approach. The control transitivizer and object combinations are relatively straightforward. The transitivizer is *-t*, with the exception of the fused transitive-object suffixes for the first person singular, second person singular, and reflexive object suffixes, where the CTR *-t* has blended with a former *s* in the *s*-class object suffixes, yielding *-θ*.⁹ Given that the CTR is uniformly *-t*, or a fused variant of it, *//t//* is a sensible underlying form. The non-control and causative paradigms are not as straightforward. The surface forms of the non-control transitivizer are *-əx^w*, *-n*, *-nu*, and *-nx^w*. The *-əx^w* form surfaces exclusively with the third person object, singular or plural, regardless of root or other affixal morphology. The form *-nx^w* is only found before the reciprocal suffix. These two cases aside, the NTR morpheme alternates between *-n* and *-nu* in a phonologically predictable manner. If the object suffix starts with a vowel, the NTR shape is *-n*; if the object suffix begins with a consonant, the NTR shape is *-nu*. A similar account can be given for the causative *//stg//*, which surfaces as *stu-* before a consonant-initial object suffix and *st-* before a vowel-initial suffix. The third person cases are also exceptional, where the causative transitivizer is *-sx^w*, unaffected by root shape or following affixal morphology. A further exception is the reflexive, where *st-* surfaces before a consonant.

Table 3: Transitivizer and Object Morphology in Watanabe (2003)

	CTr - <i>//t//</i>	NTr - <i>//ng//</i>	Causative - <i>//stg//</i>
1SG.OBJ	-θ	-nu-mš	-stu-mš
2SG.OBJ	-θi	-nu-mi	-stu-mi
3OBJ	-t-∅	-(n)əx ^w -∅	-sx ^w -∅
1PL.OBJ	-t-umuł	-n-umuł	-st-umuł
2PL.OBJ	-t-anapi	-n-anapi	-st-anapi
Reflexive	-θut	-nu-mut	-st-namut
Reciprocal ¹⁰	-t-awł	-nx ^w -igas	-st-awł

In the paradigm shown in Table 3(=Table 1), the object suffix appears to play a key role in determining transitivizer shape. The null third person object triggers forms ending in *-x^w* in the non-control and causative paradigms. Vowel

⁹ This is from *t-s* → *c* → *θ*.

¹⁰ Note that the control and the causative reciprocal suffixes match where the non-control differs from them. The non-control and causative pattern together elsewhere, in contrast to the control forms, so this is an interesting exception.

initial suffixes, which comprise three rows in Table 3, are preceded by vowel-less transitivizers. The consonant-initial object suffixes occur after transitivizers with vowels. The consonant-initial object suffixes for the non-control and causative forms correspond to the fused forms in the control paradigm. Thus, there are three rows in Table 3 with consonant-initial or fused object suffixes. These are the first singular, second singular, and the reflexive. The shape of the object suffixes, as presented in Watanabe (2003), appear to be largely based on their surface realizations. However, in the suffixes presented as consonant-initial, the source of the vowel /u/ is actually ambiguous. The strongest argument for it belonging to the transitivizer appears to be symmetry with fused control cases and adherence to diachronic development, where the Proto-Salish forms for the non-control and causative object suffixes are **-mx* and **-mi* (Kroeber, 1999:25). The Proto-Salish object suffixes are given in Table 4. The plural object forms with a vowel in Watanabe’s (2003) analysis correspond to non-control and causative object suffixes in Proto-Salish *without* an initial vowel (Kroeber, 1999:25), suggesting that the paradigm was previously more uniform. There does not seem to be a synchronic reason why /u/ needs to belong to the transitivizers, and not the object suffixes, for half of the paradigm in ʔayʔajuθəm . Similarly, the argument for a null third person object is largely diachronic, as it follows from reconstructed paradigms in Proto-Salish (Kroeber, 1999). This also allows for generalizability across the Salish language family. However, it is possible that ʔayʔajuθəm , like Bella Coola, could have innovated overt third person object agreement.

Table 4: *PS Object Suffixes (Newman, 1979; Kroeber, 1999:25, Watanabe, 2003:282)

	1SG.OBJ	2SG.OBJ	1PL.OBJ	2PL.OBJ	3OBJ
Causative Series	<i>*-mx</i>	<i>*-mi</i>	<i>*-mul (*-mul)</i>	<i>*mul (*-mul)</i>	<i>-∅</i>
Control Series	<i>*-c</i>	<i>*-ci</i>	<i>*-al (*ul)</i>	<i>*-ulm (*-ul)</i>	<i>-∅</i>

There have been arguments from the domains of syntax and semantics in favour of non-null third person agreement in other Coast Salish languages. Wiltschko (2003) presents evidence for overt third person agreement in Halkomelem, which is largely based on where *-əx^w* disappears. In particular, she suggests that it should be present in the passive if it is a part of the transitivizer, but absent if it is actually an object suffix. This is argued on the basis that passive agreement is a type of object agreement and there is a “special passive agreement paradigm”, which may not include *-əx^w* as a suffix (Wiltschko, 2003:83). Further, she predicts that *-əx^w* should not co-occur with reflexive and reciprocal morphology if it is an object suffix, as they do not co-occur in first and second person cases. The *-əx^w* is not found in these cases for Halkomelem, consistent with an overt object agreement analysis.

Jacobs (2011:277) makes a similar case for a third person object suffix in Squamish, pointing out that the *-nəx^w* form occurs exclusively with a third person object and further that “the allomorphy of the lc-transitivizer *-nəx^w* has to be lexically specified since it cannot be derived from any phonological principles”. Reanalyzing *-nəx^w* as *-n-əx^w* also fits with his larger semantic

argument for differential object marking in Squamish, where he suggests that object suffixes encode the properties of (lack of) control, rather than the transitivizers. Treating $-əx^w$ as an object suffix allows it to denote limited control, parallel to the first and second person object suffixes.

The evidence for overt third person agreement in other Coast Salish languages comes exclusively from the morphology and it is not clear that these arguments would apply in $ʔayʔajuθəm$. In Halkomelem and Squamish, the transitivizer would be either $-n$ or $-nəx^w$ under a traditional analysis. Jacobs (2011) identifies that there is no natural phonological environment that predicts this alternation, rendering it phonologically opaque. Proposing the third person object has the immediate effect of reducing allomorphy because there is no way to account for the paradigm aside from proposing two underlying forms. This is not necessarily the case in $ʔayʔajuθəm$, as the multiple surface variants are most often conditioned by their environment. For example, the NTR surfaces as $n-$ before most vowel-initial suffixes and $nu-$ before most consonant-initial ones. This alternation can be accounted for with the same underlying form and regular phonological rules. While there are some surface forms that cannot be accounted for as easily, such $-nx^w$ before a vowel-initial suffix reciprocal suffix or $-nəg$ before the subordinate passive, these are predominantly issues for the phonology. Both $-nx^w$ and $-nəg$ can theoretically come from an underlying $//ng//$, where $//g//$ can become either $/x^w/$ or $/g/$. Similarly, the NTR $-əx^w$ before a third person object could correspond to the same underlying form with $//g//$. The issue in $ʔayʔajuθəm$ is within the phonology, where it is unclear how the grammar derives the surface forms. In other words, there is a source for $-əx^w$ in the underlying form but no apparent reason why the surface form of $//g//$ would vary in the same environment, sometimes becoming $/g/$ before a vowel and sometimes $/x^w/$. This is unlike Squamish or Halkomelem, where there is no evidence for x^w , or anything similar, elsewhere in the paradigm and thus an overt third person object analysis is predominantly motivated by the morphology. In $ʔayʔajuθəm$, an examination of the non-control stative provides morphophonological evidence for overt third person agreement in $ʔayʔajuθəm$, which complements the morphosyntactic arguments for the innovation of overt third person agreement in other Coast Salish languages.

4 $-x^w$ as Third Person Object Agreement

The forms in Table 3 capture the surface forms of the transitivizer and object suffixes and, for the most part, clearly correspond to the posited underlying forms. However, the actual derivation of these forms is not straightforward. The mapping from underlying representation to surface form requires suspension or selective application of particular phonological processes that apply elsewhere in the paradigm or language, requiring the third person object to have some kind of special status in the grammar.

One of the immediate problems with the previously suggested transitivizer analysis is the invariant behaviour of x^w . Regardless of other affixal morphology, x^w never deletes or surfaces as a different segment. Watanabe (2003) states that

x^w in the NTR $-əx^w$ and the causative $-sx^w$ come from //g//, which undergoes alternation in different conditioning environments. Blake (1992) found that //g// is /g/ in an onset position, /u/ in a nucleus, /w/ in a coda, and /x^w/ word-finally. All of the given examples of the //g// surfacing as /x^w/ come from examples of the NTR suffix with third person objects. A possible analysis is that //g// becomes /x^w/ when word-final, as with null third person object and subject. The data in (8a-b) are consistent with this analysis. However, this does not work when an ergative subject suffix follows a third person object. As shown in (8c-d), the addition of these suffixes does not trigger a change to the surface realization of //g//; it remains /x^w/. In a form like *ǰεšəx^wən* ‘I carried him’ in (8d), the affixation of an ergative suffix results in //g// being an onset. In this situation, a surface form like **ǰεšəgən* is predicted. //g// becoming /x^w/ word-medially in the non-control and causative paradigms suggests that there is something exceptional about the third person object. The invariant nature of the x^w in $-əx^w$ and $-sx^w$ leads one to question whether x^w comes from //g// or if it is actually represented as an invariable /x^w/ in the underlying form.¹¹

(8) Word-Final and Pre-Ergative Suffix x^w ¹²

- a. [čigətəm čič ʔaqox^w]
 čigətəm čič ʔaq-ng
 almost just.now-1SG.IND chase-NTR
I almost caught him (just now).
- b. [čigətəm yəpox^w]
 čigətəm yəp-ng
 almost break-NTR
I almost broke it.
- c. [hahays gaqox^was ʔemən]
 hahays gaq-ng-as ʔemən
 slowly open-NTR-3ERG door
He slowly opens the door.

¹¹ Jacobs (2011:277) makes a similar point about Squamish, where it is difficult to find a phonological account that can explain the alternation between $-n$ and $-nəx^w$. It would require stipulating that the third person cases are exceptional and lexically specified in some manner.

¹² The first line of these examples represents a phonetic transcription and the second is morphemic.

- d. [jɛʂox^wən]
 jɛʂ-ng-an
 carry-NTR-1SG.ERG
I carried him.

5 The Causative Paradigm

A further issue with the transitivizer analysis is that the shape of the causative transitivizer is different depending on whether a null third person or a reciprocal object suffix follows: it takes the shape *-sx^w* in the third person cases, as in (8a), but it is *st-* before the reciprocal suffix, as in (9b).¹³ It is unclear what would drive the deletion of the coronal obstruent in the former and //g// in the second. Deletion itself is predicted in both cases as the resultant cluster violates several high-ranked constraints that determine how many segments can be in an onset (such as *COMPLEXONSET) or a coda (prosodic constraints motivating binary feet at the level of the mora). Elsewhere in the paradigm, the //t// does not delete, such as before the 1SG.OBJ suffix in (9c). However, the //g// deletes in the first and second person plural before a vowel, shown in (9d), and in the reflexive before a consonant. This suggests that the grammar prefers to delete //g// to simplify the cluster everywhere except with a third person object. In order to account for this, we must postulate that this particular segment is exceptional in some manner or that the phonological constraints motivating deletion apply differently throughout the paradigm, such that retaining //t// is less optimal in the third person cases.

(9) Causative Transitivizer with Object Suffixes¹⁴

- a. [q^waq^waysx^was]
 CV-q^way-stg-as
 impf-talk-caus-3erg
 ‘He is talking to him.’

¹³ Though not integral to the discussion of the third person object, I hypothesize that the causative reflexive has both causative and non-control morphology, such that it is *st-n-amut*. The combination of the two transitivizers is permitted in ʔayʔajuθəm, according to Watanabe (2003:230-233). Further work is necessary to explore the syntactic and semantic properties of these ‘doubly transitivized’ forms, but this may explain why this form is irregular.

¹⁴ Thank you to Marianne Huijsmans for providing the reciprocal form, (9b). Interestingly, the vowel in this form is different from the other examples. While it may be an interspeaker difference, it could also be Ci- diminutive reduplication, rather than imperfective CV-. Also note that the vowel in (9d) is deleted in the object suffix and place assimilation occurs.

- b. [q^weq^waystawɫ]
 CV-q^way-stg-awɫ
 IMPF-talk-CAUS-RECP
 ‘having a conversation’
- c. [q^waq^waystumʂuɫ hɛniɪ]
 CV-q^waj-stg-mf-ɫ Henry
 IMPF-talk-CAUS-1SG.OBJ-PST Henry
 ‘Henry was talking to me’
- d. [q^waq^waystampi bɹuno]
 CV-talk-stg-anapi Bruno
 IMPF-talk-CAUS-2PL.OBJ Bruno
 ‘Bruno is talking to you all.’

The data in (9) show that /t/ in the causative transitivizer is only deleted with a third person object. Further, x^w is only present in the third person object cases. If we assume that the x^w in the non-control and causative paradigms comes from an underlyingly /x^w/, as the phonology suggests, it becomes plausible to assume that it is only present in the third person cases. If x^w is only present in the third person and retained in cluster simplification, there is reason to consider it third person object agreement. This is shown in (10), where -x^w is treated as an object suffix.¹⁵ In this case, the deletion of /x^w/ would also entail the deletion of an entire morpheme. It follows that it would be preferable to retain the /x^w/ instead of the /t/ because the CAUS /s/ remains and less information is lost. Treating -x^w as a mono-segmental object suffix can account for its exceptional behaviour.

(10) Causative Transitivizer with -x^w Third Person Suffix

- a. q^wa-q^way-s-x^w-as
 //CV-q^way-st-x^w-as//
 IMPF-talk-CAUS-3OBJ-3ERG
 ‘He is talking to him.’

6 Precedent for Overt Third Person Agreement in ʔayʔajuθəm

Though most work on Mainland ʔayʔajuθəm has posited a null third person object suffix in the non-control transitive paradigm (i.e. Davis, 1978; Watanabe, 2003), there are some alternative perspectives that come close to an overt third person object analysis. In particular, Hagège (1981:69) suggests -x^w as the third

¹⁵ I propose //st-// for the underlying form of the CAUS suffix in (10). The motivation for this is laid out in the following section.

person form in the non-control paradigm. However, a survey of the other forms listed for the rest of the paradigm reveals that he is treating the transitive-object suffix as a single paradigm, rather than a combination of two different suffixes. As a further complication, a handful of the forms he reports appear to be exceptional. For example, he gives *-nomše-* in the first person singular cell of the paradigm, consisting of both the NTR morpheme and the object suffix, but *-anapi-* for the second person plural in both the control and non-control paradigms. The latter is missing a transitivizer, where we would expect *-tanapi* and *-nanapi*, following the other forms in the same paradigm, which clearly have the CTR *t-* and the NTR *n-* included. Therefore, it is unclear whether he believed that *-x^w* was the transitivizer (with null third person), a combined transitive-object morpheme, or an overt third person object. Given the other forms, it seems most likely that he was not treating the transitivizer and object as separate morphemes.

Harris (1981:57-58) makes a similar argument, suggesting that *n-* might be the NTR morpheme in the Island Comox dialect, which means that *-x^w* must be treated as a third person object suffix. However, he claims that the only way this could hold synchronically is to assume that the transitivizer and objects have been reanalyzed as a single morpheme. While the present analysis also argues that *-x^w* is an overt third person object suffix, it does not suggest that the transitivizer and object paradigms are completely fused. Overall, the observations of Hagège (1981) and Harris (1981) establish a precedent for proposing overt third person object agreement in $\text{?ay?aju}\theta\text{am}$.

7 The Revised Paradigm

Table 5 summarizes my proposal for the revised transitivizer and object suffix forms. There are four major changes. The first involves a reanalysis of the non-control and causative transitivizer plus third person object forms, as argued above. Based on the evidence from the phonological analysis of stative morphology and further in a consideration of the relevant paradigms, there is reason to treat the *x^w* in the non-control as a third person object. This assumption can be extended to the causative third person, which patterns very similarly.

Table 5: Proposed Revised Transitivizer and Object Morphology

	CTR - //t//	NTR - //ng//	CAUS - //st//
1SG.OBJ	-θ	-n-umš	-st-umš
2SG.OBJ	-θi	-n-umi	-st-umi
3OBJ	-t-∅	-(n)u-x ^w	-s-x ^w
1PL.OBJ	-t-umuł	-n-umuł	-st-umuł
2PL.OBJ	-t-anapi	-n-anapi	-st-anapi
Reflexive	-θut	-n-umut	-st-namut
Reciprocal	-t-awł	-nx ^w -igas	-st-awł

Second, the vowels that were associated with the non-control and causative transitivizers before a first and second person singular in previous analyses (cf. Table 1) are now designated as part of the object suffixes. This is motivated by the observation in Section 3 that the source of the vowel, which could either be the transitivizer or the object suffix, is ambiguous. This addresses the fact that /u/ appears regularly in the paradigm, but is messily divided between transitivizers and objects. Further, as the deletion of //g// is unproblematic with the first and second person plural object, it poses no problem in the singular either. This reanalysis tidies the distribution of /u/ in the object suffixes.¹⁶

A potential issue with reanalyzing the vowels in this manner stems from where the stative raised pitch occurs with a first or second person pronoun in a non-control predicate. Given that stative aspect is a part of the derivational morphology, it is expected that it should be found within the stem domain, rather than the word domain along with inflectional morphology. The proposed reanalysis predicts that the stative high tone will associate with vowels in the object suffixes, rather than the transitivizer, which is not a trivial claim.¹⁷ However, this potential problem is not limited to the present analysis: a traditional account would also require positing that stative marking appears on vowels in both the stem and word domain

Non-control statives with various object suffixes are given in Table 6, with the position of the stative marking shown in the traditional analysis on the left and in the proposed reanalysis on the right. In the revised paradigm, high tone associates with the vowel in the object suffix, if one is available. In the third person case, the suffix does not have a vowel and so raised pitch occurs on the transitivizer. In the traditional account, the raised pitch falls on the transitivizer with a singular or third person plural and on an object suffix in the first and second plural. Therefore, morphology associated with lexical aspect appears outside of the stem domain in either account. The present analysis has the advantage of making this behaviour more uniform across the paradigm.

¹⁶ Admittedly, the paradigm would be more uniform if the object suffix was *-ux^w*, rather than *-x^w*, but if this were the case it would be more optimal to retain the vowel before a third person object or the causative. It also would not work to have all the object suffixes in the causative object suffixes be consonant initial as they were in *PS because the /a/ in *-anapi* cannot come from the transitivizer.

¹⁷ Thank you to Henry Davis for bringing this to my attention.

Table 6: Position of Stative Marking in the Traditional and Proposed Analyses

Object	Non-Control Stative	Traditional	Proposed
1SG.OBJ	čəgítəm konómšis 'He almost saw me.'	NTR (<i>nu</i>)	1SG.OBJ (<i>umš</i>)
2SG.OBJ	yelńomič 'I am going to call you.'	NTR (<i>nu</i>)	2SG.OBJ (<i>umi</i>)
3OBJ	yelńox ^w ən 'I am going to call him.'	NTR (<i>əx^w</i>)	NTR (<i>u</i>)
1PL.OBJ	ješńomuł 'He is carrying us.'	1PL.OBJ (<i>umuł</i>)	1PL.OBJ (<i>umuł</i>)
2PL.OBJ	ʔačńampič 'I am going to chase you all.'	2PL.OBJ (<i>anapi</i>)	2PL.OBJ (<i>anapi</i>)

Finally, I posit that the causative transitivizer is of the shape *//st//*, rather than *//stg//*. This addresses the issues within the causative paradigm regarding the motivations for the deletion of *//t//* in the third person cases and *//g//* elsewhere. Further, it provides an explanation for why *x^w* appears in the non-control reciprocal but not in the causative. In the revised paradigm in Table 4, it becomes evident that the non-control and causative paradigms are similar because they take the same reanalyzed set of object suffixes, not because the transitivizers are inherently similar.

There is evidence for *//g//* in the non-control transitivizer, because there is a full vowel before the third person object suffix and the transitivizer takes the shape *nx^w* before the reciprocal suffix. However, if the vowel in the 1SG.OBJ, 2SG.OBJ, and reflexive belongs to the object, rather than the transitivizer, there is no longer strong evidence supporting the presence of *//g//* in the causative transitivizer. With a vowel in the object suffixes and *x^w* analyzed as the third person object, the differences between the non-control and causative paradigm come for free.

There is no obvious reason for the difference between the non-control and causative transitivizers before a reciprocal suffix in the traditional account. The NTR morpheme surfaces as *-nx^w* and the causative transitivizer as *-st* in this position. It is unclear why the causative would not have *-sx^w*, analogous to the third person form and the non-control equivalent, as is expected if *//g//* is truly present in the underlying forms of both transitivizer suffixes. Further, Watanabe (2003:269) provides an example of a causative non-control construction, where *//g//* is lost and */ə/* is inserted. Following from the patterns elsewhere in the language, the causative *//g//* could easily become */u/* in that context and not incur violations under faithfulness constraints. The insertion of an epenthetic schwa paired with the loss of the *//g//* is extremely marked. This provides evidence against the causative transitivizer having *//g//* in its the underlying form.

The causative stative is also marked differently than the non-control stative. While the non-control stative is marked by contrastive pitch, the causative takes

double marking with an *-it* suffix following the root and /i/-epenthesis into the transitivizer.¹⁸ The differences between the non-control and the causative are not clearly accounted for with the //ng// and //stg// underlying forms. If both have //g//, the causative should be marked with contrastive pitch and no /i/-infixation, following the patterns of the strong root plus control transitivizer with stative marking and the non-control stative. However, with the proposed paradigm, there is no underlying //g// in the causative transitivizer and thus there is no full vowel present. If the underlying form of the NTR suffix is //ng// and the causative is //st//, the divergent behaviour in the formation of the stative is predicted, given the generalizations regarding full vowels laid out in the phonological analysis of the stative in Section 2. In summary, the revised transitivizer-object forms in Table 4 can account for a number of paradigmatic differences between the non-control and causative forms, in addition to allowing for a unified analysis of the non-control stative.

8 Implications, Remaining Questions, and Future Considerations

The lack of the overt $-x^w$ object suffix in the control paradigm might be raised as a point of contention for the present analysis. However, there are two reasons why this is unproblematic. First, there are traditionally two different classes of object suffixes in Salish, which Watanabe (2003:282) refers to as the control and causative series. The control transitivizers select control objects and the non-control and causative transitivizers select the causative series. This is the same division seen in the $-x^w$ and null alternation in Table 4. Therefore, the lack of overt object marking in the control transitivizer-object paradigm can be accounted for as an alternation between a null morpheme in the control series and an overt one in the causative series. Further, the difference between the object suffix classes is evident in the first and second person suffixes, which are fused to the transitivizer in the control series. A plausible alternative analysis for the difference is that the third person CTR *-t* has been reanalyzed as fused, similar to the rest of the singular object suffixes. Kroeber (1999:29) points out that similar arguments have been made for *-t* being a third person object in other Salish languages. Though a comparable analysis for ʔayʔajuθəm is speculative at this point, it shows that there are multiple ways to interpret the lack of overt third person marking with the CTR morpheme that are consistent with the rest of the paradigm.

¹⁸ It does not cause any issues for my analysis, but I am not convinced that the causative is double marked. The [i] reported in Watanabe (2003) could be epenthetic, breaking up the cluster /st+x^w/. The language has very few CCC clusters and therefore this would be a normal target for epenthesis. Further, I have not managed to elicit any causative stative forms where this [i] has raised pitch, as would be expected if it were the stative /i/. I am unaware of a semantic reason why the causative would need to be double marked, but I leave this as a topic for further discussion.

The one thing that the present analysis does not offer an explanation for is the fact that the non-control and causative transitivizer have a /g/ in the subordinate passive, such as in *ʔaḳ-nəg-it* or *hu-stəg-it* (Watanabe, 2003: 295). While this is not an issue with an underlying //ng// for the non-control, there is no clear source in the proposed reanalysis for the /g/ in the causative. Further, this /g/ occurs where an overt third person $-x^w$ might be expected. However, there are two reasons why this is not an issue. The first is that the active and passive object suffixes differ elsewhere in the paradigm, such that the first person plural is $-uw$ in the passive, rather than $-umul$, for example. Further, it is possible that the $-g$ might be the third person object agreement marking in the causative passive paradigm or that $-git$ might be an allomorph of the passive marker. Each of these explanations can account for the subordinate passive form.

There is also a special subset of verbs which take $-š$ as a transitivizer, instead of the control transitive $-t$, and take the causative series of pronominal objects (Watanabe, 2003). The prediction of the current analysis is that they should generally take the overt third person object $-x^w$ as well. However, this is not necessarily an issue as there is a precedent for the loss of the $-x^w$ object suffix following a fricative. Watanabe (2003: 222) notes that some speakers drop $-x^w$ in the causative with a third person object, leaving just $-š$. The same thing could ostensibly occur with a /š- x^w / combination.¹⁹ Further, I have not found any words in my elicited data or Blake (2000) for any lexical item surfacing with [š x^w]. This suggests that the lack of overt phonological material for the third person object does not preclude its existence at some other level of the grammar.

The overt third person agreement analysis does have interesting implications for //g//. The evidence in Blake (1992; 1995; 2000) for / x^w / being the surface form of a word-final underlying //g// comes directly from the third person non-control transitive, with the assumption that the third person object is null. However, Blake does not consider verbs with an ergative subject suffix, where x^w always surfaces word-medially. A possible workaround for this might be to reconsider the morphological stem domain, placing a boundary between the object and subject suffixes and to argue that //g// surfaces as [x w] stem- or word-finally. This predicts [x w], rather than [g], in the subordinate passive constructions. If $-x^w$ is an overt third person object suffix, as argued in this paper, the only questionable suffix is the reciprocal $-nx^w$, where [x w] is not phonologically predicted. In (11), the x^w is in an onset position and, coming from //g//, should be g instead. This predicts that (11a) should be $*k^w onogegəsəl$, rather than $k^w onox^w egəsəl$.

¹⁹ A preliminary examination of predicates with the /š/ transitivizer shows some variation in the production of the fricative. Though there is an absence of a categorical pattern, there is sometimes a [x w]-like sound following /š/ or it appears to be produced with some degree of lip rounding.

(11) Reciprocal Suffix as *-igas*

- a. k^ˈwon-óx^w-egəs-ot Gloria Bruno
see-NTR-RECP-PST Gloria Bruno
'Gloria and Bruno saw each other.'
- b. ʔuk^w k^ˈwon-ox^w-egəs sʃesot
all see-NTR-RECP yesterday
'We all saw each other yesterday.'

However, it is possible that the reciprocal suffix has been reanalyzed as *-x^wigas*.²⁰ In (12), the same data is glossed under this assumption. In (12a) and (12b), there is a rounded vowel between *n* and *x^w*, which comes from the //g// in the NTR //ng//. This is further supported by the raised pitch on (12a), marking stativity on the rounded vowel, paralleling the non-control stative patterns described in Section 2. This is consistent with analyzing *-x^wigas* as the reciprocal suffix as it requires a full vowel in the NTR, which suggests that *x^w* cannot come from the NTR //g//.

(12) Reciprocal Suffix as *-x^wigas*

- a. k^ˈwon-ó-x^wegəs-ot Gloria Bruno
see-NTR-RECP-PST Gloria Bruno
'Gloria and Bruno saw each other.'
- b. ʔuk^w k^ˈwon-o-x^wegəs sʃesot
all see-NTR-RECP yesterday
'We all saw each other yesterday.'

Setting the reciprocal suffix aside as a possible exception, there is no strong evidence for [x^w] ever being a surface form of //g//. The only evidence for [x^w] being part of the alternation comes from the non-control and causative paradigms (Blake, 1992; Blake, 1995). Under the present analysis, this is no longer applicable. Furthermore, Blake (2000:48) notes that the alternations of //dz// and //g// generally involve the loss of one feature, with the exception of /x^w/, which involves two. If /x^w/ is removed from the set of alternants that need to be accounted for, the phonological analysis of //g// may be simplified and closer echo //dz//, which has no word-final fricative form.

²⁰ Thank you to Marianne Huijsmans for suggesting this possible analysis.

9 Conclusion

There is strong morphophonological evidence for overt third person object marking in ʔayʔajuθəm. Treating -xʷ as a third person object suffix allows for a constraint-based analysis stative allomorphy. In particular, this analysis can derive the contrastive pitch pattern associated with non-control stative, which poses problems under a null third person object account. Adopting this analysis additionally tidies up the transitivizer-object paradigms and better explains the differences between the causative and non-control morphology. The similarities stem from sharing the causative series of objects and the differences arise from different underlying forms for the transitivizers. Finally, the phonological and morphological evidence for overt third person object agreement in ʔayʔajuθəm complements the more paradigmatic evidence presented for Halkomelem in Wiltschko (2003) and Squamish in Jacobs (2011). Though the present paper does not touch on ʔayʔajuθəm syntax, the implications of an overt third person object for other areas of the grammar merit further investigation.

References

- Blake, S. J. (1992). *Two Aspects of Sliammon Phonology* (Doctoral dissertation, Masters thesis, University of British Columbia).
- Blake, S. J. (1995). Syllabicity Alternations in Sliammon. Paper presented at the Workshop on Features in Optimality Theory, University of Arizona, Tucson.
- Blake, S. J. (2000). *On the distribution and representation of schwa in Sliammon (Salish): descriptive and theoretical perspectives* (Doctoral dissertation, University of British Columbia).
- Davis, H., & Matthewson, L. (2009). Issues in Salish syntax and semantics. *Language and Linguistics Compass*, 3/4, 1097-1166.
- Davis, J. (1978). Pronominal paradigms in Sliammon. In *International Conference on Salish and Neighboring Languages* (Vol. 13, pp. 208-236).
- Hagège, C. (1978). Lexical suffixes and incorporation in Mainland Comox. In *Forum Linguisticum* (Vol. 3, No. 1, pp. 57-71).
- Harris, H. R. (1981). *A grammatical sketch of Comox* (Doctoral dissertation, University of Kansas).
- Jacobs, P. W. (2011). *Control in Skwxwu7mesh* (Doctoral dissertation, University of British Columbia).
- Kroeber, P. D. (1999). *The Salish language family: Reconstructing syntax*. University of Nebraska Press.
- McCarthy, J., & Prince, A. (1993). Generalized alignment. In G. Booij & J. van Marle (Eds.), *Yearbook of Morphology 1993*, Dordrecht: Kluwer.

- McCarthy, J., & Prince, A. (1995). Faithfulness and reduplicative identity. In J. Beckman, L. Walsh-Dickey, & S. Urbanczyk (eds.) *University of Massachusetts Occasional Papers in Linguistics: Papers in Optimality Theory*, 249–384. Amherst: GLSA.
- Nater, H. F. (1984). The Bella Coola language. *Musée National de l'Homme. Collection Mercure. Division d'Ethnologie. Service Canadien d'Ethnologie. Dossier Ottawa*, (92), 1-151.
- Newman, S. (1979). The Salish object forms. *International Journal of American Linguistics*, 45(4): 299-308.
- Prince, A., & Smolensky, P. (1993). *Optimality theory: Constraint interaction and satisfaction*, ms. University of Massachusetts.
- Urbanczyk, S. (2005). A note on paradigm uniformity and priority of the root. In L. J. Downing, T. A. Hall, & R. Raffelsiefen (Eds.), *Paradigms in Phonological Theory*, Oxford.
- Watanabe, H. (2003). *A morphological description of Sliammon, Mainland Comox Salish: With a sketch of syntax*. Endangered Languages of the Pacific Rim, Faculty of Informatics, Osaka Gakuin University.
- Wiltschko, M. (2003). -exw as third-person object agreement in Halkomelem. *International Journal of American Linguistics*, 69(1), 76-91.