Person-sensitive word order:
Deriving VSO and VOS across Tsimshianic

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This paper presents an analysis of person-conditioned word order alternations in two Tsimshianic languages: Nisg̱a'a (Interior) and Sm'algyax/Coast Tsimshian (Maritime). In both branches of the family, inverse configurations where third persons act on participants require VOS word order, in marked deviation from base VSO. I argue that VOS order in the inverse configurations is inadequately addressed by an object-raising analysis. I instead present an account of V1 order across Tsimshianic as broadly derived via predicate raising. Furthermore, I propose that the special order of inverse configurations is in both branches motivated by person licensing, but by a different licensing condition in each branch.

For Interior Tsimshianic, a morphological licensing condition broadly mandates that participant pronouns surface as verb-adjacent. I demonstrate how the linearization algorithm can accommodate this requirement, and how this condition predicts two additional adjacency effects. For Maritime Tsimshianic, a syntactic licensing condition drives a complex differential-subject-marking agreement pattern. I demonstrate how an analysis of VOS similar to an object incorporation construction can be arrived at by invoking feature conflict between the inverse subject and object, followed by detransitivization. As in other languages, the inverse configuration of arguments is treated as something of a non-canonical voice construction.

Keywords: verb-initial order, inverse, person licensing, linearization, agreement, Tsimshianic

1 Introduction[1]

Across languages, there are a number of ways that grammars display a sensitivity to the the person features on arguments in a clause. This paper focuses on two types of person-conditioned alternations in the Tsimshianic languages of northern British Columbia, Canada, which arise in the context of participant absolutives, particularly participant objects: marked *word orders*, as well as marked *agreement patterns*.

Many earlier accounts of person-conditioned alternations, including those of the Tsimshianic family such as Jelinek's (1986) description of Nisga'a and Mulder's (1994) of Coast Tsimshian/Sm'algyax, reference person hierarchies: semantic and functionally grounded rankings of arguments which encode the primacy of speech act participants over human and animate arguments, and of these over inanimate and indefinite arguments (Silverstein 1976). These hierarchies reflect the typological frequency of special constructions required in the context of nominals higher on the hierarchy, or in inverse contexts where arguments lower on the hierarchy act upon arguments higher in the hierarchy. These hierarchies have been broadly argued to be insufficient for the purposes of formally modeling the synchronic grammar of individual languages (e.g. Béjar 2003; Brown et al. 2004; Oxford 2014); many have turned to specific ways that grammatical computation can derive the effects of the typologically robust hierarchy. A variety of empirical phenomena have been tackled in this fashion: generative syntactic analyses have been forwarded for Person-Case Constraint (PCC) effects (Anagnostopoulou 2003; Béjar and Rezac 2003; Adger and Harbour 2007; Ormazabal and Romero 2007; Rezac 2008), person-based split ergativity (Merchant 2006; Deal 2015b; Coon and Preminger 2017), and cases of direct/inverse, or hierarchically-aligned, agreement (Béjar

and Rezac 2009; Zubizarreta and Pancheva 2017). However, where there are syntactic analyses, there are commonly also counterproposals that the phenomenon can be accounted for after syntax, in the morphological component (e.g. Bonet 1991, 1994 for the PCC; Wiltschko 2006 and Legate 2014 for split-ergativity; Oxford 2017 for direct/inverse morphology).

The focus of this paper is on object movement conditioned by person. Specifically, I examine the 'word order inverse' phenomenon coined by Givón (1994a), in which a marked word order occurs when a participant object is acted upon by a third-person subject (I refer to these 3<1 and 3<2 configurations as 'inverse contexts'). Both branches of the small Tsimshianic language family demonstrate a VSO/VOS alternation on this basis. The Interior Tsimshianic alternation is given in (1) and the Maritime Tsimshianic alternation in (2). For each, the (a) examples illustrate unmarked VSO word order, and the (b) examples provide the marked VOS word order of inverse contexts.

(1) a. Hlimoomis   Ann **'nit**.
         hlimoom-i-t=t   Ann 'nit
         help-TR-3.II=DN Ann 3.III
         'Ann helped <u>her</u>.'   *Nisg̱a'a*; (Jelinek 1986:9)

     b. Hlimoomit **'nii'y** t   Ann.
         hlimoom-i-t 'nii'y t   Ann
         help-TR-3.II 1SG.III DN Ann
         'Ann helped <u>me</u>.'   *Nisg̱a'a*; (Jelinek 1986:9)

(2) a. Nah łimooms   Meelit   **'niit**.
         na   łimoom-t=t   Meeli=t   'niit
         PST help-3.II=DN Mary=DN 3.IIIB
         'Mary helped <u>him</u>.'   *Sm'algyax*; (VN)

     b. Nat   niidz**a'nu**t   Clarence.
         na=t   niits='nu=t   Clarence
         PST=3.I see=1SG.IIIA=DN Clarence
         'Clarence saw <u>me</u>.'   *Sm'algyax*; (Anderson and Ignace 2008:377)

Notably for our purposes, the VSO/VOS alternation may either occur independently of any effects on agreement, as in (1) where suffixal agreement remains consistent, or may occur alongside them, as in (2), where suffixal agreement is replaced by preverbal agreement. That is, it is possible for

the displacement of the object to either interact with the agreement properties of the clause or not.

Though the the displacement of whole words is commonly assumed to be indicative of syntactic movement (phrasal or otherwise), I propose that the word order alternation in Tsimshianic is in fact derived *post-syntactically*. The inverted order of subject and object is neither due to object shift to a position above the subject, nor to syntactic incorporation of the object into the verb, but is instead a consequence of post-syntactic conditions that result in re-linearization of the object to a verb-adjacent position. In addition, I consider person-sensitive agreement alternations in the Maritime Tsimshianic branch and argue that these can be analyzed in a familiar fashion within the syntax. The paper contributes to the literature on post-syntactic displacement, in line with recent proposals that some VOS word orders are the consequence of post-syntactic reordering (Clemens 2014, to appear; Clemens and Coon 2018), by providing novel motivation for some such instances of reordering. Furthermore, the paper argues that there may be both syntactic and morphological sources for various alternations conditioned by person, even within the same language.

I argue that the word-order alternation in the two branches of the Tsimshianic family are synchronically derived in distinct ways, though are triggered by similar properties. I propose that both derivations require that displacement occurs post-syntactically, rather than through syntactic object movement. At its core, this is because in both situations, the displaced participant object fails to attract agreement. Even in the Maritime branch, where a participant object triggers marked agreement as well as marked VOS word order, what arises is a pattern of differential *subject* marking. Contra to the expectation of an account where the object moves above the subject, participant objects are not the preferred targets for agreement.

I argue that one manner in which the grammar of the two branches differs is with respect to the grammatical component responsible for licensing participant arguments. For the Interior branch, I propose that participant arguments are licensed post-syntactically via a morphological *person licensing condition* capable of mandating verb-object adjacency; for in the Maritime branch, I propose that participant arguments are licensed in the syntax, but that a morphological *feature co-occurrence constraint* triggers surface detransitivization in inverse contexts. In either case, the

string order of the object with respect to the subject is adjusted after syntax. In one case the word order adjustment serves to directly 'license' the participant features of the object, while in the other the word order adjustment is an indirect consequence of an independent person licensing phenomenon.

1.1 Background on Tsimshianic

Today, linguists and speakers identify four distinct languages in the small Tsimshianic family of Canada and southern Alaska. The languages are roughly arranged in a dialect continuum that extends down the watershed of the Skeena River (*ts'm+syen* or *ts'im+xsan*, anglicized *Tsimshian*, means 'in the Skeena River'). The major division is between the upriver Interior Tsimshianic (IT) languages to the north and east, and downriver Maritime Tsimshianic (MT) languages to the south and west, listed in (3).

(3)   Tsimshianic family

    Interior (IT)   Gitksan   (north/east)

                    Nisga'a

    Maritime (MT)   Coast Tsimshian (Sm'algyax)

                    Southern Tsimshian (Sgüüxs)   (south/west)

These languages are highly endangered, with the most robust being Gitksan (523 speakers, with youngest in their 50s), followed progressively by Nisga'a (331 speakers), Sm'algyax (58 speakers in Canada), and Sgüüxs (1 speaker), from the most recent BC survey (Dunlop et al. 2018).

The close relationship of the Interior languages Gitksan and Nisga'a is well-established; they are politically and culturally distinct but mutually intelligible (Rigsby 1986). The relation of Sm'algyax and Sgüüxs is less clear, largely due to the scarcity of work on the latter, but the two languages appear to behave identically with respect to both agreement and word order (based on Sgüüxs data in Dunn 1990). The representative languages used in this paper are Nisga'a (Interior) and Sm'algyax (Maritime), which I reference from prior documentation. A few examples from Gitksan

and Sm'algyax are drawn from fieldwork; examples from other sources are cited, and glosses have been edited for some consistency throughout.

In IT, the word order alternation conditioned by person is found mainly in Nisg̲a'a, not Gitksan. In Gitksan, VOS order is accepted but almost never volunteered; speakers seem to have leveled to the VSO order across all contexts (Rigsby 1986). I therefore leave it as understood that my characterization of the pattern as 'Interior' is shorthand to refer to the common precursor pattern likely in use across the Interior some generations ago, but which is now exhibited mainly in Nisg̲a'a. The grammar of the two languages in all other respects I discuss, including agreement, is otherwise extremely similar.

The Tsimshianic languages all exhibit a fundamental split in the agreement patterns of the independent versus dependent order. Independent-order clauses are, broadly, unsubordinated clauses; dependent-order clauses are those which are subordinated under a wide variety of functional elements, including aspect markers, negation, modals, complementizers, and coordinators. Independent clauses have only one agreement marker: a verbal suffix, indexing ergative arguments (4a). In contrast, dependent clauses have two agreement markers: a preverbal clitic, indexing ergatives, and the same verbal suffix, which now switches to indexing absolutives (4b).[2]

(4) a. Iileni'y   'nit.
         hilen-i-**'y**   'nit
         chase-TR-**1SG.II** 3.III
         'I chased him/her.'   Independent order, *Gitksan*

     b. Neediin   iilent.
         nee=dii=**n**   hilen-**t**
         NEG=FOC=**1.I** chase-**3.II**
         'I didn't chase him/her.'   Dependent order, *Gitksan*

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[2]Traditionally, the preverbal paradigm and suffixal paradigm are respectively referred to as *subjective/objective* (Boas 1911), *ergative/absolutive* (Anderson and Ignace 2008), or *Series I/Series II* (Rigsby 1986). The first of these oppositions is misleading, as it would suggest a nominative/accusative distribution which is not attested. The second is more accurate, but makes unclear the fact that the 'objective' or 'absolutive' suffixes can in fact mark ergatives, as they indeed do in (4a). The labels Series I/II, used predominantly in the Interior Tsimshianic literature, are the most neutral, and refer to the linear order in which the two paradigms occur. I use these tags in glosses for reference, but in text simply refer to the paradigms as 'preverbal' (I) or 'suffixal' (II).

In this paper's discussion of word order, I refer not to the placement of agreement markers, but the order of DPs (lexical or pronominal). The Tsimshianic languages exhibit strict pronoun-agreement complementarity, as the case also in Celtic languages: if a pronoun argument is targeted by agreement, it cannot also be spelled out as an overt pronoun, but must be realized as *pro*. Lexical DP arguments co-occur with agreement.[3] The consequence of pronoun-agreement complementarity is that we cannot know the linear position of pronouns that have agreed; we can only discuss the position of non-agreeing pronouns. This limits discussion of word order predominantly to the independent order, where there is usually only one agreement marker, as well as to contexts where agreeing arguments are lexical rather than pronominal (i.e., contexts where the ergative subject is a lexical noun). It is not possible to evaluate word order in configurations between two participants.

1.2   Outline

I begin in section 2 with a broad argument against a syntactic movement (i.e. object shift) analysis of VOS order in the Tsimshianic languages. In section 3 I compare person-conditioned VOS orders in both branches to object incorporation constructions, which leads me to establish a base *v*P-remnant raising structure for Tsimshianic (Massam 2000, 2001). I propose that default VSO, as well as object-incorporation VOS (taken to be pseudo-incorporation), are the results of *v*P-raising. Section 4 outlines the major proposal regarding the two types of person licensing at work in the two Tsimshianic branches: morphological licensing, versus syntactic licensing. Section 5 implements this proposal in an analysis of the Interior (IT) inverse-VOS construction, which contrasts sharply with object incorporation. I demonstrate how a morphological Person-Licensing Condition (M-PLC) accounts for several adjacency effects. Section 6 implements the proposal in an analysis of the Maritime (MT) inverse-VOS construction, which draws on its similarity to object incorporation. The complex MT agreement alternation is attributed to a standard syntactic Person Licensing Condition (Béjar and Rezac 2003), and the word order alternation attributed to a feature conflict

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[3]This is not always surface apparent due to the enclitic property of common and proper noun determiners. I assume, following discussion by Tarpent (1987), Davis and Forbes (2015), Davis (2018), and Forbes (2018), that suffixal agreement is only surface-obscured behind the determiner clitics, but does take place in the syntactic component.

resolved by detransitivization (Bobaljik and Branigan 2006). Section 7 concludes.

2   Against a syntactic object shift analysis

The word order inverse alternation in the Tsimshianic languages involves the use of an atypical pattern whereby a local object pronoun must precede a third person lexical subject. Rather than the usual VSO order, a VOS order is required in inverse contexts. The IT data is repeated in (5).

(5)   a.   Hlimoomis   Ann **'nit**.
              hlimoom-i-t=t   Ann 'nit
              help-TR-3.II=DN Ann 3.III
              'Ann helped her.'   *Nisga'a*; (Jelinek 1986:9)

       b.   Hlimoomit **'nii'y** t   Ann.
              hlimoom-i-t 'nii'y t   Ann
              help-TR-3.II 1SG.III DN Ann
              'Ann helped <u>me</u>.'   *Nisga'a*; (Jelinek 1986:9)
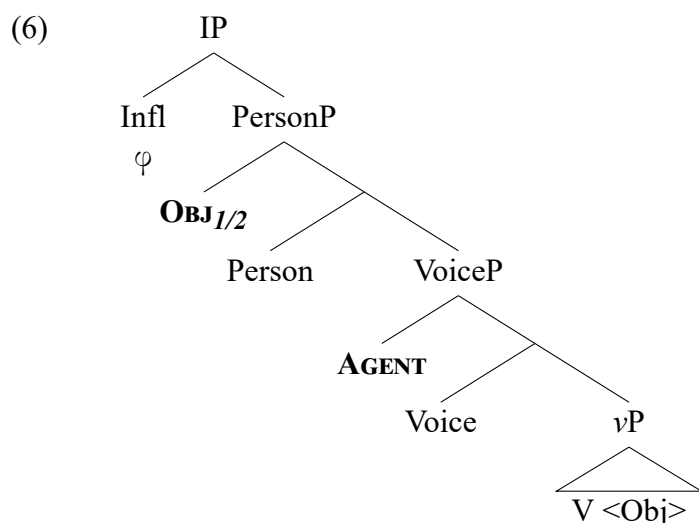
Word order alternations are most commonly treated with syntactic movement, particularly when whole words undergo displacement (rather than the movement of individual morphemes within words, which may receive a variety of analyses; Harley 2013b). For example, analyses of VSO order assuming the underlying constituency of V and O typically require syntactic movement of V. Under a head movement approach to V1 order, V moves to a position above (preceding) the subject. Under a VP-remnant approach (Massam 2000, 2001), the object moves from its base position, and a phrase consisting of the verb and the object's trace move to a position above (preceding) the subject. Under both analyses, the subject remains in its base position, relatively low.

Regardless of which of these approaches is used to achieve VSO order in Tsimshianic (in the next section I propose VP-raising), we might consider that the VOS alternative requires a participant object to obligatorily move above the low subject. I establish here that this hypothesis runs into several problems. First, it has been observed that across languages, syntactic object shift is typically conditioned by properties such as pronominality, definiteness, or specificity (Holmberg

1986; Thráinsson 2001). The word-order inverse alternation, by contrast, refers exclusively to person features, and would therefore stand as a marked outlier in the set of phenomena classically characterized as 'object shift'.

However, the larger issue is with predictions this hypothesis makes regarding the configurationality and agreement pattern of subjects and objects. Were the participant object of an inverse construction raised to a position higher than the subject, it follows that inverse contexts would have a truly *inverted* configurational relation between subject and object, as argued specifically in Bruening's (2001; 2005) analysis of the Algonquian inverse construction. In neither Tsimshianic language is there evidence of such a marked configuration differentiating 'inverse' contexts from 'direct' ones.

Let us suppose that the marked VOS order involves the attraction of a participant argument to a projection above the subject but below agreement in Infl, which ultimately suffixes to the raised verb. We can call this projection PersonP, modeled for a transitive clause in (6). (We might hypothesize that any speech-act participant moves to this position, including subjects, for which movement is string-vacuous.)

(6)

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                IP
               /  \
            Infl    PersonP
             φ      /  \
              OBJ₁/₂
                  /  \
              Person   VoiceP
                       /  \
                  AGENT
                      /  \
                  Voice    vP
                          /──\
                        V <Obj>
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In the configuration in (6), the object has risen to a position from which it c-commands the subject. Note that because this arrangement occurs specifically in inverse (3<1, 3<2) contexts, it cannot be

tested by many standard constituency tests such as binding cannot, since the subject must be third person and the object a participant. However, we might still predict two things: marked patterns for *movement* out of inverse contexts, and marked object *agreement* driven by its new hierarchically superior position.

The first prediction holds in neither IT nor MT. If objects c-command subjects, we might expect object movement from an inverse clause to more closely resemble the properties of subject movement from a regular clause, or vice versa. The morphology of A'-movement for different grammatical roles is quite distinct, making this easy to evaluate: when objects are extracted, the remnant clause is identical to that of an independent clause, with a transitive suffix and ergative agreement suffix on the verb stem. When ergative subjects are extracted, the extraction particle *an/in* appears, and the remnant clause is identical to a dependent clause, with preverbal ergative agreement and an object agreement suffix. In either case, suffixal agreement is with the transitive argument that has not been extracted (Rigsby 1986; Davis and Brown 2011; Forbes 2018). Extraction from a 3<1 or 3<2 inverse clause does not deviate from this pattern: object A'-movement from an inverse context as in (7) looks like typical object A'-movement, and ergative subject A'-movement as in (8) similarly looks just as expected of ergative A'-movement.

(7)   Object extraction from a 3<1 clause

    a.   'Nii'yhl   gibayit.
            'nii'y=hl   giba-i-**t**
            1SG.III=CN wait.for-TR-3.II
            'She was waiting for ME.'   *Nisga'a*; (Tarpent 1987:262)

    b.   'Nüüyu 'waays   Meeli.
            'nüüyu 'waa-i-**t**   =t   Meeli
            1SG.IIIB find-TR-3.II =DN Mary
            'Mary found ME.'   *Sm'algyax*; (VN)

(8)   Ergative extraction from a 3<1 clause

    a.   Naa an=**t**   giba-**n**?
            who AX=3.I wait.for-2SG.II
            'Who (was it who) waited for you?'   *Nisga'a*; (Tarpent 1987:260)

b.   Archie in=**t**   giin-**u**   da   hoon
     Archie AX=3.I give-1SG.II PREP=CN fish
     '(It was) Archie (who) gave me fish.'   *Sm'algyax*; (Sasama 2001:40)

This demonstrates that arguments in inverse contexts show the same behavior as their counterparts in non-inverse contexts. The inverse context itself, despite the change in word order, has done nothing to affect the locality relations of either argument, their extractibility, or the morphological markers used to index the type of movement.

We might also expect an object raised to PersonP to be the most local target for any probing operation higher in the clause, including by the φ-probe on Infl (the verbal suffix). All else being equal, we would expect movement of the object above the subject to feed Infl-agreement with the object, resulting in an alternation in agreement caused by the change in absolute and relative structural position. This prediction clearly does not hold for Interior Tsimshianic (IT); Maritime Tsimshianic (MT) is more difficult to assess due to the increased complexity of its agreement.

In IT, agreement in the independent order ignores the object entirely no matter its position with respect to the subject (recall (5)). Agreement is consistently ergative; this fact itself might actually provide a simple reason why an object in PersonP does not receive agreement even though it is most local to the probe. Rather than seeking the highest argument, independent-order Infl may instead be a case-discriminating probe which can only agree with the transitive subject.[4] However, Forbes (2017) has argued that suffixal agreement in the dependent order does target the highest argument, and there are person-sensitive patterns in this order as well, which I discuss in section 5's detailed discussion of Interior Tsimshianic patterns. The prediction of the PersonP analysis (as well as an analysis using a φ-probe relativized to local person features) should be clear if agreement is with the highest argument: participant objects with a third person subject should always be favored for agreement. In 5.2 I show that this prediction does not hold; agreement with the object is possible over a lexical third person subject, but impossible over a pronominal third plural subject. I argue

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[4]I indeed assume this later in my account of agreement in MT (section 6). The precise means of case discrimination can be accomplished in several ways: the transitive subject might be identified as the argument merged in the specifier of transitive Voice (bearing a unique categorial [Voice$_{TR}$] feature), or it might be identified as ergative through a dependent-case assignment process (Marantz 1991; Baker 2015).

that an account utilizing a post-syntactic verb-participant adjacency condition directly predicts not only person-conditioned VOS word order in the independent order, but this agreement pattern in the dependent order. That is, movement to PersonP is both insufficient and unnecessary to explain this pattern.

A PersonP-style analysis is slightly more successful for agreement in MT. Here, there are three transitive patterns. When the object is third person as in (9a), the ergative agreement suffix targets the transitive subject. When both arguments are local as in (9b), the typically-ergative suffix now targets the participant object. In addition, preverbal agreement appears, targeting the subject. Finally, in an inverse context such as (9c), there is no agreement suffix at all; preverbal agreement still targets the third-person subject, but the participant object is simply adjacent to the verb in marked VOS order.

(9)   a.   Nah ɬimoomut   ’niit.
              na   ɬimoom-i-**u**   =t   ’niit
              PST help-TR-1SG.II =DN 3.III
              ‘I helped him/her.’   *Sm’algyax*; (Davis 2018:496)

       b.   Ndm   ma̲ngad**n**.
              n=dm   ma̲n-gad-**n**
              1.I=PROSP up-take-2SG.II
              ‘I will take you up.’   *Sm’algyax*; (Mulder 1994:167)

       c.   Nat   niidza’nut   Clarence.
              na=**t**   niidz   =a’nu   =t   Clarence
              PST=3.I see   =1SG.IIIA =DN Clarence
              ‘Clarence saw me.’   *Sm’algyax*; (Anderson and Ignace 2008:377)

A PersonP analysis of object movement would again predict that the object should become the preferred target of agreement from a higher head. In MT, it seems that the prediction holds true in contexts like (9b) where both arguments are local: in contrast to IT, the agreement suffix abandons its traditional ergative alignment and agrees with the participant object (resembling the dependent order pattern). However, in a context like (9c) where *only* the object is local, the object moves to a position before the subject yet receives no agreement at all, from either possible source.

While the PersonP analysis could be used to model some of this behavior, it is ultimately insufficient; some additional tools are required. It is possible that cases like (9c) involve covert object agreement, obscured due to some later process; however, PersonP and syntactic object movement are not the only possible culprits which would generate such a pattern. They are not necessary in the MT case, and simply inadequate to handle the IT case. In short, the PersonP analysis does not naturally lend itself to modeling the complementarily that both patterns demonstrate between object movement and object agreement In the absence of any other substantiating evidence for a drastically different configurational relationship between subject and object in inverse contexts, I suggest that object movement to a designated PersonP even in MT is simply superfluous, and not something that would be naturally posited by a learner.

In sum, the fact that both branches of Tsimshianic exhibit an identical word-order alternation despite their quite different agreement patterns is a strong indication that the word-order alternation should not be generally attributed to this this type of movement, which would naturally feed agreement alternations.

3 Incorporation and VP-movement

In this section we consider another possibility: whether the VOS order of participant objects is an indication that these objects have undergone incorporation into the verbal complex. The goal of the section is twofold: (i) to demonstrate that movement of a participant object resembles incorporation only in the Maritime branch, but *not* the Interior; and (ii) to argue in favor of a VP (or *v*P) remnant-raising approach to VSO order and object incorporation across both branches (cf. Massam 2000, 2001).

3.1 Insight from object incorporation

As previously established, the unmarked word order across Tsimshianic is VSO. There are two situations in which VOS word order is used instead: inverse contexts, where a participant object

13

outranks a third person subject on the person hierarchy, and incorporation contexts. We will here delve more deeply into the morphology of both of these constructions and determine what differentiates them, versus how they resemble each other.

We first consider the constructions in IT, with the inverse alternation illustrated in (10) and the incorporation alternation in (11). Object incorporation in IT is typically used with indefinite objects in common phrases about food preparation or household tasks, and is not fully productive; incorporation does not express object indefiniteness as a broad strategy (Rigsby 1986; Tarpent 1987).

(10) *Direct 3<3 (VSO) vs. Inverse 3<1 (VOS)*

    a.   Hlimoomis   Ann **'nit**.
           hlimoom-i-t =t   Ann 'nit
           help-TR-3.II =DN Ann 3.III
           'Ann helped her.'

    b.   Hlimoomit **'nii'y** t   Ann.
           hlimoom-i-t 'nii'y t   Ann
           help-TR-3.II 1SG.III DN Ann
           'Ann helped me.'   *Nisg̱a'a*; (Jelinek 1986:9)

(11) *Standard (VSO) vs. Incorporated (VOS)*

    a.   K̲'ohli'yhl   **hoon**.
           k̲'ohl-i-'y=hl   hoon
           gut-TR-1SG.II=CN fish
           'I gutted a/the fish.'

    b.   K̲'ohl**hoon** 'nii'y.
           k̲'ohl-hoon 'nii'y
           gut-fish   1SG.III
           'I gutted fish.'   *Nisg̱a'a*; (Tarpent 1987:791-2)

For the inverse alternation, both clauses in (10) are demonstrably transitive despite the difference in word order. A transitive marker is present on the verb stem, immediately preceding the ergative agreement suffix -*t* marking the third person subject. This is not the case for the incorporation alternation. The standard construction in (11a) is also transitive; it has all expected transitive markers,

and the ergative subject is marked by the ergative agreement suffix -'y. (The pronoun is in complementary distribution with agreement; it cannot be demonstrated whether the subject precedes or follows the object.) However, the incorporation construction in (12b) is clearly intransitive. Both the transitive morpheme and ergative agreement are absent. The object *hoon* 'fish' is directly adjacent to the verb, and the absolutive pronoun *'nii'y* '1SG' follows it, marking the subject.

Syntactically and morphologically, the VOS constructions in (10b) and (11b) are then quite different. Only in the inverse construction in (10b) may a VOS object contribute to the transitivity of the overall clause. However, the differences do not end with transitivity: a basic morphological distinction can be drawn between the verb-adjacent object of an inverse clause and incorporated objects. This is in the position of inflectional suffixes on the verbal complex.

The incorporation clauses we have previously seen lack an agreement suffix because they are in the independent order. However, in the dependent order, intransitive clauses do have agreement suffixes (because the function of the suffix switches to mark absolutives), as demonstrated in (12). Here, suffixal agreement follows the entire verb-object complex of an incorporation construction.

(12)   Getxwhl loo'y   ahl   dim   t'aahl miyehli'y.
        getxw=hl loo-'y   a=hl   dim   t'aahl-miyehl-**'y**
        hard=CN OBL-1SG.II PREP=CN PROSP pick-blueberries-1SG.II
        'It's hard for me to pick blueberries.'   *Gitksan*; (VG)

This is in stark contrast to inverse VOS, where the transitive vowel and agreement suffix intervene between the verb and participant object, as in (13).

(13)   Hlimoomit 'nii'y t   Ann.
        hlimoom-**i-t** 'nii'y t   Ann
        help-TR-3.II 1SG.III DN Ann
        'Ann helped me.'   *Nisga'a*; (Jelinek 1986:9)

We can see from this that inverse-VOS differs from incorporation-VOS not only with regard to transitivity, but also with regard to the linear relationship of agreement and object. In the IT inverse construction, the participant object is not 'adjacent' to the verb in the same way as in incorporation;

agreement necessarily intervenes.

Now we turn to VOS patterns in the Maritime branch. The MT inverse alternation is given in (14), and the incorporation alternation in (15), both differing somewhat from the IT pattern.

(14)   *Direct 3<3 (VSO) vs. Inverse 3<1 (VOS)*

    a.   Nah łimooms   Meelit   **'niit**.
        na łimoom-i-t=t   Meeli=t 'niit
        PST help-TR-3.II=DN Mary=DN 3.IIIB
        'Mary helped him.'   *Sm'algyax*; (VN)

    b.   Nat   niidza**'nu**t   Clarence.
        na=**t**   niits   ='nu   =t   Clarence
        PST=3.I see   =1SG.IIIA =DN Clarence
        'Clarence saw me.'   *Sm'algyax*; (Anderson and Ignace 2008:377)

(15)   *Standard (VSO) vs. Incorporated (VOS)*

    a.   Nah yooyu   hoon.
        na   yoo-i-**u**   =a hoon
        PST roast-TR-1SG.II =CN fish
        'I barbecued fish.'

    b.   Nan   yoom**hoo**'nu.
        na=**n** yoo-m-hoon='nu
        PST=1.I roast-ATTR-fish=1SG.IIIA
        'I barbecued fish.'   *Sm'algyax*; (Sasama 2001:188)

The VSO clauses in each (a) example directly correspond to those of IT, with agreement suffixes on the verb marking the ergative subject.[5] However, neither the inverse VOS clause in (14b) nor the incorporation VOS clause in (15b) have this suffix; neither has the properties of a typical transitive clause. Instead, both involve the movement of an argument to a verb-adjacent position. For the inverse clause in (14b), this is the participant object pronoun; for the incorporation clause in (15b), this is the object noun. The two differ in the presence of the attributive connective; one links the

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[5] Though the independent order transitive vowel has not been discussed as such in documentation on Sm'algyax, I assume it is present, with the same distribution as in IT, based on discussion by Sasama (2001:fn95) and recent work by Colin Brown (p.c.). I reconstruct it in the second line of the Sm'algyax examples, assuming that it is realized as either a vowel (inter-consonantally) or a glide (post-vocalically). The transitive vowel is deleted by an adjacent sonorant, supported by independent processes of vowel epenthesis and deletion.

verb and incorporated object, but no connective is needed to link the verb and inverse object. The remaining argument in the clause is realized following the verb-adjacent object, either as a full noun or absolutive pronoun, and is simultaneously indexed with *preverbal* agreement.

While preverbal agreement in IT appears exclusively in dependent clauses, in MT it also appears in the two independent clause contexts above: marking the subject of inverse VOS clauses, and marking participant subjects of intransitives, as illustrated in (16).[6]

(16)   Nam   siipginsm.
        na=**m** siipk   =’nsm
        PST=2.I sick   =2PL.IIIA
        ‘You (pl) were sick.’   *Sm’algyax*; (Sasama 2001:78)

In MT, then, both types of VOS clause seem to pattern like intransitives in terms of the absence of suffixal agreement and transitive vowel, and availability of preverbal agreement. Given the lack of suffixal agreement in either context, there is also no basis to further distinguish ‘verb-adjacency’ from ‘incorporation’, as there was in IT. The strong inflectional and morphological resemblance of inverse clauses to incorporated intransitives in MT thus presents the possibility that both types of VOS clause could be derived by common operations, an option not tenable for IT.

In the remainder of this section, I propose a base structure for both branches of Tsimshianic that derives standard VSO sentences and VOS incorporation constructions. I then move in section 4 to my proposal concerning the principle driving the alternations seen in person-conditioned VOS constructions, and lay out the precise structures for each branch in sections 5 and 6.

3.2   A *v*P-raising analysis of standard and incorporated clauses

I argue that object incorporation in Tsimshianic is best analyzed as *pseudo*-noun-incorporation (PNI), rather than true head-incorporation. This is because, first, assuming head-movement by left-adjunction, Baker’s (1988) head-movement approach to incorporation predicts that incorporated objects should appear before the verbal root, but here they are ordered after the verb root as

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[6]I provide further details on agreement in MT intransitives in section 6.

in PNI analyses. Second, it is possible for suffixal material (including the antipassive marker) to intervene between the verbal root and the incorporated object, as in (17). The intervention of this material between V and O makes it unlikely that O head-adjoins directly to its selecting head, V.

(17) Needii   gubasxum   smaxt.
      nee=dii   gup-asxw-m   -smax-**t**
      NEG=FOC   eat-ANTIP-ATTR   -meat-3.II
      'He never eats meat.'   *Gitksan*; (BS)

I will here consider two possible approaches to PNI: (i) Massam's (2000; 2001) VP-remnant raising analysis, and (ii) Clemens's (2014; to appear) prosodic O-reordering analysis (see also Clemens and Coon 2018). While the two are difficult to untangle in lieu of any conclusive research on Tsimshianic intonation patterns,[7] I ultimately suggest that a *v*P-raising approach better accounts for the position of agreement morphemes and additional material in the clausal spine, including adverbs.

Under Massam's VP-raising analysis, a verbal phrase is raised to the specifier of a higher functional projection in the clause, typically T/Infl, to satisfy the EPP. In a typical clause, the DP object evacuates the verbal constituent before this movement occurs. The object moves to a slightly higher projection still below the subject, generally for the purpose of licensing. This results in a VSO order as in (18a). The bare NP object of an incorporation construction remains in situ within this verbal constituent, and is pied-piped to spec-IP, resulting in a VOS order as in (18b).

(18)   a. $_{IP}[_{VP}[\text{V} ... t_O] \text{Infl} ... \text{S} ... \text{O} ... t_{VP}]$

        b. $_{IP}[_{VP}[\text{V} ... \text{O}] \text{Infl} ... \text{S} ... t_{VP}]$

Under Clemens's prosodic reordering analysis, the verb moves above the subject through successive head movement, and the subject and object arguments remain in their base positions, resulting in a base VSO order.[8] After syntax, a prosodic constraint (ARGUMENT-φ) applies to the

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[7]The prevalence of both obstruents and glottalization in the Tsimshianic phoneme inventory makes analysis of pitch difficult; there is yet only preliminary work on rhythm and intonation in Gitksan, such as Satterwhite (2012).

[8]Previous work on Interior Tsimshianic adopts the head-movement approach to VSO (Belvin 1985; Hunt 1993). These

phase, demanding that an object be pronounced adjacent to its selecting head, the verb. In contexts with DP objects, the object is assessed as part of its own phase; the prosodic constraint is unable to match it to its selecting head, so VSO order remains intact at PF, as in (19a). In noun incorporation contexts, the object is a non-phasal bare NP, and its spellout is assessed as part of the same phase as the verb. The prosodic constraint applies, and O is reordered to a position adjacent to the verb, resulting in VOS order as in (19b).

(19) $_{IP}$[V-v-Infl $_{vP}$[S t_v $_{VP}$[t_V O]]]

    a.   **PF:**   V-v-Infl ... S ... O$_{DP}$

    b.   **PF:**   V-v-Infl **O$_{NP}$** ... S

The two approaches to obtaining the basic VSO structure make different predictions with respect to the position of low verbal modifiers. Under a head-movement approach, the only thing that moves is V and the functional heads it attaches to as it climbs the clausal spine. Non-head material—that is, the phrasal arguments S and O, but also verbal modifiers—would be predicted to remain in situ, and would therefore be predicted to surface post-verbally, as in (20a). By contrast, under a remnant raising analysis, low modifiers are predicted to be pied-piped along with the V head, within the raised clausal constituent, and therefore may surface pre-verbally, as in (20b).

(20)   a.   V-MOVEMENT: $_{IP}$[V-v-Infl $_{vP}$[S t_v $_{VP}$[**adv** t_V O]]]

    b.   VP-MOVEMENT: $_{IP}$[$_{VP}$[**adv** V ... t_O] Infl ... S ... O ... t_{VP}]

The adverbial material that is predicted to raise along with V depends entirely on the size of the verbal constituent that is moved above the subject. That is, if only VP raises, vP-level modifiers would still be left in postverbal position; if a larger constituent like vP or VoiceP raises, there might be very little adverbial material remaining post-verbally.

It is the latter which is the case in the Tsimshianic languages. Essentially all morphemes in-

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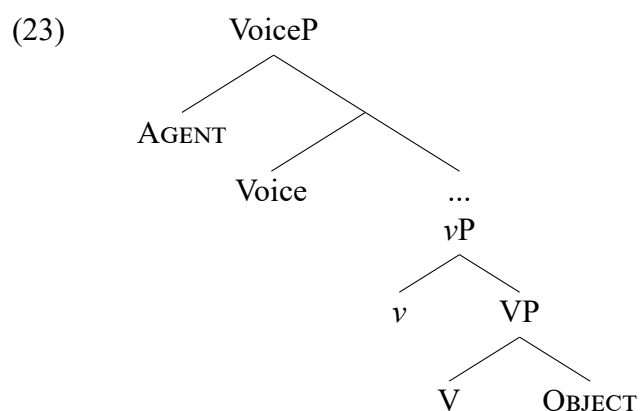analyses do not discuss inverse-VOS, and predate Massam's VP-raising proposal.

volved in the composition of the predicate, excluding the arguments themselves, appear preceding the verbal stem. This includes low manner-, position-, and path-denoting adverbials like *hagwil* 'slowly', *luu* 'in', or *suu~suwi* 'away, off'. Some examples are provided in (21) and (22). However, it also includes more complex expressions involved in the composition of argument structure, which in other languages are realized with biclausal control structures. These morphemes, including the productive causative *gun* 'make/tell (someone) to' or the expression *sik'ihl~si'ix* 'try to', produce monoclausal structures, illustrated in (22).

(21)   T'ek'il   suwi k'eekwhl   x̱pts'ewit   hlgu gyet.
           t'ek'il   **suwi** k'eekw   =hl x̱pts'exw-it hlgu gyet
           curled.up away flee   =CN afraid-SX   little man
           'The frightened little guy took off right away.'   *Gitksan*; (RJ)

(22)   Iit   si'ix luu yuxwdiit.
           ii=t   **si'ix luu** yuxw-diit
           CCNJ=3.I try   in   follow-3PL.II
           'And they tried to follow them (the laws).'   *Gitksan*; (BS)

In the Tsimshianic literature, these elements are traditionally called proclitic particles (Boas 1911), or preverbs (Rigsby 1986). They seem to be prosodically phrased with the verb, but are distinct prosodic words; many are polysyllabic and bear their own stress. These elements are sandwiched between preverbal TAM- and C-related morphemes, on one side, and the verb stem on the other. Notably, certain preverbs can be clearly distinguished from other, higher preverbal TAM- and C-related heads and modifiers (e.g. prospective aspect *dim*, negation *needii*, or adverbs like *balgi* 'suddenly') by the position of preverbal agreement (Tarpent 1987). Preverbal agreement flexibly pro- or en-cliticizes anywhere amongst the TAM- and C-morphemes, but must appear outside the left edge of the preverb cluster.

    I propose that preverbs and the verbal stem comprise a verbal constituent which raises over the subject, in line with Massam's (2000; 2001) remnant-raising approach. However, unlike for Massam, where only the VP raises, I propose it is a potentially quite complex verbal constituent containing a multitude of possible adverbs.
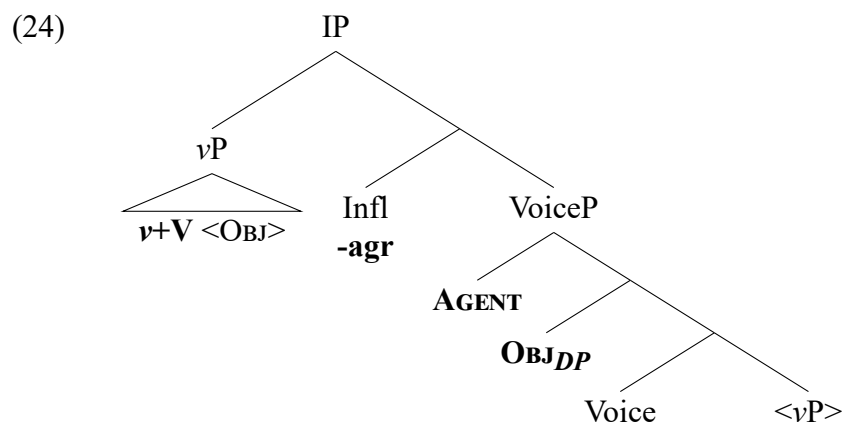
The derivation is structured as follows. An object is base-generated as complement of the root, V. The predicate is constructed within what I simply refer to as *v*P, which I assume may potentially iterate. This projection hosts path and manner adverbials, as well as morphemes which introduce additional events, like the causative *gun* or try-expression *sik'ihl~si'ix* (though these morphemes await further investigation). The external argument is merged in the specifier of VoiceP, a non-iterable projection at the top of the thematic domain (Hale and Keyser 1993a; Kratzer 1996; Harley 2013a). This produces an initial predicate structure as in (23).
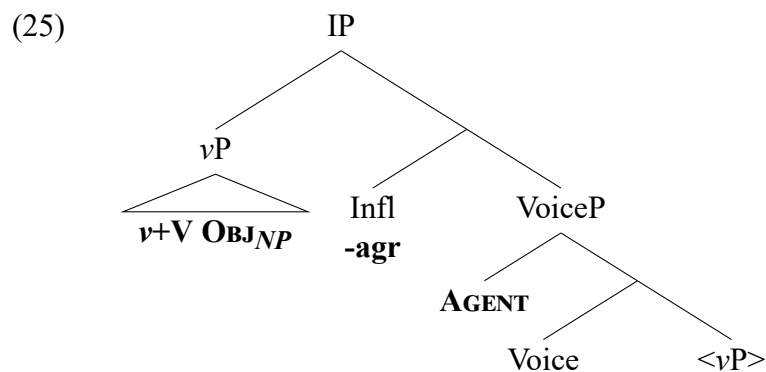
(23)

```
              VoiceP
             /      \
        AGENT        \
             Voice    \
                      ...
                       vP
                      /  \
                     v    VP
                         /  \
                        V    OBJECT
```

An object DP, which receives no accusative licensing within *v*P, may raise to a second specifier position in VoiceP, tucking in below the subject. Above VoiceP is Infl, the locus of suffixal agreement. From this position, Infl is able to see either the subject or a raised object and agree with either as necessary (for the ergative argument in the independent order, or the highest argument in the dependent order, as discussed by Forbes 2017, 2018). Finally, *v*P moves to the specifier of IP, and Infl later fuses to the final element of the *v*P, through Morphological Merger (Marantz 1984) or Merger Under Adjacency (Bobaljik 1994). Additional TAM and C-related material appears in further projections above Infl, preceding the *v*P, which derives an AuxVSO pattern in all clause types as desired.

A derivation for the typical transitive sentence is illustrated in (24). With the DP object having evacuated *v*P, agreement in Infl suffixes directly to the verb stem in the raised *v*P, and a VSO order

results. The subject and object are equidistant.[9]

(24)

```
                        IP
              _____
             /                \
           vP               _____
        _____         /        \
       /          \      Infl      VoiceP
   v+V <OBJ>       -agr         _____
                              /       \
                          AGENT    _____
                              OBJ_DP /    \
                                  Voice   <vP>
```

An object-incorporation construction is illustrated in (25). The bare NP object here remains inside the *v*P; it is pied-piped to the specifier of IP along with the verb and preverbal elements, resulting in VOS order. Agreement in Infl later fuses to the object.

(25)

```
                        IP
              _____
             /                \
           vP               _____
        _____         /        \
       /          \      Infl      VoiceP
   v+V OBJ_NP      -agr         _____
                              /       \
                          AGENT    _____
                                  Voice   <vP>
```

This structure successfully derives the order of not only V, S, and O, but also complex predicates, and the agreement suffix. I adopt this *v*P-raising clause structure, and the position of suffixal agree-

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[9]I suggest equidistance of the subject and object DP is preferable to proposing an additional object- or absolutive-licensing projection or landing site, as in Massam's (2000) original proposal. The reduced amount of syntactic material between Infl and the trace of *v*P reflects the fact that there is simply no morpheme which can legally intervene between the verb+agreement and subject DP (aside from second-position clitics), or between the subject and object DPs. Precious little evidence has been uncovered motivating a c-command relationship between S and O; for example, binding in Gitksan has been proposed to reference linear order rather than hierarchical relations (see discussion in Hunt 1993:103-110; Forbes 2019). In the next section, I utilize the equidistance of the two arguments to derive the person-based word order alternation in Interior Tsimshianic.

ment in Infl, essentially 'encliticizing' to the *v*P, for both Interior and Maritime Tsimshianic.

The position of the agreement suffix after the object in the incorporation construction is best accommodated under the syntactic remnant-raising approach, as opposed to Clemens's approach of V-head movement followed by prosodically-motivated reordering of O. Under a prosodic account of VOS order, it is more difficult to understand why O should move to a position inside what is typically a single prosodic word: V and the agreement suffix. Under the head-movement approach to VSO order that underlies Clemens's (2014; to appear) analysis, the verb moves through a series of functional heads until it reaches a position above the subject. The agreement suffix would most naturally be analyzed as one of these functional heads – the highest, attaching to the rightmost edge of the verb under the Mirror Principle (Baker 1985). If this were the case, the object would then have to be prosodically reordered to a position *inside a complex head*, something that should be dispreferred under any theory mapping syntax and prosody. An approach to linear reordering based on prosody more naturally accounts for a pattern in which O moves to a position *after* a complete prosodic word (i.e. after the agreement suffix). This is precisely what we have seen in inverse VOS constructions in the Interior.

4   Proposal: Two components for person licensing

Under the analysis for clause structure I have presented above, the verb phrase raises above the subject, either with or without the object, to derive either the VOS order of an incorporation construction or the VSO order of a basic transitive. The next step is to determine how the VOS order of a inverse construction is derived; how S and O come to appear in a different order based on their relative person features. We have seen that in IT, the O in an inverse VOS construction is ordered differently relative to the verbal agreement suffix than it is in incorporation. The VP-raising analysis of O-incorporation consequently cannot be adopted wholesale to achieve VOS order in the inverse construction. However, in MT, an analysis of the inverse VOS construction could be accomodated under the VP-raising analysis I have proposed for incorporation. However, the agreement

properties of inverse constructions, which differ from those of traditional transitives, have yet to be explained. In this section, I provide a proposal regarding the motivation for the alternations seen in inverse constructions in each branch of Tsimshianic, and why they should subtly differ from one another, despite sharing the common outcome of a marked VOS order.

The common analysis of person-based alternations—alternations involving first and second person arguments, which I here assume can be uniquely identified as bearing a feature [PART]—is a licensing story. For example, Baker (2008) proposes special binding conditions on participant arguments, while Béjar and Rezac (2003) propose the Person Licensing Condition in (26), which demands that [PART] features take part in agreement in the syntactic component.

(26)   *Person Licensing Condition (original):*   (Béjar and Rezac 2003)
        Interpretable 1st/2nd person features must be licensed by entering into an Agree relation with an appropriate functional category.

In (26), 'licensing' is defined in a syntactic way: a feature [PART] must come into a feature-valuation relation with a functional head. This does not seem to bear any obvious relevance to the word-order alternation in either branch, but particularly IT, where the participant object changes its linear position but agreement is totally unaffected. Rather, in IT, a more appropriate empirical generalization seems to be that participant arguments either overtly agree, or else surface as pronouns immediately following the verb word, even if this necessitates a marked VOS order (as is the case for inverse constructions). That is, if [PART] features in IT require licensing, then this licensing requirement seems to be satisfied through either *agreement* or *string-adjacency* with the verb. Licensing by adjacency has previously been discussed with respect to (pseudo-)incorporation constructions, antipassive object constructions, and some subject constructions in Austronesian languages (Baker 2014; Levin 2015; Erlewine et al. 2018; Clemens 2014, to appear).

To model the intrinsically person-sensitive pattern of IT, I suggest that restrictions on [PART] features can be restricted both syntactically (as in (26)) *and* post-syntactically. I formalize this with two versions of the Person Licensing Condition (PLC) housed in two different grammatical

components. These are a syntactic PLC (27a), and a post-syntactic, or 'morphological' PLC (27b).

(27)   *Person Licensing Conditions (revised)*:

    a.   **S-PLC:** The feature [PART] must be licensed by entering an Agree relation with an appropriate functional category.

    b.   **M-PLC:** The feature [PART] feature must be licensed through realization as overt m-agreement on an appropriate functional category, or else through realization in a position adjacent to that category.

Unlike the S-PLC, which places conditions on the [PART] feature in terms of its participation in an Agree operation with a particular functional head (say, Infl), the M-PLC places conditions on the [PART] feature in terms of its morphological realization with respect to that head. The M-PLC does not require that a participant argument engage in Agree in the syntax. It can be satisfied if the argument *does* agree, under the condition that the [PART] feature is spelled out as part of a feature bundle including the licensing head. It can also be satisfied if the argument *does not* Agree, so long as the [PART] feature is spelled out adjacent to the licensing head (even if that head Agrees with something else). Both of these options reference the final spellout of the [PART] feature in relation to a licensing head, and can be evaluated in the post-syntactic component.

The satisfaction conditions of both of the two proposed PLCs are a consequence of the grammatical component in which they are encoded. Assuming a late-insertion model of morphology (e.g. Distributed Morphology; Halle and Marantz 1993), the syntax is comprised only of feature bundles; there is no way of telling which bundles will receive overt surface realization at a later point in the grammar. A licensing condition referencing the syntactic component can only evaluate the application of operations taking place in the narrow syntax, such as Agree. A condition on licensing referencing the post-syntactic component, by contrast, is blind to Agree itself, and can only evaluate how valued features in the final syntactic representation map to PF properties such as overtness and linear order. Overt morphological agreement with a participant argument can be

taken as evidence that both of these conditions have been satisfied. However, the S-PLC does not require that valuation by Agree ultimately result in overt agreement. The valuation relation that [PART] features engage in may subsequently be subject to some kind of post-syntactic deletion or impoverishment. Conversely, the M-PLC does not mandate that participant features always be mapped to overt agreement. Non-agreeing participant pronouns may surface in a particular string position instead, which may differ across languages. For Interior Tsimshianic, I suggest that this is the immediate post-verbal position—or more specifically, the position following the agreement suffix. Verbal adjacency is one way of *morphologically licensing* a participant.

Similarly, violations of either condition will mandate distinct repairs. Violations of the syntactic condition will require some repair operation that resolves the abstract licensing problem, such as insertion of an additional licenser (leveraged for MT in section 6.2). Violations of the morphological condition are assessed after syntax, at a point when additional licensers cannot be inserted. Consequently, rather than adding additional instances of agreement, a feasible repair is to re-linearize the offending participant features to an appropriate verb-adjacent position.

I argue that the IT system, which exclusively involves word order alternations, is captured by the proposed M-PLC, which places conditions on the overt realization and linear order of participant nominals. An implementation of the condition in action is provided in the next section, along with several additional effects it is able to derive. The MT system, which involves both word order alternations and agreement alternations, is largely captured by the familiar S-PLC, which places conditions only on abstract nominal licensing. I discuss this in section 6.

5   Interior: M-licensing and person-sensitive linearization

This section provides an implementation for morphological licensing in IT (specifically, Nisg̲a'a), consistent with the M-PLC. I first discuss the implementation of the condition in independent clauses where the inverse word-order alternation applies, then move to some additional person-based word order effects that it predicts in dependent clauses.

5.1 Implementation in independent clauses

I here consider how participant arguments in each grammatical role (A, S, O) satisfy the M-PLC in independent clauses. There are two roles for which the condition is satisfied without need for reference to a repair operation: that of ergative subject, and intransitive subject. Recall that in IT, ergative arguments always engage in agreement with the agreement suffix on Infl; a participant in this role therefore always satisfies the M-PLC through morphological agreement, as shown in (28).[10] Intransitive subjects do not receive agreement, but are always the only argument in the clause, and therefore are always immediately adjacent to the verb, as shown in (29). An intransitive participant argument therefore always satisfies the M-PLC through linear adjacency to the verb and (null) Infl.

(28) Dim giigwi'yhl   k'udats'i'y.
      dim giikw-i-**'y**   =hl k'udats'-'y
      PROSP buy-TR-1SG.II =CN coat-1SG.II
      'I am going to buy my coat.'   *Nisga'a*; (Tarpent 1987:239)

(29) X̱bits'axw 'nii'y ahl   as'us.
      x̱bits'axw **'nii'y** a=hl   RED~us
      afraid   1SG.III PREP=CN PL~dog
      'I am/was afraid of the dogs.'   *Nisga'a*; (Tarpent 1987:249)

Participant *objects*, however, do not receive morphological agreement as a matter of course. Their capacity to satisfy this condition is dependent on their adjacency to the verb, and consequently on the overtness of the subject argument. If the transitive subject is pronominal, it receives agreement, and due to pronoun-agreement complementarity is realized as *pro*. The object is consequently adjacent to the verb, as in (30), and the M-PLC is satisfied for both arguments.[11]

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[10] For suggestions on how ergative agreement comes to be realized on or in association with Infl, see Bobaljik and Branigan (2006) or Deal (2010). See Forbes (2018) for a specific proposal for ergative agreement on Infl in Tsimshianic, wherein Infl agrees with features on an ergative *v*/Voice head.

[11] This is the pattern used with clauses involving two participant arguments; the ergative pronoun agrees and is realized as *pro*, satisfying the M-PLC, and the object is adjacent, satisfying the M-PLC an alternative way.

(30)   Ts'ilaywit   'nuu'm.
       Ts'ilayxw-i-t **'nuu'm**
       visit-TR-3.II   1PL.III
       'S/he came to visit us.'   *Nisga'a*; (Tarpent 1987:339)

However, if the transitive subject is overt, a typical VSO order would leave the object in a non-verb-adjacent position. Some repair or alternate derivation is required for this type of sentence to satisfy the M-PLC.

I here derive the inverse VOS order through conditions impacting the linearization algorithm. Recall from the proposed *v*P-raising clause structure from section 3.2 that the subject and object of a basic transitive are equidistant specifiers of Voice; the the external argument (subject) is merged there, while the internal argument (object) is moved there. Assuming Kayne's (1994) Linear Correspondence Axiom (LCA), elements would be linearized by virtue of their c-command relations; I suggest that, due to equidistance, the linearization algorithm at PF is unable to straightforwardly determine a relative linear order for S and O. The LCA maximally provides the incomplete string representation in (31).

(31)   *v*P-Infl { Subject, Object }

While the LCA is the strongest principle governing string-linearization, equidistance between two elements can be mapped onto a linear representation through additional, lesser-ranked linearization conditions. The first of these is a principle deriving Richards's (1997) 'tucking in' order for multiple specifiers, which would linearize the two phrases based on the relative hierarchical order of their base positions. This would generate a VSO order, and could apply in situations where there is either no [PART] feature or else [PART] has been licensed through agreement. This produces the VSO order of typical sentences containing two third-person DPs, such as (32).

(32)   Hlimoomis   Mary   t   Peter.
       hlimoom-i-t$_V$ [=t   Mary]$_S$ [t   Peter]$_O$
       help-TR-3.II   =DN Mary   DN Peter
       'Mary helped Peter.'   *Nisga'a*; (Tarpent 1987:235)

A second pressure affecting linearization is the proposed M-PLC, which demands that a [PART] feature be spelled out either in the same feature bundle as a licensing categorial feature, or adjacent to one. This principle is only applicable to derivations containing participant arguments, and specifically to derivations with participant objects in need of morphological licensing, which do not agree. This condition would preferentially produce a string order where the non-agreeing object is adjacent to the verb: VOS. This is found in the case of inverse sentences such as (33).

(33)　　Ts'ilaywit　　'nuu'm　　t　　Mary.
　　　　ts'ilayxw-i-t$_V$ ['nuu'm]$_O$ [t　Mary]$_S$
　　　　visit-TR-3.II　　1PL.III　　DN Mary
　　　　'Mary came to visit us.'　　　　　　　　　　　　　　　　*Nisga'a*; (Tarpent 1987:339)

Between these two linearization pressures, both the attested VSO and VOS orders can be derived. Where applicable, in the context of a non-agreeing participant, a VOS order is always generated; otherwise, the VSO order is used. The principles guiding the linearization algorithm can therefore be ranked (following e.g. López 2009) as in (34).

(34)　　Linear Correspondence « Morphological Person Licensing « Tucking In

Equidistance between subject and object obviates the most basic linearization principle, allowing for variation in possible orders based on the application of lesser-ranked principles.

5.2　Extension to dependent order alternations

The M-PLC, as a broad prosodic requirement impacting linearization, is capable of affecting word order in dependent clauses as well. I here point to additional patterns in IT, including patterns of optionality, that can be directly attributed to licensing conditions imposed by the M-PLC. Some data consists of primary fieldwork on mutually-intelligible Gitksan, which no longer exhibits the VSO/VOS alternation in inverse contexts, as discussed in section 1.1; for these, cases of optionality

seem to arise, shedding light on the erosion of the M-PLC.[12]

Unlike independent-order clauses, which only have suffixal agreement, dependent-order clauses have both pre- and post-verbal agreement. This means more arguments typically receive agreement; fewer are predicted to require licensing by adjacency. Ergative subjects always receive preverbal agreement; however, different types of transitive subject condition different behaviors for suffixal agreement, which may or may not target the *object*. If the transitive subject is a simple pronoun (a participant, or third person singular or inanimate), suffixal agreement ignores it and instead tracks the object. Each transitive argument receives a different type of agreement; as in (35), preverbal agreement tracks A and suffixal agreement tracks O.

(35) Yukw mahlimoomi'y.
      yukw ma=hlimoom-'y
      IPFV 2.I=help-1SG.II
      'You are helping me.'   *Nisga'a* (Belvin 1990:19)

This pattern presents no problems to either a syntactic or post-syntactic approach to person licensing. I assume following Forbes (2017) that Infl targets the object regardless of the relative height of the two arguments because the ergative argument has already agreed, and isn't a viable target. Under a morphological licensing analysis, both participants receive m-agreement, satisfying the M-PLC.

If the transitive subject is a DP, the Nisga'a literature reports that the agreement pattern is the same: suffixal agreement is with the object, as in (36). Gitksan, however, exhibits free variation: suffixal agreement is with either the object (37a) or the subject (37b). In the latter case, the object is realized as a pronoun following the subject, in VSO order.

(36) ...wilt   hlimoomi'yt   Mary.
      ...wil=t   hlimoom-'y =t   Mary
      ...COMP=3.I help-1SG.II =DN Mary
      '...that Mary helped me.'   *Nisga'a* (Jelinek 1986:13)

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[12]Further documentation on Nisga'a is necessary to determine whether these contexts show any variation.

(37) a. Jidaat 'maji'mhl lo'op, ...
　　　 ji-daa=t 'mats-**'m** =hl lo'op ...
　　　 IRR-SPT=3.I hit-1PL.II =CN rock ...
　　　 'If a rock hits us ...'

　　 b. Jidaat 'matshl lo'op 'nuu'm, ...
　　　 ji-daa=t 'mats-**t** =hl lo'op **'nuu'm**, ...
　　　 IRR-SPT=3.I hit-3.II =CN rock 1PL.III ...
　　　 'If a rock hits us ...' *Gitksan* (BS)

For the Nisg̱a'a case in (36) and its Gitksan parallel in (37a), m-licensing of the object is achieved through agreement. However, for the case in Gitksan (37b), the object seems to go unlicensed according to any of the possible analyses presented so far; it has no m-agreement, it is not verb-adjacent, and it does not seem to have undergone any other kind of movement either (to consider the PersonP analysis from section 2). We might then consider the two possible Gitksan constructions in (37) as one where object licensing has taken place, and one where it has not, with the availability of the second corresponding to the fact that participant objects in inverse constructions need not be verb-adjacent. It seems that person licensing is no longer necessary in Gitksan, but there still exist some options to satisfy the residual licensing condition. Where the formal derivation is concerned, it seems that the subject and object arguments do not move, but are simply equidistant possible agreement targets. Infl can choose the subject, leaving the M-PLC unsatisfied, or can choose the object, to satisfy it.

　　The third type of subject, third plural pronouns, presents a different agreement pattern. In both Gitksan and Nisg̱a'a, agreement must be with the pronominal subject, as in (38). The object may not receive agreement, even if it is a participant; even in Gitksan, there is no possible variation (Forbes 2017:17).

(38) Luu'aamhl g̱oodi'y wilt hlimoomdiit 'nii'y.
　　 luu-aam =hl g̱oot-'y [wil=t hlimoom-**diit** 'nii'y]
　　 in-good =CN heart-1SG.II [COMP=3.I help-3PL.II 1SG.III]
　　 'I am happy that they helped me.' *Nisg̱a'a*; (Jelinek 1986:13)

Under a syntactic analysis of person licensing, this presents a puzzle. In the presence of a third-

plural subject – but not a lexical subject – the object is unable to raise to PersonP, and is always blocked for agreement. In this context, the participant object does not seem to be licensed at all.

In contrast, the post-syntactic analysis I have proposed actually predicts the invariance of the agreement pattern in this context. Third-plural subjects, like lexical subjects, seem to be possible targets for suffixal agreement (in contrast to simple pronominal subjects). When a third-plural subject then receives agreement, pronoun-agreement complementarity results in the argument itself being realized as null *pro*. The object consequently surfaces immediately string-adjacent to the agreement suffix -*diit* on Infl. This is precisely one of the satisfaction conditions for the M-PLC: adjacency between Infl and a participant. There is no need for the agreement suffix to actually agree with the participant object. Only the post-syntactic approach to agreement, where verbal adjacency is a direct means of licensing the feature [PART], is able to explain why these contexts are acceptable in Nisg̱a'a, where participants otherwise seem to demand agreement in the dependent order.

In Gitksan, we again find optionality arising in putatively ditransitive ('specified complement') constructions (Tarpent 1987; Forbes to appear), where there are more arguments than there are available agreement licensers. In ditransitive constructions, indirect objects typically receive agreement and direct objects surface as obliques. However, when the indirect object is a DP and the direct object a participant, there is an optional shift in word order, given in (39).

(39) a. Nax̱'ni'y wint 'nim ginhl gawk̲'aw as   'nuu'm.
     nax̱'ni-i-'y [win=t 'nim gin-t =hl gawk̲'aw a-t =s **'nuu'm**]
     hear-TR-1SG.II [COMP=3.I DESID feed-3.II =CN crow PREP-3.II =DN 1PL.III]
     'I heard [that she wants to feed us to the crows/feed the crows us].'

   b. Nax̱'ni'y wint 'nim gint 'nuu'm ahl   gawk̲'aw.
     nax̱'ni-i-'y [win=t 'nim gin-t **'nuu'm** a-t =hl gawk̲'aw]
     hear-TR-1SG.II [COMP=3.I DESID feed-3.II 1PL.III PREP-3.II =CN crow]
     'I heard [that she wants to feed us to the crows].'   (VG)

In (39b), the participant DO instead appears adjacent to the verb as a participant pronoun, apparently forcing the indirect object DP to be introduced as an oblique, even though it receives verbal agreement. This parallels the situation with DP subjects in dependent clauses: one of the two possi-

ble realizations for the constructions involves object m-licensing, while the other does not, instead favoring a consistent VSO (or V-S-IO-DO) order.

The consistent thread running through all of these contexts is the importance of string-adjacency between the verb and a non-agreeing participant pronoun; regardless of clause type, a DP subject or indirect object has the capacity to interrupt this adjacency, and it is in these contexts that we find a marked pattern of word order or agreement enforced, as predicted by the M-PLC. In Gitksan, some of these scenarios either no longer permit the marked word order, or result in optionality between two constructions, one of which follows the M-PLC and one of which does not. This seemingly indicates that the M-PLC has eroded from Gitksan at different rates in different contexts, from obligatory m-licensing, to optional m-licensing, and finally to no m-licensing but rather a consistent word order. More broadly, that these differences have arisen between such closely related languages is consistent with the idea that the condition driving the inverse alternation is 'surface-level', in that it can be lost with no further syntactic consequence.

6   Maritime: S-licensing and detransitivization

Having considered in detail an appropriate model for person-conditioned word-order alternations in IT, and demonstrated the effectiveness of a post-syntactic, adjacency-based licensing model in accounting for those alternations, I now turn for comparison to MT, which exhibits an additional level of complexity: agreement alternations. While the post-syntactic M-PLC successfully motivates a variety of word order alternations in the Interior, it is fundamentally unable to model why agreement should be so drastically affected in the Maritime branch. I propose instead that the relevant licensing condition in Maritime Tsimshianic is syntactic: the classic syntactic Person Licensing Condition (S-PLC) that requires participants to agree with an appropriate functional head (Béjar and Rezac 2003). Given that this condition applies in the narrow syntax, possible derivational repairs that may apply to satisfy the condition include the addition of licensers (φ-probes) to the derivation, rather than simply operations on spellout or string reordering.

In this section I present an analysis of Maritime agreement in the independent order and alternations in accordance with the S-PLC, using a primary/secondary licenser approach to agreement (Kalin 2018). I also address the VSO/VOS word-order alternation, arguing that VOS word order in the inverse context is the result of post-syntactic detransitivization, which repairs violations of a feature co-occurrence constraint on Infl (Bobaljik and Branigan 2006). The resulting detransitivized string resembles intransitive PNI constructions.

6.1 The MT agreement system

Agreement in the MT independent order is often the same as that of IT: a single agreement suffix agrees with the ergative argument. Absolutives do not agree and may be realized as pronouns. This pattern is used in most intransitive clauses, such as (40) where the third person S may be either overt or *pro*, as well as transitive clauses where the object is third person, such as (40).

(40)   Dm   'yagayaa(t   'niit).
            dm   'yaga-yaa (=t   'niit)
            PROSP down-go   (=DN 3.III)
            'S/he will walk down.'   *Sm'algyax*; (Davis 2018:33)

(41)   Anoogut   Dzon
            anoog-i-**u**   =t Dzon
            like-TR-1SG.II =DN John
            'I like John.'   *Sm'algyax*; (Sasama 2001:57)

The morphological licensing analysis presented for the Interior would predict that this pattern should be entirely sufficient for licensing participants. Absolutive arguments, while not agreeing directly, are adjacent to the verb stem; only in a transitive clause where a DP subject intervenes between verb stem and object pronoun would any issue arise. However, when absolutives are participants, we instead find that alternate constructions emerge: (42) presents a transitive clause where both arguments are participants, (43) presents an inverse transitive clause where only the object is a participant, and (44) presents an intransitive clause with participant subject.

(42)   Ma anoogu.
         ma anoo<u>k</u>-**u**
         2.I like-1SG.II
         'You like me.'   *Sm'algyax*; (Sasama 2001:79)

(43)   a.   Nat   anooga'nu.
               na=**t**   anoo<u>k</u>   ='nu
               PST=3.I like   =1SG.IIIA
               'They used to like me.'   *Sm'algyax*; (Sasama 2001:150)

         b.   Dmt   liiłg'nsmt   Meeli.
               dm=**t**   liiłk   ='nsm =t   Meeli.
               PROSP=3.I look.after =2PL.IIIA =DN Mary
               'Mary will look after you guys.'   *Sm'algyax*; (VN)

(44)   Nam   siipginsm.
         na=**m**   siipk   ='nsm
         PST=2.I sick   =2PL.IIIA
         'You (pl) were sick.'   *Sm'algyax*; (Sasama 2001:78)

In (42), both types of agreement (preverbal and suffixal) are present. Preverbal agreement is with the participant subject, and suffixal agreement is with the participant object. This mirrors the agreement pattern of a dependent-order transitive. In the inverse (43), only preverbal agreement is used, and it marks the third-person subject. Curiously, suffixal agreement is absent, and the participant object is realized as a reduced pronoun. The object pronoun is always verb-adjacent; when the subject is a DP, it follows the object in VOS order, as illustrated in (45b). Finally, in the intransitive (44), preverbal agreement may co-occur with the reduced S pronoun. These agreement patterns are summarized in Table 1.[13]

The picture is broadly one of differential subject marking on the basis of absolute person:

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[13]Though this picture seems to be the one broadly volunteered and preferred by speakers, given how robustly it characterizes the data in the Sm'algyax literature (e.g. Mulder 1994; Sasama 2001; Anderson and Ignace 2008), the true descriptive picture seems to involve optionality. Preliminary fieldwork suggests that the suffix-only pattern involving no preverbal agreement (as in (41)) is an acceptable alternative no matter the person values of arguments (C. Brown, p.c.). The suffix-only pattern might therefore be characterized as an available 'default'. Davis (2018) notes for intransitive clauses that the pattern involving preverbal agreement seems to be conditioned by two factors: the person value of S, but also the presence of one of the tense/aspect particles *dm* 'PROSP' or *na(h)* 'PST'. Further investigation is required to determine whether the picture is one of stable variation or a change in progress—and if the latter, the direction of the change.

	DEFAULT/DIRECT (3.A<3.O, PART.A<3.O)	BOTH-LOCAL (PART.A<PART.O)	INVERSE (3.A<PART.O)	INTRANS
Preverbal agr.		A	A	(S_{PART})
Suffix agr.	A	O		
Pronoun	O		O	S

Table 1: Sm'algyax independent-order agreement

when an absolutive argument is a participant, preverbal agreement marks the subject.[14] The distribution of suffixal agreement is somewhat marked. It appears when the object is third person, to mark the subject, and otherwise only appears if both arguments are participants, to mark the object. Participant objects do not agree in inverse contexts, instead surfacing as verb-adjacent pronouns. This matches the representation of intransitive arguments as verb-adjacent pronouns. Of some interest for our purposes is an aspect of surface similarity between intransitive constructions and inverse ones: both involve preverbal agreement as well as a pronoun.

6.2   A syntactic licensing analysis

I propose that the emergence of the patterns above can be attributed to typical *syntactic* person-licensing concerns, rather than morphological ones. In the rest of this section, I present a formal analysis of MT agreement from this licensing perspective, specifically concerning myself with the distribution of preverbal agreement. In the following section I return to the problem of VOS word order with this foundation.

When all arguments of a clause are third person, or only the ergative subject is a participant, as in (41), only suffixal agreement is possible in the clause, and it targets the ergative. Absolutives do not overtly agree; I assume that neither do they abstractly Agree with any functional head, but

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[14]This can additionally be considered a split-ergative agreement pattern: the preverbal agreement marker has a nominative distribution, rather than an ergative or absolutive one. However, unlike many cases of person-based split ergativity discussed in the literature, the nominative pattern does not correlate directly with the person features of nominative-grouped arguments (A and S; subjects), but instead arises in an indirect manner based on the person features of absolutive-grouped arguments (S and O). This immediately rules out certain analyses of split-ergativity which treat the split via the co-occurrence of participant features with ergative case/agreement features (e.g. Aldridge 2007; Legate 2014; Deal 2015b).
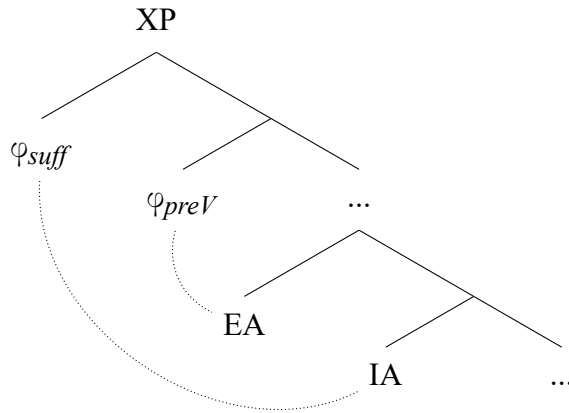
are instead syntactically *unlicensed,* and surface as pronouns by default.[15] If this is taken as the default state of affairs, an alternate construction would be necessary for an absolutive argument to acquire a licenser.

I suggest that the emergence of preverbal agreement in particular situations corresponds to the emergence of such a licenser. Preverbal agreement in MT may (or must) be introduced to the derivation only if an absolutive argument is a participant. This pattern suggests that it is highly preferred for participants to be licensed through overt agreement, while third persons can easily go without. This is situation is precisely what the original syntactic Person Licensing Condition (the S-PLC) was proposed to account for. The S-PLC cares nothing for adjacency, but instead mandates that [PART] features enter an Agree relationship with an appropriate head in the narrow syntax (Béjar and Rezac 2003, 2009). In order for an absolutive participant to receive licensing in MT, then, I propose that preverbal agreement may be inserted as a derivational repair.
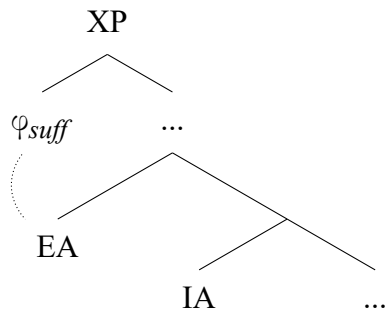
I here adopt a formal approach to agreement and licensing under which clauses have a obligatory licenser, but may include a secondary licenser when needed for the derivation to converge (Levin and Massam 1985; Bobaljik 1993; Laka 1993, 2000; Rezac 2011; Kalin 2018). Languages differ in terms of the location of these licensers on various functional heads in the clause, as well as whether the distribution of licensers results in a default nominative versus ergative pattern. As reviewed in section 1.1, the Tsimshianic languages have distinct agreement patterns in the independent and dependent order. I propose that part of the difference between the two orders can be captured through a difference in the number of available licensers: the dependent order has two obligatory licensers (preverbal and suffixal agreement), as illustrated in (45). In these clauses, all arguments receive licensing, and so syntactic licensing conditions on participants are always satisfied. By contrast, the independent order has only one obligatory licenser (suffixal agreement), as in (46). This suffices to model agreement in IT, where there is no syntactic licensing condition.

_____

[15]Brown (2016) proposes that the default suffix-only construction in Tsimshianic involves two kinds of licensing: ergatives receive licensing via the agreement suffix, and absolutives (realized as free pronouns) are covertly licensed by T. Seen another way, an argument's realization as a free pronoun can be interpreted as absolutive case, licensed via Agree with T. I propose an alternative: free pronouns are not indicative of absolutive case, but are instead a default form. Agreement operations are surface-apparent, as indicated by the preverbal and suffixal markers.

(45)   XP   *Dependent order licensers*

φ_{suff}

φ_{preV} ...

       EA

          IA   ...

(46)   XP   *Independent order licensers (IT)*

φ_{suff} ...

    EA

      IA   ...

I propose that preverbal agreement is also available as a *secondary licenser* in the independent order in MT. In the context of an absolutive participant, not normally targeted by suffixal agreement, the secondary licenser is exceptionally activated in order to license that participant, as in (47).

(47)   XP   *Independent order licensers (MT)*

φ_{suff}

$(\varphi)_{preV}$ ...

       EA

         IA   ...
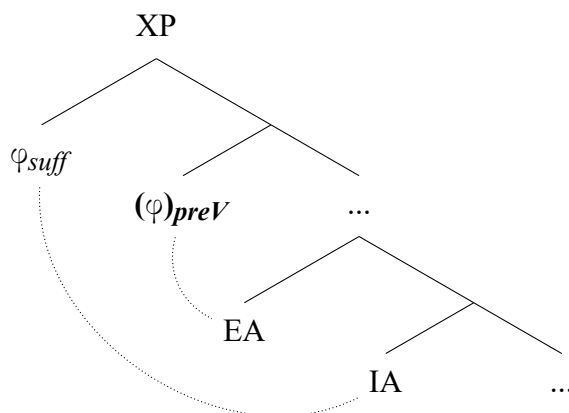
Important to an analysis of these alternations is that the appearance of the preverbal agreement

paradigm, triggered due to the licensing requirements of the absolutive, does not necessarily result in preverbal agreement *with* the absolutive; instead, it results in different agreement for the subject. As Kalin (2018:150) discusses, this is possible under a structure where the exceptionally-activated secondary licenser has first choice for which argument to agree with (i.e. it is lower than the obligatory licenser and probes first), and selects the argument normally targeted by the obligatory licenser. This leaves the obligatory licenser available to target the object.

With respect to the position of licensers in the clause, I proposed in section 3.2 that suffixal agreement is located in Infl, and is attached leftward via Morphological Merger to the raised *v*P in spec-Infl (typically the verb stem). I maintain this view, and suggest preverbal agreement is located below the arguments, in Voice. That is, suffixal agreement is structurally higher than preverbal agreement, despite their linear order. I suggest that preverbal agreement is syntactically located below Infl, and undergoes a later cliticization process that linearizes it to some position preceding its raised complement, the *v*P.[16]

The analysis of syntactic licensing in MT is as follows. Dependent order clauses have two obligatory licensers: (transitive) Voice, and Infl. Transitive Voice indexes the ergative subject through Spec-Head agreement with the DP it merges, and Infl indexes the remaining argument: either the transitive object, or the sole argument of an intransitive. Both arguments of a transitive receive licensing, as illustrated in (48).
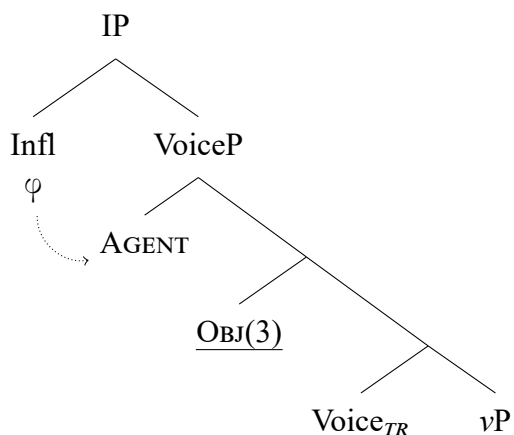
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[16]This is not entirely satisfying, but any analysis of preverbal agreement requires some recourse to postsyntactic readjustment. These morphemes are not verbal prefixes, but rather flexiclitics (sometimes multiply exponed circumclitics) on some prosodic host preceding the *v*P. They may appear anywhere between the clause edge and the raised *v*P edge, procliticizing to the *v*P-edge itself if all heads in that span are null. They could be plausibly associated with several syntactic heads, based on their sensitivity to both transitivity ('low') and clause type ('high'). The alternative would be to assume that preverbal agreement agrees from a position higher than suffixal agreement. However, if this were the case, we would expect different patterns of interaction or competition between the two licensers.

(48)

```
              IP
          ╱        ╲
      Infl          VoiceP
       φ          ╱      ╲
              AGENT
             ╱      ╲
          OBJ        ╲
         ╱    ╲        ╲
   Voice_TR    vP
      φ       ╱  ╲
          v V <OBJ>
```
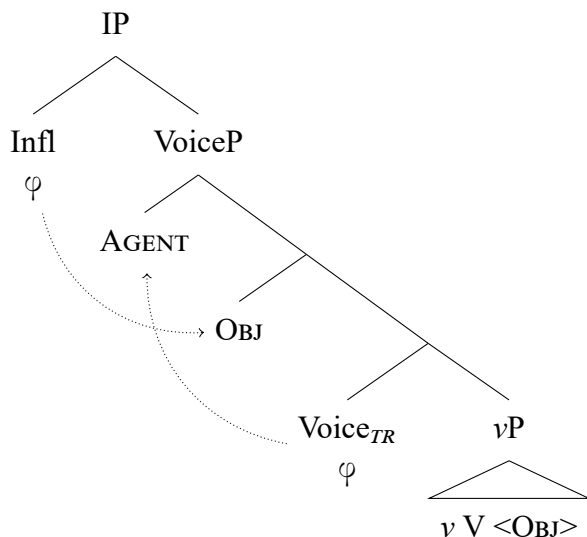
Independent order clauses, by contrast, have only one obligatory licenser: Infl. Unlike in the dependent order, the independent-order Infl head is case-discriminating, and agrees only with the ergative subject.[17] In the absence of another licenser, absolutive arguments do not receive licensing, as illustrated in (49).

(49)

```
              IP
          ╱        ╲
      Infl          VoiceP
       φ          ╱      ╲
              AGENT
             ╱      ╲
        OBJ(3)       ╲
               ╱    ╲
          Voice_TR    vP
```

For third-person absolutives, there are no consequences for surfacing in an unlicensed position; these arguments simply appear as non-agreeing pronouns. However, arguments bearing [PART]
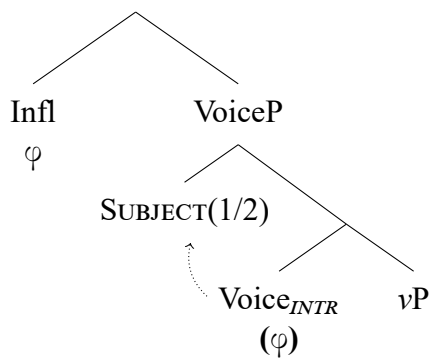
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[17]I remain agnostic as to how precisely this is accomplished, whether by relativization to a dependent-case feature [ERG] transmitted prior to agreement, or to the category feature transmitted to the ergative argument by Voice_TR, or by agreement with the Voice head itself as proposed by Forbes (2018). Curiously, Infl is only case-discriminating when preverbal agreement is absent; there is perhaps some kind of relationship between the two heads that derives such complementarity, but I do not discuss it further here.

features merit syntactic licensing. When a participant absolute is at risk of going unlicensed, a repair is triggered: the activation of preverbal agreement on Voice. In a transitive clause, Voice agrees with the ergative subject, leaving Infl free to agree with the participant object, as in (50). In an intransitive clause, Voice may agree with a participant intransitive, as in (51).

(50)　　　　　IP　　　　　　　　　　*MT independent agreement (marked: trans)*

```
              IP
           /      \
        Infl      VoiceP
         φ       /      \
            AGENT
              ⤴
            OBJ(1/2)
                   \
                Voice_TR    vP
                  (φ)
```
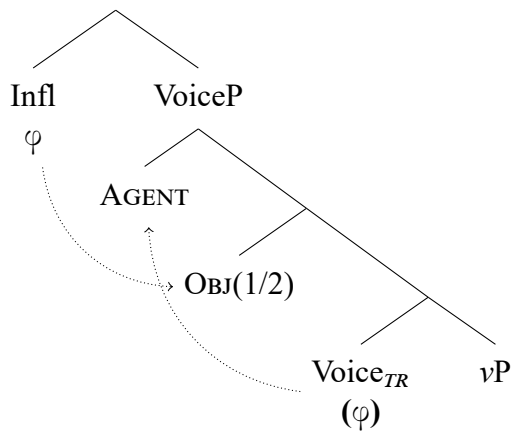
(51)　　　　　IP　　　　　　　　　　*MT independent agreement (marked: intransitive)*

```
              IP
           /      \
        Infl      VoiceP
         φ       /      \
            SUBJECT(1/2)
                  ⤴
               Voice_INTR    vP
                  (φ)
```

When activated as a secondary licenser, Voice's normal restriction to agreement with only ergatives (as in the dependent order) seems to be absent. The transitive pattern in (50) mirrors the pattern of a dependent clause, but the intransitive pattern in (51) contrasts with dependent clauses, where suffixal agreement on Infl targets S instead.

41

6.3 On inverse contexts and the realization of O

Finally, we return to the issue of VOS order. What this picture of syntactic licensing does not yet address is the difference between situations where a participant object is realized as an agreement suffix on the verb (agreement from Infl) versus as a pronoun cliticized to the verb, preceding the subject. The two possible forms for verb-adjacent objects are illustrated in (52) and (53) respectively; in (53), an inverse context with reduced pronoun, there seems to be no agreement suffix at all.[18] In both examples, the subject receives preverbal agreement.

(52)   Ma anoog̱u.
        m= anoog̱-**u**
        2.ɪ= like-1sɢ.ɪɪ
        'You like me.'   (Sasama 2001:79)

(53)   Nat   niidza'nu   'yuuta.
        na=t   niits   ='**nu**   'yuuta.
        PST=3.ɪ see   =1sɢ.ɪɪɪA man
        'The man saw me.'   (Anderson and Ignace 2008:407)

This pattern demonstrates the relevance of more than just the object's features in determining the agreement pattern of any given clause: the subject is also relevant, and affects the distribution of suffixal agreement.

Under the analysis of the Maritime branch so far, participant objects are always predicted to trigger the insertion of the secondary licenser (preverbal agreement), which agrees with the subject in a nominative pattern. The obligatory licenser on Infl (suffixal agreement) is then predicted to target the object. That is, we would predict suffixal agreement to target the object in both (52) and (53), yet in inverse sentences like (53), there is no suffix at all. What can explain the absence of

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[18]The difference between these two types of object markers is not addressed in Baker's (2015) discussion of Sm'algyax agreement. Peterson (2017) assumes that the cliticized pronoun paradigm constitutes a third type of agreement (in contrast to preverbal and suffixal agreement). The additional agreement process would presumably resemble the PersonP analysis argued against in section 2. This seems to ignore both the similarity of these elements to the free pronouns from which they clearly derive (e.g. first person *'nu* from *'nüüyu*, both of which retain the glottalized nasal) and also the resemblance of these verb-adjacent object markers to verb-adjacent object pronouns in the Interior branch (the topic of section 5). Connecting the special paradigm of reduced pronouns in the Maritime branch to an additional agreement process, one that the Interior lacks, fails to explain why both branches share the verb-object adjacency pattern.

what has to this point been considered the *obligatory* licenser?

I propose that the kernel for understanding this pattern comes from the morphological similarity between the inverse transitive construction, which involves preverbal subject agreement and a verb-adjacent object, and *intransitive* incorporation construction. Crosslinguistically, inverse constructions have been linked together as marked 'voice' constructions, sometimes surfacing in the same form as a passive, antipassive, or otherwise semi-transitive clause (Jacobs 1994; Bobaljik and Branigan 2006; Polinsky 2017). I suggest that MT is another case where the inverse can be categorized as semi-transitive: in this case, it resembles an intransitive PNI clause. The obligatory licenser, suffixal agreement, is absent because it is typically *ergative*, and therefore fully transitive.

This provides some intuitive idea of what is going on, and situates the pattern in crosslinguistic context, but is not itself a formal analysis. For a synchronic formalization, I propose that the MT inverse context undergoes a process of morphological detransitivization, following a prior analysis of the 'spurious antipassive' in Chukchi (Chukotko-Kamchatkan) by Bobaljik and Branigan (2006). In short, during the process of agreeing with the object, Infl registers the features of both *and* object, and conflict arises between these two sets of features post-syntactically.

In Chukchi, transitive clauses have agreement patterns like (54a): an agreement prefix marks the subject, and an agreement suffix marks the object, or else the portmanteau features of subject and object. Certain combinations of subject and object (most commonly, inverse configurations) instead trigger morphology like that of (54b). Here, the prefix and suffix both mark the features of the subject, as is also characteristic of intransitives, and the object goes unmarked on the verb. Most curiously, antipassive morphology (*ine-*) also obligatorily appears on the verb, deriving the nickname 'spurious antipassive'.

(54) a. γəm-nan γət **tə-ɬʔu-γət**.
           1SG-ERG 2SG.ABS 1SG.S-see-2SG.O
           'I saw you.'

      b. ə-nan γəm ∅-**ine**-lʔu-**γʔi**.
           he-ERG 1SG.ABS 3SG.S-ANTIP-see-3SG.S
           'He saw me.'   *Chukchi*; (Bobaljik and Branigan 2006:48-49)

Bobaljik and Branigan propose that subject and object both raise to the specifier of TP, and T agrees with both the subject and object, explaining its occasional portmanteau realization. However, there is a post-syntactic feature co-occurrence constraint for certain combinations of subject and object features on this head. Offending combinations are resolved by deleting the object features from T after syntax, forcing the object to reconstruct in its original position within the *v*P. With respect to linear order, the difference between the object's placement in a second specifier of TP or in the complement of V is string-vacuous. With respect to morphology, however, placement of the object within *v*P causes *v* to be spelled out in its antipassive form (*-ine*), required when an object remains in *v*P.[19] The post-syntactic nature of the Chukchi feature co-occurrence constraint allows morphological detransitivization (via the antipassive) for the verb, even while the arguments retain transitive case (ergative/absolutive).

The morphological detransitivization analysis can be applied to MT with minor adjustments. It requires a single admendment to the agreement process outlined in section 6.2: when the obligatory licenser (suffixal agreement) on Infl seeks the object, it must also copy the features of the subject. We have previously seen that suffixal agreement is sensitive to the features of both subject and object, in terms of whether it is present or absent in the clause; this requires some ability to reference both arguments' features. Following Deal (2015a), I assume that Infl *interacts* with the both the subject's and object's features, due to the equidistance of these arguments, but is ultimately *satisfied* by the object's features.

The derivation proceeds as follows, and is illustrated in (55). Because the object is a participant, the secondary licenser on Voice is activated, and it agrees with the subject. The obligatory licenser on Infl now begins its search. It finds and copies the features of the subject, although these have been deactivated by its prior agreement with Voice. Infl continues to search, finding the features of the participant object, which saturate it and conclude its search. The *v*P, containing the trace of the object, then raises to the specifier of Infl.

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[19]Polinsky (2017) argues against this view, instead suggesting that the spurious antipassive indicates a marked kind of agreement.

(55)
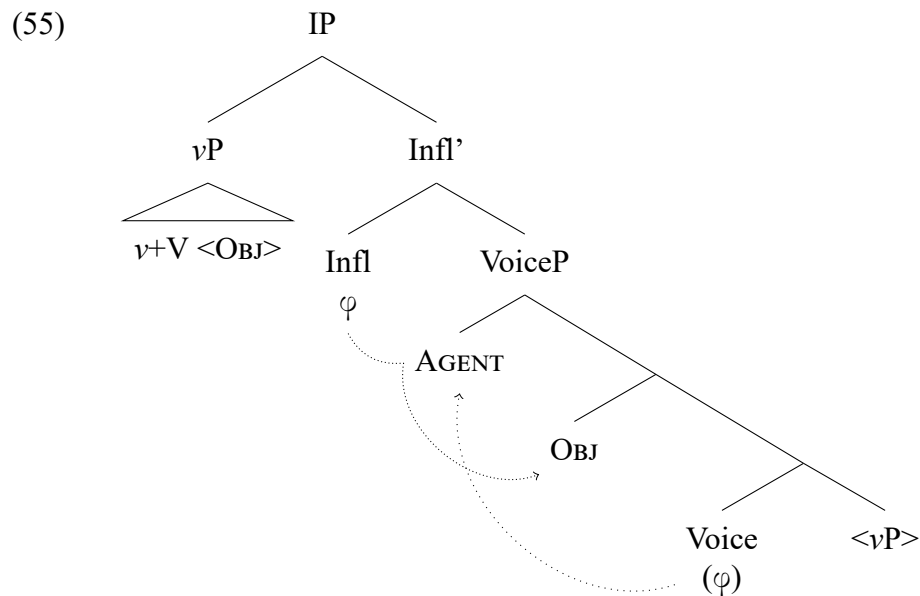
The syntactic portion of the derivation concludes, with both arguments having been licensed. If both arguments are participants, Infl will come to have a feature bundle like that of (56); in inverse clauses where only the object is a participant, the bundle will be as in (57).

(56)   [{PERSON, PARTICIPANT}$_A$, {PERSON, PARTICIPANT}$_O$]

(57)   [{PERSON}$_A$, {PERSON, PARTICIPANT}$_O$]

Under Bobaljik and Branigan's (2006) analysis, certain combinations of features on a single head can be banned in the post-syntactic component.[20] For concreteness, I suggest that the restriction against standard agreement in specific inverse contexts comes from variations on a morphological feature co-occurrence constraint, or filter. When the features of multiple arguments come to be copied and bundled onto a single head, specific combinations of the two features where the second bundle is more complex than the first, are restricted, as stated in (58).

(58)   **Inverse Bundling Constraint**

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[20]In general, these fall under the category of inverse configurations where the subject 'outranks' the object, but Bobaljik and Branigan (2006:68) report specific combinations triggering the spurious antipassive (2>1 and 3SG>1SG). In Sm'algyax, 3<1 and 3<2 inverse combinations result in an absent agreement suffix. Mulder (1994) (from Boas 1911:385) also presents one 2PL<1PL example that does this.

*[{PERSON}, {PERSON, PARTICIPANT}]

To resolve the violated constraint, just as in Chukchi, the object's features in MT are deleted from the bundle in Infl, and the object is reconstructed at a lower point in its chain, back to its base position within the *v*P. However, the surface consequences of violating this restriction differ in accordance with each language's clause structure and Vocabulary Insertion rules. Unlike in Chukchi, the MT subject has already received agreement from a lower head; its features are not candidates for spellout on Infl as well. Infl is unable to realize the features of either argument, so the agreement suffix is zero by default (as in intransitives and weather predicates). Furthermore, while object movement in OV-ordered Chukchi was vacuous, in MT the object is reconstructed within the raised *v*P as in (59), resulting in VOS order and a construction surface-identical to object pseudo-incorporation.

(59)
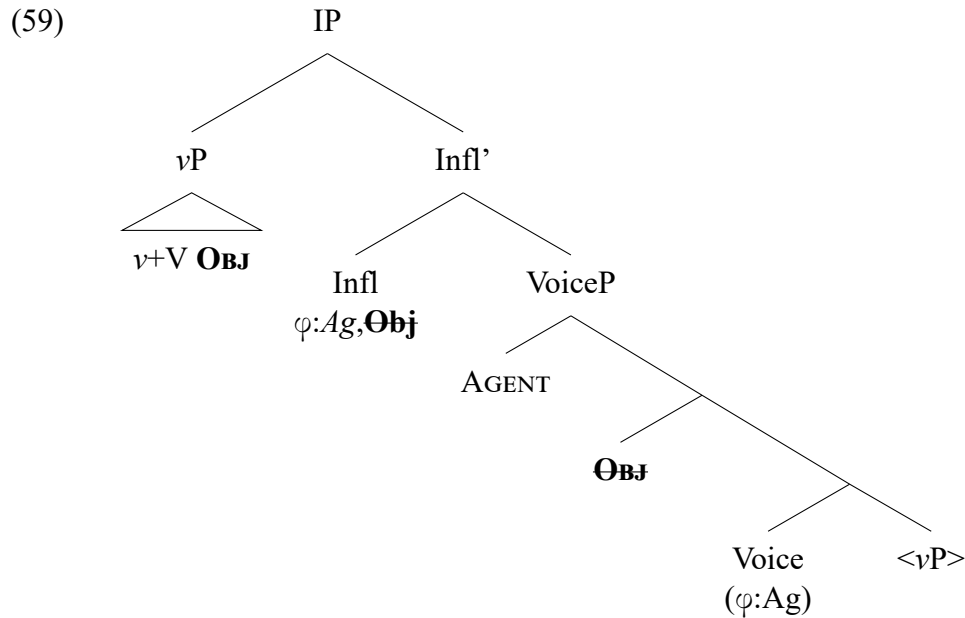
In Chukchi, the low reconstruction of the object triggers antipassive morphology. For Bobaljik and Branigan, this is due to the productivity of the Vocabulary Insertion rule for the antipassive morpheme. In MT, the antipassive morpheme does not appear; this is unsurprising, given that typical PNI in MT does not require the antipassive morpheme. Rather, this morpheme has been

described as unproductive and 'lexical' across Tsimshianic (Rigsby 1986; Tarpent 1987; Mulder 1994; Sasama 2001).

Let us sum up this section's characterization of person restrictions in MT. We have seen that the types of agreement markers used in the clause vary as a function of the role of participants in the clause. I take this as indicative of a syntactic requirement on person licensing (Béjar and Rezac 2003), in contrast to the post-syntactic requirement proposed for IT, and model the process in a system with obligatory and secondary licensers (suffix and preverbal clitic, respectively) (Kalin 2018). However, participant objects in inverse contexts do not receive agreement, but instead surface as verb-adjacent reduced pronouns. I analyze this as a consequence of a feature co-occurrence constraint on Infl, which results in post-syntactic detransitivization following Bobaljik and Branigan (2006). The agreement suffix disappears and the object is moved to its base position in vP, identical to a PNI construction, although the clause remains underlyingly transitive in its syntax and semantics.

7   Conclusion

In the Tsimshianic languages, word order alternates between VSO and VOS as a function of the relative hierarchy of subject and object person, in a case of 'word order inverse' (Givón 1994a). This empirical phenomenon raises questions for the crossroads of person-sensitive licensing and string-based licensing. Ultimately, this paper argues that there are multiple possible means of deriving a 'word order inverse' alternation, neither involving simple object raising.

First, I argued that base VSO in Tsimshianic is derived via predicate raising (Massam 2000, 2001). I then demonstrated that the marked inverse VOS orders in each branch are distinct surface constructions, and proposed that each results from licensing requirements on participant arguments being evaluated in a distinct grammatical module. Participant arguments in Interior Tsimshianic follow a strict condition of either receiving overt agreement, or appearing adjacent to the verb; this generalization characterizes both the VSO/VOS alternation in the independent order but also addi-

tional agreement alternations in the dependent order. I attribute this to a *morphological* licensing condition governing the surface form and linear order of participants relative to Infl. Participant arguments in Maritime Tsimshianic are subject to a different generalization: the presence of an absolutive participant seems to trigger the appearance of preverbal agreement, a syntactic licenser, suggesting that licensing requirements on participants is instead *syntactic*. I proposed that VOS order arises in this branch somewhat tangentially, through post-syntactic detransitivization of the transitive inverse construction into one resembling incorporation, as a logical extension of Bobaljik and Branigan's (2006) account of the Chukchi 'spurious antipassive' as applied to Tsimshianic.

By proposing that person licensing can take place in distinct modules, my analysis raises some questions regarding what person licensing even is. If, descriptively, there seem to be two types of PLCs, how should this be characterized in terms of parameters? Is the presence or absence of the S-PLC one parameter, and presence or absence of the M-PLC another? Or is there a single parameter dedicated to the PLC, and different options for what grammatical module it is evaluated in? This is ultimately an empirical question, one which the Tsimshianic data cannot further contribute to. However, this paper has paved the way for further investigation into the nature of licensing, and contributed to our understanding of adjacency-related phenomena in natural language.

References

Adger, David, and Daniel Harbour. 2007. Syntax and syncretism of the Person Case Constraint. *Syntax* 10:2–37.

Aldridge, Edith. 2007. Case in ergative languages and NP split-ergativity. In *Texas Linguistics Society 9: Morphosyntax of underrepresented languages*, ed. Frederick Hoyt, Nikki Seifert, Alexandra Teodorescu, and Jessica White. CSLI Publications.

Anagnostopoulou, Elena. 2003. *The syntax of ditransitives: Evidence from clitics*. Mouton de Gruyter.

Anderson, Margaret, and Marianne Ignace. 2008. *Visible grammar: Twenty user friendly grammar modules for Sm'algyax.* Prince Rupert, BC: Wap Sigatgyet, School District 52.

Baker, Mark. 1985. The Mirror Principle and morphosyntactic explanation. *Linguistic Inquiry* 16:373–415.

Baker, Mark. 1988. *Incorporation: A theory of grammatical function changing*. Chicago University Press.

Baker, Mark. 2008. *The syntax of agreement and concord*. Cambridge University Press.

Baker, Mark. 2014. Pseudo noun incorporation as covert noun incorporation: Linearization and crosslinguistic variation. *Language & Linguistics* 15:5–46.

Baker, Mark. 2015. *Case: Its principles and its parameters*. Cambridge University Press.

Béjar, Susana. 2003. Phi-syntax: A theory of agreement. Doctoral Dissertation, University of Toronto.

Béjar, Susana, and Milan Rezac. 2003. Person licensing and the derivation of PCC effects. In *Romance linguistics: theory and acquisition*, ed. Ana Teresa Perez-Leroux and Yves Roberge, 49–62. Amsterdam: John Benjamins Publishing Company.

Béjar, Susana, and Milan Rezac. 2009. Cyclic Agree. *Linguistic Inquiry* 40:35–73.

Belvin, Robert S. 1985. Nisgha syntax and the ergativity hypothesis: An analysis using the Government and Binding model. In *Papers for the 20th International Conference on Salish and Neighbouring Languages*, 25–76.

Belvin, Robert S. 1990. Person markers and patterns of Case assignment in Nisgha. In *Papers for the 25th International Conference on Salish and Neighbouring Languages*.

Boas, Franz. 1911. Tsimshian grammar. In *Handbook of American Indian languages*. Washington: Government Print Office. Bulletin 40, volume 1.

Bobaljik, Jonathan. 1993. On ergativity and ergative unergatives. In *Papers on case and agreement II*, volume 19, 45–88. MIT Working Papers in Linguistics.

Bobaljik, Jonathan. 1994. What does adjacency do. In *MIT working papers in linguistics 22*, 1–32. MITWPL.

Bobaljik, Jonathan, and Phil Branigan. 2006. Eccentric agreement and multiple case checking. In Johns et al. (2006), 47–77.

Bonet, Eulàlia. 1991. Morphology after syntax: Pronominal clitics in Romance. Doctoral Dissertation, MIT.

Bonet, Eulàlia. 1994. The Person-Case Constraint: A morphological approach. In *The morphology-syntax connection*, ed. Heidi Harley and Colin Phillips, volume 22, 33–52. MITWPL.

Brown, Colin. 2016. Extraction restrictions in Gitksan. Master's thesis, McGill University.

Brown, Jason, Karsten Koch, and Martina Wiltschko. 2004. The person hierarchy: primitive or epiphenomenal? evidence from Halkomelem Salish. In *Proceedings of the 34th meeting of the North East Linguistics Society (NELS 34)*, ed. Keir Moulton and Matthew Wolf, 147–162. GLSA Amherst.

Bruening, Benjamin. 2001. Syntax at the edge: Cross-clausal phenomena and the syntax of Passamaquoddy. Doctoral Dissertation, MIT.

Bruening, Benjamin. 2005. The Algonquian inverse is syntactic: Binding in Passamaquoddy. Manuscript, University of Delaware.

Clemens, Lauren Eby. 2014. Prosodic noun incorporation and verb-initial syntax. Doctoral Dissertation, Harvard University.

Clemens, Lauren Eby. to appear. Prosodic noun incorporation: The relation between prosody and argument structure in Niuean. *Syntax* .

Clemens, Lauren Eby, and Jessica Coon. 2018. Deriving verb-initial word order in Mayan. *Language* 94:237–280.

Coon, Jessica, Diane Massam, and Lisa deMena Travis, ed. 2017. *Oxford handbook of ergativity*. Oxford University Press.

Coon, Jessica, and Omer Preminger. 2017. Split ergativity is not about ergativity. In Coon et al. (2017), 226–252.

Davis, Henry. 2018. Only connect! a unified analysis of the Tsimshianic connective system. *International Journal of American Linguistics* 84:471–511.

Davis, Henry, and Jason Brown. 2011. On A'-dependencies in Gitksan. In *Papers for the 46th International Conference on Salish and Neighbouring Languages*, 43–80. UBC Working Papers in Linguistics.

Davis, Henry, and Clarissa Forbes. 2015. Connect four! The morphosyntax of argument marking in Tsimshianic. In *Papers for the 50th International Conference on Salish and Neighbouring Languages*, ed. Natalie Weber, Erin Guntly, Zoe Lam, and Sihwei Chen, volume 40, 155–185. UBCWPL.

Deal, Amy Rose. 2010. Ergative case and the transitive subject: a view from Nez Perce. *Natural Language and Linguistic Theory* 28:73–120.

Deal, Amy Rose. 2015a. Interaction and satisfaction in ϕ-agreement. In *Proceedings of NELS 45*, ed. Thuy Bui and Deniz Ozyildiz, 1–14. GLSA Amherst.

Deal, Amy Rose. 2015b. Person-based split ergativity in Nez Perce is syntactic. *Journal of Linguistics* 1–32.

Dunlop, Britt, Suzanne Gessner, Tracey Herbert, and Aliana Parker. 2018. Report on the status of BC First Nations languages. Report of the First People's Cultural Council. URL `http://www.fpcc.ca/files/PDF/FPCC-LanguageReport-180716-WEB.pdf`, retrieved March 24, 2019.

Dunn, John Asher. 1990. Inflection structures in Lower Tsimshianic. In *Papers for the 25th International Conference on Salish and Neighbouring Languages*, 113–124.

Erlewine, Michael Y., Theodore Levin, and Coppe van Urk. 2018. The typology of nominal licensing in Austronesian voice languages. Poster presented at LSA 92.

Forbes, Clarissa. 2017. Persistent ergativity and split absolutive agreement in Gitksan. In *Proceedings of the 47th annual meeting of the North East Linguistic Society*, ed. A. Lamont and K. Tetzloff, volume 2, 11–24. GLSA Amherst.

Forbes, Clarissa. 2018. Persistent ergativity: Agreement and splits in Tsimshianic. Doctoral Dissertation, University of Toronto.

Forbes, Clarissa. 2019. On binding and precedence in Gitksan. In *Wa7 xweysás i nqwal'utteníha i ucwalmícwa: He loves the people's languages. essays in honour of Henry Davis*, ed. Lisa Matthewson, Erin Guntly, and Michael Rochemont, volume 6, 111–126. UBC Occasional Papers in Linguistics.

Forbes, Clarissa. to appear. Consequences of long-distance extraction morphology in Gitksan. In *Proceedings of the Workshop on Structure and Constituency in Languages of the Americas 22*. UBC Working Papers in Linguistics.

Givón, Thomas. 1994a. The pragmatics of de-transitive voice: Functional and typological aspects of inversion. In Givón (1994b).

Givón, Thomas, ed. 1994b. *Voice and inversion*. John Benjamins Publishing Company.

Hale, Kenneth, and Samuel Jay Keyser. 1993a. On argument structure and the lexical expression of syntactic relations. In Hale and Keyser (1993b), 53–110.

Hale, Kenneth, and Samuel Jay Keyser, ed. 1993b. *The view from Building 20: Essays in linguistics in honor of Sylvain Bromberger*. MIT Press.

Halle, Morris, and Alec Marantz. 1993. Distributed Morphology and the pieces of inflection. In Hale and Keyser (1993b), 111–176.

Harley, Heidi. 2013a. External arguments and the Mirror Principle: on the distinctness of Voice and v. *Lingua* 125:34–57.

Harley, Heidi. 2013b. Getting morphemes in order: Merger, affixation, and head-movement. In *Diagnosing syntax*, ed. Lisa Cheng and Norbert Corver, 44–74. Oxford University Press.

Holmberg, Anders. 1986. Word order and syntactic features in the Scandinavian languages and English. Doctoral Dissertation, University of Stockholm.

Hunt, Katharine. 1993. Clause structure, agreement and case in Gitksan. Doctoral Dissertation, University of British Columbia.

Jacobs, Peter. 1994. The inverse in Squamish. In Givón (1994b), 121–146.

Jelinek, Eloise. 1986. The ergativity hypothesis and the argument hierarchy in Nisgha. In *Papers for the 21st International Conference on Salish and Neighbouring Languages*. Seattle, WA.

Johns, Alana, Diane Massam, and Juvenal Ndayiragije, ed. 2006. *Ergativity: Emerging issues*. Dordrecht: Springer Publishing Company.

Kalin, Laura. 2018. Licensing and differential object marking: the view from Neo-Aramaic. *Syntax* 21:112–159.

Kayne, Richard. 1994. *The antisymmetry of syntax*. Cambridge: MIT Press. Linguistic Inquiry Monograph 25.

Kratzer, Angelika. 1996. Severing the external argument from its verb. In *Phrase structure and the lexicon*, 109–137. Springer.

Laka, Itziar. 1993. Unergatives that assign ergative, unaccusatives that assign accusative. In *Papers on case and agreement I*, volume 18, 149–172. MIT Working Papers in Linguistics.

Laka, Itziar. 2000. Thetablind case: Burzio's Generalization and its image in the mirror. In *Arguments and case*, ed. Eric Reuland, 103–129. John Benjamins.

Legate, Julie Anne. 2014. Split ergativity based on nominal type. *Lingua* 148:183–212.

Levin, Juliette, and Diane Massam. 1985. Surface ergativity: Case/theta relations reexamined. In *Proceedings of NELS*, volume 15, 286–301.

Levin, Theodore. 2015. Licensing without Case. Doctoral Dissertation, MIT.

López, Luis. 2009. Ranking the Linear Correspondence Axiom. *Linguistic Inquiry* 40:239–276.

Marantz, Alec. 1984. *On the nature of grammatical relations*. MIT Press.

Marantz, Alec. 1991. Case and licensing. Paper presented at the 8th Eastern States Conference on Linguistics, University of Maryland.

Massam, Diane. 2000. VSO and VOS: Aspects of Niuean word order. In *The syntax of verb-initial languages*, ed. Andrew Carnie and Eithne Guilfoyle, 97–116. Oxford University Press.

Massam, Diane. 2001. Pseudo noun incorporation in Niuean. *Natural Language and Linguistic Theory* 19:75–134.

Merchant, Jason. 2006. Polyvalent case, geometric hierarchies, and split ergativity. In *Proceedings of the 42nd annual meeting of the Chicago Linguistics Society*, ed. Jackie Bunting, Sapna Desai, Robert Peachey, Chris Straughn, and Zuzana Tomkova.

Mulder, Jean. 1994. Ergativity in Coast Tsimshian (Sm'algyax). Doctoral Dissertation, UC Berkeley.

Ormazabal, Javier, and Juan Romero. 2007. The object agreement constraint. *Natural Language and Linguistic Theory* 25:315–347.

Oxford, Will. 2014. Microparameters of agreement: A diachronic perspective on Algonquian verb inflection. Doctoral Dissertation, University of Toronto.

Oxford, Will. 2017. Inverse marking as impoverishment. In *Proceedings of WCCFL 34*, ed. Aaron Kaplan, Abby Kaplan, Miranda K. McCarvel, and Edward J. Rubin, 413–422.

Peterson, Tyler. 2017. Alignments across Tsimshianic. In Coon et al. (2017), 1007–1034.

Polinsky, Maria. 2017. Antipassive. In Coon et al. (2017).

Rezac, Milan. 2008. Phi-agree and theta-related case. In *Phi theory*, ed. Daniel Harbour, David Adger, and Susana Béjar, 83–129. Oxford: Oxford University Press.

Rezac, Milan. 2011. *Phi-features and the modular architecture of language*. Springer.

Richards, Norvin. 1997. What moves where in which language? Doctoral Dissertation, MIT.

Rigsby, Bruce. 1986. *Gitxsan grammar*. Ms., University of Queensland, Australia.

Sasama, Fumiko. 2001. A descriptive study of the Coast Tsimshian morphology. Doctoral Dissertation, Kyoto University.

Satterwhite, Alyssa. 2012. Rhythm and perceptual prominence in Gitxsan. Abstract. Workshop on the Phonetic Analysis of Rhythm in Indigenous Languages.

Silverstein, Michael. 1976. Hierarchy of features and ergativity. In *Grammatical categories in Australian languages*, ed. R. M. W. Dixon, 112–171. New Jersey: Humanities Press.

Tarpent, Marie-Lucie. 1987. A grammar of the Nisgha language. Doctoral Dissertation, University of Victoria.

Thráinsson, Höskuldur. 2001. Object shift and scrambling. In *The handbook of contemporary syntactic theory*. Blackwell Publishing.

Wiltschko, Martina. 2006. On 'ergativity' in Halkomelem Salish: And how to split and derive it. In Johns et al. (2006), 197–227.

Zubizarreta, Maria Luisa, and Roumyana Pancheva. 2017. A formal characterization of person-based alignment: The case of Paraguayan Guaraní. *Natural Language and Linguistic Theory* 35:1161–1204.

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