

Connect Four!

The morphosyntax of argument marking in Tsimshianic

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Abstract: The NP-introducing connective morphemes are an enduring puzzle in Tsimshianic linguistics, their distribution obscured by opaque morphophonology and considerable homophony. We present a novel account of the Gitksan connective paradigm which reduces the distinction between *t* and *=s* to a matter of morphophonology, in contrast to the case-related analysis proposed by Hunt (1993). As a result, the connective system is simplified so as to only reference the distinction between common and proper/determinate nouns. We then extend the analysis to Coast Tsimshian, demonstrating the fundamental similarity of the two systems while exploring some points of variation which indicate interesting differences in agreement patterns between the Coast and Interior varieties.

Keywords: Gitksan, Tsimshianic, connectives, pronouns, agreement, case

1 Introduction¹

In the Tsimshianic literature, the term ‘connective’ has been used since Boas (1911) to identify a set of article-like morphemes which precede noun phrases. The distribution of these morphemes shows a basic distinction between ‘determinate’ and ‘common’ (non-determinate) NPs (Rigsby 1986): determinates include proper names, demonstrative pronouns, and ascending kinship terms,² while non-determinates include all other NPs. In both Coast Tsimshian (CT) and Interior Tsimshianic (IT), the connective for non-determinates is invariant (*a* in the former and *hl* in the latter); however, within the class of determinates, there are two apparently competing elements (*t* and *s*) whose distribution is sensitive to clause type and grammatical function. In IT, the situation is further complicated by a number marking distinction within the determinates, which partially neutralizes the distinction between *s* and *t*.

This paper focuses on the connective system of Gitksan, one of the two members of the IT branch (that of the other member, Nisga’a, is basically identical, at least on the evidence presented in Tarpent 1987*b*, 1988). We develop an analysis of the Gitksan connective system that considerably simplifies its surface

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² Ascending kinship terms mark kin above the level of the ego, such as parents, parents’ siblings, grandparents, and so on.

complexity, reducing the pattern from one which relies on common/determinate, singular/plural, and syntactic role contrasts, to one which only references the determinate/non-determinate distinction. We argue that the difference in number marking for determinate NPs is best recognized as an independent contrast, and that the difference in connective usage for NPs with different syntactic roles is ultimately morphophonological in nature. Consequently, our analysis of the connective paradigm posits only two members: determinate *t* and non-determinate *hl*. We then extend our findings on IT to the connective system of CT: we show that in spite of apparent surface differences the two systems are nearly identical, and our account of IT can be extended to CT with minimal adjustments.

The paper is structured as follows. In the rest of Section 1, we provide some background information on the syntax and inflectional morphology of Gitksan. In Section 2, we give an overview of the Gitksan connective system, exemplifying each different connective pattern, before introducing the two major analytical approaches that have been proposed in the previous literature on IT, those of Rigsby (1986) and Tarpent (1987*b*). In Section 3 we explore Hunt's (1993) analysis (itself partly based on Tarpent 1987*b*), which is the most detailed and successful of previous accounts. We then present our own alternative in Section 4, before extending it in Section 5 to the CT connective system. Section 6 concludes.

1.1 Brief background on Interior Tsimshianic syntax and morphosyntax

Here we provide a skeletal outline of certain key features of IT syntax that will be relevant to the argumentation in following sections. We make no attempt to be comprehensive: for detailed descriptions see Rigsby (1986) (Gitksan) and Tarpent (1987*b*) (Nisga'a).

Clausal morphosyntax in all Tsimshianic languages is organized around a clause-typing distinction, variously characterized as 'indicative' versus 'subjunctive' (Boas 1911), 'independent' versus 'dependent' (Rigsby 1986), and 'predicate focused' versus 'regular' (Tarpent 1987*b*, 1988). We will adopt Rigsby's Gitksan-based terminology here. The distinction is particularly important in regulating the function of the three pronominal series (named prosaically but efficiently Series I, II and III by Rigsby 1986). All subordinate clauses are dependent, but not all main clauses are independent: a set of pre-predicative 'dependent markers', including certain aspectual operators, negation, and clausal coordination, also induce dependent inflection. See Rigsby (1986), Tarpent (1987*b*), and Hunt (1993) for details of the IT system. The CT system is very similar, differing only in which elements trigger dependent inflection: see Dunn (1979*a*), Mulder (1994), Bach (2004), and Anderson and Ignace (2008).

The three pronominal series are most easily distinguished on morphological grounds, as shown in Table 1:

Table 1: Morphological type and position of pronouns

| | TYPE | POSITION |
|------------|------------------|------------------|
| SERIES I | clitic | pre-predicative |
| SERIES II | affix | post-predicative |
| SERIES III | independent word | post-predicative |

Their distribution is complex, but can be roughly characterized as ‘pivoting ergative’, with the Series II pronouns acting as the pivot.³ The basic distribution of the three pronominal series is shown in Table 2, with A, S and O standing for subject of a transitive clause, subject of an intransitive clause, and object, respectively, as is standard practice in the literature on ergativity.⁴

Table 2: Basic distribution of pronominal series

| | | INDEPENDENT | DEPENDENT |
|-----|---|-------------|-----------|
| ERG | A | II | I |
| ABS | S | III | II |
| | O | III | II |

Both Series I and Series II pronouns co-occur with lexical (NP) arguments (and on occasion with each other, as we will see); however, Series III pronouns (whose syntax is closest to that of NPs) never co-occur either with lexical NPs or other pronouns.

³ These affixes also mark possessors and the complements of prepositions; we discuss the latter function in Section 4.3.

⁴ Transitivity (obviously, crucial to ergative systems such as those of Tsimshanic languages) is not systematically marked on verbs, though various transitivizing and intransitivizing affixes are quite common. However, in transitive independent clauses, a ‘transitive’ suffix (glossed -TR here) appears immediately before the Series II suffix which marks the A argument (although sometimes it is obscured for phonological reasons). As noted by Hunt (1993), this suffix (which also appears in O extraction contexts) is in strict complementary distribution with Series I pronouns, and as such is never found in dependent clauses.

Lexical arguments in all Tsimshianic languages follow the predicate, except in contexts of A'-extraction;⁵ word order is strictly VSOX.⁶ All arguments aside from A, S and O must be introduced either by the general oblique preposition *a=* or the specialized locative preposition *go(')o=*.

2 The Gitksan connective system

The basic elements of the Gitksan connective paradigm are presented in Table 1. Connectives are obligatory before noun phrases in argument positions, including those introduced by prepositions.⁷

Table 3: The Gitksan connective paradigm, version 1

| | SG | PL |
|---------------|----|-------|
| Common | hl | |
| Determinate 1 | t | dip |
| Determinate 2 | s | s dip |

NPs headed by common (non-determinate) nouns are uniformly introduced by the morpheme *=hl*, which appears as an enclitic on the previous prosodic word. This connective shows no sensitivity to linear position, grammatical function, or clause type.⁸

⁵ A'-extraction contexts include relativization, WH-question formation, and focus movement. In each case, a constituent (sometimes null in the case of relativization) moves to a pre-predicative A'-position, leaving a distinct morphological signature which differs between A, S, and O functions, as well as between arguments and adjuncts. For details, see Davis and Brown (2011) and references therein.

⁶ The one exception to this, discussed by Rigsby (1989:250) involves an alternative VOS ordering limited to cases with a pronominal (Series III) object, as shown in (i). Even in the 1970s and 1980s, this 'right-extraposed' order was apparently confined to older speakers, and now seems to have been replaced by the 'regular' VSO order for all speakers (ii).

(i) hlmooyit 'nuu'm t Mary
 help-TR-3.II 1PL.III DM Mary
 'Mary helped us.'

(ii) hlmooyis Mary 'nuu'm
 help-TR=PN Mary 1PL.III
 'Mary helped us.'

⁷ The common noun connective *=hl* (or a homophonous morpheme) is also used to introduce certain clausal complements, following for example imperfective *yukw*. We set aside these uses here.

⁸ The orthography used here is a variant of the Gitksan orthography established by Hindle and Rigsby (1973), with minor changes to the representation of palatovelars (e.g. *gya* rather

- (1) a. bahl hanak'
run=CN woman
'The woman ran.'

- b. needii bahl hanak'
NEG=FOC run=CN woman
'The woman didn't run.'

- (2) a. gya'ah hanak'hl gyat
see[TR]=CN woman=CN man
'The woman saw the man.'

(Hunt 1993:200)

- b. neediit gya'ah hanak'hl gyat
NEG=FOC=3.I see=CN woman=CN man
'The woman didn't see the man.'

The examples in (1) contain an intransitive subject (S), those in (2) a transitive subject (A) and an object (O): all are introduced by *=hl*. The (a) cases also differ from the (b) cases by clause type: the (a) examples involve independent clauses, while the (b) examples involve dependent clauses; again, this has no effect on the form of the connective.

In contrast, determinate NPs (personal names, demonstrative pronouns, and ascending kinship terms) are introduced by the morphemes *=s* and *t*, as well as *dip* when plural or coordinated.⁹ The distribution of these morphemes is complex, and is governed by three factors: the distinction between independent and dependent clauses, the linear position of noun phrases relative to the verb, and the

than *ga*). Sm'algyax (Coast Tsimishian) examples are presented in the standard community orthography, which differs from that used in IT mainly in using *l* rather than *hl* for the lateral fricative. Glossing abbreviations used in examples are as follows: ASSOC = associative; CAUS = causative; CN = common noun connective; DM = determinate noun marker/connective; EMPH = emphatic; EPIS = epistemic modal; FOC = focus; I/II/III = person marker series; INTR = intransitive; LOC = locative; NEG = negation; NMZ = nominalizer; PASS = passive; PFV = perfective; PH.CNJ = phrasal conjunction; PL = plural; PN = proper noun connective; POSS = possessive; PREP = preposition; REPORT = reportative; SG = singular; TR = transitive.

⁹ The morphophonological properties of these elements differ from each other as well as from *=hl*. Determinate *=s* (glossed *=PN* for 'proper noun' here) is a bound morpheme which only ever surfaces at the right edge of the predicate (usually, but not always, a verb). It is given the status of an enclitic rather than a suffix here only because of its linear position following other elements which are themselves clearly enclitic, notably the reportative marker *=gat* and the modal *=ima(')a* (Tarpent 1987*b*, Hunt 1993, Peterson 2010). In contrast the determinate marker *t* (glossed DM) is a 'floating' clitic which can either dock to a preceding or following host, or even remain 'unmoored' as a stray consonant. And finally, the plural marker *dip* is prosodically independent, and as such has the status of a 'particle', rather than a clitic. See Stebbins (2003), Mulder and Sellers (2010) for remarks on the morphophonological properties of various closed-class elements in CT.

distribution of agreement morphology. Below, we lay out the possibilities for the determinate connectives systematically, beginning with independent clauses.

(3) *singular determinate S in independent clause*

bax t **Gidi**
 run DM **Katie**
 ‘Katie ran.’

(4) *plural determinate S in independent clause*

gol **dip** [Michael gan t Aidan]¹⁰
 run.PL ASSOC [Michael PH.CNJ DM Aidan]
 ‘Michael and Aidan ran.’

(5) *singular determinate A in independent clause*

a. gya'as **Michael** t Gidi
 see[TR]=PN **Michael** DM Katie
 ‘Michael saw Katie.’

b. gya'as **Michael** ('nit)
 see[TR]=PN **Michael** (3.III)
 ‘Michael saw him/her.’

(6) *plural determinate A in independent clause*

a. gya'as **dip** [**Michael gan t Aidan**] t Gidi
 see[TR]=PN ASSOC [**Michael PH.CNJ DM Aidan**] DM Katie
 ‘Michael and Aidan saw Katie.’

b. gya'as **dip** [**Michael gan t Aidan**] ('nit)
 see[TR]=PN ASSOC [**Michael PH.CNJ DM Aidan**] (3.III)
 ‘Michael and Aidan saw him/her.’

(7) *singular determinate O in independent clause*

a. gya'as Gidi t **Michael**
 see[TR]=PN Katie DM **Michael**
 ‘Katie saw Michael.’

b. gya'at t **Michael**
 see[TR]-3.II DM **Michael**
 ‘S/he saw Michael.’

¹⁰ The determinate *t* marking the second conjunct of the coordinated noun phrase here is used for non-initial determinate conjuncts by speakers from the Eastern (Gigyeenix) dialects; Western dialect (Geets) speakers use =s, which is also employed by Nisga'a speakers.

- (8) *plural determinate O in independent clause*
- a. gya'as Gidi **dip** [Michael **gan** **t** Aidan]
 see[TR]=PN Katie ASSOC [Michael PH.CNJ DM Aidan]
 ‘Katie saw Michael and Aidan.’
- b. gya'at **dip** [Michael **gan** **t** Aidan]
 see[TR]-3.II ASSOC [Michael PH.CNJ DM Aidan]
 ‘S/he saw Michael and Aidan.’
- (9) *singular determinate S in dependent clause*
- needii **baxs** **Michael**
 NEG=FOC run=PN **Michael**
 ‘Michael didn’t run.’
- (10) *plural determinate S in dependent clause*
- needii **gols** **dip** [Michael **gan** **t** Gidi]
 NEG=FOC run.PL=PN ASSOC [Michael PH.CNJ DM Katie]
 ‘Michael and Katie didn’t run.’
- (11) *singular determinate A in dependent clause*
- a. neediit gya'as **Michael** **t** Aidan
 NEG=FOC=3.I see=PN **Michael** DM Aidan
 ‘Michael didn’t see Aidan.’
- b. neediit gya'as **Michael** ('nit)
 NEG=FOC=3.I see=PN **Michael** (3.III)
 ‘Michael didn’t see him.’
- (12) *plural determinate A in dependent clause*
- a. neediit gya'as **dip** [Michael **gan** **t** Gidi] **t** Aidan
 NEG=FOC=3.I see=PN ASSOC [Michael PH.CNJ DM Katie] DM Aidan
 ‘Michael and Katie didn’t see Aidan.’
- b. neediit gya'as **dip** [Michael **gan** **t** Gidi] ('nit)
 NEG=FOC=3.I see=PN ASSOC [Michael PH.CNJ DM Katie] (3.III)
 ‘Michael and Katie didn’t see him/her.’
- (13) *singular determinate O in dependent clause*
- a. neediit gya'as **Michael**
 NEG=FOC=3.I see=PN **Michael**
 ‘S/he didn’t see Michael.’
- b. neediit gya'as Gidi **t** **Michael**
 NEG=FOC=3.I see=PN Katie DM **Michael**
 ‘Katie didn’t see Michael.’

(14) *plural determinate O in dependent clause*

- a. neediit gya'as **dip** [Michael **gan** **t** **Gidi]**
 NEG=FOC=3.I see=PN ASSOC [Michael PH.CNJ DM Katie]
 'S/he didn't see Michael and Katie.'
- b. neediit gya'as Gidi **dip** [Michael **gan** **t** **Aidan]**
 NEG=FOC=3.I see=PN Katie ASSOC [Michael PH.CNJ DM Aidan]
 'Katie didn't see Aidan and Michael.'

Table 4 summarizes the distribution of both determinate (DM) and common (CN) NPs.

Table 4: Gitksan connectives by clause and argument type

| | S | | A | | O | |
|-----------|-------|-----------|-----------|-----------|-------|-----------|
| | IND | DEP | IND | DEP | IND | DEP |
| V-SCN | =hl | =hl | | | | |
| V-SDM | t/dip | =s/=s dip | | | | |
| V-ACN-OCN | | | =hl | =hl | =hl | =hl |
| V-ACN-ODM | | | =hl | =hl | t/dip | t/dip |
| V-ACN | | | =hl | =hl | | |
| V-ADM | | | =s/=s dip | =s/=s dip | | |
| V-ADM-OCN | | | =s/=s dip | =s/=s dip | =hl | =hl |
| V-ADM-ODM | | | =s/=s dip | =s/=s dip | t/dip | t/dip |
| V-OCN | | | | | =hl | =hl |
| V-ODM | | | | | t/dip | =s/=s dip |

How to read the table:

- As specified in the left-hand column, connectives are classified according to their distribution in clauses with S, A, and O arguments headed either by common nouns (CN) or determinates (DM).
- Clauses listed with a single A or O (e.g. V-ACN, V-ODM) have no *overt* O and A argument, respectively; however, a covert argument is present, recoverable via pronominal morphology and/or the discourse context.
- For each grammatical function (top row), clauses are cross-classified (second row) as independent (IND) or dependent (DEP).

- iv. For determinates, both singular and plural values are given, with the singular preceding the plural (*sg/pl*).

2.1 Four generalizations and two potential analyses

The following generalizations immediately emerge from an inspection of Table 4.

- A. The distribution of the common noun connective *=hl* is completely uniform across clause type and grammatical function.
- B. The singular determinate connectives *t* and *=s* are in complementary distribution.
- C. The plural marker *dip* is in complementary distribution with *t*, but co-occurs with *=s*.
- D. *=s* only occurs on an argument immediately left-adjacent to the verb.

Since *=hl* poses no morphosyntactic challenges, we will set it aside here, focusing on the interaction of *=s*, *t* and *dip*. There are two basic ways to understand this interaction:

- I. *t* and *=s* are allomorphs, and *dip* is a separate marker of plurality
- II. *dip* is the plural allomorph of *t*, and *=s* marks something else

Analyses based on both interpretations have been proposed previously in the IT literature. An analysis based on (I) and schematized in Table 5 was assumed in early work by Rigsby and Tarpent (Tarpent 1982, Rigsby 1986), but later abandoned in favour of an analysis based on (II), developed by Tarpent (1987*b*, 1988) and later modified by Hunt (1993). Tarpent's version is schematized in Table 6 (see also Rigsby 1989, note 1).

Table 5: A type I analysis of the connective paradigm

| | CONTEXT 1 | CONTEXT 2 |
|---------------|--------------------|--------------|
| CN connective | <i>hl</i> | |
| DM connective | <i>t</i> | <i>s</i> |
| DM PL | <i>(t → ∅) dip</i> | <i>s dip</i> |

Table 6: A type II analysis of the connective paradigm

| | SG | PL |
|---------------|----------|------------|
| CN connective | | <i>hl</i> |
| PN connective | | <i>s</i> |
| DM marker | <i>t</i> | <i>dip</i> |

In Table 5, there are two sets of connectives, common noun and determinate; the latter may be pluralized by a separate plural marker. In Table 6, there are common noun and proper noun connectives, with separate singular and plural ‘determinate markers’.

Both proposals face analytical challenges. For Type I analyses, there are two: (a) specifying the contexts in which the allomorphs *t* and *=s* surface, and (b) explaining the failure of *t* to co-occur with *dip*. For Type II analyses, the main challenges both involve the restricted distribution of *=s*: (a) explaining the failure of *t* to co-occur with *=s*, and (b) explaining the failure of *=s* to occur anywhere except immediately adjacent to the predicate.

In the following sections we will explore these analyses in more detail. We will begin with Type II analyses, since these have been favoured recently, either in Tarpent’s original version or the modified account given by Hunt (1993). We will then return to Type I analyses, ultimately arguing for a greatly modified version of Rigsby’s original account.

3 Type II analyses: Tarpent (1987*b*) and Hunt (1993)

Of the two challenges faced by Type II analyses, the first (accounting for the complementary distribution of *=s* and *t*) admits of a fairly straightforward solution: a morphophonological rule which deletes *t* immediately after *=s* and before a following consonant.

(15) *Cluster Simplification* (Tarpent 1986:31 note 3b)

$t \rightarrow \emptyset / =s __ C$
DM PN

Hunt (1993) observes that this rule must be morphologically conditioned, because clusters of *[stC]* occur not infrequently elsewhere in the language, as in the following examples:

(16) **aksthl** gudaksi'y
wet-INTR=CN coat-1SG.II
‘My coat is wet.’

(Hunt 1993:17)

- (17) ama'mas **t** **Mary**
 beautiful DM Mary
 ‘Mary is beautiful.’ (Hunt 1993:17)

The second problem, the limited distribution of $=s$, is more problematic for the Type II analysis. Recall that unlike t or $=hl$, $=s$ only ever shows up immediately to the right of the predicate. As far as we can tell, Tarpent offers no explanation for this restriction.

Hunt (1993), however, does. Hunt adopts the outlines of Tarpent’s account, but rather than treating $=s$ as a connective, she proposes that it is a *case marker*. As such, it is not expected to act as the determinate counterpart of $=hl$, which appears uniformly on common noun arguments (that function is assumed by t and *dip*); rather, as a case marker, it should be sensitive to grammatical function. Hunt’s system is schematized in Table 7.

Table 7: Hunt’s (1993) connective paradigm

| | SG | PL |
|-----------------------------|--|--------------|
| CN connective | <i>hl</i> | |
| DM connective | <i>t</i> | <i>dip</i> |
| (in <i>s</i> -case context) | <i>s</i> ($t \rightarrow \emptyset$) | <i>s dip</i> |

Like Tarpent, Hunt appeals to cluster simplification (15) to account for the absence of the $=s t$ combination, but otherwise her system is rather different. In particular, t and *dip* are restored to their original roles as connectives rather than being treated as a separate set of determinate markers, accounting for their relatively unrestricted distribution (like $=hl$ but unlike $=s$, they appear on objects in V-A-O_{DM} clauses, for example). The anomalous element in Hunt’s system is clearly $=s$.

3.1 Generalizations on the distribution of $=s$

There is good justification for Hunt’s breakdown of the paradigm this way: $=s$ is the only one of the four connective elements to be restricted to immediately post-predicative position, and the only one to show sensitivity to the particular form of agreement on the predicate. These two unique properties are combined in what Hunt refers to as the ‘ $/s/$ -case-assignment condition’:

- (18) */s/ case-assignment condition*
 $/s/$ -case is assigned to an NP if and only if
 a. it is adjacent to a lexical head *and*
 b. it is coreferent with the Series II suffix on that head (Hunt 1993:200)

(19) a. hlimooyis Kathy t John
 help-TR=PN Kathy DM John
 'Kathy helped John.'

b. hlimooyitgas Kathy t John¹¹
 help-TR-3.II=REPORT=PN Kathy DM John
 'I heard that Kathy helped John.' (Hunt 1993:19)

- Hunt follows Tarpent in concluding that third person Series II *-t* is always underlyingly present, irrespective of the presence of a following overt argument, but is deleted under adjacency with a following *=s*. This second t-deletion rule, termed *deaffrication* by Tarpent (1988), also applies before the common noun connective *=hl*, and is formulated as in (21):¹³

-t → Ø / {=s, =hl}
3.II PN, CN

¹¹ The final *t* in *gat* is deleted here by the deaffrication rule (21), which deletes *t* before =*s* or =*hl*.

¹² The *d* which surfaces here is underlyingly *-t*, changed by the pervasive rule of Tsimshianic obstruent voicing which affects all stops and affricates before a vowel: see e.g. Rigsby (1986).

¹³ Though Hunt (1993:116, note 63) points out that 'deaffrication' is a misnomer, because the rule applies to a sequence of *t* + fricative, not to an affricate, we retain it here for reasons of continuity with earlier work.

that counterexamples to both of these rules involve the lexical root as part of the relevant environment for deletion. Turning this observation around, we see that a /t/ or /s/ in a lexical root may serve neither as a valid trigger nor target of any deletion process. This is suggestive of a larger phonological generalization: lexical roots are protected from reduction processes like (15) and (21) (cf. work on Root Faithfulness, e.g. McCarthy and Prince 1995). We therefore expect reduction processes to occur only amongst inflectional elements like the person suffixes and connectives, as attested, without requiring reference to specific morphemes.

Adoption of the above establishes that =s always co-occurs with Series II -t. But what about the /s/-case condition's coreference requirement? At first sight, this appears counter-intuitive, since =s may introduce arguments bearing any of the three grammatical functions: determinate A in both independent and dependent clauses, determinate S in dependent clauses, and determinate O in dependent clauses without a lexical subject. The coreference condition therefore entails that third person Series II -t can switch allegiance between A, S and O functions, not only between but also within clause types.

However counter-intuitive it might seem, there is in fact strong evidence that the coreference condition is correct. Switching functions between clause types is a hallmark of Series II pronouns, which are employed as ergatives (i.e., in A function) in independent clauses, and (usually) as absolutives (i.e., in S and O functions) in dependent clauses (as shown in Table 2 above). Since in independent transitive clauses Series II is always linked to the A argument, and A arguments are always immediately adjacent to the right edge of the predicate, (18) correctly predicts that =s will occur on all and only overt A arguments in transitive independent clauses.

The situation is more complicated in dependent clauses, where Series II pronouns normally mark the S and O arguments (i.e., they show an absolutive distribution), but sometimes unexpectedly mark the A argument instead, contrary to the basic pattern shown in Table 2.

The exceptional cases all involve a third person Series II pronoun 'doubling' the third person Series I clitic pronoun *t*, which uniformly marks the A function in dependent transitive clauses. The most obvious such case involves the third person plural Series II suffix *-diit*, which marks the A rather than the O argument in dependent clauses with a third person plural subject and a lexical object.¹⁴

- (22) neediit gya'adiit t Michael
 NEG=FOC=3.I see-3PL.II DM Michael
 'They didn't see Michael.'

¹⁴ Since the language simply lacks a third person plural Series I clitic, the exceptional use of the Series II third person plural suffix here seems to be a way of circumventing a lexical gap in the Series I paradigm, with 'knock on' effects elsewhere in the pronoun system.

The A function is marked overtly here both by the Series I pre-predicative third person (number neutral) clitic *t* and by the Series II suffix *-diit*.¹⁵ In order to express a third person singular A with a third person plural O, the language resorts to using the Series III (independent) plural pronoun *'nidiit*, which occupies the regular post-predicative object argument slot, as shown in (23):

- (23) neediit gya'as Michael **'nidiit**
 NEG=FOC=3.I see=PN Michael **3PL.III**
 'Michael didn't see them.'

By hypothesis, the appearance of *=s* above in (23) forces deletion of an underlying third person singular Series II suffix *-t* (via the deaffrication rule in (23)). This predicts that if an evidential enclitic is inserted between *-t* and *=s*, *-t* will surface. It does:

- (24) neediit gya'**adimaas** Michael **'nidiit**
 NEG=FOC=3.I see-3.II=EPIS=PN Michael **3PL.III**
 'Perhaps Michael didn't see them.'¹⁶

But in this case, what is the Series II suffix *-t* marking? It cannot be the O, because Series III pronouns (unlike Series I clitics) *never* double other arguments, either lexical or pronominal (see Section 1.1 above). This leaves only one

¹⁵ In the absence of a lexical (NP) object, *-diit* is able to mark *either* the object *or* the subject in dependent clauses:

- (iii) Neediit t'**isdiit**
 NEG=FOC=3.I hit.with.fist-3PL.II
 (a) 'They hit him/her.'
 (b) 'S/he hit them.'

This ambiguity can be resolved either contextually or grammatically. In the latter case, a Series III pronoun is employed in object position: since Series III pronouns cannot be cross-referenced with any other pronominal marking, a subject interpretation for *-diit* is forced (iv).

- (iv) Neediit t'**isdiit** **'nit**
 NEG=FOC=3.I hit.with.fist-3PL.II **3SG.III**
 'They hit him/her.' (unambiguous)

¹⁶ Unlike Series II *-t*, 3rd plural Series II *-diit* never co-occurs with a lexical DP (Tarpent 1988, Hunt 1993:182), as shown in (vi) below. In contexts where a Series II pronoun doubles a plural argument, the third person singular (or rather, number-neutral) suffix *-t* appears instead (v).

- (v) hlixxwhl simimnaks**dimaas** dip John gan t Mary
 finish=CN together-marry-3.II=EPIS=PN ASSOC John PH.CNJ DM Mary
 'John and Mary apparently just got married.'
- (vi) *hlixxwhl simimnaks**diidimaas** dip John gan t Mary
 finish=CN together-marry-3PL.II=EPIS=PN ASSOC John PH.CNJ DM Mary

possibility: both Series I *and* Series II pronouns mark the A function in dependent clauses such as (23) and (24).

This finding extends to non-plural contexts. A sentence such as (25) with a single overt argument is surface ambiguous:¹⁷

- (25) neediit gya'as Michael
 NEG=FOC=**3.I** see=**PN** Michael
 (i) 'S/he didn't see Michael.'
 (ii) 'Michael didn't see him/her/it.'

On reading (i), the underlying Series II *-t* refers to the O function, and is coindexed with the lexical argument *Michael*, just as it would, for example, in a parallel sentence with a first person Series I (ergative) clitic:

- (26) neediin gya'as Michael
 NEG=FOC=**1SG.I** see=**PN** Michael
 'I didn't see Michael.'

But on reading (ii) of (25), the Series II *-t* refers to the A function, just as in (23) and (24). We can see this if we replace the null object with a third person singular Series III pronoun:¹⁸

- (27) neediit gya'as Michael 'nit
 NEG=FOC=**3.I** see=**PN** Michael **3SG.III**
 'Michael didn't see him/her.' (unambiguous)

And just as in the plural case, insertion of an evidential clitic leads to the re-emergence of the covert *-t*:

- (28) neediit gya'adimaas Michael 'nit
 NEG=FOC=**3.I** see=**3.I=EPIS=PN** Michael **3SG.III**
 'Perhaps Michael didn't see him/her.' (unambiguous)

¹⁷ See Tarpent (1988:114) who gives similarly ambiguous cases from Nisga'a. Tarpent (1987a:155) had earlier attempted to argue that interpretation (i) of these cases is disfavoured, due to her claim that Nisga'a is 'syntactically ergative' and more specifically that it has an absolute rather than a nominative 'pivot' in discourse contexts. Furthermore, she claims that sentence-level stress systematically distinguishes between the two interpretations, since the A always has weaker prominence than the O. We have found neither of these claims to be true in Gitksan. There is no preference for interpretation (ii) over (i) – in fact, if anything, the contrary is true, since speakers prefer to insert an overt Series III pronoun in object position for (ii) – and in a pilot phonetic study of examples such as (25), elicited with the help of storyboards, McClay (2015) found no prosodic difference between the two cases. See also note 18 immediately below, and Hunt (1993:42–44), who comes to the same conclusion.

¹⁸ The variant in (27) with an overt object pronoun is actually more common than the version without (interpretation (ii) of (25)), at least in elicitation contexts where a discourse antecedent is not provided for the null object.

Notice that in (28), as in its plural counterpart in (24), all three pronoun series are represented: the Series I pre-predicative clitic *t* and the Series II suffix *-t* both mark the A function, while the Series III independent argument pronoun *'nit* marks the O function.

In fact, this configuration is not even restricted to cases with third person objects. It is also possible to employ other Series III pronouns in O function in dependent clauses, as in (29), which is an acceptable alternative to the more standard agreement configuration in (29). Just as elsewhere with a covert Series II *-t*, insertion of an evidential enclitic blocks deletion and allows the *-t* to surface (29).

- (29) a. neediit gya'a'y t Michael
 NEG=FOC=3.I see=1SG.II DM Michael
 'Michael didn't see me.'
- b. neediit gya'as Michael 'nii'y
 NEG=FOC=3.I see=PN Michael 1SG.III
 'Michael didn't see me.'
- c. neediit gya'adimaas Michael 'nii'y
 NEG=FOC=3.I see=3.II=EPIS=PN Michael 1SG.III
 'Michael didn't see me.'

In all of these cases, *=s* appears if and only if an overt or covert Series II *-t* suffix is present on the predicate, and is coindexed with an immediately adjacent determinate argument. In short, Hunt's /s/-case condition in (18) is an accurate description of the facts.

3.2 Is *=s* a case-marker?

Having provided evidence for Hunt's generalization, let us now, however, ask whether it supports her contention that *=s* is a *case marker*. This is not a simple question to answer, since 'case' covers a multitude of theoretically heterogeneous notions. Hunt, furthermore, never attempts to justify her claim, but is content to label *=s* as '/s/-case' and leave it at that.

Most approaches to case, however, agree on some version of the following basic properties:¹⁹

- A. Case is a form of dependent marking (i.e., it marks an argument rather than a predicate)
- B. Case at least partially reflects a hierarchy of grammatical functions which may or may not be instantiated in phrase structural terms.

¹⁹ These properties are characteristic of 'structural case', as opposed to 'inherent' or 'semantic' case, which is tied to specific thematic roles; the latter is clearly not relevant to *=s*.

- C. Case is relational: that is, within a grammar, cases are only defined relative to each other.

We can now ask to what extent /s/-case meets these criteria.

Concerning A.: Since =s is always prosodically attached to the (immediately left-adjacent) *predicate*, and not to an argument, it is not surface obvious that it meets the dependent marking criterion. A case-based analysis must come up with a supplemental explanation for its distribution.

Concerning B.: Because it tracks agreement so closely, =s shares the idiosyncratic behaviour of third person Series II -t. In particular, while it is associated with A function in independent clauses, and (usually) S and O functions in dependent clauses (see Table 2), in cases of doubling =s may also mark A in dependent clauses. Thus, while =s must presumably ultimately be linked to a functional hierarchy, the mapping is indirect, via agreement. Furthermore, there is no evidence that =s-marked arguments occupy a unique syntactic position, since, as far as we know, there are no structural tests in IT which pick out just the class of nominals which are linked to Series II agreement (for a survey of structural tests in Gitksan, see Hunt 1993: Chapters 3 and 4).

Concerning C.: To the extent that it marks case at all, the basic distinction in IT is between ‘direct’ and ‘oblique’ arguments; the former are unmarked, while the latter are introduced by a preposition. Direct arguments include S, A, and O, but =s does not mark any of them consistently, and there is no evidence of a second (unmarked) case to which it is opposed.

We conclude that though it is difficult to produce knock-down arguments against a case-based analysis of =s, simply because the notion ‘case’ can be interpreted so variably, =s clearly does not fit the typological profile of a case-marker: it forms a prosodic constituent with the predicate, marks all three grammatical functions, and does not form part of a standard case opposition. In short: /s/-case is not case.

4 A new Type I analysis of the connective system

In view of the problems with treating =s as a case marker, we would like to suggest a new approach – or rather, a new variant of the older Type I approach to the connective system – containing the following core claims: (i) =s is in fact an allomorph of connective *t*, with its appearance conditioned by adjacency to a predicate containing a coindexed Series II -t suffix; and (ii) *dip* is not part of the connective system at all, but is a separate *associative marker* (Forbes 2013a).

In Table 8, we schematize our version of the Type I analysis (cf. Table 5 above).

Table 8: A new Type I analysis of the connective paradigm

| | CONTEXT 1 | CONTEXT 2 |
|----------------|-----------|-------------------------------------|
| CN connective | | <i>hl</i> |
| DM connective | <i>t</i> | <i>t</i> (\rightarrow <i>s</i>) |
| Associative PL | | <i>dip</i> |

The basic ingredients of this analysis are as follows:

- A. $=s$ is derived from determinate *t* by a *softening rule* which applies under adjacency with the right edge of the predicate, with the additional condition that the argument introduced by *t* be coindexed with a third person Series II $-t$ on the predicate.
- B. The softening rule is crucially ordered before a *degemination rule* that deletes *t* before the associative marker *dip*.²⁰
- C. The softening rule is also crucially ordered before the *deaffrication rule* (21), which deletes Series II $-t$ before $=s$ or $=hl$.

We assume softening takes the form in (30), and degemination the form in (31). Deaffrication is repeated here as (32).

(30) *Softening*

$$\begin{array}{ccccc} t & \rightarrow & =s & / & -t_i] \text{ ___ } [NP]_i \\ \text{DM} & & \text{PN} & & 3.\text{II} \end{array}$$

(31) *Degemination*

$$\begin{array}{ccc} t & \rightarrow & \emptyset / \text{ ___ } dip \\ \text{DM} & & \text{ASSOC} \end{array}$$

(32) *Deaffrication (=21)*

$$\begin{array}{ccc} -t & \rightarrow & \emptyset / \text{ ___ } \{=s, =hl\} \\ 3.\text{II} & & \text{PN, CN} \end{array}$$

The rules operate as follows. Determinate *t* is softened to $=s$ when following a coindexed Series II suffix $-t$. The suffix that triggered this change is then deleted before the $=s$ it has produced via deaffrication, in a classic case of feeding order opacity. Otherwise, *t* remains *t*. In environments where *dip* follows this *t*, the *t dip* sequence is degeminated to simply *dip*.

To illustrate this rule interaction, let us work through a couple of the example sentences given above. We begin with (6a), repeated below as (33):

²⁰ The *d* in *dip* is itself derived from a phonemic *t* by obstruent voicing, as mentioned in note 12.

- (33) gya'as dip [Michael gan t Aidan] t Gidi
 see[TR]=PN ASSOC [Michael PH.CNJ DM Aidan]DM Katie
 'Michael and Aidan saw Katie.'

By hypothesis the underlying form is as in (34).

- (34) gya'at t dip [Michael gan t Aidan] t Gidi
 [see[TR]-3.II_i] DM ASSOC [Michael PH.CNJ DM Aidan]_i DM Katie

The environment for softening is met, so the DM following the verb becomes =s:

- (35) gya'ats dip [Michael gan t Aidan] t Gidi
 [see[TR]-3.II_i]=PN ASSOC [Michael PH.CNJ DM Aidan]_i DM Katie

Now deaffrication (21) applies to delete the Series II -t, yielding (33).

Next, let us take a case where softening fails to apply. One such case is (8b), repeated as (36):

- (36) gya'at **dip** [Michael gan t Aidan]
 see[TR]-3.II **ASSOC** [Michael PH.CNJ DM Aidan]
 'S/he saw Michael and Aidan.'

The underlying form here is (37):

- (37) gya'at t dip [Michael gan t Aidan]]
 see[TR]-3.II_i DM ASSOC [Michael PH.CNJ DM Aidan]]_i

The Series II -t on the verb is contra-indexed with the adjacent nominal, so softening is blocked, and since softening feeds deaffrication, the latter also fails to apply. However, the environment for degemination is met, and therefore DM *t* deletes before *dip*, yielding the surface form (36).

4.1 Consequences

The analysis outlined above has the following consequences.

- A. The determinate connective *t* and its plural counterpart *dip* are no longer part of the same paradigm: *dip* is a separate *associative marker*, as independently argued by Forbes (2013*a,b*).
- B. There is no longer a number distinction in any part of the connective system.
- C. DM *t* is now present underlyingly with all determinates, mirroring the behavior of CN =*hl*.
- D. PN =*s* has been reduced to a reflex of *t*: hence it is just an allomorph of the determinate connective. There is no 's/-case'.
- E. Since determinate noun phrases always show up with =*s* when they are complements to the prepositions *a* and *go(')o*, we must assume that

prepositions are themselves inflected for third person Series II *-t* agreement.

Of these consequences, we take (B), (C) and (D) to be both self-evident and to constitute clear advantages of our analysis over previous accounts; (A) and (E), however, merit more discussion, and are further elucidated in Sections 4.2 and 4.3 below, respectively.

4.2 *Dip* as an associative marker

Consequence (A) of our analysis concerns the ‘determinate plural’ particle *dip*, which we propose need not be considered a counterpart of the connective morpheme *t* with which it appears to alternate. Instead, we argue following Forbes (2013a,b) that it independently marks an associative or group interpretation for determinate nouns, and co-occurs underlyingly with a number-neutral *t*. The lack of surface co-occurrence with *t* is explained by morphophonological means (specifically, the degemination rule in (31)).

As remarked by all who have discussed this morpheme (e.g. Rigsby 1986; Tarpent 1981, 1987b), *dip* introduces a “group” interpretation when used with a determinate noun. The noun in a *dip* NP sequence serves as the representative member of a group whose other members are identified contextually.

- (38) *dip* *nigwood'y*
 ASSOC father-1SG.II
 ‘my parents’ or ‘my dad and his friends’

- (39) *jabis* *dip* *ts'iits'* *ahl* *jam* *miyup*
 make-TR=CN ASSOC grandmother OBL=CN cook rice
 ‘The grandmothers made rice.’
 BS: There could be grandfathers there too, and only one ts'iits'.

Corbett’s (2001) crosslinguistic discussion of number identifies this as a specific *associative* subset of plurality, which sometimes overlaps with a more familiar additive interpretation. The terminological distinction between additive and associative plurals is important to make in Gitksan, however, as *dip* is crucially restricted to an associative interpretation, contrasting semantically with numerous other morphological plurals in the language.²¹

As shown in (40), reduplicative plural morphology is not able to perform this semantic function:

²¹ Other subsets of the general ‘plural’ notion are similarly marked in Gitksan; Rigsby (1986) notes distributive and collective plural morphemes (*ga-* and *-(t)xw* respectively). The specifically distributive vs. collective usage of these morphemes, in contrast to other plural interpretations, merits further investigation.

- (40) doxhl **sipsip** goohl laxyip
 lie.PL PL~bone LOC=CN on-earth

‘There are bones on the ground.’

Researcher: Could there be one bone, and other dog toys on the ground, like balls (hlit’)?

Consultant: No.

Further, as demonstrated by native speaker judgements to (41)–(42), it does not seem to be possible for *dip* to function as a traditional additive plural, as is for example possible when names are pluralized in English.

- (41) saksins dip Michaels hla ga'windiit
 clean-CAUS=CN ASSOC Michael-PL NMZ PL-teeth-3PL.II
 ‘The Michaels (= Michael and his reflections in the mirror) cleaned their teeth.’

Consultant: I’m not sure if “Michaels” is right, but it seems like there should be something there.

- (42) k'ap lukw'il wilix wila ky'uulst Michaelhl
 EMPH very smart how one.hum-PASS=CN Michael=CN
 wilaa'y
 know-1SG.II

‘The Michaels I know are very smart.’

Consultant: How do I say a plural for Michaels?

*Researcher: Could you say **dip Michael**?*

Consultant: No, not in Gyaanimx.

The absence of an additive interpretation for determinate nouns suggests that *dip* is strictly associative.²²

With the semantic interpretation of *dip* clarified, we now consider some motivation for removing this morpheme from the connective system.

First, to our knowledge there is no previously identified case of an article sensitive to this semantic category (though this is not to say such a thing would not be possible). Instead, associatives crosslinguistically tend to be linked to other types of plural markers, whether by sharing their form or other properties of their distribution. We note that in Tsimshianic, *dip* is homophonous with the 1st plural Series I clitic, which appears pre-predicatively rather than pre-nominally. Given

²² An additive interpretation is possible for kinship terms, though this is usually accomplished with the distributive. *Dip* may co-occur with this morpheme.

- (vii) (dip) ganits'iits'xw'm
 (ASSOC) DISTR-grandmother-PASS-1PL.II
 ‘our grandmothers’

Gitksan generally allows different types of plural markers to co-occur in this fashion, e.g. simultaneous prefixation and reduplication on common nouns. We therefore do not take the co-occurrence facts as evidence against an analysis of *dip* as a plural marker.

the inherent associativity of first person plurals (which mark the self and a group of others, rather than multiple selves), it seems that these two morphemes are likely diachronically linked, though we do not speculate which usage might have been derived from the other.

Second, we note some optionality in the distribution of *dip* that goes unexplained under an analysis of this morpheme as a connective. Tarpent (1981:400) notes that *dip* may co-occur with Series III independent pronouns as a way of emphasizing a group interpretation.

- (43) a. (dip) 'nuu'm
(ASSOC) 1PL.III
'us (guys)'
- b. (dip) 'nisi'm
(ASSOC) 2PL.III
'you guys'
- c. (dip) 'nidiit
(ASSOC) 3PL.III
'them (guys)'

The use of *dip* with coordinated determinate nouns is also optional, as shown in (44) below:

- (44) si'anaax (dip) Henry gans Lisa
CAUS-bread (ASSOC) Henry PH.CNJ=CN Lisa
'Henry and Lisa baked bread.'

Such a pattern more closely resembles that of nominal plural marking, which is often required to achieve a plural interpretation, but is not strictly obligatory; speakers we have worked with occasionally omit it, and when asked comment that an added plural marker makes a sentence "more correct."

In light of these facts, it is clear that the inclusion of *dip* in the connective system does not simply introduce a distinction on the basis of number. Rather, it introduces optionality on a semantic basis into a system which otherwise obligatorily marks a noun class distinction, and obligatorily alternates for grammatical function. The connective system without *dip* can be described cleanly in terms of agreement with syntactic properties. Given that *dip* can be understood equally well as an independent marker of associativity, we argue that this added simplicity is worth the cost of removing it from the connective system.

We now consider the precise nature of this cost: the mechanisms required to explain why, of all three of the connectives, *dip* only co-occurs with =s.

Its inability to co-occur with =hl is easy to explain: all accounts of *dip* require that it be restricted to the class of determinate nouns. This clashes with the strictly non-determinate properties of =hl. Such a distribution is even more restricted than is crosslinguistically common for associatives, usually restricted to use only with human or animate nouns, and is illustrated in (45).

- (45) a. bakw **dip** John (ganhl hliguutxwt)
 come.PL ASSOC John (PH.CNJ=CN family-3SG.II)
 goohl li'ligit
 LOC=CN feast
 'John and his family arrived at the feast.'

- b. *bakw**hl** **dip** **sim'oogit** (ganhl hliguutxwt)
 come.PL=CN ASSOC **chief** (PH.CNJ=CN family-3.II)
 goohl li'ligit
 LOC=CN feast
 intended: 'The chief and his family arrived at the feast.'

Dip also fails to co-occur overtly with *t*. We accomplish this by assuming that they appear together underlyingly (as presented in (36) and (37) above), but that *t* procliticizes to *dip*,²³ and is deleted via the degemination rule presented in (31) and repeated below as (46).

- (46) *Degemination*
 t → Ø / __ dip
 DM ASSOC

As this rule is phonologically motivated, with the effect of deleting two adjacent coronal stops in onset position,²⁴ we are of the view that the cost incurred is relatively minor compared to the simplification of the overall system afforded by shifting *dip* from 'connective' to 'associative marker'.

4.3 The morphosyntax of PPs

We now turn to consequence (E) of our analysis, which concerns the connective system in prepositional phrases. IT has only two prepositions (or oblique markers): the general purpose preposition *a*, and the specifically locative preposition *go(')o*.²⁵ Both induce =s when their complement is a determinate noun phrase:

- (47) gi'namis Johnhl anaax as Mary
 give-TR=PN John=CN bread PREP=PN Mary
 'John gave the bread to Mary.' (Hunt 1993:113)

²³ For more on the proclitic properties of *t*, refer to note 9.

²⁴ We further note that the only other instances of adjacent coronal stops in onset position are those involving names, such as *t Tom*; we have already noted that phonemes within roots tend to be immune to processes of deletion. If names were to be considered as roots, then the degemination rule in (46) could potentially be reformulated as a more general phonological rule which did not refer to *dip* in particular.

²⁵ This statement has to be slightly qualified: *a* has a suppletive alternate *loo* which is used with Series II suffixes to yield oblique forms of pronouns (e.g., *loo-t* P-3.II, *loo-n* P-2SG.II). We set these forms aside, since they are not directly relevant to the issue at hand.

- (48) 'witxw t John go'os Mary
 come DM John LOC=PN Mary
 'John went to Mary's place' (Hunt 1993:113)

By hypothesis, this means that the underlying representation for a preposition with a determinate noun phrase complement must include Series II *-t*, which induces softening of determinate *t* to *=s* and then deletes by deaffrication, as shown in the schematic derivation in (49).²⁶

- (49) *a-t t Mary* → *a-t=s Mary* → *a=s Mary*
 (softening) (deaffrication)

This means in turn that we must effectively treat all prepositions in IT as inflected. We see no objection to this move, either empirically or theoretically, though it must also be admitted we have no independent evidence to support it.

5 Extending the analysis to Coast Tsimshian

On any analysis, the IT connective system and its relation to the pronominal system raises questions as to how it arose, and which of its components are shared by its CT relatives. In this section, we therefore compare the IT system with what we can deduce of the CT system from Dunn (1979*a,b*), Mulder (1994), Stebbins (2003), Bach (2004), and Anderson and Ignace (2008). This is not the first time the comparison has been made: Peterson (2004) is an earlier attempt, though with somewhat different analytical assumptions (in particular, he adopts Hunt's /s/-case analysis).

In Tables 9 and 10, we compare the two systems systematically, first in independent and then in dependent clauses. Differences between the CT and IT systems are bolded.

Several comments are in order involving the CT forms. First of all, we have confined ourselves to the 'plain' connective system, eschewing an analysis of the more complex formal or 'elaborate' system first recorded by Boas (1911) and discussed in detail by Mulder (1994).²⁷ Second, we have glossed over certain

²⁶ Series III pronouns can also optionally be preceded by *as* (yielding e.g. *as 'niin* 'to you', *as 'nidiit* 'to them', etc.) as an alternative to the specialized oblique pronominals beginning with *loo* (see note 25). There is an added complication here in that Series III pronouns do not normally occur with DM *t*: however, cases where the two do co-occur are reported in Davis and Brown (2011), along with the suggestive comment that "today, they'd leave it out". It seems that independent pronouns used to conform to the general determinate pattern, but have recently lost their initial *t* in IT (it is retained after the phrasal coordinator *gan*, and is still present in CT). For present purposes, we will assume a late local *t*-deletion rule for Series III pronouns only, ordered after softening.

²⁷ It is worth mentioning here Tarpent's interesting take on the CT elaborated system, presented in an unpublished 1998 paper using mostly Southern Tsimshian (Sgüüxs) data. She segments the 'complex' forms into the simple forms plus two 'optional postclitics' =*da'a* and =*ga'a* with deictic meanings (absent/proximal and remote/distal, respectively). She then claims that because the postclitics appear in phrase- as well as sentence-final position (unlike their IT counterparts) they end up adjacent to connectives, and various

phonological complications: in particular, the common noun *=a* connective is deleted systematically before vowels and resonants, and the vowel that we have given as simply ‘V’ (which we treat as epenthetic, following Bach 2004) varies between *a* and *i* under conditions which we do not understand. And third, following Bach (2004) and Peterson (2004) but contra Dunn (1979*a,b,c*), Mulder (1994), and Anderson and Ignace (2008), all of whom follow

Table 9: CT-IT connective comparison: Independent clauses

| | S | | A | | O | |
|----------------------------------|----------------|------------|--------------|------------|--------------|------------|
| | CT | IT | CT | IT | CT | IT |
| S _{CN} | <i>=a</i> | <i>=hl</i> | | | | |
| S _{DM} | <i>=(V)s/t</i> | <i>t</i> | | | | |
| A _{CN} -O _{CN} | | | <i>=a</i> | <i>=hl</i> | <i>=a</i> | <i>=hl</i> |
| A _{CN} -O _{DM} | | | <i>=a</i> | <i>=hl</i> | <i>=(V)t</i> | <i>t</i> |
| CAN | | | <i>=a</i> | <i>=hl</i> | | |
| A _{DM} | | | <i>=(V)s</i> | <i>=s</i> | | |
| A _{DM} -O _{CN} | | | <i>=(V)s</i> | <i>=s</i> | <i>=a</i> | <i>=hl</i> |
| A _{DM} -O _{DM} | | | <i>=(V)s</i> | <i>=s</i> | <i>=(V)t</i> | <i>t</i> |
| O _{CN} | | | | | <i>=a</i> | <i>=hl</i> |
| O _{DM} | | | | | <i>=(V)t</i> | <i>t</i> |

phonological processes then obscure their status as separate morphemes, leading Boas and others following him to misanalyze them as ‘complex connectives’.

Table 10: CT-IT connective comparison: Dependent clauses

| | S | | A | | O | |
|----------------------------------|------------------------|-------------|------------------------|-------------|------------------------|-------------|
| | CT | IT | CT | IT | CT | IT |
| S _{CN} | = <i>a</i> | = <i>hl</i> | | | | |
| S _{DM} | =(<i>V</i>) <i>s</i> | = <i>s</i> | | | | |
| A _{CN} -O _{CN} | | | = <i>a</i> | = <i>hl</i> | = <i>a</i> | = <i>hl</i> |
| A _{CN} -O _{DM} | | | = <i>a</i> | = <i>hl</i> | =(<i>V</i>) <i>t</i> | <i>t</i> |
| A _{CN} | | | = <i>a</i> | = <i>hl</i> | | |
| A _{DM} | | | =(<i>V</i>) <i>t</i> | = <i>s</i> | | |
| A _{DM} -O _{CN} | | | =(<i>V</i>) <i>t</i> | = <i>s</i> | = <i>a</i> | = <i>hl</i> |
| A _{DM} -O _{DM} | | | =(<i>V</i>) <i>t</i> | = <i>s</i> | =(<i>V</i>) <i>t</i> | <i>t</i> |
| O _{CN} | | | | | = <i>a</i> | = <i>hl</i> |
| O _{DM} | | | | | =(<i>V</i>) <i>s</i> | = <i>s</i> |

Boas's original (1911) analysis, we treat the A connectives as simply =*a* and =(*V*)*t*, rather than =*da* and =*dVt*, with the initial *t* (voiced to *d*) actually representing the very same Series II third singular suffix *-t* that much of our analysis of the IT system has revolved around.

Once we have 'cleaned up' the CT connective system in this way, it is clear that it is very close to the IT system. The common noun connectives have different forms (CT has =*a* where IT has =*hl*), but there are traces of =*hl* in the CT system (it replaces =*a* in certain irrealis environments, including under negation and in questions and conditionals: Dunn 1979*a*, Tarpent 1998, Bach 2004).²⁸ The likelihood is that both =*hl* and =*a* originated from a Proto-Tsimshianic *=*ahl* connective.²⁹

As far as the determinate connectives are concerned, the first point to make is that the same elements (*t* and =*s*) appear in more or less the same environments

²⁸ Peterson (2004:336) points out that the correspondence between IT =*hl* and CT =*a* extends to non-standard uses of the CN connective: in particular, where the IT imperfective marker *yukw* selects =*hl* before its complement, its CT cognate *yagwa* can be analyzed as consisting of a root *yakw* plus the common noun connective =*a*.

²⁹ A fluent speaker whom we have worked with from Gitsegukla, but with extensive family connections further west in CT territory, systematically uses =*ahl* instead of =*hl* as the common noun connective in Gitksan. We do not know if this represents a hitherto undocumented 'interlanguage' between IT and CT or if her dialect represents a throwback to an earlier form of IT.

in both systems. Of note is the limited distribution of =s in CT: just as in IT, it only ever appears immediately adjacent to the predicate.

In fact, there are only two significant differences between the two systems. The first is in intransitive independent clauses with determinate subjects: whereas *t* is consistently used in IT (see (3) above), Dunn (1979*b*) and Mulder (1994) report that =s is used in CT, as shown in (50) and (51).

- (50) ada nah manyaas üünalda la huup!
 then PFV walk.up=PN Arnold=PREP INCEP dark
 ‘Arnold used to walk up from the shore in the dark.’ (Dunn 1979*b*:133)

- (51) nah ts'lm'wiihawtgas Mardzi da nawaabu
 PFV into.from-cry=PN Margie PREP POSS-house-1SG.II
 ‘Margie came into my house crying.’ (Mulder 1994:57)

This CT pattern suggests that there should be a Series II *-t* suffix present in intransitive independent clauses, which triggers softening of the determinate marker *t* to =s and then undergoes deletion via deaffrication. Interestingly, there is evidence that this is indeed the case, offering rather striking support for our account. Unlike in IT, in CT Series III independent pronouns are not used in absolutive contexts in independent intransitive clauses: instead, a fourth suffixal paradigm consisting of reduced variants of the independent pronouns is employed, termed the ‘definite objective’ paradigm by Dunn (1979*c*), and the ‘marked absolutive’ paradigm in Dunn (1979*a*). Significantly, this paradigm overlaps in first person singular and third person with the Series II paradigm: in particular, the third person form is simply *-t*. Assuming, then, that this ‘marked absolutive’ *-t* acts exactly like Series II *-t* for the purposes of softening and deaffrication, the difference between CT and IT falls out without stipulation.

However, there is a further interesting wrinkle in the CT data.³⁰ Anderson and Ignace (2008) (see also Sasama 1995:7, note 8) give a number of examples of intransitive clauses introduced by perfective *nah* with subjects introduced not by =s but by the determinate marker *t* (with epenthetic vowel insertion):

- (52) nah yaawxgat Meli
 PFV eat[INTR]=DM Mary
 ‘Mary has eaten.’

- (53) nah hadiksat Sally
 PFV swim=DM Sally
 ‘Sally has swum.’

- (54) nah sisaaxsat Doug
 PFV laugh=DM Doug
 ‘Doug has laughed.’

³⁰ We are grateful to Margaret Anderson for help with the CT data here.

This is, of course, identical (except in phonetic detail) to the IT system. There are two possible explanations. The first is that the cases in (50) and (51) are actually *dependent* clauses, introduced exceptionally by *nah*. Dunn (1979*a*) raises this possibility by claiming that in CT – unlike in IT – the dependent-independent clause distinction is not categorically induced by a set of designated ‘dependent markers’, but is clinal, with certain tense-aspect markers (*yagwa*) most likely to induce dependent inflection, others (*dm*) least likely, and still others (*la* and *nah*) intermediate in status.

The other alternative is that there is a language shift taking place, with older speakers preferring =*s* and younger speakers shifting to *t*. The shift would involve a change in the pronominal paradigm used by CT speakers in independent intransitive clauses, with the ‘definite objective’ or ‘marked absolutive’ -*t* being eliminated altogether, thus bringing CT in line with IT in these contexts. Interestingly, the paradigms for this pronoun series in Dunn (1979*c*:226) and in Anderson and Ignace (2008:303) differ in exactly this way: Dunn gives -*t*, where Anderson and Ignace have Ø.

The second difference between the connective systems of CT and IT is found in transitive dependent clauses, where the A argument is marked with *t* in CT, but =*s* in IT. This is shown in (55) and (56):

(55) *Coast Tsimshian*

- a. yagwat łmoomdit Meli
 IPFV=3.I help-3.II=DM Mary
 ‘Mary is helping him.’ (Bach 2004)

Interior Tsimshian (Gitksan)

- b. yukwt hlimoos Mary (‘nit)
 IPFV=3.I help=PN Mary (3.III)
 ‘Mary is helping him.’

(56) *Coast Tsimshian*

- a. yagwat łmoomdit Melit³¹ Dzon
 IPFV=3.I help-3.II=DM Mary=DM John
 ‘Mary is helping John.’ (Bach 2004)

Interior Tsimshian (Gitksan)

- b. yukwt hlimoos Mary t John
 IPFV=3.I help=PN Mary DM John
 ‘Mary is helping John.’

³¹ The determinate connective *t* is usually written together with the preceding word in CT, unlike in most work on IT. This possibly signifies that it is more closely bound to the preceding prosodic word (like the common noun connectives =*hl*/=*a*), although given that *t* may front together with its NP complement in focusing constructions in CT (as is also possible for more conservative IT speakers), the difference is more likely to be simply orthographic.

Note that in CT, both the third person Series II suffix *-t* and the determinate connective *t* surface overtly in the sequence *-d=it*, separated by what we assume to be an epenthetic vowel [i], which triggers voicing on the immediately preceding *-t*. Softening fails in this environment: but why?

There is an obvious answer to this question: in CT, the third person Series II suffix *-t* is *not* coindexed with the subject, but with the *object*, and therefore the coindexation condition on softening is not met. This means that the difference between the languages falls out from the lack of ‘double A’ marking in CT, whose Series II *-t* shows a straightforward absolutive pattern in dependent clauses, just as in Table 2 above.

We take it as a significant advantage of the analysis we have provided for the IT connective system that it extends so straightforwardly to the CT system, with two truly ‘micro-’parametric adjustments. Otherwise, exactly the same set of morphophonological rules, operating in the same order, accounts for both systems.

6 Conclusion

We believe the account we have given of the Tsimshianic connective system, which has drawn on the important contributions of Tarpent, Hunt, Dunn, Bach, and Peterson, is the most successful description yet. Even so, our analysis is far from simple: it appeals to three morphophonological rules (softening, deaffrication and degemination) which are not only specific to particular morphological environments, but in the case of softening, also subject to a syntactic condition on coindexing. We welcome suggestions on how to simplify the analysis we have provided without losing its empirical coverage.

Beyond the details of our analysis, however, we also think it is important to point out that *any* analysis will have to confront the fact that the Tsimshianic connective system is both quite regular and remarkably opaque. Generally, morphological complexity is measured in terms of the sheer number of morphemes per word, leading both Rigsby and Tarpent to comment that IT is less morphologically complex than e.g., Wakashan and Salish. However, the combination of rampant homophony within the inflectional system (how many *t* morphemes can a language tolerate?) and significant morphophonological opacity (with complex rule-ordering necessary to derive the surface forms) would appear to make Tsimshianic uniquely difficult from the viewpoint of language acquisition. And yet the same system in its essentials characterizes both IT and CT, suggesting a surprising degree of diachronic stability, and therefore learnability. Not for the first time, we are struck with wonder at the human capacity for learning complex grammar.

References

- Anderson, Margaret Seguin and Marianne Ignace 2008. *Visible Grammar: Twenty User Friendly Grammar Modules for Sm'algax*. Prince Rupert, B.C.: Wap Sigatyet, School District 52.

- Bach, Emmon. 2004. Argument marking in Riverine Tsimshian. Handout, available at <http://people.umass.edu/ebach/papers/argmrk.htm>
- Boas, Franz. 1911. Tsimshian. In *Handbook of American Indian Languages*, ed. Franz Boas: 283–422. Washington, D.C.: Smithsonian Institution, Bureau of American Ethnology, Bulletin 40, vol. 1. (Reprinted 1969: Humanities Press/Anthropological Publications, Oosterhout, NB.)
- Corbett, Greville G. 2001. *Number*. Cambridge: Cambridge University Press.
- Davis, Henry, and Jason Brown. 2011. On A'-dependencies in Gitksan. In *Papers for the 46th ICSNL*: 43–80. Vancouver: UBC Working Papers in Linguistics 30.
- Dunn, John Asher. 1979a. *A Reference Grammar for the Coast Tsimshian Language*. Ottawa: National Museum of Canada. Canadian Ethnology Service. Paper No. 55.
- Dunn, John Asher. 1979b. Tsimshian connectives. *International Journal of American Linguistics* 45:131–40.
- Dunn, John Asher. 1979c. Pronominal concord in Coast Tsimshian. *International Journal of American Linguistics* 45:224–31.
- Forbes, Clarissa. 2013a. Associative plurality in the Gitksan nominal domain. In *Proceedings of the 2013 CLA*. Victoria: University of Victoria.
- Forbes, Clarissa. 2013b. Coordination and number in the Gitksan nominal domain. Master's thesis, University of Toronto.
- Hindle, Lonnie and Bruce Rigsby. 1973. A short, practical dictionary of the Gitksan language. *Northwest Anthropological Research Notes* 7. 1–60.
- Hunt, Katharine. 1993. Clause structure, agreement and case in Gitksan. Ph.D. Dissertation, University of British Columbia.
- McCarthy, John J. & Alan Prince. 1995. Faithfulness and reduplicative identity. *University of Massachusetts Occasional Papers in Linguistics* 18: *Papers in Optimality Theory*, ed. Jill Beckman, Suzanne Urbanczyk and Laura Walsh Dickey: 249–384.
- McClay, Elise. 2015. Poster given at final Field Methods presentation (Gitksan): UBC, Vancouver.
- Mulder, Jean Gail. 1994. Ergativity in Coast Tsimshian (Sm'algax). Berkeley / Los Angeles / London: University of California Press. (= University of California Publications: LINGUISTICS Volume 124)
- Mulder, Jean and Holly Sellers 2010. Classifying clitics in Sm'algyax: Approaching theory from the field. *Fieldwork and Linguistic Documentation in Indigenous Languages of the Americas*, ed. by Andrea L. Berez, Jean Mulder, and Daisy Rosenblum: 33–56. Language Documentation and Conservation Special Publication No.2: available at <http://nflrc.hawaii.edu/lcdc/>

- Peterson, Tyler. 2004. Case and the (re)organization of semantic roles in Tsimshian connectives. *Papers for the 46th ICSNL*: 323–340. Vancouver: UBC Working Papers in Linguistics 14.
- Peterson, Tyler. 2010. Epistemic modality and evidentiality in Gitksan at the semantics-pragmatics interface. Ph.D. Dissertation, University of British Columbia.
- Rigsby, Bruce. 1975. Nass-Gitksan: an analytic ergative syntax. *International Journal of American Linguistics* 41:346–354.
- Rigsby, Bruce. 1986. Gitksan grammar. Ms., University of Queensland, Australia.
- Rigsby, Bruce. 1989. A later view of Gitksan syntax. In *General and Amerindian Ethnolinguistics: In Remembrance of Stanley Newman*, ed. M. Key and H. Hoenigswald: 245–259. Berlin: Mouton de Gruyter.
- Sasama, Fumiko. 1995. Coast Tsimshian plural formation with phonological introduction. Master's thesis, Hokkaido University.
- Stebbins, Tonya. 2003. On the class of adjectives in Coast Tsimshian. *Linguistic Typology* 7:383–415.
- Tarpen, Marie-Lucie. 1981. Them Fred: Factors in the evolution of a Tsimshianism. In *Papers for the 16th ICSNL*: 397–401. Missoula, Montana: University of Montana.
- Tarpen, Marie-Lucie. 1982. Ergative and accusative: a single representation of grammatical categories based on evidence from Nisgha. Victoria: *Working Papers of the Linguistics Circle of Victoria*.
- Tarpen, Marie-Lucie. 1986. Nisgha possessives. *Papers for the 21st ICSNL*: 18–34. Seattle: University of Washington.
- Tarpen, Marie-Lucie. 1987a. Between ergative and accusative syntax: lessons from Nisgha/English syntactic interference. *Papers for the 22nd ICSNL*: 149–172. Victoria: University of Victoria.
- Tarpen, Marie-Lucie. 1987b. A grammar of the Nisgha language. Ph.D. dissertation: University of Victoria.
- Tarpen, Marie-Lucie. 1988. Below the surface of Nisgha syntax: arguments and adjuncts. *Papers for the 23rd ICSNL*: 43–80. Eugene, Oregon: University of Oregon.
- Tarpen, Marie-Lucie. 1998. The function of the Southern Tsimshian elements ==ga and ==ka? and the nature of the Tsimshian “connectives”. Handout for paper given at CAIL XXXVII, AAA meeting, Philadelphia, Pennsylvania.

