Clarissa Forbes
Tsimshianic

Abstract: Languages of the Tsimshianic family, spoken in the Skeena and Nass River watershed region in British Columbia, share a number of properties with other languages of the Pacific Northwest region. Their sound inventories feature glottalized consonants, and they permit clusters of consonants without vowels. Their word order is verb-first (VSO), and a central property of the grammar is a robust system of plural marking on both nouns and verbs. This chapter reviews topics on the sound system, word formation, and sentence building. In particular, I review two topics that commanded the majority of linguists' attention until about a decade ago: glottalized sounds, and the agreement/pronoun system. This second is a complicated core area of the grammar, particularly for an L2 learner, and is perhaps unique to Tsimshianic: linguists have described the pattern as one of 'ergative agreement reversal' across two types of clauses. In the course of discussing sounds, words, and sentences, I also briefly cover some more recent lines of linguistic work of interest to language learning and teaching: stress and emphasis in words, mismatches between words and syntactic phrases, tense and perspective, and ways to form questions and convey a topic's importance.

Keywords: Tsimshianic, glottalization, clitics, VSO, plurals, ergativity

1 Introduction[1]

1 = first person, 2 = second person, 3 = third person, AFFRM = affirmative, ANTIP = antipassive, ASSOC = associative, ATTR = attributive, AX = agent extraction, CAUS = causative, CN = common noun determiner, COMP = complementizer, DEM = demonstrative, DETR = detransitive, DUR = durative, FOC = focus, INCEP = inceptive, INS = instrumental, INTR = intransitive, IPFV = imperfective, IRR = irrealis, LOC = locative, NEG = negative, NMLZ = nominalizer, OBL = oblique, PFV = perfective, PL = plural, PN = proper noun determiner, POSS = possessive, PROG = progressive, PROSP = prospective, PROX = proximal, PST = past, SG =

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Tsimshianic derives from *Tsimshian*, an anglicization of Ts'msyen (*ts'm-* 'in' *syen, ksiyeen* 'the Skeena River'), used by the coastal Tsimshianic-speaking peoples to refer to themselves. The Tsimshianic peoples and languages are indigenous to the watersheds of the Skeena and Nass Rivers in the northern region of what is today called British Columbia, Canada, plus one more recently established community in Alaska. The territory spans from the uppermost reaches of the Skeena and Nass Rivers in the BC interior, to where they empty into the Pacific Ocean, as well as nearby coastline and islands. All four Tsimshianic-speaking groups may refer to their language with some variant of the term *s(i)m alg(y)ax* 'true/real speech'.
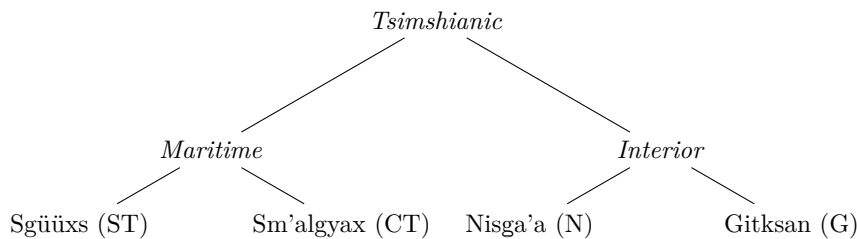

Fig. 1: Table of Tsimshianic family relations

The structure of the family is given in Figure 1. The deepest split is between the Maritime languages (Coast Tsimshian/Sm'algyax and Southern Tsimshian/Sgüüxs), and the Interior languages (Nisga'a and Gitksan).[2] Within both of the two major branches, individual varieties are to a large degree mutually intelligible. The entire family can be considered a continuum of dialects, with each village's speech being somewhat different from that of its neighbors. People from nearby villages understand each other well, but those that are more geographically distant are less able to understand each other.

The earliest documentation of the Tsimshianic languages is a Coast Tsimshian/Sm'algyax text collection and a short comparative grammar of the two

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singular, SPT = spatiotemporal, SX = intransitive subject extraction, T = T-morpheme, TR = transitive, YNQ = yes-no question.

2 Boas referred to the branches as "Tsimshian proper" (Maritime) and "Nass" (Interior). The divisions internal to these categories took some time to be recognized in the linguistic literature as they derive more from sociocultural contrast than unintelligibility. Dunn (1979b) was the first author noting the contrast between Southern Tsimshian/Sgüüxs and Coast Tsimshian/Sm'algyax, and Rigsby (1986, 1989) the first to explicitly divide Nisga'a and Gitksan from their earlier grouping "Nass-Gitksan".

branches from Boas (1902, 1911). The later 20th century saw the development of the modern spelling systems, and print resources such as wordlists and dictionaries (Coast: Dunn 1978; Nisga'a: School District 92 1986; Gitksan: Hindle & Rigsby 1973; Sim'algyax Working Group 1995) or linguistic grammars (Coast: Dunn 1979a; Sasama 2001; Nisga'a: Tarpent 1987; Gitksan: Rigsby 1986). There are few public pedagogical resources. The most accessible and comprehensive is most certainly Anderson & Ignace's (2008) grammar of Coast Tsimshian/Sm'algyax, and there are also teaching resources for the Eastern and Western varieties of Gitksan (Powell & Stevens 1977; Jensen & Powell 1979-1980). In the 21st century, there has been significant emphasis on the development of online talking dictionaries and wordlists (Ts'msyen Sm'algyax Authority 2017; Mother Tongues Dictionaries 2020; FPCC 2020).

Today, the family represents the full spread of language vitality in British Columbia; Gitksan is reported to be the second most vital indigenous language in BC with several hundred speakers, though the youngest are in their sixties (Dunlop et al. 2018). For the Gitxsan, while the Gitksan language is still the language in which business is conducted at feasts, and can be heard in use in some public places, there is a sense that this may begin to shift as new non-speakers take up positions as chiefs in the feast hall. Nisga'a is perhaps ten years further along the cline, and Coast Tsimshian/Sm'algyax yet further, with somewhere between 50 and a handful of speakers remaining. These languages each have hundreds of self-reported active learners. Southern Tsimshian/Sgüüxs has perhaps just one remaining speaker, or none, and just a handful of reported learners (Dunlop et al. 2018).

The Tsimshianic languages share many features with languages of the North Pacific and Pacific Northwest geographic regions; some examples are verb-first word order and large inventories of consonants. They have had contact with neighboring Tlingit and Dene/Athabaskan languages to the north and west, Wakashan languages to the south, and other languages through Chinook Jargon. However, the unique character of the Tsimshianic languages is well-recognized.[3]

In this paper I review topics about sounds (§2), word-formation (§3), sentence-formation (§4), and finally enriched meaning and contexts (§5).

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[3] There is a prevalent hypothesis originating from Sapir (1921) that the Tsimshianic languages can be genetically linked to Penutian languages in Oregon and California, supported by Tarpent (1997). However, the extreme time depth of such a possible relation, as well as the many significant surface differences between Tsimshianic and the other members – enough so that modern Tsimshianic languages neither typologically nor lexically resemble other proposed Penutian languages at all – makes this strictly a hypothesis.

2 The sound level

2.1 Inventory

The Tsimshianic languages have large consonant inventories, exemplified for the Interior branch in Table 1, and Maritime branch in Table 2.[4]

	Labial		Coronal		Palatal	Labiovelar	Postvelar
Stops (Plain)	p	t	ts		kʲ	kʷ	q
Stops (Glottal)	(pʔ)	tʔ	tsʔ	(ƛʔ)	kʲʔ	kʷʔ	qʔ
Fricatives			s	ɬ	xʲ	xʷ	χ
Sonorants (Plain)	m	n		l	j	w	h
Sonorants (Glottal)	mʔ	nʔ		lʔ	jʔ	wʔ	ʔ

Tab. 1: Interior Tsimshianic consonants (Rigsby 1986; Tarpent 1987)

	Labial		Coronal		Palatal	Velar	Labiovelar	Postvelar
Stops (Plain)	p	t	ts		kʲ	k	kʷ	q
Stops (Aspirate)	pʰ	tʰ	tsʰ		kʲʰ	kʰ	kʷʰ	
Stops (Glottal)	pʔ	tʔ	tsʔ	(ƛʔ)	kʲʔ	kʔ	kʷʔ	qʔ
Fricatives			s	ɬ				χ
Sonorants (Plain)	m	n		l	j	ɰ	w	h
Sonorants (Glottal)	mʔ	nʔ		lʔ	jʔ	ɰʔ	wʔ	ʔ

Tab. 2: Maritime Tsimshianic consonants (based on Sasama 2001)

As is characteristic of the region, there are several sets of dorsal *k*-like sounds, including distinctions between front, back, and rounded (and simple velars for Maritime). This contrast is maintained across stops, fricatives, and sonorants in the Interior, but on the coast reduces to only a single fricative. There are

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4 I have classified the Maritime glottal consonants /h, ʔ/ as sonorants, departing from Sasama's (2001) presentation that they are fricative and stop, respectively. The phonotactic basis for an analysis of the glottals as glides (Rigsby 1986; Hunt 1990; Sasama 1997) seems to hold across the family.

many lateral *l*-sounds but no rhotic *r*-sounds. In stark contrast to many nearby languages, the lateral affricate (*tl'*, /ƛˀ/) is found only very rarely.

For both branches, there is a contrast between plain versus glottalized sounds, which applies to stops (e.g. /t/ versus /tˀ/) as well as sonorants (e.g. /n/ versus /nˀ/). The plain stops are voiced before vowels and sonorants (e.g. **d**aala 'money', aa**d**(i)n 'your net') but voiceless otherwise (e.g. aa**t** 'net'). Plain stops at the ends of words commonly become voiced when a vowel or sonorant suffix is added. For example, /wakʲ/ *wak* 'man's brother' becomes *wa**g**in* 'your brother' when the second-singular suffix /-n/ is added (Rigsby 1986: 158, *G*). Aspirated stops which remain voiceless before vowels (e.g. *tii*, variant of focus particle *dii*) can also be identified in a number of words in both branches, but these are less numerous. In the Interior, Rigsby (1986) argues that aspirate stops derive exclusively from sequences of stop + fricative or /h/. For example, the aspirated *p* in *gipaykw* 'fly' follows from its composition: /kʲip+hajkʷ/ → [gʲɪpʰajkʷ]). In the Maritime branch, Sasama (1995) treats stop aspiration as its own contrast, since examples are more widespread and difficult to decompose.

All the languages contrast long and short vowels. The Interior vowel inventory is presented in Table 3, and the Maritime inventory in Table 4. To both of these can be added a reduced vowel, /ə/.

	Front	Back
High	i, iː	u, uː
Mid	eː	oː
Low	a, aː	

Tab. 3: Interior Tsimshianic vowels (Rigsby 1986; Tarpent 1987; Brown et al. 2016)

	Front	Back
High	i, iː	u, uː, ɯ, ɯː
Mid	eː	o, oː
Low	a, aː	

Tab. 4: Maritime Tsimshianic vowels (Sasama 2001)

There are mid short vowels /e/ and /o/ in both branches, but several authors suggest these do not contrast with their high counterparts /i/ and /u/; short

vowels are typically lowered by neighboring post-velars (Rigsby 1986; Sasama 2001). This results in only three short vowels in, for example, Gitksan: /i~e/ versus /u~o/ versus /a/. Unstressed short vowels typically get their quality from neighboring consonants, and their pronunciation and spelling are sometimes variable. Phonologically, most unstressed vowels can be posited as /ə/.

Complex clusters of consonants are permitted both at the beginning and ends of words, to a greater extent in the Interior (e.g. CVCCCC in Nisga'a /miɬχkʷs/ *mihlx̲kws* 'moxibustion'; Tarpent 1987: 82).

2.2 Orthographies

The Interior versus Maritime language groups have different writing systems, with the Interior writing system developed by Hindle & Rigsby (1973) and the Maritime system developed by Dunn (1978). However, the distinction between the two orthographies belies the similarity of the sound system across the family.

There are a few sounds that have different spellings in the two systems, such as [ɬ] (Maritime *l*, Interior *hl*) or [dz~ʤ] (Maritime *dz*, Interior *j*). Another general contrast between the two writing systems is in the propensity of the Interior system to explicitly write reduced vowels, versus the propensity of the Maritime system to drop them (e.g. Interior *dim* versus Maritime *dm* 'will (future/prospective)', and in the Interior system to separate some morphemes as words, versus the tendency of the Maritime system to write them together. Consider (1), which exemplifies the phrase 'true speech', one with near-identical pronunciation across the family.

(1)   a.   **Interior:** *sim algax̲* (variant *sim algyax̲*)
       b.   **Maritime:** *sm'algyax* (variant *sm'algyax̲*)

With some knowledge of these differences, it is not difficult for a reader of one orthography to interpret the other.

2.3 Glottalization

The best-studied property of Tsimshianic phonology is the contrast between plain and glottal ("hard") sounds. The glottal character of these sounds is quite weak, often with a simple interruption of airflow, or addition of creakiness to a nearby vowel, rather than the characteristic popping sound of ejectives in some other languages. The preferred term is therefore "glottalized" rather than "ejective" (Ingram & Rigsby 1987; Rigsby & Ingram 1990; Sasama 1995; Schwan

2013; Brown et al. 2016). It is common for even those with years of experience to have difficulty distinguishing plain and glottal sounds in running speech.

The glottal closure of these sounds is not always fixed to the position of the oral closure, particularly in Coast Tsimshian/Sm'algyax. That is, glottalization is on some level independent of its host sound. Sasama (1995) notes that glottalization in a final consonant may "float" backward elsewhere into a consonant cluster (2a), or into a long vowel to create an interrupted vowel (2b).

(2)   Sm'algyax (Sasama 1995: 22,25)

a.	/paːlqˀ/	[baːʔlɑχ]	**baa'lɑ̱x** 'ghost'
b.	/tˀiːkʲˀ/	[t'iʔikʲ]	**t'i'ik** 'navel'

The position of glottalization for stops usually depends on the position of stress, while the position of glottalization for sonorants is fixed. Stops are post-glottalized ([Tˀ]) in word-initial position and before stress, but are elsewhere pre-glottalized ([ˀT]), as in (3a).[5] Sonorants are always pre-glottalized ([ˀR]), as in (3b). These can be very hard to hear at the beginning of a word (Lyon 2008).

(3)   Gitksan (Rigsby 1986: 142; author's fieldnotes: BS)

a.	/tsˀakʲˀ/	[ts'ɛʔkʲ]	**ts'ak'** 'dish'
b.	/nˀuːmˀ/	[ʔnuːʔm]	**'nuu'm** 'us (1pl)'

This two-part realization of glottal sounds, as a distinct glottal closure plus oral segment, extends to glottalized glides and the glottal stop. These are realized as sequences of a glottal stop and vowel sound ([ˀV]), sometimes as an "echo" or "interrupted" vowel. Examples are in (4).

(4)   Gitksan (author's fieldnotes: BS)

a.	/qənaːwˀ/	[ɢɑnaːʔu]	**ganaa'w** 'frog'
b.	/kʲaʔ/	[gʲaʔa]	**ga'a** 'see'

In some varieties and in fast speech, the post-glottal sonorant or vowel can be cut short or "swallowed" until it is voiceless, and becomes very difficult to hear.

In sum, the plain/glottal contrast is phonetically subtle and difficult to perceive, especially at the beginnings or ends of words. However, the contrast is also extremely important, as it minimally distinguishes many pairs of words.

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5 This is reflected in the variable position of the apostrophe in the Maritime orthography: *t'* or *'t* as needed. In contrast, the Interior orthography treats *t'* (or *t̓*) as a fixed letter.

3 The word level

3.1 Categories

The Tsimshianic languages clearly distinguish nouns and verbs, and perhaps also adjectives. There are also modifiers for both nouns and verbs, initial functional particles, and some functional or discourse-related clitics which attach either to the first word or to the end of the sentence.

Nouns and verbs can both be used bare as the main predicate (action, event, or state) of a clause. They can also both be used as arguments (subjects and objects). The examples in (5) demonstrate how nouns and verbs can be flexibly reversed (the verb *'witxw* 'arrive' becomes *'witxwit* 'the one who arrived' in (5b)).

(5)   Gitksan (Davis et al. 2014: 197)

   a.   *'Witxwhl   hanak'ast.*
         'witxw=hl hanak'=ist
         arrive=CN woman=AFFRM
         'The woman arrived.'
   b.   *Hanak'hl   'witxwidist.*
         hanak'=hl 'witxw-it=ist
         woman=CN arrive-SX=AFFRM
         'The one who arrived is a woman.'

The division between verbs and adjectives is less clear (cf. Stebbins 1996; Forbes 2012)). Nouns and verbs/adjectives are both able to take agreement suffixes: for nouns these mark possessors, and for verbs they mark subjects and objects.

The next most notable category is the modifying proclitics. There are *preverbs* and *pre-nouns*, illustrated in (6).

(6)   Nisga'a (Tarpent 1987: 27)

   Luut'aa   ts'im   wilp.
   luu=t'aa **ts'im** wilp
   in=sit   in   house

   'S/he stayed in the house.'

The proclitics typically provide information about location, direction, or manner, as *luu* and *ts'im*, both meaning 'in', jointly do in (6). For preverbs, there are also concepts such as 'try to' or 'want to'. For prenouns there are some adjectival concepts like 'old', 'new', 'small', 'big', and also focus markers (Stebbins 1996). Some examples from the Coast Tsimshian/Sm'algyax dictionary are given in (7).

(7)   Sm'algyax (Ts'msyen Sm'algyax Authority 2017)

      a.   PREVERBS: *tgi* 'down', *'yaga* 'down along plane/ground', *gisi* 'downstream', *hagwil* 'slowly', *k̲'amgayt* 'at first', *si'iɫ* 'try to'

      b.   PRENOUNS: *lax* 'on', *t'm* 'on surface', *sta* 'one side, half', *k'aba* 'small (PL)', *su* 'new', *ksa* 'only'

In general, the structure of nouns and verbs/adjectives is as given in (8); an example with many of these slots is given in (9), with the root bolded.

(8)   (proclitics=)derivation–plural–ROOT–valence–agreement(=enclitics)

(9)   Gitksan (Rigsby 1986: 85)

      hagukwsgalt'amdinsxw
      ha-gukws-tk̲'al-**t'am**-din-sxw
      INS-self-against-**mark**-CAUS-ANTIP

      'camera'

Proclitics appear outside derivational morphemes to modify the outer category, as well as inside to modify the inner category, as is the case in (9), an example which has lexicalized. Proclitics are almost always outside of plural marking and reduplication.

3.2 Complex words and stress

The Tsimshianic languages are between analytic and polysynthetic: sentences are usually constructed of multiple complex words rather than a single long word. The Maritime languages have near-identical morphological structure, but more elements (modifiers and pronouns) are able to attach onto the main predicate, forming a single word. This type of development has likely been helped along by the sparseness of concrete cues as to where words end. Unlike in languages where the stressed (emphasized, or loudest) syllable falls predictably near the beginning or end of a word, in Tsimshianic it is almost always the root (Shaw 1992; Forbes 2015). Here, I mark stress with an accent.

    There are often both periphrastic (multi-word) and synthetic (single-word) ways of saying something. Some common events like 'making', 'going to', and 'eating/drinking' can be expressed either with transitive verbs that take an object, or with prefixes that attach to or incorporate an object to create an in-

transitive verb. Example (10a) illustrates the transitive option, and (10b) the intransitive, incorporated option.

(10)   Gitksan (author's fieldnotes: VG)

    a.   *Neediit*   *anooks*   *noxo'y*   *nim*   *guphl*
        nee=dii=t   anóok-t=t   nóx-'y   n=dim   **gúp**-t=hl
        NEG=FOC=3   allow-3=PN   mother-1SG   1SG=PROSP   eat-3=CN
        keek.
        CAKE
        cake
        'My mother does not allow me to eat cake.'

    b.   *Neediit*   *anooks*   *noxo'y*   *dim*   *xkeegi'y.*
        nee=dii=t   anóok-t=t   nóx-'y   dim   **x**-CAKE-'y
        NEG=FOC=3   allow-3=PN   mother-1SG   PROSP   eat-cake-1SG
        'My mother does not allow me to eat cake.'

Compounding and incorporation occur with both nouns and verbs. Some examples of complex compounded forms are given from Coast Tsimshian/Sm'algyax in (11), and Nisga'a in (12) for comparison.

(11)   Sm'algyax (Sasama 2001: 75)

    a.   *hagalksagosmhagwilhuu*
        ha-galksi-gòs-m+hagwilhúu
        INS-through-jump-ATTR+rope
        'skipping rope'

    b.   *K'aa'lgmgant'miisi'nu.*
        k̲'áa'lk-m+gan-t'mìis='nu
        steal-ATTR+means-write=1SG
        'I stole a pencil.'

(12)   Nisga'a (Tarpent 1987: 558,792)

    a.   *hayala'am-hlgimat*
        ha-yàl-a'a-m+hlgimát
        INS-turn-ATTR+egg
        'eggbeater'

    b.   *Silakw'a'am-am'ugit*   *'nii'y.*
        si-làkw-a'a-m+am'úgit   'níi'y
        CAUS-burn-DETR-ATTR+clothes   1SG
        'I burned some old clothes.'

Where there are two roots in a word, as in the examples from (11) and (12), the first root receives secondary stress and the final root receives main stress. Stress can fall on any given syllable, from the first through the last, depending on where

the root is. Knowledge of word structure crucially informs pronunciation, and vice versa; the stressed root in an unknown word is often a clue to its meaning or etymology.

3.3 Clitics and word boundaries

The fact that stress marks roots, rather than word edges, can make it hard to determine where exactly word edges are, or to differentiate a reduced word from an affix. For example, prenouns and preverbs are sometimes written together with their host noun or verb, and sometimes separately. But there are also many other elements in Tsimshianic which raise questions about word boundaries. I will here discuss some additional clitics (sub-word elements which "lean" onto full words for support, and are often written together) which are found across Tsimshianic (see also Stebbins 2003; Mulder & Sellers 2010).

The first case is clitics associated with nouns. The status of a noun as common or proper is signaled by a clitic which comes before the noun, but attaches to the preceding word, as illustrated in (13).

(13)   Nisga'a (Tarpent 1987: 211–2)

    a. *Yukwt   giba**s**   Mary**hl**   hlgiikwt.*
           yukw=t giba-t[=t Mary][=hl hlgiikw-t]
           IPFV=3 wait[=PN Mary][=CN sister-3]
           'Mary is waiting for her sister.'

    b. *Yukwt   giba**hl**   hana**k̲**' **t**   Lucy.*
           yukw=t giba-t[=hl hana̲k'] [t   Lucy]
           IPFV=3 wait=[CN woman] [PN Lucy]
           'The woman is waiting for Lucy.'

This means that the syntactic boundaries of the noun phrase are at odds with the prosodic boundaries of words.

The second case is a group of pronoun clitics which appear before the main predicate or verb of the sentence and its preverbs. While most clitics in languages of the world consistently "lean" in one direction, in the Tsimshianic languages, these pronoun clitics vary in what direction they lean. Rather than attach to the end of a word ("enclitic") or front of a word ("proclitic"), they can be considered "flexiclitics" (Mulder & Sellers 2010). Some examples of this flexibility, including both the direction they lean and the prosodic host word they choose, are given in (14) with the first person marker *n* 'I, me'. In (14a) it leans on the front side of the conjunction *ii* 'and', in (14b) the back side, and in (14c) it leans on the

predicate. Note that these sentences are drawn from one narrative with a single speaker.

(14)   Gitksan (Forbes 2018: 55)

a.   ***N**ii*   *xhlii*   *guut...*
n=ii   xhlii   guu-t
1=and all.apart take-3
'And I took it apart...'

b.   *I**in**   yatshl   pole loot...*
ii=n   yats-t=hl pole loo-t
and=1 hit-3=CN pole OBL-3
'And I hit the pole with it...'

c.   *Ii*   ***na**'wahl   anhahla'lst goohl   Stockholm*
ii   n='wa-t=hl an-hahla'lst goo=hl   Stockholm
and 1=find=CN NMLZ-work LOC=CN Stockholm
sawatdiit.
si-wa-t-diit
CAUS-name-T-3PL
'And I found work in Stockholm, that's what they call it.'

In our first case from (13), the noun clitics attach in a consistent way, but always to a different word than the one they are associated with. In the second case in (14), the pronoun clitic is free to associate with a host word in different ways. These issues about what constitutes a word, how words can be flexibly constructed, and mismatches between words and syntactic constituents, raise both theoretical linguistic questions and practical questions about writing. For example, the first case is something that can be easily provided with a written standard, while the second case is something that most likely should not be standardized at all, but taught as something that explicitly varies.

3.4 Plural marking and reduplication

Pluralization is a major morphological process in Tsimshianic, and it has been well studied (Rigsby 1986; Tarpent 1983; Sasama 1995). Both nouns and verbs/adjectives undergo pluralization, and there are a number of morphological strategies for this transformation. Some examples are given in (15).

(15)   Sm'algyax (Sasama 1995)

a.   hap 'lid' → **hap**hap 'lids'   REDUPLICATION
b.   xbiis 'box' → **ga**xbiis 'boxes'   PREFIXATION

c. gyaps 'be high' → **l**aps 'be high (of many things)'   Mutation
d. hadiks 'swim' → **lahee**diks '(many) swim'   Prefix + Umlaut
e. baa 'run' → **ḵ'oł** '(many) run'   Suppletion

There is no easy way to predict how to form a plural; these typically have to be learned on a case-by-case basis. The precise rules of pluralization and the most common or default strategies for doing so differ across the family (e.g., CVC reduplication in Gitksan, but CVk reduplication in Coast Tsimshian/Sm'algyax; Brown 2008: 153) or even between speakers. Finally, there are many words which do not have plurals; for example, animals are usually invariant.

For verbs, pluralization typically indicates that the object is plural, as in (16a). If there is no object, then it means the subject is plural, as in (16b).

(16)   Gitksan (Hunt 1993: 152)

    a.   *'Nii t'ahldi'yhl*   *lakw laẕ anlakw.*
         'nii **t'ahl**-t-i-'y=hl   lakw laẕ an-lakw
         on   put.PL-T-TR-1SG=CN fuel on NMLZ-fire
         'I put (more than one piece of) wood on the fire.'

    b.   *Walga jixts'iikwhl*   *ha'aks*   *dipun.*
         walga **jix**~**ts'iikw**-t=hl ha-aks   dip=xwin
         all   PL~leak   INS-water ASSOC=DEM.PROX
         'All these pails leak.'

As both nouns and verbs can be pluralized, it is possible (even common) for plurality to be marked in multiple places in the sentence. It must be marked at least once, but need not always be marked everywhere. Sasama (2001) and Brown (2008) both report a scale in the obligatoriness of plural marking: words with suppletive or irregular plural forms often require pluralization, but words that have regular reduplicative plurals can often appear in the singular (so long as plurality is indicated somewhere else).

Reduplication has several other somewhat related uses. CVC reduplication can mark iterative or repetitive actions, as in (17);[6] CV reduplication can be used to mark extended or durative action, as in (18).

(17)   Sm'algyax (Sasama 1995: 63)

      Łaxłaxsa   *duusa*   *ha'lit'aa.*
      łax~**łaxs**-t=a   duus=a ha-'li-t'aa
      PL~scratch-3=CN cat=CN INS-on-sit

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[6] Sasama (1995: 64) also notes it can provide emphasis to a statement in Coast Tsimshian/Sm'algyax.

'The cat is scratching the chair.'

(18)   Nisga'a (Tarpent 1987: 218)

> *Bibax̱t,   k'iit   ga'ahl   smax.*
> **bi∼bax̱**-t   k'ii=t   ga'a-t=hl smax
> DUR∼run-3 and=3 see-3=CN bear

'While (s/he was) running, s/he saw a bear.'

Finally, names are exempt from this plural-formation system, but do have a special plural marker (*dip* G/N; *dp* CT/ST). This plural marker marks groups including the named person, for example *dip/dp Barbara* 'Barbara and them' (Tarpent 1981; Forbes 2013). This group marker can be used with all proper nouns (see §4.4 for details on proper/common nouns).

4 Constructing sentences

4.1 Word order

The most basic word order in Tsimshianic is VSO: Verb-Subject-Object. More accurately, Tsimshianic has Predicate-Subject-Object order, where 'predicate' refers to the main action or state of the sentence, which need not be a verb. This word order is illustrated in (19). Various grammatical particles come before the predicate *niist* 'see', while arguments like subjects and objects follow it.

(19)   Sgüüxs (Dunn 1990: 119)

> *Ła   yagwit   si'ki   niisdi   oli   hoan.*
> ła   yagwi=t si'ki   niist-t=i   ol=i   hoan
> INCEP IPFV=3 maintain see-3=CN bear=CN fish

'The bear is staring at the fish.'

VOS order is also used in the Maritime languages and Nisga'a when the object of the sentence is 'you' or 'me' (Jelinek 1986; Forbes 2018).[7] This is shown in (20).

(20)   Nisga'a (Jelinek 1986: 9)

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[7] Gitksan has begun to diverge from the other languages, with VOS order becoming less and less common; these contexts now almost exclusively use VSO order (Rigsby 1986).

> *Hlimoomit   'nii'y t   Ann.*
> hlimoom-i-t 'nii'y t   Ann
> help-TR-3   1SG   PN Ann

'Ann helped me.'

Other word orders are possible (indeed, common) when emphasizing a certain element, as discussed in more detail in §5.2. A questioned or emphasized subject will be fronted before the predicate in surface SVO order. A questioned or emphasized object will be fronted before the predicate in surface OVS order.

The Tsimshianic languages generally show 'head-initial' properties: verb-object order, preposition-noun order, and tense and aspect elements preceding the verb. There are some exceptions to this however, such as typical adjective-noun order and some sentence-final particles.

4.2 Clause types

The Tsimshianic languages have two different kinds of clauses (sentences, or sentence-like units), in which the marking for subject and object proceeds differently. I refer to the two types of clauses as *independent* versus *dependent*, following Rigsby (1986).[8] The choice of whether a given clause is independent or dependent is generally based on whether certain grammatical elements come before the verb: dependent clauses appear in the presence of elements listed in Table 5 – they are "dependent" on these elements.

Maritime (CT/ST)	Interior (N/G)	Gloss
ada	*k'ii, ii*	'and'
ał, *aka*	*nii, nee*	'not, NEG'
yakw (yagwa)	*yukw*	'-ing, IPFV/PROG'
ła	*hlaa*	'about to, just now, INCEP'
wil	*wil, win*	'that, COMP'
dzi	*ji*	'if, IRR'

Tab. 5: Some dependent clause markers across Tsimshianic

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8 In the linguistic literature, the clause types have been variously called "indicative/subjunctive" (Boas 1911), "independent/dependent" (Rigsby 1986), "predicate-focused/normal" (Tarpent 1987), and descriptively as "*nah-dm/yagwa-ła*" clauses (for Coast Tsimshian/Sm'algyax in Anderson & Ignace 2008).

Independent clauses are typically main clauses which lack all of these markers. Some other preverbal elements, such as *dm/dim* 'PROSP' and *na(h)* 'PST/PFV' (Maritime only), do not affect the clause type; they are used in both independent and dependent clauses.

The clause type difference results in two distinct patterns for using pronouns and verbal agreement. A contrast can be seen in the pronoun used for an independent clause like (21a), versus a dependent clause like (21b).

(21) Sm'algyax (Anderson & Ignace 2008: 134)

a. *Dm   'yagabaa'**nu**.*
    dm   'yaga-baa='nu
    PROSP down-run=1SG
    'I will run down.'

b. *Yagwa 'yagabaa**yu**.*
    yagwa 'yaga-baa-u
    IPFV   down-run-1SG
    'I'm running down.'

Though essentially the same clause type division is present in all of Tsimshianic, the two different branches have developed different variations on the patterns in each clause type. The Interior languages have an elaborated system in dependent clauses, and retain simple independent clauses (Hunt 1993; Forbes 2017, 2018; Davis 2018). The Maritime languages have the reverse: a more elaborate system in independent clauses, and a simple system in dependent clauses (Mulder 1994; Anderson & Ignace 2008; Peterson 2017; Forbes 2018; Davis 2018). In the rest of this section I detail only the simple versions of the clause types.

4.3 Pronouns and agreement

Important to understanding Tsimshianic pronouns and agreement is understanding the concept of transivity. Intransitive predicates have only one argument involved in the event: a subject. Transitive predicates have two arguments participating in the event: a subject and an object. The Tsimshianic languages are *ergative*, meaning that the subjects of transitive predicates (transitive subjects), are always expressed in a unique way. Intransitive subjects and objects are grouped together, separately from transitive subjects.

This ergative pattern is used in both types of clauses, but with different sets of pronouns. In independent clauses, the subject of the intransitive clause in (22a) and the objects in (22b,c) are expressed with pronouns. The transitive subjects

in (22b,c) are expressed with a suffix on the predicate. There is sometimes a vowel present to support this agreement suffix (Hunt 1993).

(22) INDEPENDENT CLAUSES — Gitksan (Forbes 2018)

  a. *Bax̱ **'nii'y**.*
      run 1SG
      'I ran.'   INTRANSITIVE

  b. *Iileni'y   ('nit).*
      hilen-i-'y   ('nit)
      chase-TR-1SG (3SG)
      'I chased him/her.'   TRANSITIVE

  c. *Iilen**it**   **'nii'y**.*
      hilen-i-t   'nii'y
      chase-TR-3SG 1SG
      'S/he chased me.'   TRANSITIVE

In dependent clauses, such as the negative clauses in (23), the subject of the intransitive clause in (23a) and the objects in (23b,c) are expressed with the suffix, this time usually without a supporting vowel. The transitive subjects in (23b,c) are now expressed with the pre-predicate clitic that appears on the negation marker, or whatever other initial marker has been used.

(23) DEPENDENT CLAUSES — Gitksan (Forbes 2018)

  a. *Needii   bax̱a**'y**.*
      nee=dii   bax̱-'y
      NEG=FOC run-1SG
      'I didn't run.'   INTRANSITIVE

  b. *Needii**n**   iilen**t**.*
      nee=dii=n   hilen-t
      NEG=FOC=1 chase-3
      'I didn't chase him/her.'   TRANSITIVE

  c. *Needii**t**   iileni**'y**.*
      nee=dii=t   hilen-'y
      NEG=FOC=3 chase-1SG
      'S/he didn't chase me.'   TRANSITIVE

Agreement and pronouns are in complementary distribution (Davis 2018). That is, pronouns never co-occur with other agreement markers, even for emphasis (unlike some pro-drop languages). Third-person pronouns can be dropped if the

referent is clear from context; for example it is possible in (22b).[9] First and second person pronouns typically cannot be dropped.

This pattern has been called ergative "agreement reversal" (Baerman 2007; Forbes 2018; Davis 2018). The basic idea is that the ergative *pattern* remains consistent, but that agreement suffixes have a different role in this pattern for each clause type. The pattern is summarized in Table 6.

	Independent	Dependent
Transitive Subject	suffix	preverbal clitic
Intransitive Subject	pronoun	suffix
Direct Object	pronoun	suffix

Tab. 6: "Pivoting ergative" subject/object marking in Tsimshianic clause types (simplified)

Where language learning is concerned, mastery of how to express different types of subjects and objects in both clause types, as well as knowing where to use them, is a crucial aspect of fluency. The "independent" patterns are most typical of short remarks, conversation, out of the blue statements, and general emphasis, while the "dependent" pattern is predominant in extended speech where sentences tend to be linked together in a stream of thought, as well as negative sentences, and most sentences using a special aspect or mood. Learners often find the full pronouns and agreement suffixes most salient, and have a harder time with the preverbal agreement markers, which appear in fewer contexts.[10]

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9 In the Interior languages where there is a third person singular/plural contrast, only the singular pronouns may be entirely dropped (Forbes 2016).

10 In my own fieldwork on Gitksan, I have found that native speakers are often not aware that they have produced the preverbal markers in a sentence. This contrasts drastically with their awareness of the suffixes and full pronouns, which they often voluntarily point out and translate. The preverbal elements seem to be below the level of most speakers' conscious awareness, making them much more challenging to learn or teach on the fly, without dedicated grammatical study.

4.4 Full nouns

Nouns in the Tsimshianic languages come in two classes: common nouns, and proper nouns.[11] The group of proper nouns includes personal names (e.g. 'Thelma' or in-language names and titles), human-referring pronouns (e.g. 'him/her'), and kinship terms referring to the parent generation and higher (e.g. 'mother', 'grandmother').[12] Place names are treated as common nouns. This class division is a way of linguistically marking the cultural importance of personal names, including hereditary names and titles.

In general, the two different classes are signaled by a clitic that attaches to the preceding word. In the Tsimshianic literature, these are called "connectives" (Boas 1911). For common nouns, this clitic is =*hl* in Nisga'a and Gitksan, =*a* in Coast Tsimshian/Sm'algyax, and =*i* in Southern Tsimshian/Sgüüxs; examples are given in (24a) and (25a).[13] Proper nouns are a bit more complex; the Tsimshianic languages mark proper nouns with an article *t* or *s*, depending on the position and function of the noun in the sentence. Examples of *t* are shown in (24b) and (25b).

(24)   Nisga'a (Tarpent 1987: 484)

    a.   *Limx**hl**   hana__k__'.*
       sing=CN woman
       'The woman sang.'

    b.   *Limx **t**   Mary.*
       sing   PN Mary
       'Mary sang.'

(25)   Sm'algyax (Sasama 2001: 92, 8)

    a.   *Mmoo'mx**a**   'yuuta.*
       smile=CN   man
       'The man is smiling.'

    b.   *Miilg**it**   Kayla.*
       dance=PN Kayla

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11 In some work (e.g. Tarpent 1987) proper nouns are referred to instead as 'determinate' nouns, to bring explicit attention to the differences between the concept in Tsimshianic and the concept in English and other languages.

12 In Interior Tsimshianic, the demonstratives (e.g. G *tun, =sun, dipun* 'this, these') are also proper nouns. The Maritime demonstratives (e.g. CT *gwa'a* 'this, these') is a common noun.

13 The Maritime languages use an article =*l* in irrealis and negative sentences, cognate to the Interior (Mulder 1994: 89). The vocalic connectives =*a/i* are typically deleted if attached to a sonorant (Anderson & Ignace 2008).

'Kayla is dancing.'

The complexity of the system arises due to the interaction of these connective clitics (which attach not to the noun itself but to the prior word) and suffixes on the verb. In (24) and (25), there is no verbal suffix. However, in most other sentence types (transitives, or dependent clauses, as discussed in §4.2) there is agreement on the verb, and a noun connective is able to attach directly to the agreement suffix.

When predicate agreement is with the same noun that immediately follows, the noun's connective effectively "hides" the agreement suffix. If agreement is not with the immediately following noun, then both morphemes are visible (Davis 2018). In (26), I show how this works by demonstrating what happens when the subject is a pronoun versus a full noun. In (26a), the transitive subject is a pronoun, and it appears as a suffix -*t/d* on the verb. After this is the object, =*a hoon* 'fish'. The object connective =*a* remains separate from the subject agreement suffix. In (26b), we now have a common noun subject, =*a haas* 'the/a dog'; otherwise the sentence remains the same. However, here there is no visible agreement suffix. The expected -*t/d* which would refer to the subject is completely hidden by the connective =*a*. Finally, in (26c), we see the same thing with a proper noun subject, =*s Wes* 'Wes'. Again, the agreement suffix is hidden and only the connective remains. There is some evidence of this change: the proper noun connective becomes =*s* when it is hiding the agreement marker, rather than =*t* as it would be otherwise.

(26)   a.   Sm'algyax (Davis 2018: 499)

*Dm   gabi**da**   hoon.*
dm   gab-i-**t[=a**   hoon]
PROSP eat-TR-3$_i$[=CN fish]$_k$
'She/he/it they will eat the/a fish.'   (N: *gibithl*, G: *gubithl*)

b.   Sm'algyax (Davis 2018: 499)

*Dm   gab**a**   haasa   hoon.*
dm   gab-i-**t[=a**   haas][=a   hoon]
PROSP eat-TR-3$_i$[=CN dog]$_i$[=CN fish]$_k$
'The/a dog will eat the/a fish.'   (N: *gibihl*, G: *gubihl*)

c.   Sm'algyax (Anderson & Ignace 2008: 101)

*Nah gaba**s**   Wesa   hoon.*
na   gap-i-**t[=t**   Wes][=a   hoon]
PFV eat-TR-3$_i$[=PN Wes]$_i$[=CN fish]$_k$
'Wes ate the fish.'   (N: *gibis*, G: *gubis*)

This generalization about hiding agreement, and when to use the *t* versus *s* connective, has only crystallized in recent years (Hunt 1993; Davis & Forbes 2015; Davis 2018). The generalization holds across both Maritime and Interior Tsimshianic. Earlier descriptions typically treat the connectives and agreement separately, which led to sometimes-inconsistent descriptions that were exceedingly difficult to internalize. Pedagogical resources typically go through the many possible styles of sentence one by one, without being able to refer to an overall rule (Anderson & Ignace 2008). While it is imperative that pedagogical resources present examples of each construction for learners to review, hopefully the inclusion of the recent generalization in future materials can make the learning process much easier. Rather than memorizing agreement and connectives as totally separate systems, learning them as related patterns may reduce the overall learning burden. In the end, knowledge of one pattern should reinforce knowledge of the other, as is the case for fluent speakers.

5 Elaborating on sentences

5.1 Situating sentences in time and space

While the previous section provides a walkthrough of the most basic essentials of a grammatical sentence (VSO order, agreement, noun connectives), there are many other components that provide necessary aspects of meaning. These elements come on the edges of the VSO sentence almost without exception, either before the predicate or after the subject and object.

The primary tool for conveying geography, motion, and spatial perspective is the preverb system. Preverbs note directions as well as relative locations like 'upstream'. In addition, modifying phrases can be added after the VSO elements, conveying full concepts like 'on the table' or 'in Terrace'. The contrast between two ways to convey 'outside' is illustrated by the following two examples: (27a) uses a preverb describing movement out of an enclosed space, while (27b) uses a phrase describing where the entire event takes place.

(27)   Nisga'a (School District 92 1986: 225, 34)

    a.   *Ksisdili'y*   *t*   *niye'e'y.*
          ksi-sdil-i-y   t   niye'e-'y
          out-accompany-TR-1SG PN grandfather-1SG
          'I went outside with my grandfather.'

b. *Lukw'il ts'axwhl   'mukws gyalḵ.*
  lukw'il ts'axw=hl   'mukws **gyalḵ**
  very   impressive=CN storm   outside
  'There is a bad snowstorm outside.'

There are also pre-VSO and post-VSO markers of time. Tsimshianic tense comes before the predicate, and contrasts future versus non-future. An sentence with no explicit markers can be interpreted as either present or past, as in (28), but anything with future-oriented temporal perspective requires the pre-predicate marker *dim/dm*, as in (29) (Jóhannsdóttir & Matthewson 2007; Matthewson 2012).[14]

(28)   Sm'algyax (Ts'msyen Sm'algyax Authority 2017: ginats'ii'ḵa)

  Ginats'ii'ka   na   xsooyu.*
  gina-ts'ii'k=a   na   xsoo-u
  leave.behind-dry.up=CN POSS canoe-1SG

  'My canoe dried up (when the tide fell).'

(29)   Sm'algyax (Anderson & Ignace 2008: 335)

  Dm   sigyootga'nm   dzida   ganłaak dm
  dm   si-gyoo-tk='nm   dzi-da   ganłaak **dm**
  PROSP CAUS-travel-INTR=1PL IRR-SPT morning PROSP
  sihoonm.
  si-hoon-m
  CAUS-fish-1PL

  'We will set out in the morning to fish.'

Other means of elaborating on the time and situation of an event or action are conveyed by aspect markers that come before the predicate. Aspect markers signal perspective-related properties such as whether the event is ongoing (imperfective or progressive: *yukw* G/N; *yakw* CT/ST), has finished (perfective: *hlis* G/N; *na* CT/ST?), or is just starting or about to start (inceptive: *hlaa* G/N; *la* CT/ST). Most of these are dependent markers, described in §4.2 (Jóhannsdóttir 2006). Phrasal descriptors of time, like *dzida ganłaak* 'when it's morning' from (29), follow the subject and object.

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14 The Maritime languages are commonly described as having a past tense marker, *na(h)*, but examples like (28) suggest it is not mandatory for a past-tense interpretation. Sasama (2001) suggests it is instead perfect(ive) aspect, and I list it as such here.

5.2 Questions, answers, and emphasis

Few additional tools are needed to form yes/no questions; typically, the addition of a question clitic is sufficient to turn a sentence into a question. In the Interior, the clitic *=aa* is sentence-final, as in (30); in Maritime languages, the clitic *=i* is placed after the first word, as in (31) (from Sasama 2001: 84, it appears after a fronted element, if there is one, otherwise the verb).

(30)   Nisga'a (Tarpent 1987: 363)

    Nii mi dim x̱dayi'ma?
    nii mi dim x̱dax-'m**=aa**
    NEG 2SG PROSP eat.with-1PL=YNQ

    'Would you (like to) eat with us?'

(31)   Sm'algyax (Sasama 2001: 84)

    Hooynił   ha'lit'aa gwa'a?
    hoy-i-n**=i**=ł   ha-'li-t'aa gwa'a
    use-TR-2SG=YNQ=CN INS-on-sit this

    'Are you using this chair?'

It is common for yes/no questions to be politely framed as negative questions, as in the Nisga'a example in (30). A question 'Did you not see it?' is semantically equivalent to 'Did you see it?', and is often construed as more polite.

    There are several different ways to construct a sentence when asking or answering a content question. These strategies are used when providing an answer to a question, or when otherwise placing emphasis on some element of the sentence due to its importance in context.[15] The emphasized phrase moves from its original position in the VSO sentence to initial position, via a process of fronting.[16] This is illustrated in the Gitksan examples in (32a)-(32d), which involve focused information, and can be used as question answers. Note also that the sentence from which the fronted element has moved takes a specific form or

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15 The exact same constructions are also used when forming relative clauses which modify nouns, such as in 'the house *that I bought*', 'the place *where I saw you*'.

16 An issue of theoretical relevance is whether these A'-fronting constructions arise through a process of movement, or whether the question words are actually predicates, as discussed in work on Salish and Wakashan languages. Davis & Brown (2011), in addressing this question, suggest both strategies are possible in Gitksan.

uses a specific marker, depending on what is being asked about. These special markers are bolded.[17]

(32)   Gitksan (Rigsby 1986: 282,288,285,294)

     a.   *'Nii'yhl   bah**at**.*
          'nii'y=hl bax̲-it
          1SG=CN run-SX
          'I'M the one who ran.'   INTRANS. SUBJECT

     b.   *Anaaxhl   gubi'y.*
          anaax=hl gup-i-'y
          bread=CN eat-TR-1SG
          'It was BREAD that I ate.'   OBJECT

     c.   *Sarah **an**(t) hlimoo'y.*
          Sarak an=t hlimoo-'y
          Sarah AX=3 help-1SG
          'SARAH is the one who helped me.'   TRANS. SUBJECT

     d.   *'Nithl   **wil**   'nii 'masi'y   lax̲ Gisbayakws.*
          'nit=hl wil   'nii 'mas-'y   lax̲ gitsbayakws
          3SG=CN COMP on grow-1SG on Kispiox
          'It was THERE that I grew up, in Kispiox.'   OBLIQUE/LOCATION

These strategies sometimes involve a suffix on the predicate (-*it* when fronting an intransitive subject) and sometimes a particle before the predicate (for transitive subjects and locations). Fronting constructions about sentential modifiers like locations (where), times (when), reasons (why), manners (how), and choice (which) each use their own specific particles. In all cases, the agreement suffix on the predicate marks something which has not moved, rather than the fronted element (Forbes 2018). This detailed system has been described further elsewhere (e.g. for Interior Tsimshianic by Rigsby 1986; Tarpent 1987; Davis & Brown 2011; Brown 2016; Forbes to appear; and for Maritime Tsimshianic by Dunn 1979a; Sasama 2001; Anderson & Ignace 2008).

6 Conclusion

This chapter has presented an overview of the shared grammatical properies of the four Tsimshianic languages, discussing sounds, words, and sentence-level

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[17] Note that in the Maritime languages, content question constructions are usually accompanied by a question particle =*yu/*=*du*.

constructions, based on the history of linguistic research in the last fifty years. Issues of long-term investigation have included glottalization, which demands attention even from experienced learners and linguists; plurality, which is best learnt on an item-by-item basis; and the complex ergative system of agreement and pronouns across two clause types. This chapter has also presented discussion on mismatches in the correspondence between syntactic phrases and words, the use of preverbs and prenouns, and the detailed Tsimshianic system of fronting under emphasis and in questions.

I conclude with a brief review of the state of revitalization. There have been several Master-Apprentice pairs in the last ten years, with the apprentices moving on to active involvement and leadership in language-based programming and policymaking in their communities, and many continuing to use the language publicly and regularly. Today, there are several ongoing in-community documentation projects, and most K-12 schools across native Tsimshianic-speaking territory have small but regular amounts of indigenous language programming. School districts 52 (Prince Rupert) and 92 (Nisga'a) have centralized language curricula. One Gitxsan community school offers K-3 half-day immersion, and a pre-K Gitksan language nest was established in 2019. Some postsecondary language courses are offered by the University of Northern BC and Coast Mountain College. In addition, indigenous language technologies are the focus of research projects at Simon Fraser University and the University of British Columbia. These projects aim to produce online and mobile pedagogical resources (such as community-oriented grammars and lessons) for several Tsimshianic languages.

On a final somber note, Southern Tsimshian/Sgüüxs has comparably fewer people and resources to work with to support revitalization, and is in the most critical state. However, hundreds of hours of recordings were done in Klemtu with one of the last Sgüüxs-speaking elders until the end of her life in 2013. These recordings are a valuable seed for future work.

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