

# Questions and their relatives in Sm’algyax\*

Colin Brown

colinjbrown@ucla.edu

## 1 Introduction

This paper presents a description of content questions or *wh*-questions in Sm’algyax (also known as Coast Tsimshian), a Maritime Tsimshianic language spoken in Northwestern British Columbia, and Southeastern Alaska. Questions in Sm’algyax are typologically interesting due to a complex system of extraction morphology indicating whether a transitive subject, intransitive subject, or object has been extracted — a tripartite system — as well as a number of other configurations marking different types of adjunct and non-core-argument extraction. I provide a detailed description of each configuration and show parallels to other kinds of movement/fronting such as focusing and relativization: so-called “A-bar” processes (henceforth  $\bar{A}$ -processes). Moving beyond local extraction, I show that  $\bar{A}$ -movement in Sm’algyax is sensitive to strong islands (Ross 1967), and provide a basic description of long-distance movement, showing parallels between local and long-distance movement.

This work’s immediate contribution is clear. This is the first in-depth look at content questions and other processes, such as focusing and relativization in Sm’algyax — a critically endangered language with fewer than 100 fluent speakers (FPCC 2018). Though the scope of this paper is largely descriptive, I point out various theoretical questions and implications as they arise throughout the paper, which I believe warrant deeper investigation and discussion in future work.

This paper proceeds as follows: in the remainder of this section I provide a background for Sm’algyax and the methodology used in my own fieldwork; in Section 2 I discuss clause typing, person marking, and determiners (referred to as “Connectives” in the Tsimshianic literature), which are crucial to accurately describing  $\bar{A}$ -processes in Sm’algyax. In Section 3, I outline the basic facts of *wh*-movement and extraction. In Section 4 I move onto a description of core-argument extraction with a focus on content questions, In Section 5, I discuss a number of non-

---

\**T’oyaxsut ’niüism* to Velna Nelson, Beatrice Robinson, Ellen Mason, Theresa Lowther and all of the others I have worked with on the *Lax Yuuba Ts’msyen*. Thank you to Margaret Anderson, Henry Davis, Harold Torrence, and Ethan Poole for collectively providing valuable insights and comments that have helped shape this project. This research is supported in part by funding from the Social Sciences and Humanities Research Council, as well as the Harry and Yvonne Lenart Graduate Travel Fellowship.

core argument and adjunct questions. In Section 6 I discuss long-distance movement. In Section 7 I conclude, and discuss future avenues of investigation.

## 1.1 Sm'alg yax background and methodology

Sm'alg yax (ISO 639-3 *tsi*), also known as Coast Tsimshian or the Ts'msyen language, is a Tsimshianic language with fewer than 100 fluent speakers spoken in Northwestern British Columbia and Southeastern Alaska (FPCC 2018). The Tsimshianic family is divided between the Maritime branch and the Interior branch — the Maritime branch is made up of Sm'alg yax (Coast Tsimshian) and Sgüüx̄s (Southern Tsimshian) while the Interior branch consists of Gitksan and Nisga'a.

All uncited examples come from my own fieldwork in Prince Rupert, British Columbia, with four fluent first language speakers of Sm'alg yax: Velna Nelson, Ellen Mason, and Theresa Lowther (Txałgiw/Hartley Bay), and Beatrice Robinson (Gitxaala/Kitkatla). The methodology employed corresponds to that outlined in Matthewson (2004): target strings and sentences are elicited by providing the consultant with a context and a sentence in English and asking for a translation into Sm'alg yax, while felicity and acceptability judgements are elicited by providing the speaker with a sentence in Sm'alg yax and asking for a judgement or comment on acceptability for that context, as well as a translation back into English (if felicitous) or a corrected form (if infelicitous).

## 2 Clause typing, person marking, and connectives

In this section I provide the background on Sm'alg yax morphosyntax needed to discuss  $\bar{A}$ -movement in subsequent sections. This background includes the distinction between the two main clause types and the marking of arguments, which affects the distribution of the determiner-like CONNECTIVES, all of which interact with the processes of  $\bar{A}$ -movement.

### 2.1 Independent and dependent clauses

Sm'alg yax is an ergative head-marking language with an unmarked Verb > Subject > Object > Oblique word order:<sup>1,2</sup>

<sup>1</sup>The four-line glossing convention used throughout can be understood as follows: the first/top line appears in the community orthography used throughout British Columbia, adapted from John Dunn's Sm'alg yax orthography. The second line from the top utilizes the same orthography, but indicates morpheme boundaries; word-level morphophonological processes such as obstruent voicing before vowels are not marked at this level. The third line provides grammatical category labels in line with the Leipzig glossing rules. The fourth and final line provides an English translation.

<sup>2</sup>Abbreviations used in glosses are as follows: 1 = first person, 2 = second person, 3 = third person, ATTR = attributive, AX = agent extraction morpheme, CAUS = causative, CN = common noun connective, COMP = complementizer, DET = determiner, FOC = focus, I = series I clitic, II = series II suffix, III = series III pronoun, INS = instrumental, IRR = irrealis, MANR = manner clause subordinator, NEG = negative, NMLZ = nominalizer, PASS = passive, PFV = perfective, PL = plural, PN = proper noun connective, POSS = possessive, PREP = preposition, PROG = progressive, PROSP = prospective, PROX = proximal, Q = question particle, REAS = reason clause subordinator, SG = singular, SPT = spatiotemporal

- (1) Nah dzabas Ronnie pts'aan das Dick.  
 nah dzap-i[-t] [=s Ronnie] [=a pts'aan] da [=s Dick]  
 PFV make-TR[-3.II] =PN Ronnie =CN pole PREP =PN Dick  
 'Ronnie has fixed a totem pole for Dick.'<sup>3</sup> (Mulder 1994; 49)

Across the Tsimshianic family there are two main clause types, referred to here as INDEPENDENT and DEPENDENT.<sup>4</sup> This clause-type distinction affects the morphology that appears on the predicate including person marking, which in turn affects the determiner or connective system (Davis and Forbes 2015; Davis 2018). Independent clauses are typically verb initial, though some preverbal clitics, particles, and the aspectual morphemes *dm* PROSPECTIVE and *nah* PERFECTIVE appear before the verb in either clause type. A suffix *-i* appears on transitive verbs in independent clauses and is often treated as a diagnostic for clause type across Tsimshianic (Brown et al. 2020).<sup>5</sup> Examples (2) and (3) show independent clauses, which feature this transitive suffix:<sup>6</sup>

- (2) T'uusis Henry xbiis.  
 t'uus-i[-t]=s Henry=a xbiis  
 push-TR[-3.II]=PN Henry=CN box  
 'Henry pushes/pushed the box.' *Independent*
- (3) Gabit.  
 gap-i-t  
 eat-TR-3.II  
 'S/he eats/ate it.' *Independent*

---

particle, SX = subject extraction morpheme, T = transitive control suffix, TR = transitive, WH = underspecified content-question word. Abbreviations used in the text are as follows: A = transitive subject or "agent", C = consonant, CP = complementizer phrase, DP = determiner phrase, O = (direct) object, PRED = predicate, S = (intransitive) subject, V = vowel.

<sup>3</sup>The marking of a proposed underlying third-person agreement marker [-t] follows the proposal in Tarpent (1987) for Nisga'a, which is adopted in Hunt (1993; and following work) for Gitksan as well as Davis (2018) for Sm'algax. Briefly, the suffixal agreement marker *-t* marks ergative arguments in independent clauses, and absolutive arguments in dependent clauses, but crucially does not surface when followed directly by the DP it co-refers with. See the above references for discussion and analysis.

<sup>4</sup>Much of the prior literature on Sm'algax refers to these clause types as "indicative" and "subjunctive", following the terminology introduced in Boas (1911) — as this clause-type distinction is orthogonal to mood, I have opted for the theory neutral terms used in Rigsby (1986) and later work on Interior Tsimshianic.

<sup>5</sup>Though the transitive vowel appears as *-i* in glosses, it is more accurately characterized as a featureless vowel that assimilates to its consonantal environment, surfacing as [i] or [a]. The transitive vowel is often deleted due to a number of phonological processes. Brown et al. (2020) outline the environments which license the appearance of this morpheme as well as the (morpho)phonological conditions which result in the deletion of a proposed underlying transitive vowel. Throughout this paper I will indicate the presence of the transitive vowel, underlying or overt, in the second line of glossed examples.

<sup>6</sup>As indicated by the English translations, third-person agreement/pronouns are not marked for gender. Sm'algax does not overtly encode grammatical tense, and unmarked sentences may be interpreted as past or present (non-future) tense, while future oriented sentences are marked with *dm* PROSPECTIVE (as in Gitksan Jóhannsdóttir and Matthewson 2007; Matthewson 2013). For ease of readability, after this section, I only provide a single English translation as offered/accepted by my consultants.

Dependent clauses occur in subordinate contexts, imperative constructions, or are triggered by the presence of a DEPENDENT MARKER, one of a heterogeneous class of prepredicative morphemes which includes *at/aka* NEGATION, *yagwa* PROGRESSIVE, and *ta* INCEPTIVE. In (4) and (5) we see dependent clauses triggered by the dependent markers *yagwa* and *aka*, respectively — note that unlike (2) and (3) these examples lack the transitive suffix:

(4) Yagwat t'uusdit Henry xbiis.  
 yagwa=t t'uus-t=t Henry=a xbiis  
 PROG=3.I push-3.II=PN Henry=CN box  
 'Henry is/was pushing the box.' *Dependent*

(5) Akadit gapt.  
 aka=di=t gap-t  
 NEG=FOC=3.I eat-3.II  
 'S/he doesn't/didn't eat it.' *Dependent*

Another difference between the independent clauses in (2) and (3) and their dependent-clause counterparts in (4) and (5) concerns person marking, which we turn to now.

## 2.2 Person marking

There are four sets or “series” of person markers in Sm’algyax, whose distribution is dictated by the independent/dependent clause-type distinction:<sup>7</sup>

(6) Sm’algyax person marking

	I		II		IIIa		IIIb	
	<i>Clitics</i>		<i>Suffixes</i>		<i>Weak pronouns</i>		<i>Strong pronouns</i>	
	SG	PL	SG	PL	SG	PL	SG	PL
1	n	(n) dip	-u	-m	-’nu	-’nm	’nüüyu	’nüüm
2	m	m sm	-n	-sm	-n	-nsm	’nüün	’nüüsm
3	t		-t		-∅		’niit	

The basic distribution of person markers is as follows. In independent clauses, an intransitive subject (S) is marked with a series III(a) suffix, while an object (O) is marked by a series III(b) independent pronoun.<sup>8</sup> Transitive subjects, or agents (A) are marked by a series II verbal suffix:

<sup>7</sup>These series are referred to as series I–III after Rigsby (1986), based on their linear position in the clause. For example, series I clitics appear prepredicatively, while series II suffixes follow the predicate. Series I–III are referred to in much of the Sm’algyax literature following Boas (1911) and Dunn (1979) as “subjective”, “objective” and “definite objective”, respectively. Sasama (2001; 77 fn.65) points out that these terms are misleading as, for instance, an “objective” (series II) suffix can mark intransitive subjects and transitive subjects in addition to marking objects. I opt here for the theory-neutral terminology from Rigsby (1986) that is in use for much of the linguistic work on Interior Tsimshianic.

<sup>8</sup>I follow Forbes (2018) in analyzing series IIIa suffixes as phonologically weakened forms of the series IIIb pronouns. The generalization is as follows: when an absolutive pronominal element appears adjacent to a verb that is not

- (7) Independent intransitive: Series III marks S:

Baa'nu.  
 baa-'**nu**  
 run-1 SG.III  
 'I ran'

- (8) Independent transitive: Series II marks A; Series III marks O:

'Nax'nuyn(t 'niit).  
 'nax'nuu-i-**n**(=t '**niit**)  
 hear-TR-2SG.II=PN 3.III  
 'You heard him.'

Example (8) also shows that third-person independent pronouns are able to be dropped if a suitable discourse antecedent is present.

In intransitive dependent clauses, S is not marked by series III, but by a series II suffix. In transitive dependent clauses, O is also marked by a series II suffix, while A is marked by a prepredicative series I clitic:

- (9) Dependent intransitive: Series II marks S:

Akadi baayu.  
 aka=di baa-**u**  
 NEG=FOC run-1 SG.II  
 'I didn't run.'

- (10) Dependent transitive: Series I marks A; Series II marks O:

Akandi 'nax'nuun.  
 aka=**n**=di 'nax'nuu-**n**  
 NEG=1.I=FOC hear-2SG.II  
 'I didn't hear you.'

This basic pattern is schematized in (11):

- (11) Basic person-marking system

	A	S	O
Independent	II	III	III
Dependent	I	II	II

inflected with series II person marking, the “weakened” series IIIa form surfaces — this is the case for independent intransitive sentences, as well as some independent transitive sentences which have a marked agreement pattern stemming from person-hierarchy effects (see Forbes 2018; Brown et al. 2020; for a description and discussion on these marked agreement patterns). When the verb *is* inflected with series II person marking, an absolutive argument will surface as a series IIIb pronoun — this is the case for independent transitive sentences.

This system has been referred to as “pivoting ergative” by [Davis and Brown \(2011\)](#) for Gitksan (Interior Tsimshianic), as it exhibits ergative agreement patterns on both sides of the clause-type conditioned split, with series II suffixes acting as the “pivot”, due to the fact that they mark ergatives in independent clauses, and absolutes in dependent clauses.

Beyond the marking of core arguments, series II suffixes and III pronouns have additional roles. For instance, series III pronouns also function as strong pronouns, appearing in prepositional phrases (12) or in a left-peripheral position under  $\bar{A}$ -movement (13). Series II suffixes also mark possession (14):

- (12) Gaadu           kaats adan           k'ilamt    as           'niit.  
       gaa-t-u       kaats ada=n     k'ilam-t [a=s       '**niit**]  
       take-T-1SG.II card and=1SG.I give-3.II PREP=PN 3.III  
       ‘I take a card and give it to him.’<sup>9</sup>

- (13) 'Nüün dm    int       gaas                    Meeli.  
       '**nüün** [dm    in=t    gaa[-T][-t]=s \_\_\_\_ Meeli]  
       2SG.III PROSP AX=3.I take-T-3.II=PN    Meeli  
       ‘It’s you who will take Mary.’

- (14) waabm  
       waap-**m**  
       house-1PL.II  
       ‘our house’

This basic person-marking pattern described above and schematized in (11) abstracts away from person-hierarchy effects and differences between the weak and strong series III variants, which are orthogonal to  $\bar{A}$ -movement. I refer the reader to [Mulder \(1994\)](#); [Sasama \(2001\)](#); [Forbes \(2018\)](#); [Brown et al. \(2020\)](#) for a more in-depth look at person marking in Sm’algyax.

### 2.3 Connectives

The final grammatical process we will discuss is the determiner system, referred to in the Tsimshianic literature as CONNECTIVES. In the interest of space I will limit my discussion here to the basics required to navigate the examples in subsequent sections — for a detailed description and analysis of connectives across Tsimshianic see [Sasama \(2001\)](#) and [Davis \(2018\)](#). Connectives are semantically vacuous clitics which attach to the phrase that appears to the left of the nominal they introduce. This is seen in (15): the connective =a is associated with the common noun *hana’a* but phonologically attaches to the predicate *sisaxs* which appears to the right of the noun. All non-predicative nominals must be introduced by a connective.<sup>10</sup>

<sup>9</sup>The morpheme glossed as T in this example and subsequent ones occurs on a subset of transitive predicates, and can be “triggered” by certain valency altering morphology. A number of allomorphs of this element arise depending on clause-type and phonological factors. See [Brown et al. \(2020\)](#) for discussion.

<sup>10</sup>Throughout this paper there are many examples in which the second and third lines of examples show common-noun connectives that are absent in the first (orthographic) line. This is due to the phonological process of vowel deletion

- (15) Sisaaxsa hana'a.  
 sisaaxs [=a hana'a]  
 laugh =CN woman  
 'The/a woman laughed.'

There are four connectives which make up this system: the proper-noun (or “determinate”) connectives =*t* and =*s*, and the common noun connectives =*a* and =*l*. Proper-noun connectives appear with proper names, ascending kinship terms (such as mother and grandfather, but not daughter or grandson), Series III pronouns (in some configurations), and demonstratives. Common-noun connectives introduce every other class of nominal. The connective =*a* appears to be a default common-noun connective, which uniformly introduces the roles of intransitive subject, transitive subject and object across both clause types:

- (16) Independent intransitive — [=a S]:

Goyt'iksa ts'ikts'ik.  
 goyt'iks [=a ts'ikts'ik]  
 arrive =CN car

'The car arrived.'

(Anderson and Ignace 2008; 366)

- (17) Independent transitive — [=a S] [=a O]:

Dm gaba haasa hoon.  
 dm gap-i[-t] [=a haas] [=a hoon]  
 PROSP eat-TR[-3.II] =CN dog =CN fish

'The dog will eat the fish.'

(Anderson and Ignace 2008; 394)

- (18) Dependent intransitive — [=a S]:

Ła dzaga giik.  
 ła dzak[-t] [=a giik]  
 PROX die[-3.II] =CN fly

'The fly is dead.'<sup>11</sup>

(Sasama 2001; 98)

- (19) Dependent transitive — [=a A] [=a O]:

Yagwat sibaasda gyeda haas.  
 yagwa=t sibaas-t [=a gyet] [=a haas]  
 PROG=3.I scare-3.II =CN person =CN dog

'The person scared the dog.'

---

which is triggered in environments where the =*a* connective directly follows a sonorant or vowel (Anderson and Ignace 2008).

<sup>11</sup>Though (18) and (19) function as matrix/root sentences, they are dependent clauses as they are introduced by the dependent markers *ła* and *yagwa*, respectively.

Under certain conditions =*a* may be replaced by =*t*, the so-called IRREALIS connective. This connective may appear in a number of non-declarative sentence types, including interrogatives, imperatives, and exclamatives, as well as alongside negation, epistemic modals, and evidentials. Examples of the irrealis connective are given below:

(20) Negation:

Akat           anooxdit   Larry†           onions.  
 A=ka=t       anoox-t=t   Larry [=†       onions]  
 NEG=FOC=3.I like-3.II=PN Larry =IRR.CN onions  
 'Larry doesn't like onions.'

(Sasama 2001)

(21) Polar question:

Di   t'aayii†           nagwaadi?  
 di   t'aa=ii [=†       nagwaat-i]  
 with sit=Q   =IRR.CN father-IRR.1 SG.II  
 'Do I have a father?'<sup>12</sup>

TSLA (2013)

In subsequent sections I will outline the role of common-noun connectives (both irrealis and non-irrealis) in extraction and questions. See Sasama (2001) for more discussion and data concerning the distribution of common noun connectives. With this background in place let us now discuss  $\bar{A}$ -movement.

### 3 $\bar{A}$ -movement and questions

In contrast to declarative word order (22a), *wh*-questions (22b), focus-constructions (22c), and relative clauses (22d) in Sm'algayx all involve the appearance of some element in a position to the left of the predicate:

- (22) a. Tgi   k'apaaytga   'yuuata  
          tgi   k'apaaytk=a   'yuuata  
          down fall=CN       man  
          'The man fell down.'
- b. Naayu       tgi   k'apaaytgit?  
          naa=u=a   tgi   k'apaaytk-it \_\_\_\_  
          who=Q=CN down fall-SX  
          'Who fell down?'
- c. Dzon       tgi   k'apaaytgit.  
          Dzon=a   tgi   k'apaaytk-it \_\_\_\_  
          John=CN down fall-SX  
          'It's John who fell down.' (a suitable answer to (22b))

<sup>12</sup>Note also the presence of an irrealis first-person suffix on the verb that surfaces as -*i*, contra the unmarked -*u* suffix. This irrealis agreeing person marking is restricted to first person morphemes.



- d. Wilaayu            ’yuuta tgi k’apaaytgit.  
 wilaay-u=a        ’yuuta=a tgi k’apaaytk-it \_\_\_\_  
 know-1SG=CN man=CN down fall-SX  
 ‘I know the man who fell down.’

*Wh*-questions in Sm’algyax are characterized by the presence of a fronted *wh*-word (23), and a *wh*-particle =(d)u.<sup>13</sup> There are three basic *wh*-words in Sm’algyax: *naa* ‘who’, *goo* ‘what’, and an underspecified *wh*-word *ndaa/ndeh*, as well as two quantificational *wh*-words *t’masool* ‘how many (people)’, and *t’maays* ‘how many (things)’. The basic words may combine with subordinating or modifying elements.

(23) Sm’algyax *wh*-words

	<i>naa</i> ‘who’	<i>goo</i> ‘what’	<i>ndaa/ndeh</i> WH	* <i>t’ma-</i> ‘how many’
<i>wil</i> COMP		<i>goo wil</i> ‘when’	<i>ndaa wil</i> ‘where’	
<i>wila</i> MANNER		<i>goo wila</i> ‘how’	<i>ndaa wila</i> ‘how’	
<i>gan</i> REASON		<i>goo gan</i> ‘why’		
Other			<i>dzindaa</i> ‘when (irrealis)’ <i>ksindaa</i> ‘which (one)’	<i>t’masool</i> ‘how many (people)’ <i>t’maays</i> ‘how many (things)’

These *wh*-words also function as indefinite nouns in argument positions:<sup>14</sup>

<sup>13</sup>The *wh*-particle =(d)u may surface either as [ju] or [du]. It optionally surfaces as [ju] or [du] directly following one of the three basic *wh*-words with no difference in meaning between the two forms: *naayu/naadu* (who=Q), *goyu/godu* (what=Q), *ndeyu/ndedu* (WH=Q).

- (i) Naadu        baat?  
 naa=du=a    baa-it  
 who=Q=CN run-SX  
 ‘Who ran?’

Consultant’s comment: “Same as *Naayu baat*.”

When linearizing after other elements this particle always surfaces as [du]. This can sometimes be analyzed as a sequence of a third person suffix -t and the particle =u, though examples such as (i) show that this is not always the case.

<sup>14</sup>Indefinite or indeterminate nouns in Sm’algyax are most often composed of a *wh*-word preceded by a particle which contributes quantificational meaning, including *ligi* ‘some/any’, *txa’nii* ‘all’, and *al/aka* ‘not’. Though (24) and (25) show that bare *wh*-expressions are able to appear in argument positions.

- (24) Ksiniidzu                    naa.  
ksi=niist-i-u=a                **naa**  
out=see-TR-1 SG.II=CN who  
‘I picked out someone.’
- (25) Hablbootida                goo a        ts'im ts'ikts'ikt.  
ha=bl-boolt-i-t=a            **goo** a        ts'im ts'ikts'ik-t  
INS=PL-keep-TR-3=CN what PREP in    car-3.II  
‘He is keeping things in in his car.’

D(iscourse)-linked content questions (translated with ‘which’) are formed with the complex *wh*-word *ksindaa/ksindeh* which appears before a noun, or may stand alone, in which case it is translated as ‘which one’:

- (26) a. Ksindeyu    gan diduulsit?  
ksi=ndeh=u gan diduuls-it \_\_\_\_  
out=WH=Q tree live-SX  
‘Which tree is alive?’
- b. Ksindeyu    diduulsit?  
ksi=ndeh=u diduuls-it \_\_\_\_  
out=WH=Q live-SX  
‘Which one is alive?’

Sm’algyax allows long-distance extraction (discussed in §6). In spite of this, we see that  $\bar{A}$ -movement is sensitive to islands (Ross 1967). Attempts to extract from adjunct islands, complex noun phrases, and *wh*-islands result in ungrammaticality:

- (27) Adjunct island:
- a. Dawłit    Dzon awilt            liiłdit            Meelit    Michael.  
dawł=t    Dzon [awil=t            liił-t=t            Meeli=t    Michael]  
leave=PN John    because=3.I watch-3.II=PN Mary=PN Michael  
‘John left because Mary was looking after Michael.’
- b. \* naa=u    dawł-it=t    Dzon [awil=t            liił-i-t=t            Meeli \_\_\_\_]  
who=Q leave-SX=PN John    because=3.I watch-TR-3.II=PN Mary  
Intended: \*Who did John leave because Mary was looking after’
- (28) Complex noun phrase island:
- a. Gabis        Dzon hoon nah sip’iyaans                    Meeli.  
gap-i=s        Dzon [hoon nah si-p’iyaan-i[-t]=s                    Meeli]  
eat-TR=PN John    fish    PFV make-smoke-TR[-3.II]=PN Mary  
‘John ate the fish that Mary smoked.’
- b. \* naa=u    gap-i=s    Dzon [hoon nah sip’iyaan-i-t \_\_\_\_]  
who=Q eat-TR=PN John    fish    PFV make-smoke-TR-3.II  
Intended: \*Who did John eat the fish that smoked?’

(29) *Wh*-island

- a. Wilaayda            goo gant        k'otsdit    Lucy    hoon.  
 wilaay-i-t=a        [goo gan=t    k'ots-t=t    Lucy=a hoon]  
 know-TR-3.II=CN what REAS=3.I cut-3.II=PN Lucy=CN fish  
 'He knows why Lucy cut the fish.'
- b. \*Goo=u wilaay-i-t=a        [goo gan=t    k'ots-t=t    Lucy \_\_\_\_]  
 what=Q know-TR-3.II=CN what REAS=3.I cut-3.II=PN Lucy  
 Intended: \*What does he know why Lucy cut?

In *wh*-questions the *wh*-word obligatorily appears in initial position. It is not allowed to remain in its in-situ argument position:<sup>15</sup>

- (30) \* tgi    k'apaaytk-it naa(=u)  
 down fall-SX        who=Q  
 Intended: 'Who fell down?'<sup>16</sup>

We also find that multiple *wh*-questions are not permitted — only one *wh*-word per clause may function as such. This peculiar fact places Sm'algyax (as well as Gitksan (Bicevskis et al. 2017)) among the set of languages which systematically disallow multiple questions, such as Irish, Berber, Somali (Stoyanova 2008)<sup>17</sup> as well as a number of languages of the Mesoamerican sprachbund (Caponigro et al. 2020).

- (31) a. \* naa(=u) in=t    dzam[-t]    goo(=u)  
 who=Q AX=3.I make[-3.II] what=Q
- b. \* naa(=u) goo(=u) in=t    dzam[-t]  
 who=Q what=Q AX=3.I make[-3.II]  
 Intended: 'Who made what?'

Having presented these generalizations about extraction in Sm'algyax, let us turn to a more in-depth discussion of the extraction morphosyntax associated with core and non-core argument extraction in Sm'algyax. In the following sections I show that all  $\bar{A}$ -constructions — including

<sup>15</sup>In the ungrammatical examples given in (30) and (31) the presence of the question particle *u* in parentheses shows the sentence is not ameliorated by the presence, absence, or positioning of the particle in the sentence.

<sup>16</sup>The equivalent of this sentence, as well as (31), with the *wh*-word functioning as an indefinite must also include the particle *ligi*, a particle associated with existential meanings and disjunction:

- (ii) Tgi k'apaaytgit lit    naa.  
 tgi k'apaaytk-t \*(ligi=t) naa  
 down fall-PN        LIGI=PN who  
 'Someone fell down.'

The distribution of bare vs modified indefinite *wh*-words needs to be investigated further.

<sup>17</sup>Stoyanova (2008) argues that this ban arises because in these languages *wh*-elements can only be licensed in a unique structural focus position in the left-periphery.

*wh*-questions, relative clauses, and focus fronting — exhibit morphosyntactic cues reflecting the grammatical role of the extracted element (whether the extracted element is an intransitive subject, transitive subject, object or one of a number of classes of non-core argument).

#### 4 Core-argument extraction

The  $\bar{A}$ -movement of core arguments in Sm’algyax exhibits distinct extraction morphology indicating whether an Intransitive Subject (S), Object (O), or Transitive Subject or “Agent” (A) has been extracted. In this section I outline this core-argument extraction morphology, and compare focus constructions, relative clauses, and embedded questions to highlight the surface isomorphism between these constructions. I opt here for embedded questions, as root/matrix questions are almost always volunteered to me by my consultants with the question particle  $=\langle d \rangle u$ , which exhibits variable positioning in the clause and obscures the otherwise consistent morphosyntactic marking of these constructions.

##### 4.1 Intransitive subject extraction

Extraction of an intransitive subject is marked morphologically by the presence of a morpheme *-it* which suffixes to the predicate, and the common-noun connective  $=a/=t$  appearing on the extracted element in the left-peripheral position.<sup>18</sup>

(32) S extraction:

- a. Sisaaxsa gyet.  
 sisaaxs=a gyet  
 laugh=CN person  
 ‘A person laughed’

*Baseline*

<sup>18</sup>The vowel in the suffix *-it* does not appear when the suffix follows a vowel-final stem such as *baa* ‘run’. The underlying sequence of *baa-it* will therefore surface as *baat*:

- (iii) a. Baa gyet.  
 baa =a gyet  
 run =CN person  
 ‘A person ran.’

*Baseline*

- b. Wilaayu gyeda baat.  
 wilaay-u =a gyet [=a baa-it \_\_\_\_]  
 know-1SG.II =CN person =CN run-SX  
 ‘I know the person who ran.’

*Relative clause*

- c. Wilaayu naa baat.  
 wilaay-u =a naa [=a baa-it \_\_\_\_]  
 know-1SG.II =CN who =CN run-SX  
 ‘I know who ran.’

*Embedded question*

- b. Pada            sisaaxsit.  
 Pat [=a sisaaxs-**it** \_\_\_\_]  
 Pat =CN laugh-SX  
 ‘It’s Pat who laughed.’ *Focus*
- c. Wilaayu            gyeda            sisaaxsit.  
 wilaay-u=a            gyet [=a sisaaxs-**it** \_\_\_\_]  
 know-1SG.II=CN person =CN laugh-SX  
 ‘I know the person who laughed.’ *Relative clause*
- d. Gүүүdagu            naa            sisaaxsit.  
 gүүүdax-i-u=a            naa [=a sisaaxs-**it** \_\_\_\_]  
 ask-TR-1SG.II=CN who =CN laugh-SX  
 ‘I asked who laughed.’<sup>19</sup> *Embedded question*

The presence of a common-noun connective on the *wh*-word in questions is obscured by the general vowel-final nature of *wh*-words, as the =*a* connective systematically deletes when appearing after vowels and sonorants (Anderson and Ignace 2008; Brown et al. 2020). Evidence that there is a connective in (embedded) questions comes from those that feature the irrealis connective =*t*, which does not undergo this deletion. We see this in (33) — here =*t* is licensed by the matrix-clause negation:

- (33) Akadit            wilaaydit            Michael naat            ksi dawhit.  
 aka=di=t            wilaay-t=t            Michael naa [=t            ksi dawt-**it**]  
 NEG=FOC=3.I know-3.II=PN Michael who =IRR.CN out leave-SX  
 ‘Michael doesn’t know who left.’

Subject extraction is schematized below. The *wh*/focused/relativized subject appears prepredicatively, followed by a common-noun connective and a predicate marked by the subject extraction suffix *-it*:

- (34) S extraction morphology:  
 S=CN PRED-SX \_\_\_\_

This subject extraction suffix appears in two other extraction configurations: extraction of the grammatical subject of DP-DP copular constructions, and in possessor extraction. I discuss these configurations in Appendix A.

In sum, the subject extraction morpheme *-it* appears in the extraction of subjects of intransitive predicates.

<sup>19</sup>In these examples with *gүүүdagu* ‘I ask(ed)’ it is not clear whether the embedded question is introduced by a connective *a*, as it is routinely deleted after a vowel. The embedded question with the third-person suffix *-t* does however show us that there is underlyingly a connective in these constructions:

- (iv) Gүүүdagada            ndeh wil            waan.  
 gүүүdax-i-t=**a**            ndeh wil            waal-n  
 ask-TR-3.II=CN WH COMP de/be-2SG.II  
 ‘She asked how you are doing.’

## 4.2 Object extraction

Object extraction is characterized by the presence of the transitive suffix *-i* on the verb. Like subject extraction, a common-noun connective encliticizes to the extracted element. The transitive vowel does not surface in (35a)–(35d) due a morphophonological deletion process: *-i* does not surface between a consonant and a vowel (/CiV/ → [CV]). The examples in (36) with a pronominal subject show that the transitive vowel appears between consonants (/CiC/ → [CiC]).

### (35) O extraction

a. Gaba gyeda ts'ik'aaws.  
 gap-i[-t]=a gyet=a ts'ik'aaws  
 eat-TR[-3.II]=CN person=CN split.salmon  
 'The people eat split dried salmon.' *Baseline*

b. Ts'ik'aawsa gaba gyet.  
 ts'ik'aaws [=a gap-i[-t]=a gyet \_\_\_\_]  
 split.salmon =CN eat-TR[-3.II]=CN person  
 'It's split dried salmon that the people eat.' *Focus*

c. Niidzu ts'ik'aawsa gaba gyet.  
 niist-u=a ts'ik'aaws [=a gap-i[-t]=a gyet \_\_\_\_]  
 see-1 SG.II=CN split.salmon =CN eat-TR[-3.II]=CN person  
 'I saw the split dried salmon the people ate.' *Relative clause*

d. Gүүүdagu goo gaba gyet.  
 gүүүdax-i-u=a goo [=a gap-i[-t]=a gyet \_\_\_\_]  
 ask-TR-1 SG.II=CN goo =a eat-TR[-3.II]=CN person  
 'I asked what the people eat.' *Embedded question*

(36) a. Niidzu ts'ik'aawsa gabit.  
 niist-u=a ts'ik'aaws [=a gap-i-t \_\_\_\_]  
 see-1 SG.II=CN split.salmon =CN eat-TR-3=CN  
 'I saw the split dried salmon she ate.' *Relative clause*

b. Gүүүdagu goo gabit.  
 gүүүdax-i-u=a goo [=a gap-i-t \_\_\_\_]  
 ask-TR-1 SG.II=CN goo =a eat-TR-3.II  
 'I know what she ate.' *Embedded question*

There are two pieces of evidence that the transitive vowel is part of the characteristic extraction morphology of object extraction. The first evidence comes from the appearance of the transitive vowel in clauses with dependent markers. Recall that an aspectual morpheme such as *ła* PROXIMAL will trigger a dependent clause — this is not the case in object extraction configurations with dependent markers. Here we see that the transitive vowel still appears.

(37) Godu ła gabit?  
 goo=du ła gap-i-t  
 what=Q PROX eat-TR-3.II

‘What did she eat?’

Further evidence can be seen in (36b) — embedded clauses with canonical word order in Sm’algyax are obligatorily dependent clause types, and therefore lack the transitive vowel *-i*, however embedded object extraction configurations are obligatorily marked with the transitive vowel.

Object extraction is schematized below. A common-noun connective follows a left-peripheral object, the transitive suffix appears on the verb, and a series II suffix indexes agreement with the transitive subject/agent (as indicated here by the subscript A):

- (38) O extraction morphology:  
O=CN PRED-TR-II<sub>A</sub> A \_\_\_\_

### 4.3 Transitive subject extraction

The extraction of a transitive subject (henceforth “Agent”) is quite different from intransitive subject and object extraction. This configuration is marked by the preverbal agent extraction element *in*, and the appearance of a third person person-marking clitic *=t*. Unlike object extraction configurations, which pattern like independent clauses with respect to person marking (series II suffixes agreeing with the ergative subject) and the presence of the transitive vowel, agent extraction involves a dependent clause, marked by the absence of the transitive vowel and the presence of series I ergative clitics, and series II suffixes marking the absolutive object.<sup>20</sup> The absence of the transitive vowel is clearly observed in the relative clause and embedded question with a pronominal object in (40).

- (39) A extraction (see (35a) for baseline sentence)

- a. ’Nüün int gaba ts’ik’aaws.  
 ’nüün [=a in=t gap[-t]=a \_\_\_\_ ts’ik’aaws]  
 2SG.III =CN AX=3.I eat[-3.II]=CN split.salmon  
 ‘It’s you who ate split dried salmon.’ *Focus*
- b. Wilaayu gyeda int gaba ts’ik’aaws  
 wilaay-u=a gyet [=a in=t gap[-t]=a \_\_\_\_ ts’ik’aaws]  
 know-1SG.II=CN person =CN AX=3.I eat[-3.II]=CN split.salmon  
 ‘I know the people who eat split dried salmon.’ *Relative clause*
- c. Güüdagu naa int gaba ts’ik’aaws.  
 güüdax-i-u=a naa [=a in=t gap[-t]=a \_\_\_\_ ts’ik’aaws]  
 ask-TR-1SG.II=CN who =CN AX=3.I eat[-3.II]=CN split.salmon  
 ‘I asked who eats split salmon.’ *Embedded question*

<sup>20</sup>Unlike with S and O extraction, the presence of the common-noun connective following the extracted element in A extraction is variable, and generally a point of variation between speakers. A extraction in Interior Tsimshianic lacks the connective in this position (Tarpent 1987; Davis and Brown 2011).

- (40) a. Wilaayu gyeda int gapt.  
wilaay-u=a gyet [=a in=t gap-t \_\_\_\_]  
know-1SG.II=CN person =CN AX=3.I eat-3.II  
‘I know the people who eat it.’ *Relative clause*
- b. Gүүidagu naa int gapt.  
gүүidax-i-u=a naa [=a in=t gap-t \_\_\_\_]  
ask-TR-1SG.II=CN who =CN AX=3.I eat-3.II  
‘I asked who eats it.’ *Embedded question*

Agent extraction is schematized below. The extracted agent appears in the leftmost position, followed by the prepredicative agent extraction morpheme *in* and the third-person clitic =*t*; verbal agreement suffixes agree with the absolutive object:<sup>21</sup>

- (41) A extraction morphology:  
A(=CN) AX=3.I PRED-II<sub>O</sub> \_\_\_\_ O

Root, or matrix *wh*-questions are further marked by the presence of the enclitic =(d)*u*, which appears in every *wh*-extraction configuration, with all *wh*-words.<sup>22</sup> Below we see S, O, and A questions marked predictably with their respective extraction morphology as well as the *wh*-particle =(d)*u*.<sup>23</sup>

- (42) S *wh*-question:  
Naayu sisaaxsit?  
naa=**u** [=a sisaaxs-**it** \_\_\_\_]  
who=Q =CN laugh-SX

<sup>21</sup>The third person ergative clitic =*t* may optionally appear before or after the agent extraction morpheme *in* with no change in meaning:

- (v) Naayu naht in halagyagu?  
naa=u=a nah=**t** **in** halagyak-u  
who=Q=CN PFV=3.I AX laugh.at-1SG.II  
‘Who laughed at me?’

<sup>22</sup>The *wh*-particle =(d)*u* may be dropped in colloquial or rapid speech. My consultants describe this as “taking short-cuts” and it is judged as a difference in register. They systematically produce *wh*-questions with =(d)*u* during elicitation.

<sup>23</sup>In the gloss I have indicated that the common-noun connective associated with extraction is present in these questions, but deletes due to a predictable vowel-deletion process (=a does not surface after vowels and sonorants). Evidence that there is a connective in this position comes from the appearance of a proper-noun connective =*t* in *wh*-questions featuring =(d)*u*:

- (vi) Naayut Dzon?  
naa=u=**t** Dzon  
who=Q=PN John  
‘Who is John?’

This is, however, slightly suspicious as we might expect the irrealis connective =*t* to appear here, which would not undergo deletion. I stipulate that the appearance of =(d)*u* in this *wh*-word adjacent position blocks irrealis agreement.



‘Who laughed?’

(43) O *wh*-question:

Goyu            gabin?  
goo=**u** [=a gap-**i**-n \_\_\_\_]  
what=Q =CN eat-TR-2SG.II

‘What did you eat?’

(44) A *wh*-question:

Goyu            int      ɫak’an?  
goo=**u** [=a **in**=t    ɫak’-n \_\_\_\_]  
what=Q =CN AX=3.I bite-2SG.II

‘What bit you?’

This clitic exhibits variable positioning in the clause, conditioned partially by verbal morphology. For reasons of space I set this issue aside for this paper.

In sum, the morphosyntax of Sm’algyax extraction exhibits a tripartite pattern in which intransitive subjects, transitive subjects, and objects receive unique marking:

(45) Argument extraction in Sm’algyax

Subject	S [=CN PRED-SX ____]	= (32)
Object	O [=CN PRED-TR-II <sub>A</sub> ____]	= (35)
Agent	A [(CN) AX=3.I <sub>A</sub> PRED-II <sub>O</sub> ____]	= (39)

Extraction therefore reveals underlying syntactic heterogeneity with respect to absolutive arguments: S and O pattern together with respect to person marking and number agreement, but exhibit distinct marking under extraction (as pointed out in Gitksan in [Davis and Brown 2011](#)). A extraction does not proceed straightforwardly: a prepredicative morpheme *in* appears and triggers a dependent clause. In addition to this a third-person clitic *t* appears in agent extraction, potentially acting as a resumptive element. This hints at possible syntactic ergativity effects: the extraction of A by conventional means is blocked, and a special construction is utilized as a grammatical “fix” for otherwise illicit movement. The presence of a *wh*-word and a question particle *=(d)u* sets apart (root) *wh*-questions from other  $\bar{A}$ -configurations such as relative clauses and focus fronting.

## 5 Non-core-argument and adjunct extraction

Non-core arguments and adjuncts, in their canonical positions, linearize to the right of any core arguments. In this section I discuss extraction of these elements. I show that in the majority of cases, we observe a configuration featuring a dependent clause headed by a subordinating element (not unlike the agent extraction configuration described in §4). We also observe a configuration featuring a “bare” dependent clause with no overt subordinating element.

## 5.1 Extracting with a subordinating element

The extraction of non-core arguments and adjuncts is most commonly marked by the presence of one of three subordinating elements: *wil*, *wila*, and *gan*. I outline here the distribution and meaning contribution of these elements in questions, relative clauses, and focus constructions and show that most non-core argument extraction is characterized by the presence of *wil*, while the *wh*-expressions *ndaa/ndeh*, and *goo* combine with these subordinators to create adjunct questions. For example *ndaa + wil* results in a locative/‘where’ question, *goo + wil* results in a temporal/‘when’ question, *ndaa/goo + wila* results in a manner/‘how’ question, and *goo + gan* results in a reason/‘why’ question.

The default configuration for relativizing, focusing, or questioning non-core arguments involves the subordinating element *wil*, which is glossed here as a complementizer. In sentences without movement, *wil* introduces certain embedded clauses, often corresponding to ‘that’-clauses in English. Clauses introduced by *wil* are always dependent clauses, as evidenced by the absence of the transitive theme vowel and dependent clause person marking pattern wherein series I clitics agree with transitive subjects, and series II suffixes agree with intransitive subjects and objects:

- (46) Intransitive dependent clause complement: Series II marks S:

Lu aam goodu            wil    gatgoydiksism.  
 lu aam goot-u        [**wil**    gat~goydiks-sm]  
 in good heart-1SG.II COMP PL~arrive-2PL.II

‘I am very happy that you all came.’

(TSLA 2013)

- (47) Transitive dependent clause complement: Series I marks A; Series II marks O:

Lu aam goodu            wilt            niidzn.  
 lu aam goot-u        [**wil**=t        niist-n]  
 in good heart-1SG.II COMP=3.I see-2SG.II

‘I’m happy that he saw you.’<sup>24</sup>

Canonical “ditransitive” constructions in Sm’algyax feature an absolutive-marked theme and a goal introduced by the preposition *a/da* (48a). Extraction of the absolutive theme patterns with object extraction (48b) as described in §4:

- (48) a. Ky’ilam                    ’yuuta    p’iildzap’il da            haas.  
          ky’ilam-i[-t]=a    ’yuuta=a p’iildzap’il [da=a    haas]  
          give-TR[-3.II]=CN man=CN toy            PREP=CN dog  
          ‘The man gave a toy to the dog’

Baseline

<sup>24</sup> Complement clauses headed by *wil* are islands to movement:

- (vii) \*naa=u (wil)    lu aam goot-n        m=wil    niis-t \_\_\_\_?  
 who=Q (COMP) in good heart-2SG.II 2.I=COMP see-3.II  
 Intended: ‘Who are you happy that you saw?’

- b. Goyu ky'ilam 'yuuta da haas?  
 goo=u ky'ilam-i[-t]=a 'yuuta=a [da=a haas]  
 what=Q give-TR[-3.II]=CN man=CN PREP=CN dog  
 'What did the man give the dog?' *Absolutive object question*

Extraction of the oblique goal features the complementizer *wil* which introduces a dependent clause (49). Note that the preposition does not appear in the left-peripheral position under this pattern, nor is it stranded:<sup>25</sup>

- (49) a. Naayu wilt ky'ilamda 'yuuta p'ildzap'il?  
 naa=u **wil**=t ky'ilam-t=a 'yuuta=a p'ildzap'il \_\_\_\_  
 who=Q COMP=3.I give-3.II=CN man=CN toy  
 'Who did the man give the toy to?' *Oblique question*
- b. Güüdagu naa wilt ky'ilamda 'yuuta p'ildzap'il?  
 güüüdax-i-u=a naa **wil**=t ky'ilam-t=a 'yuuta=a p'ildzap'il \_\_\_\_  
 ask-TR-1 SG.II=CN who COMP=3.I give-3.II=CN man=CN toy  
 'I asked who the man give the toy to?' *Embedded oblique question*

Much like the core-argument  $\bar{A}$ -processes described above, oblique relative clauses and focus constructions receive the same morphosyntactic marking that questions do.

- (50) a. Niidzu haas wilt k'yilamda 'yuuta p'ildzap'l.  
 niist-u haas **wil**=t ky'ilam-t=a 'yuuta=a p'ildzap'il \_\_\_\_  
 see-1 SG.II dog COMP=3.I give-3.II=CN man=CN toy  
 'I saw the dog that the man gave the toy to.' *Oblique relative clause*
- b. Haas wilt k'yilamda 'yuuta p'ildzap'l.  
 Haas **wil**=t ky'ilam-t=a 'yuuta=a p'ildzap'il \_\_\_\_  
 dog COMP=3.I give-3.II=CN man=CN toy  
 'It was the dog that the man gave the toy to.' *Oblique focus*

A number of other oblique and non-core argument nominals which are introduced by the preposition *a* extract identically. Below we see that the extraction of benefactives (51), causees in causative constructions (52), as well as locatives (formed with *ndaa/ndeh* + *wil*) (53) and realis/non-future temporals (formed with *goo* + *wil*) (54) all feature the *wil* complementizer and a dependent clause complement.<sup>26,27</sup>

<sup>25</sup>In all of the configurations described in this subsection, the subordinator is obligatory.

<sup>26</sup>One of my consultants also forms 'when' questions with the underspecified *wh*-expression *ndaa/ndeh* followed by the clitic cluster *n=da* which consists of two clitics that appear in spatiotemporal environments; these questions also feature a dependent clause remnant:

- (viii) Ndeyu ndat dzapdit Meeli ts'ikts'ik?  
 ndeh=u **n=da**=t dzap-t=t Meeli=a ts'ikts'ik  
 wh=CN SPT=SPT=3.I do-3.II=PN Mary=CN car  
 'When did Mary fix the car?'

<sup>27</sup>There exist two exceptional classes of oblique argument, which are introduced by the preposition (*d*)*a* in their



- b. Naayu wilt            gwiniitsnda                            fismaan            hagwilhoo?  
 naa=u **wil**=t        gwin-niist-'n[-T]-t=a            fismaan=a        hagwilhoo \_\_\_\_  
 who=Q COMP=3.I CAUS-see-CAUS-T-3.II=CN fisherman=CN rope  
 'Who did the fisherman show the rope to?'

(53) Locative extraction:

- a. Nah niidzu            a            Kxeen.  
 nah niits-i-u        [a=a        Kxeen]  
 PFV see-TR-1SG.II PREP=CN Prince.Rupert  
 'I saw her in Prince Rupert.'
- b. Ndeyu nam            wil        niidzu?  
 ndeh=u nah=m        **wil**        niist-u \_\_\_\_  
 wh=Q PFV=2SG.I COMP see-1SG.II  
 'Where did you see me?'<sup>28</sup>

(54) (Realis) temporal extraction:

- a. Axłga'nu        da            Kxeen            gits'ipda.  
 axłk-'nu        da=a        Kxeen            gits'ipda  
 arrive-1SG.III PREP=CN Prince.Rupert yesterday  
 'I arrived in Prince Rupert yesterday.'
- b. Goyu wil axłgn        da            Kxeen?  
 goo=u **wil** axłk-n        da=a        Kxeen \_\_\_\_  
 what=Q COMP arrive-2SG.II PREP=CN Prince.Rupert  
 'When did you arrive in Prince Rupert?'

(TSLA 2013)

Comitative and instrumental arguments do not extract with *wil*, and instead are paraphrased by bi-clausal constructions, as indicated by the English translations.

(55) Comitative extraction:

- a. Habida            k'ala    aks    dił            wekt.  
 hap-i-t=a        k'ala    aks    [di=ł        wek-t]  
 go.PL-TR-3.II=CN upriver water with=IRR.CN brother-3.II  
 'He went to the river with his brother.'
- b. Naal            sduulda,            łat            goo    k'ala    aks?  
 naa=ł            sduul-t=a \_\_\_\_    łat            goo[-t]    k'ala    aks  
 who=IRR.CN companion-3.II=Q PROX=3.I go[-3.II] upriver water  
 'Who was his companion, when he went to the river'

(56) Instrumental extraction:

<sup>28</sup>In this example we find that the aspectual morpheme *nah* linearizes to the left of the subordinator *wil*. While this typologically-unexpected ordering of aspectual markers before subordinators is worth exploring, I set this aside in this paper.

- a. k'odzida        hoon a            t'u'utsk.  
k'ots-i-t=a        hoon [a=a        t'u'utsk]  
cut-TR-3.II=CN fish    PREP=CN knife  
'He cut the fish with a knife.'
- b. Goł            hayda,        łat            k'odza        hoon?  
goo=ł            hay-t=a \_\_\_\_ ła=t        k'ots[-t]=a    hoon  
what=IRR.CN use-3.II=Q    PROX=3.I cut[-3.II]=CN fish  
'What did he use, when he cut the fish?'

The next type of question containing a subordinating element is marked by the morpheme *wila* MANNER. Like *wil*, *wila* introduces dependent clauses; the main difference is that *wila* introduces manner clauses, often translated to English using 'how'.

- (57) Aam wila    miilkt.  
aam **wila**    miilk-t  
good MANR dance-3.II  
'He dances well' Lit: It's good how he dances.
- (58) Aam wilat        'maga            txaaw.  
aam **wila**=t        'mak[-t]=a        txaaw  
good MANR=3.I catch[-3.II]=CN halibut  
'She catches halibut well.' Lit: It's good how she catches halibut.

'How' questions are formed with *goo* 'what' preceding *wila*:

- (59) a. Goyu wila    miilgn?  
goo=u **wila**    miilk-n  
what=Q MANR dance-2SG.II  
'How do you dance?' *Manner question*
- b. Gүүүдaгу        goo wila    miilgn.  
gүүүdax-i-u=a        goo **wila**    miilk-n  
ask-TR.1SG.II=CN what MANR dance-2SG.II  
'I asked how you dance.' *Embedded manner question*
- (60) a. Goł            wilat        k'otsda        łgu 'yuuta    hoon?  
goo=ł            **wila**=t        k'ots-t=a        łgu 'yuuta=a hoon  
what=IRR.CN MANR=3.I cut-3.II=CN small man=CN fish  
'How did the boy cut the fish?' *Manner question*
- b. Gүүүдaгу        goo        wilat        k'otsda        łgu 'yuuta    hoon?  
gүүүdax-i-u=a        goo        **wila**=t        k'ots-t=a        łgu 'yuuta=a hoon  
ask-TR.1SG.II=CN what=CN MANR=3.I cut-3.II=CN small man=CN fish  
'I asked how the boy cut the fish.' *Embedded manner question*

Consistent with all other extraction morphology, we see that *wila* also appears in relative clauses and focus-fronting constructions:

- (61) a. Nah niidzu      goo wila    haʔeelst.  
 nah niist-u      goo **wila**    haʔeels-t  
 PFV see-1 SG.II what MANR work-3.II  
 ‘I saw how it works.’ *(Headless) manner relative clause*
- b. ʔNii wila    haʔeelst.  
 ʔnii **wila**    haʔeels-t  
 DET MANR work-3.II  
 ‘This is how it works.’ *Manner focus*

The final subordinating element found in extraction is *gan* REASON, which often appears in clauses translated as ‘why’ or ‘that’s why’, and predictably triggers a dependent clause.

- (62) Hanaanga aytga                      ʔyuuta gan    waalt.  
 hanaank=a ayt[-t]=a                      ʔyuuta **gan**    waal-t  
 girl.PL=CN blame[-3.II]=CN man    REAS happen-3.II  
 ‘The man is blaming the girls (for) why he’s in trouble’ *(Sasama 2001)*
- (63) Dzakdida              ʔyoon gan    lu aam    goot.  
 dzak-t-i-t=a              ʔyoon **gan**    lu aam    goot-t  
 kill-T-TR-3.II=CN moose REAS in good heart-3.II  
 ‘He killed a moose that’s why he’s happy.’

In interrogatives, we find *gan* occurring with the *wh*-expression *goo* ‘what’ to express ‘why’ (or perhaps more literally ‘what reason’) questions. As with all of the configurations outlined in this subsection, the clause following the subordinator is a dependent clause.<sup>29</sup>

- (64) a. Sa oksga    ʔgwoomʔk.  
 sa oksk=a ʔgwoomʔk  
 off fall=CN child  
 ‘The child fell.’ *Baseline*
- b. Goyu              gan    sa oksga              ʔgwoomʔk?  
 goo=u=a              **gan**    sa oksk[-t]=a              ʔgwoomʔk  
 what=Q=CN REAS off fall[-3.II]=CN child  
 ‘Why did the child fall?’ *Reason question*

<sup>29</sup>This subordinator may also appear with the *wh*-expression *naa* ‘who’ in questions such as the following:

- (xi) Naayu gan    luwantga    goodin    dm    laaltgit?  
 naa=u **gan**    luwantk=a    goot-n    dm    laaltk-it  
 who=Q REAS worry=CN heart-2.II PROSP slow-SX  
 ‘Who are you worried will be late?’  
 ‘**Who is the reason** you are worried that they will be late’





## 5.2 Extracting with a bare dependent clause

The final configuration discussed here is characterized by the extracted element appearing in a left-peripheral position and the presence of a (bare) dependent clause. This configuration occurs in the extraction of some temporal adverbs, as well as irrealis/future temporal questions (those featuring the future oriented *dzindaa/dzindeh* ‘when’). We also find certain oblique-marked arguments extract in this manner as well — including those selected by naming verbs. The bare extraction configuration is observed below. In (68a) we see the baseline sentence which exhibits canonical word order over Verb Subject Object Oblique, with the oblique argument being the target for extraction. In (68b)–(68e) we see relativization, focusing, and *wh*-questions featuring the extracted element appearing to the left of a dependent clause (which we can diagnose by the presence of series I ergative marking and the absence of the transitive vowel), with no overt complementizer or subordinator.

- (68) a. Siwaatida                            ɬguuɬgm    hana’axt    as        Emily.  
       si-waa-t-i-t=a                        ɬguuɬk-m    hana’ax-t    [a=s        Emily]  
       CAUS-name-T-TR-3II=CN child-ATTR woman-3.II    PREP=PN Emily  
       ‘She named her daughter Emily.’ *Baseline*
- b. Anoogut                                siwaada                                ɬguuɬgm    hana’axt.  
       anook-i-u=t                            si-waa[-T]-t=a                        ɬguuɬk-m    hana’ax-t  
       like-TR-1SG.II=3.I CAUS-name-T-3.II=CN child-ATTR woman-3.II  
       ‘I like what she named her daughter.’ *(Headless) relative clause*
- c. Emilyt    siwaada                            ɬguuɬgm    hana’axt.  
       Emily=t    si-waa[-T]-t=a                        ɬguuɬk-m    hana’ax-t  
       Emily=3.I CAUS-name-T-3.II=CN child-ATTR woman-3.II  
       ‘She named her daughter EMILY.’ *Focus*
- d. Naayut    siwaada                            ɬguuɬgm    hana’axt?  
       naa=u=t    si-waa[-T]-t=a                        ɬguuɬk-m    hana’ax-t  
       who-Q=3.I CAUS-name-T-3.II=CN child-ATTR woman-3.II  
       ‘What did she name her child?’ Lit: **Who** did she name[. . .] *Wh-question*
- e. Güüdagu                                naat    siwaada                                ɬguuɬgm    hana’axt.  
       güüdax-i-u=a                            naa=t    si-waa[-T]-t=a                        ɬguuɬk-m    hana’ax-t  
       ask-TR-1SG.II=CN who=3.I CAUS-name-T-3.II=CN child-ATTR woman-3.II  
       ‘I asked what she named her child.’ Lit: I asked **who**[. . .] *Embedded wh-question*

Turning to adverbials, we find that the extraction of future oriented time adverbials also results in a bare-extraction configuration. This is observed below with the fronted adverbial *dzigits’iip* ‘tomorrow’ and the future-oriented *wh*-expression *dzindaa/dzindeh* ‘when’, both of which appear to be composed of the irrealis element *dzi*, and either the time adverbial *gits’iip* ‘yesterday’ or the general *wh*-element *ndaa/ndeh*:

- (69) a. Dm    daawɬit    Dzeen dzigits’iip.  
       dm    daawɬ=t    Dzeen dzigits’iip  
       PROSP leave=PN Jane    tomorrow

- ‘Jane will leave tomorrow.’ Baseline
- b. Dzigyits’iip dm daawłs Dzeen.  
 dzigits’iip dm daawł[-t]=s Dzeen  
 tomorrow PROSP leave[-3.II]=PN Jane  
 ‘Tomorrow Jane will leave.’ Focus
- c. Dzindeyu dm daawłs Dzeen?  
 dzi=ndeh=u dm daawł[-t]=s Dzeen  
 IRR=WH=Q PROSP leave[-3.II]=PN Jane  
 ‘When will Jane leave?’ Question
- d. Gүүidagu dzindeh dm daawłs Dzeen.  
 gүүidax-i-u dzi=ndeh dm daawł[-t]=s Dzeen  
 ask-TR-1 SG.II IRR=WH=Q PROSP leave[-3.II]=PN Jane  
 ‘I asked when Jane will leave.’ Embedded question

This contrasts with the extraction of non-future oriented time adverbials and ‘when’ questions as seen in (54) and below. These are instead marked with *wil*.

- (70) Gyits’iip wil gyilks axgis Dzon  
 gyits’iip **wil** gyilks axk[-t]=s Dzon  
 yesterday COMP back arrive[-3.II]=PN John  
 ‘Yesterday John arrived.’

The bare extraction pattern is schematized below:<sup>31</sup>

- (71) a. X(=CN) [PRED-II<sub>S</sub> (S) \_\_\_\_] *oblique/adjunct extraction with intransitive predicate*  
 b. X [=I<sub>A</sub> PRED-II<sub>O</sub> (A) (O) \_\_\_\_] *oblique/adjunct extraction with transitive predicate*

This concludes the discussion on non-core argument and adjunct extraction. We find a number of configurations are utilized in the extraction of these elements, including dependent clauses headed by a subordinator (*wil*, *wila*, *gan*), a bare dependent clause, as well as a handful of exceptional and periphrastic configurations. The main processes are summarized below.

- (72) Non-core argument/adjunct extraction in Sm’algyax:
- |             |                |  |   |   |      |
|-------------|----------------|--|---|---|------|
| <i>wil</i>  | (intransitive) |  | X [wil PRED-II <sub>S</sub> ____]                 | = | (51) |
|             | (transitive)   |  | X [wil=I <sub>A</sub> PRED-II <sub>O</sub> ____]  | = | (52) |
| <i>wila</i> | (intransitive) |  | X [wila PRED-II <sub>S</sub> ____]                | = | (59) |
|             | (transitive)   |  | X [wila=I <sub>A</sub> PRED-II <sub>O</sub> ____] | = | (60) |
| <i>gan</i>  | (intransitive) |  | X [gan PRED-II <sub>S</sub> ____]                 | = | (64) |
|             | (transitive)   |  | X [gan=I <sub>A</sub> PRED-II <sub>O</sub> ____]  | = | (65) |
| “bare”      | (intransitive) |  | X [(=CN) PRED-II <sub>S</sub> ____]               | = | (69) |
|             | (transitive)   |  | X [=I <sub>A</sub> PRED-II <sub>O</sub> ____]     | = | (68) |

Let us now turn briefly to long-distance extraction.

<sup>31</sup>As with agent extraction, the presence or absence of the common-noun connective on the extracted element is not categorical.

## 6 Long-distance extraction

In addition to the local extraction configurations described in the previous sections, Sm'alyax also allows long-distance extraction. As observed in (73)-(75), the extraction morphology associated with S(ubject), O(bject), and A(gent) extraction appears in the lower clause from which an S, O or A has been extracted, while the matrix predicate bears a transitive vowel suffix, indicative of object extraction. Note, however, that the left-edge common-noun connective associated with extraction does not appear in the downstairs clause.<sup>32</sup>

(73) Long-distance S question:

- a. Anooltis                      dzi'is                      dm      galmiilgu.  
 anool-t-i[-t]=s                      dzi'is                      [dm      galmiilk-u]  
 allow-T-TR[-3.II]=PN grandmother      PROSP play-1 SG.II  
 'Grandma allowed me to play.'
- b. Naayu                      anooltis                      dzi'is                      dm      galmiilgit?  
 Naa=u [=a anool-t-i[-t]=s                      dzi'is \_\_\_\_ [dm      galmiilg-it \_\_\_\_]]  
 who=Q =CN allow-T-TR[-3.II]=PN grandmother      PROSP play-SX  
 'Who did grandma allow to play?'

(74) Long-distance O question:

- a. Anooltis                      dzi'is                      nm                      ts'ilaaya  
 anool-t-i[-t]=s                      dzi'is                      [n=dm                      ts'ilaay[-t]=a  
 allow-T-TR[-3.II]=PN grandmother      1 SG.I=PROSP visit[-3.II]=CN  
 'nasiip'insgu.  
 'na-siip'insk-u]  
 POSS-friend-1 SG.II  
 'Grandma allowed me to visit my friend.'
- b. Naayu                      anooltis                      dzi'is                      dm      ts'ilaayin?  
 naa=u [=a anool-t-i[-t]=s                      dzi'is \_\_\_\_ [dm      ts'ilaay-i-n \_\_\_\_]]  
 who=Q =CN allow-T-TR[-3.II]=PN grandmother      PROSP visit-TR-2 SG.II  
 'Who did grandma allow you to visit?'

(75) Long-distance A question:

- Naayu                      anooltis                      dzi'is                      dm      int      ts'ilaaya  
 naa=u [=a anool-t-i[-t]=s                      dzi'is \_\_\_\_ [dm      in=t      ts'ilaay[-t]=a \_\_\_\_  
 who=Q =CN allow-T-TR[-3.II]=PN grandmother      PROSP AX=3.I visit[-3.II]=CN  
 'nasiip'insgit?  
 'na-siip'insk-t]]  
 POSS-friend-3.II  
 'Who did grandma allow to visit their friend?'

<sup>32</sup>For instance, if there was a connective in the lower clause, we would expect to see the unattested form in (73)

\*Anooltis Dzi'isa dm galmiilgu.

Long distance movement of obliques functions similarly. In (76) we see the predicted dependent clause marked by *wil* in the lower clause where the prepositional argument has undergone movement — consistent with local oblique extraction described in §5.1. In (77) we see the predicted bare dependent-clause configuration — characteristic of extraction from naming-verbs outlined in §5.2. The upstairs clause is again predictably marked with object extraction morphology:

(76) Long-distance oblique question (1):

a. Anooltis                      dzi'is                      nm                      ky'ilam                      p'ildzap'il  
 anool-t-i[-t]=s                      dzi'is                      [n=dm                      ky'ilam[-t]=a                      p'ildzap'il  
 allow-T-TR[-3.II]=PN grandmother 1SG.I=PROSP give[-3.II]=CN toy  
 a                      haas.  
 a=a                      haas]  
 PREP=CN dog

‘Grandma allowed me to give a toy to the dog.’

b. Goyu                      anooltis                      Dzi'is                      minm                      wil  
 goo=u [=a anool-t-i[-t]=s                      Dzi'is \_\_\_\_ [m=dm                      **wil**  
 what=Q =CN allow-T-TR[-3.II]=PN grandmother 2SG.I=PROSP COMP  
 ky'ilam                      p'ildzap'il?  
 ky'ilam[-t]=a                      p'ildzap'il \_\_\_\_]]  
 give[-3.II]=CN toy

‘What did grandma allow you to give a toy to?’<sup>33</sup>

(77) Long-distance oblique question (2):

a. Anooltis                      dzi'is                      nm                      siwaada                      haas  
 anool-t-i[-t]=s                      dzi'is                      [n=dm                      si-waa-t[-t]=a                      haas  
 allow-T-TR[-3.II]=PN grandmother 1SG.I=PROSP make-name-T-3.II=CN dog  
 as                      Mediik.  
 a=s                      mediik]  
 PREP=PN grizzly

‘Grandma allowed me to name the dog Mediik (grizzly bear).’

b. Godu                      waa                      anooltis                      dzi'is                      minm  
 goo=u waa [=a anool-t-i[-3.II]=s                      dzi'is \_\_\_\_ [m=dm  
 what=Q name =CN allow-T-TR[-3.II]=PN grandmother 2SG.I=PROSP  
 siwaada                      haas?  
 si-waa-t[-t]=a                      haas \_\_\_\_]]  
 make-name-T-3.II dog

‘What name did grandma allow you to name the dog?’

<sup>33</sup>We thus find that *wil* can appear in this lower clause as a *reflex* of long-distance movement, despite *wil* clauses being islands to movement. See footnote 24.

In the examples above, the appearance of the question particle (*du*) obscures whether a common-noun connective appears in the upstairs clause. However, if we look at long-distance relative clauses we see that the connective does in fact appear:

- (78) Niidzu                    łgwoomłga                    anooltis                    dzi'is                    dm  
 niist-i-u=a                    łgwoomłk [=a    anool-t-i[-t]=s                    dzi'is \_\_\_\_ [dm  
 see-TR-1SG.II=CN child                    =CN allow-T-TR[-3.II]=PN grandmother PROSP  
 galmiilgit.  
 galmiilk-it \_\_\_\_]  
 play-SX  
 'I saw the child that grandma allowed to play.'

The extraction morphology that appears on the matrix predicate varies based on the class and valency of the matrix predicate. Below we see that the same predicate with the valency reducing suffix *-k(s)* (which now functions as an intransitive that can take a DP or clausal complement (79)) is suffixed with the intransitive subject extraction morpheme, while the lower clause exhibits predicted S, O, or A extraction morphology corresponding to the role of the extracted element:

- (79) a. Anoolksit                    Pita.  
 anool-ks [=t Pita]  
 allow-PASS =PN Peter  
 'Peter is allowed.'
- b. Anoolksa                    dm    galmiilks                    Pita.  
 anool-ks [=a dm galmiilk[-t]=s Pita]  
 allow-PASS =CN PROSP play[-3.II]=PN Peter  
 'Peter is allowed to play.'
- (80) Naayu                    anoolksit                    dm    galmiilgit?  
 naa=u [=a anool-ks-**it** \_\_\_\_ [dm galmiilk-**it** \_\_\_\_]]  
 who=Q =CN allow-PASS-SX PROSP play-SX  
 'Who is allowed to play?'
- (81) Goyu                    anoolksit                    dm    gabit?  
 goo=u [=a anool-ks-**it** \_\_\_\_ [dm gap-**i-t** \_\_\_\_]]  
 what=Q =CN allow-PASS-SX PROSP eat-TR-3.II  
 'What is he allowed to eat?'
- (82) Naayu                    anoolksit                    dmt                    in gaba                    naasüü?  
 naa=u [=a anool-ks-**it** \_\_\_\_ [dm=**t**                    in gap[-t]=a                    \_\_\_\_ naasüü]]  
 who=Q =CN allow-PASS-SX PROSP=3.I AX eat[-3.II]=CN raspberries  
 'Who is allowed to eat raspberries?'



This suggests that movement does not happen in “one fell swoop”, but rather in a step-by-step fashion, or more formally “successive cyclically” (Chomsky 1986; 2000; 2001; 2008; Rackowski and Richards 2005; van Urk and Richards 2015). Though a formal analysis of successive cyclic movement in Sm’algyax is beyond the purview of this descriptive paper, I suggest this data provides further cross-linguistic evidence for analyses of successive cyclicity and warrants more investigation in the future.

## 7 Conclusion

In this paper I sought to introduce and describe  $\bar{A}$ -extraction in Sm’algyax. This constitutes the first detailed description of questions and  $\bar{A}$ -processes in Sm’algyax. I showed that extraction of a core argument exhibits a tripartite pattern: object and intransitive subject extraction both feature verbal suffixes — *-i* and *-it*, respectively — while transitive subject extraction is marked by a subordinating element *in*. This three-way pattern may be unexpected considering case alignment in canonical clauses in Sm’algyax, which is rigidly ergative and otherwise does not differentiate between intransitive subjects and direct objects. As pointed out in Forbes (2017) for Gitksan,  $\bar{A}$ -movement thus exposes underlying syntactic heterogeneity between both types of absolutive argument.

Beyond core argument extraction, I showed that the movement of oblique elements and adjuncts typically results in a configuration marked by the presence of a dependent clause, which may be introduced by a subordinator such as *wil*, *wila*, *gan*, or in certain cases may result in a “bare” dependent clause.

I have uncovered a number of facts that warrant a closer look in the future. Movement is sensitive to strong islands, multiple-*wh*-questions are not possible, and long-distance movement bears evidence of extraction in each clause. Also of interest is the presence of a determiner element, a “connective”, in most extraction configurations. What is the role of the connective here? Does it hint at a potential analysis of these configurations as consisting of a *wh*-expression or focused element, combining with a headless relative clause (introduced by the common-noun determiner/connective). This kind of cleft or “pseudo-cleft” analysis has been proposed as a possible analysis of Gitksan questions in Davis and Brown (2011), and also is compatible with the syntax proposed for questions and clefts in many languages of the Pacific Northwest (Kroeber 1991; 1999; Davis et al. 1993; Jelinek 1998; Baptiste 2001).

In terms of intrafamily generalizations, I would like to flag the similarities between extraction in Sm’algyax and extraction in Interior Tsimshianic languages (Gitksan and Nisga’a), where these phenomena have garnered more description. We observe that the complex system of extraction in Sm’algyax is strikingly consistent across the family, with a few slight divergences between the different languages. Gitksan, for example, boasts identical or near-identical cognates to Sm’algyax’s core-argument extraction morphosyntax (Rigsby 1986; Davis and Brown 2011; Brown 2016; Forbes 2017) as well as the morphosyntax associated with non-core argument extraction (Brown and Forbes 2018). One difference is that there is no Interior Tsimshianic cognate of Sm’algyax’s *wh*-question clitic (*du*) which appears only in *wh*-questions, and is a root-level phenomenon. The present survey of questions and movement in Sm’algyax lays a foundation for

further intrafamily comparison and discussion.

## References

- M. S. Anderson and M. Ignace. Visible grammar: Twenty user friendly grammar modules for Sm'algyax. Prince Rupert, B.C.: Wap Sigatgyet, School District 52, 2008.
- M. R. Baptiste. Okanagan wh-questions. Master's thesis, University of British Columbia, 2001.
- K. Bicevskis, H. Davis, and L. Matthewson. *Quantification in Gitksan*, pages 281–382. 07 2017. doi: 10.1007/978-3-319-44330-0\_6.
- F. Boas. Tsimshian grammar. In *Handbook of American Indian Languages*. Washington: Government Print Office, 1911. Bulletin 40, volume 1.
- C. Brown. Extraction restrictions in Gitksan. Master's thesis, McGill University, 2016.
- C. Brown and C. Forbes. Three (hidden) obliques in Gitksan. Handout presented at SSILA, January 2018.
- C. Brown, C. Forbes, and M. D. Schwan. Clause-type, transitivity, and the transitive vowel in Tsimshianic. In D. K. E. Reisinger, H. Green, M. Huijsmans, G. Mellesmoen, and B. Trotter., editors, *Papers for the 55th International Conference on Salish and Neighbouring Languages*, pages 12–40. UBC Working Papers in Linguistics, 2020.
- I. Caponigro, H. Torrence, and R. Z. Maldonado, editors. *Headless Relative Clauses in Mesoamerican Languages*. Oxford University Press, 2020.
- N. Chomsky. *Barriers*. Cambridge, MA: MIT Press., 1986.
- N. Chomsky. Minimalist inquiries: the framework. In *Step by Step: Essays on Minimalist Syntax in Honour of Howard Lasnik*. MIT Press, Cambridge, 2000.
- N. Chomsky. Derivation by phase. In *Ken Hale: A life in language*, pages 1–52. MIT Press, 2001.
- N. Chomsky. On phases. In R. Freidin, D. Michaels, C. P. Otero, and M. L. Zubizarreta, editors, *Foundational issues in linguistic theory: Essays in honor of Jean-Roger Vergnaud*, pages 133–166. Cambridge, MA: MIT Press, 2008.
- H. Davis. Only connect! determiners, case and agreement in Tsimshianic. *International Journal of American Linguistics*, 84(4):471–511, 2018.
- H. Davis and J. Brown. On A'-dependencies in Gitksan. In *Papers for the 46th International Conference on Salish and Neighbouring Languages*, pages 43–80. UBC Working Papers in Linguistics, 2011.



- H. Davis and C. Forbes. Connect four! The morphosyntax of argument marking in Tsimshianic. In *Papers for the 50th International Conference on Salish and Neighbouring Languages*. UBCWPL, 2015.
- H. Davis, D. Gardiner, and L. Matthewson. A comparative look at wh-questions in Northern Interior Salish. In *Paper presented at the 29th International Conference on Salish and Neighbouring Languages*. August 19-21. Seattle, 1993.
- J. A. Dunn. A reference grammar for the Coast Tsimshian language. Canadian Ethnology Service paper 55, Ottawa, ON, 1979.
- C. Forbes. Extraction morphosyntax and wh-agreement in Gitksan: The case for accusativity. In *Proceedings of the 2017 Canadian Linguistic Association*. Ryerson University, 2017.
- C. Forbes. *Persistent ergativity: Agreement and splits in Tsimshianic*. PhD thesis, University of Toronto, Toronto, ON, 2018.
- FPCC. First Peoples' Culture Council language needs assessment: Sm'algyax, 2018. URL <https://maps.fpcc.ca/languages>. Accessed Nov 18, 2021.
- F. Heck. *On Pied-Piping: Wh-Movement and Beyond*. Berlin: Mouton de Gruyter, 2008.
- K. Hunt. *Clause Structure, Agreement and Case in Gitksan*. PhD thesis, University of British Columbia, 1993.
- E. Jelinek. Wh-clefts in Lummi. In *Papers for the 33rd International Conference on Salish and Neighboring Languages*, pages 257–65. Seattle, WA: University of Washington, 1998.
- K. M. Jóhannsdóttir and L. Matthewson. Zero-marked tense: The case of Gitksan. In *Proceedings of NELS*, volume 37, 2007.
- P. D. Kroeber. *Comparative syntax of subordination in Salish*. PhD thesis, University of Chicago, 1991.
- P. D. Kroeber. *The Salish Language Family*. University of Nebraska Press, 1999.
- L. Matthewson. On the methodology of semantic fieldwork. *International Journal of American Linguistics*, 70(369-415), 2004.
- L. Matthewson. Gitksan modals. *International Journal of American Linguistics*, 79(3):349–394, 2013.
- J. Mulder. *Ergativity in Coast Tsimshian (Sm'algyax)*. PhD thesis, UC Berkeley, 1994.
- A. Rackowski and N. Richards. Phase edge and extraction: A Tagalog case study. *Linguistic Inquiry*, 36:565–599, 2005.
- B. Rigsby. Gitksan grammar, 1986. Ms., University of Queensland, Australia.

- J. R. Ross. *Constraints on variables in syntax*. PhD thesis, MIT, 1967.
- F. Sasama. *A descriptive study of the Coast Tsimshian morphology*. PhD thesis, Kyoto University, 2001.
- T. Smith Stark. ‘pied-piping’ con inversion en preguntas parciales. Ms. Centro de estudios lingüísticos y literarios, Colegio de México y Seminario de lenguas indígenas., 1988.
- M. Stoyanova. *Unique Focus: Languages without multiple wh-questions*. John Benjamins Publishing, 2008.
- M.-L. Tarpent. *A Grammar of the Nisgha Language*. PhD thesis, University of Victoria, 1987.
- TSLA. Sm’algyax living legacy talking dictionary, Ts’msyen Sm’algyax Language Authority, 2013. URL <http://web.unbc.ca/~smalgyax/>. M. Anderson (editor). Prince Rupert, B.C.
- C. van Urk and N. Richards. Two components of long-distance extraction: Successive cyclicity in Dinka. *Linguistic Inquiry*, 46(1):113–155, 2015.

## A Extraction from copular sentences and possessor extraction

Copular sentences in Sm’algyax resemble sentences with intransitive predicates. A predicative nominal element appears in initial position, and is followed by its subject. Predicative nominals are not introduced by connectives, but the nominal arguments of those predicative nominals are obligatorily preceded by a connective.

- (88) a. Lapleedit      Dzon.  
       lapleet    [=t   Dzon]  
       priest     =PN John  
       ‘John is a priest.’
- b. Lapleeda      ’yuuta.  
       lapleet    [=a   ’yuuta]  
       priest     =CN man  
       ‘The man is a priest.’

There are two ways to form questions based on this type of construction. The first, in which the predicate is being questioned, consists of a *wh*-word followed by the argument of the predicate, which is introduced by a connective:

- (89) a. Naayut      Dzon?  
       naa=u    [=t   Dzon]  
       who=Q   =PN Dzon  
       ‘Who is John?’

- b. Naat 'nüün?  
naa [=t 'nüün]  
who =PN 2SG.III  
'Who are you?'  
c. Naat 'yuuta?  
naa [=t 'yuuta]  
who =CN man  
'Who is the man?'

The second kind, in which the argument is being questioned, features a *wh*-expression appearing before the subject, a common-noun connective, and the subject extraction suffix appearing on the nominal predicate:

- (90) Naat lapleedit?  
naa=**t** lapleet-**it**  
who=CN priest-SX  
'Who is a priest?'<sup>36</sup>

Possessor extraction is also marked with the subject extraction morpheme. Possessive structures appear in a possessee-possessor order. The possessor is introduced by a connective (either *a* if a common noun, or *s* if a proper noun), or if the possessor is pronominal, it is indexed on the possessed noun with series II person agreement. Some possessed nominals are further marked with a possessive prefix *na*:

- (91) Giigu naboots Klalens.  
giik-i-u=a [na-boot=s Klalens]  
buy-TR-1SG.II=CN POSS-boat=PN Clarence  
'I bought Clarence's boat.'

Extraction of the possessor involves inversion of the possessor and the possessee, and the appearance of the subject extraction suffix on the possessee. Note that the possessive prefix is also absent in these sentences:

- (92) a. Naat boodidu giigin?  
naa=**t** boot-**it**=u giik-i-n \_\_\_\_  
who=CN boat-SX=Q but-TR-2SG.II  
'Whose boat did you buy?'

<sup>36</sup> Copular questions where the predicative noun is possessed lack this subject extraction suffix, and instead are only marked with a series II suffix, functioning as a possessive person marker.

- (xii) Goyu (dii) pteegn?  
goo=u=a dii pteek-n  
what=Q=CN FOC crest-2SG.II  
'What is your crest/clan?'

- b. Klalensa boodida giigu.  
Klalens=**a** boot-**it**=a giik-i-u \_\_\_\_  
Clarence=CN boat-SX=CN buy-TR-1 SG.II  
It was Clarence's boat that I bought. (Answer to 'whose boat did you buy?')

This inversion process thus resembles “pied-piping with inversion” or secondary *wh*-movement (Smith Stark 1988; Heck 2008).