

QUESTIONS AND THEIR RELATIVES IN SM'ALGYAX*

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1 Introduction

This paper presents a description of content questions or *wh*-questions in Sm'algyax (ISO 639-3 *tsi*, also known as Coast Tsimshian), a Maritime Tsimshianic language spoken in Northwestern British Columbia, and Southeastern Alaska. Questions in Sm'algyax are characterized by a complex system of extraction morphology indicating whether a transitive subject, intransitive subject, or object has been extracted. This tripartite system is surprising given that Sm'algyax is an otherwise ergative patterning language in which intransitive subjects and direct objects pattern together with respect to person marking and agreement. We thus find that extraction processes reveal a grammatical distinction between intransitive subjects and direct objects, as is also attested in the Interior Tsimshianic languages (Rigsby 1986, Tarpent 1987, Davis and Brown 2011, Brown 2016, Forbes 2017).

In addition to core-argument extraction, Sm'algyax also boasts a number of configurations marking different types of adjunct and non-core-argument extraction. Again, we observe that while in-situ oblique elements often pattern identically to one another, extraction of these oblique elements differs substantially, highlighting underlying heterogeneity not observable in sentences with canonical word order.

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 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 that I believe warrant deeper investigation and discussion in future work.

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This paper proceeds as follows: in the remainder of this section I provide a background on 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*-expressions, *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-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'algyax background and methodology

Sm'algyax, 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'algyax (Coast Tsimshian) and Sgüüxs (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'algyax: Velna Nelson, Ellen Mason, and Theresa Lowther (Txalgiw/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'algyax, while acceptability judgements are elicited by providing the speaker with a sentence in Sm'algyax 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). Examples cited as TSLA are pulled from the Sm'algyax Living Legacy Talking Dictionary accessible at <https://www.webonary.org/smalgyax/>.

2 Clause typing, person marking, and connectives

In this section I provide the background on Sm'algyax 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'algyax word order is rigidly Verb-Subject-Object-Oblique (VSOX), except for the movement of phrases to a preverbal position which will be documented more completely in subsequent sections:^{1,2}

- (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.' (Mulder 1994, 49)

Across the Tsimshianic family there are two main clause types, referred to here as INDEPENDENT and DEPENDENT.³ 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. The suffix *-i* (the “transitive vowel”) appears on transitive verbs in independent clauses and may function as a diagnostic for clause type across Tsimshianic (Brown et al. 2020).⁴ Examples (2) and (3) show independent clauses, which feature this transitive suffix:⁵

¹The 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'algyax 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.

²Abbreviations 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, CNTR = contrastive, COMP = complementizer, DET = determiner, EPIS = epistemic modal, FOC = focus, I = series I clitic, II = series II suffix, III = series III pronoun, INDEF = indefinite, 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, PROHIB = prohibitive, PROSP = prospective, PROX = proximal, Q = question particle, REAS = reason clause subordinator, REL = relative, SG = singular, SPT = spatiotemporal particle, SX = subject extraction morpheme, T = transitive control suffix, TR = transitive, VER = verum, 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.

³Much of the prior literature on Sm'algyax refers to these clause types as “indicative” and “subjunctive”, following the terminology introduced in Boas (1911). However, as we will see in detail in this section, this clause-type distinction is orthogonal to mood. I have here opted for the theory neutral terms used in Rigsby (1986) and later work on Interior Tsimshianic.

⁴Though 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], or as a glide [j]. 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.

⁵As indicated by the English translations, third-person agreement/pronouns are gender neutral. Sm'algyax also 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

(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

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 *al/aka* NEGATION, *yagwa* PROGRESSIVE, and *la* PROXIMAL. 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 (Table 1). The distribution of these person-markers is sensitive to the independent/dependent clause-type distinction: in independent clauses, series II suffixes index agreement with the transitive (or “ergative”) subject, and objects and intransitive subjects (“absolutive” arguments) surface as series III pronouns; in dependent clauses, series I suffixes index agreement with the transitive subject, while series II suffixes agree with objects and intransitive subjects. This is schematized in (2):⁶

2007, Matthewson 2013). For ease of readability, after this section, I only provide a single English translation as offered/accepted by my consultants.

⁶These 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.

	I <i>Clitics</i>		II <i>Suffixes</i>		IIIa <i>Weak pronouns</i>		IIIb <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	

Table 1: Sm’algyax person marking

	A	S	O
Independent	II	III	III
Dependent	I	II	II

Table 2: Basic person-marking system

We see examples of these person-marking configurations below. In the intransitive independent clause in (6), the intransitive subject (S) is marked with a series III(a) suffix. While in the transitive independent clause in (7), the object (O) surfaces as a series III(b) independent pronoun and the transitive subject, or “agent” (A), is marked by a series II verbal suffix:⁷

(6) Independent intransitive: Series III marks S

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

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

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

Example (7) also shows that third-person independent pronouns are able to be dropped if a suitable discourse antecedent is present.

In the intransitive dependent clause in (8), S is not marked by series III, but by a series II suffix. In the transitive dependent clause in (9), O is also marked by a series II suffix, while A is marked by a prepredicative series I clitic:

⁷I 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 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.

- (8) Dependent intransitive: Series II marks S

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

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

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

Throughout this paper I include in the morpheme breakdown the presence of a proposed underlying third-person agreement marker [-t], following 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.

- (10) Dependent intransitive: Series II marks S; deleted when adjacent to referent

Ła miiga maay. (not *miikda*)
 ła miik[-**t**]=a maay
 PROX ripe[-3.II]=CN berry
 ‘The berries are ripe.’

Consistent with the generalizations outlined in this section, the proposed suffixal series II agreement marker *-t* agrees with ergative arguments in independent clauses and absolutive arguments in dependent clauses. However, it does not surface when followed directly by the DP it co-refers with, as is the case in (10). This deletion process is sensitive to a strict adjacency requirement: when elements such as sentential clitics appear between the predicate and its arguments, this *t*-deletion does not occur. We observe this in (11): the epistemic modal =*sn* surfaces between the predicate and its argument, and *-t* appears. See the aforementioned sources for additional argumentation and discussion.

- (11) Ła miiktsnł maay.
 ła miik-**t**=sn=ł maay
 PROX ripe-3.II=EPIS=IRR.CN berry
 ‘The berries might/must be ripe.’

The system schematized in (2) 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 absolutives 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 in a left-peripheral position under \bar{A} -movement (12), and series II suffixes also mark possession (13):

- (12) 'Nüün dm int gaas Meeli.
 'nüün [dm in=t gaa[-t]=s ____ Meeli]
 2SG.III PROSP AX=3.I take[-3.II]=PN Meeli
 'It's you who will take Mary.'
- (13) waabm
 waap-**m**
 house-1PL.II
 'our house'

Having described person marking across independent and dependent clauses, let us turn to the morphological marking associated with overt DPs.

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 (14): the connective *=a* is associated with the common noun *hana'a* but phonologically attaches to the predicate *sisaaxs* which appears to the right of the noun. All non-predicative nominals must be introduced by a connective.⁸

- (14) Sis'aaxsa hana'a.
 sis'aaxs [=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 *=t*. 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* uniformly introduces intransitive subject, transitive subject and object across both clause types:

- (15) Independent intransitive: [=a S]

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

⁸ 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 which is triggered in environments where the *=a* connective directly follows a sonorant or vowel ([Anderson and Ignace 2008](#)).

‘The car arrived.’

(Anderson and Ignace 2008, 366)

- (16) 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)

- (17) Dependent intransitive: [=a S]

Ła dzaga giik.
ła dzak[-t] [=a giik]
PROX die[-3.II] =CN fly
‘The fly is dead.’⁹

(Sasama 2001, 98)

- (18) 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.’

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:

- (19) Negation

Akat anooxdit Larrył onions.
A=ka=t anoox-t=t Larry [=ł onions]
NEG=FOC=3.I like-3.II=PN Larry =IRR.CN onions
‘Larry doesn’t like onions.’

(Sasama 2001)

- (20) Polar question

Gabał haasił hoon?
gap-i[t] [=ł haas]=ii [=ł hoon]
eat-TR-3.II =IRR.CN dog=Q =IRR.CN fish
‘Did the dog eat the fish?’

In subsequent sections I will outline the role of common-noun connectives (both irrealis and non-irrealis) in extraction and questions. With this background in place let us now discuss \bar{A} -movement.

⁹Though (17) and (18) function as matrix/root sentences, they are dependent clauses as they are introduced by the dependent markers *ła* and *yagwa*, respectively.

3 \bar{A} -movement, questions, and *wh*-expressions

In contrast to Sm'algyax's canonical predicate initial word order (21a), *wh*-questions (21b), focus-constructions (21c), and relative clauses (21d) are characterized by the preposing (or “extraction”) of a post-predicative word or phrase to a left-peripheral position in the clause:

- (21) a. Tgi k'apaaytga 'yuuta
 tgi k'apaaytk=a 'yuuta
 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 (21b))
- 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.’

In this section I discuss the formation of *wh*-questions, the interrogative and non-interrogative uses of *wh*-expressions, and the interrogative enclitic (*d*)*u*, which appears optionally in root/matrix *wh*-questions.

3.1 *Wh*-expressions

There are three basic *wh*-expressions in Sm'algyax: *naa* ‘who’, *goo* ‘what’, and an underspecified *wh*-expression *ndaa/ndeh*. As shown in Table 3, these basic words combine with subordinating elements such as *wil/wila/gan* to form complex *wh*-expressions corresponding to ‘when’, ‘how’, ‘why’, etc. (these subordinators and non-core argument extraction configurations are described in detail in §5). In addition to the basic *wh*-expressions, there are two quantificational *wh*-expressions *t'masool* ‘how many (people)’, and *t'maays* ‘how many (things)’.

In content questions, the *wh*-expression appears in the prepredicative position, and may not appear in situ (either as a canonical question or an echo/surprise question):

- (22) a. Tgi k'apaaytga 'yuuta
 tgi k'apaaytk=a 'yuuta
 down fall=CN man
 ‘The man fell down.’

	<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>t'masool</i> 'how many (people)'
			<i>ksindaa</i> 'which (one)'	<i>t'maays</i> 'how many (things)'

Table 3: Sm'algyax *wh*-expressions

- b. Naayu tgi k'apaaytgit?
naa=u tgi k'apaaytk-it ____
who=Q down fall-SX
'Who fell down?'
- c. # tgi k'apaaytk-it/=t naa(=u)
down fall-SX/=PN who=Q
Intended: 'Who fell down?'

(23) Context: Mary is talking about her young child Pat, and mentioned that he ate sea lion. You are surprised by this:

- a. # gap-i[-t]=s Pat=l **goo**
eat-TR-3.II=PN Pat=IRR.CN what
Intended 'Pat ate what?'
- b. Goł gabis Pat??
goo=l gap-i[-t]=s Pat
what=IRR.CN eat-TR-3.II=PN Pat
'What did Pat eat??' (Correction offered by speaker in context)

Though occurring infrequently, bare *wh*-expressions may appear in argument positions functioning as light nouns such as 'person' or 'thing'. This suggests that the interrogative reading of these *wh*-expressions is associated with extraction.

- (24) Ksiniidzu naa.
ksi=niist-i-u=a **naa**
out=see-TR-1 SG.II=CN who
'I picked out a person.'

- (25) Hablbootida goo a ts'im ts'ikts'ikt.
 ha=bl-bootl-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.'

However, (non-interrogative) *wh*-expressions do optionally occur in a left-peripheral position in headless relative clauses.

- (26) Context: John trapped two bears, one managed to get free and start running off

Guuyda (goo) k'eexgit.
 guu-i-t=a **goo**=a k'eexk-ət ____
 shoot-TR-3.II=CN what=CN run.off-SX
 'He shot the one that ran off.'

- (27) Txal'waayu (naa) int ba'an boot.
 txal'waa-i-u=a **naa**=a in=t baa-'n=a ____ boot
 meet-TR-1 SG.II=CN who=CN AX=3.I run-CAUS=CN boat
 'I met the one who runs the boat.'

Indefinite/indeterminate nouns in Sm'algyax are most often composed of a *wh*-expression preceded by a particle that contributes quantificational meaning, including *ligi* 'some/any/or', *txa'nii* 'all', and *al/aka/'wah* 'not'.

- (28) Nah niidzu ligit naa
 nah niits-i-u **ligi**=t **naa**
 PFV see-TR-1 SG INDEF=PN who
 'I saw someone.'

- (29) Giigida txa'nii goo ap ksa ła'at.
 giik-i-t=a **txa'nii** **goo** ap ksa=a ła'at
 buy-TR-3.II=CN all what VER only=CN ball
 'She bought everything but the ball.'

- (30) Giloo labayt 'nakan da 'wah goo.
 giloo=a libagayt 'naka-n da=a **'wah** **goo**
 PROHIB=CN wrong reach.out-2 SG.II PREP=CN NEG what
 'Stop reaching for nothing.'

(TSLA)

These *wh*-expressions marked with quantificational particles are able to appear in the initial/non-argument position, and do not receive an interrogative reading:

- (31) Txa'nii goo wil baast.
txa'nii **goo** wil baas-t ____
 all what COMP fear-3.II
 'He is afraid of EVERYTHING.'
 Not: 'What all is he afraid of?'

We also find that multiple *wh*-questions are not permitted. In (32) we observe that multiple *wh*-movement is not possible, and that English-style multiple *wh*-questions with an in-situ *wh*-expression are likewise not possible. This second construction may be ruled out based on the observation above that a *wh*-expression must move to be interpreted as interrogative. 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), as well as a number of languages of the Mesoamerican sprachbund (Caponigro et al. 2020).

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

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

- (33) 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?'

Many of the questions described above are marked by the *wh*-clitic =(d)u. I briefly describe its distribution in the following subsection.

3.2 *Wh*-clitic

Content questions may optionally be marked by the *wh*-clitic =(d)u. This element appears in any root (i.e. not embedded) content question, though it is often dropped in colloquial or rapid speech.

- (34) Naayut 'nüün?
 naa=**u**=t 'nüün
 who=Q=PN 2SG.III
 'Who are you?'
 (35) Naat 'nüün?
 naa=t 'nüün
 who=PN 2SG.III
 'Who are you?'

We observe in (36) that $=(d)u$ may not appear in embedded questions.

- (36) Gütüdagü naa limoom sm'ooygit.
 güüdax-i-u=a naa(*=**u**)=a limoom-i(*=**u**) =a sm'ooygit ____
 ask-TR-1SG=CN who=Q=CN help-TR=Q=CN chief
 'I asked who the chief helped.'

The *wh*-clitic may surface either as [ju] or [du], optionally surfacing as either form directly following one of the three basic *wh*-expressions with no difference in meaning between the two forms: *naayu/naadu* (who=Q), *goyu/godu* (what=Q), *ndeyu/ndedu* (WH=Q).

- (37) a. Naayu baat?
 naa=**u**=a baa-it
 who=Q=CN run-SX
 'Who ran?'
 b. Naadu baat?
 naa=**du**=a baa-it
 who=Q=CN run-SX
 'Who ran?'
 Consultant's comment: "Same as *Naayu baat*."

The interrogative clitic exhibits variable positioning in the clause. It may always appear on the *wh*-expression, as in (38a). However, under certain circumstances, it may optionally appear in a position following the predicate, as in (38b).¹⁰

- (38) a. Naayu int gaba ts'ik'aaws?
 naa=**u**=a in=t gap=a ts'ik'aaws
 who=Q=CN AX=3.I eat=CN split.salmon
 'Who ate the split salmon?'
 b. Naat int gapdu ts'ik'aaws?
 naa=t in=t gap-t=**u**=a ts'ik'aaws
 who=CN.IRR AX=3.I eat-3.II=Q=CN split.salmon
 'Who ate the split salmon?'

Having presented these generalizations about content questions and extraction, 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 *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).

¹⁰The post-predicative positioning of $=(d)u$ is unavailable if a participant (first or second person) series II suffix appears on the predicate, as well as in the case of subject extraction, where a special suffix *-it* appears (described in §4). I set aside this issue of clitic linearization.

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. This tripartite system is perhaps surprising given that person-marking and number agreement in Sm'algyax does not generally mark a grammatical distinction between intransitive subjects and objects (or "absolutives"). 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 interrogative clitic $=\langle d \rangle u$, which exhibits variable positioning in the clause and obscures the otherwise consistent morphosyntactic marking of these constructions. However, I also include examples of root questions marked with $=\langle d \rangle u$, but limit discussion of the interrogative clitic.

4.1 Intransitive subject extraction

Extraction of an intransitive subject is marked morphologically by the presence of the morpheme *-it* (glossed as "subject extraction") that suffixes to the predicate, and the common-noun connective $=a/\langle t \rangle$ appearing on the extracted element in the left-peripheral position.

(39) S extraction

- | | |
|---|-------------------|
| <p>a. Sis'aaxsa gyet.
 sis'aaxs=a gyet
 laugh=CN person
 'A person laughed'</p> | Baseline |
| <p>b. Pada sis'aaxsit.
 Pat [=a sis'aaxs-it ____]
 Pat =CN laugh-SX
 'It's Pat who laughed.'</p> | Focus |
| <p>c. Wilaayu gyeda sis'aaxsit.
 wilaay-u=a gyet [=a sis'aaxs-it ____]
 know-1 SG.II=CN person =CN laugh-SX
 'I know the person who laughed.'</p> | Relative clause |
| <p>d. Güüdagu naa sis'aaxsit.
 güüdax-i-u=a naa [=a sis'aaxs-it ____]
 ask-TR-1 SG.II=CN who =CN laugh-SX
 'I asked who laughed.'¹¹</p> | Embedded question |

The presence of a common-noun connective on the *wh*-expression in questions such as (39d) is obscured by the general vowel-final nature of *wh*-expressions, as the $=a$ connective systematically

¹¹In these examples with *güüdagu* '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:

deletes when appearing after vowels and sonorants (Anderson and Ignace 2008, Brown et al. 2020). Evidence that there is a connective in questions comes from those questions that feature the irrealis connective =*t*, which does not undergo this deletion. We see this in (40) — here =*t* is licensed by the matrix-clause negation:

- (40) Akandi wilaayɬ naaɬ dawɬit.
 aka=n=di wilaay[-t]=ɬ naa [=ɬ dawɬ-**it** ____]
 NEG=2SG.I=FOC know[-3.II]=IRR.CN who =IRR.CN leave-SX
 ‘I don’t know who left.’

Root *wh*-questions do not differ substantially from embedded ones. They bear the same extraction morphology described above, however, they are additionally optionally marked with the interrogative clitic =(d)*u* on the *wh*-phrase:

- (41) Naayu sis’aaxsit?
 naa=**u** [=a sis’aaxs-**it** ____]
 who=Q =CN laugh-SX
 ‘Who laughed?’

Question

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*:

- (42) S extraction morphology
 S=CN PRED-SX ____

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

4.2 Object extraction

Object extraction is characterized by the presence of the transitive suffix *-i* on the verb, and a person-marking configuration in which series II suffix indexes agreement with the transitive subject; object-extraction configurations therefore exhibit morphology characteristic of independent clauses. Although the transitive vowel does not surface in (43a)–(43d) due a morphophonological deletion process: *-i* does not surface between a consonant and a vowel (/CiV/ → [CV]), the examples in (44) with a pronominal subject show that the transitive vowel does appear in between consonants (/CiC/ → [CiC]).

- (43) O extraction

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

- 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. Gүүдaгу goo gaba gyet.
gүүdax-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
- (44) 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. Gүүдaгу goo gabit.
gүүdax-i-u=a goo [=a gap-i-t ____]
ask-TR-1 SG.II=CN goo =a eat-TR-3.II
'I asked what she ate.' Embedded question

As we saw above for subject questions, root *wh*-questions may be additionally marked by the interrogative clitic =(d)u without otherwise affecting the characteristic extraction morphology.

- (45) Goyu 'nax'nuuyn?
goo=**u** [=a 'nax'nuu-**i**-n ____]
what=Q =CN hear-TR-2 SG.II
'What did you hear?' Question

I have suggested that the transitive vowel functions as extraction morphology in these object extraction cases, in spite of it also being present in the baseline transitive sentence (43a). I provide below two pieces of evidence that the transitive vowel *is* part of the characteristic extraction morphology of object extraction, and is not simply occurring here because these sentences feature transitive predicates.

The first piece of evidence comes from the appearance of the transitive vowel in clauses with dependent markers. Recall that dependent clauses are typically introduced by a dependent marker or are triggered by syntactic subordination. The examples below show a dependent marker *la*

introducing a dependent clause, as diagnosed by the presence of the ergative indexing series I clitic, series II morphology indexing the absolutive argument, and the absence of the transitive vowel:

- (46) Łat dzapda 'yuuta waap.
 ł̣a=**t** dzap-t=a 'yuuta=a waap
 PROX=3.I make-3.II=CN man=CN house
 'The man is just beginning/just began to build the house.' (Mulder 1994, 80)

- (47) Łan nax'nuu wuts'iin.
 ł̣a=**n** nax'nuu[-t]=a wuts'iin
 PROX=1 SG.I hear[-3.II]=CN mouse
 'I just heard a mouse.'

In object-extraction configurations with dependent markers, the transitive vowel appears, there is no series I agreement morphology, and the series II suffix indexes agreement with the transitive subject: all hallmarks of independent clauses.

- (48) Godu nah ł̣a gabit?
 goo=du=a nah ł̣a gap-**i**-t ____
 what=Q=CN PFV PROX eat-TR-3.II
 'What did he just eat?'

- (49) Godu ł̣a 'nax'nuuyn?
 goo=du=a ł̣a 'nax'nuu-**i**-n ____
 what=Q=CN PROX hear-TR-2.II
 'What did you just hear?'

Further evidence that the transitive vowel, and more generally independent clause morphology, is associated with object extraction comes from embedding. Embedded clauses with canonical word order in Sm'algyax are obligatorily dependent clauses, and therefore lack the transitive vowel *-i*. For example, in (50) the embedded clause *t gapdit Bill bilhaa* is marked with a series I ergative clitic *=t*, and lacks the transitive vowel. The embedded object extraction configuration *ap ksa bilhaa gabis Bill* in (51), conversely, lacks series I marking and is obligatorily marked with the transitive vowel. Again, this shows that the transitive vowel occurs as a direct reflex of the extraction of an object.

- (50) Wilaayut gapdit Bill bilhaa.
 wilaay-i-u [(a)=**t** gap-t=t Bill=a bilhaa]
 know-TR-1 SG.II =CN=3.I eat-3.II=PN Bill=CN abalone
 'I know that Bill ate abalone.'

- (51) Wilaayu ap ksa bilhaa gabis Bill.
 wilaay-u [=a ap ksa=a bilhaa=a gap-**i**[-t]=s Bill ____]
 know-1 SG.II=CN =CN VER only=CN abalone=CN eat-TR-3.II=PN Bill
 'I know it was only abalone that Bill ate.'

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):

- (52) O extraction morphology
O=CN PRED-TR-II_A A ____

4.3 Transitive subject extraction

The extraction of a transitive subject (or “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 series I clitic =*t*. Unlike object extraction configurations, which pattern like independent clauses with respect to person marking (series II suffixes agree with the transitive subject) and the presence of the transitive vowel, agent extraction configurations pattern like dependent clauses: they feature a series I clitic and lack the transitive vowel, and the series II suffix indexes agreement with the object.¹²

- (53) A extraction (see (43a) 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

The absence of the transitive vowel is clearly observed in the relative clause and embedded question with a pronominal object in (54).

- (54) 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

¹²Unlike 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).

b. Güüdagu naa int gapt.
 güüdax-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

A root question, featuring the interrogative clitic =(d)u, predictably shares this A extraction morphology:

(55) A *wh*-question

Goyu int ɭak'an?
 goo=u [=a in=t ɭak'-n ____]
 what=Q =CN AX=3.I bite-2SG.II
 ‘What bit you?’

Question

Agent extraction is schematized below. The extracted agent appears in the left-peripheral position, followed by the prepredicative agent extraction morpheme *in* and the third-person clitic =t; verbal agreement suffixes agree with the absolutive object:¹³

(56) A extraction morphology:

A(=CN) AX=3.I PRED-II_O ____ O

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

(57) Argument extraction in Sm'algyax

Subject	S [=CN PRED-SX ____]	= (39)
Object	O [=CN PRED-TR-II _A ____]	= (43)
Agent	A [(CN) AX=3.I _A PRED-II _O ____]	= (53)

I have suggested in (57) that both absolutive arguments, namely intransitive subjects and objects, behave distinctly with respect to extraction. Note, however, that the morphological material following the predicate in either extraction configuration may sometimes be surface identical. For example, in (58) the subject extraction morpheme and the sequence of the transitive vowel and third-person series II suffix both surface as [it]:

(58) S vs. O extraction: surface identical morphology

¹³The third person series I clitic =t may optionally appear before or after the agent extraction morpheme *in* with no change in meaning:

(1) 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?’

- a. Naayu tgi oksit?
 naa=u=a tgi oks-**it** ____
 who=Q=CN down fall-SX

‘Who fell?’

S extraction, *-it* suffix appears on predicate

- b. Goyu gabit?
 goo=u=a gap-**i-t** ____
 what=Q=CN eat-TR-3.II

‘What did she eat?’

O extraction, *-i* suffix appears on predicate

A potential unifying analysis of the transitive vowel and subject extraction suffix might proceed as follows:¹⁴ (i) both S and O extraction trigger the appearance of an extraction suffix *-i* EXTRACT (formally distinct from the transitive vowel), (ii) both S and O extraction trigger the use of series II suffixes, which follow the extraction suffix. For O extraction, the series II suffix agrees with A, and for S extraction, the series II suffix functions as an expletive third-person S. This potential alternate analysis is applied to the examples in (58) below:

(59) Unifying S and O extraction?

- a. Naayu tgi oksit?
 naa=u=a tgi oks-**i-t** ____
 who=Q=CN down fall-EXTRACT-3.II

‘Who fell?’

S extraction, series II agrees w/ expletive S

- b. Goyu gabit?
 goo=u=a gap-**i-t** ____
 what=Q=CN eat-EXTRACT-3.II

‘What did she eat?’

O extraction, series II agrees w/ A

This potential unifying analysis, however, fails to actually unify the processes of S and O extraction. The series II morphology in the intransitive extraction configuration would be indexing agreement with an intransitive subject (which occurs in dependent clauses), while the same suffix in the object extraction configuration would be indexing agreement with a transitive subject (which occurs in independent clauses). Whether or not this approach sketched out here is correct, we cannot straightforwardly unify the processes of S and O extraction.

However, language internal data from hiatus resolution suggests that the unifying analysis sketched in (59) is not correct. We find that the transitive vowel, in both its canonical and extraction related uses, surfaces as a glide [j] when it follows a vowel final predicate. Below we see that, in an independent clause, the transitive vowel surfaces as a glide when it follows a vowel final predicate such as *txal’waa* ‘meet’ — the transitive vowel is predictably absent in the dependent clause:

- (60) Txal’waays Henry.
 txal’waa-**i**[-t]=s Henry
 meet-TR-3.II=PN Henry
 ‘Henry met her.’

Independent

¹⁴I would like to thank Seth Cable for helping me work through this discussion.

- a. Akadit txal'waas Henry.
 aka=di=t txal'waa[-t]=s Henry
 NEG=FOC=3.I meet[-3.II]=PN Henry

'She didn't meet Henry.'

Dependent

Object extraction from the same predicate triggers the appearance of the transitive vowel, again in its surface form as a glide:

- (61) Ligi lip naa dm txal'waayn, ada midm małat.
 ligi lip naa=a dm txal'waa-**i**-n ____ ada mi=dm mał-i-t
 INDEF self who=CN PROSP meet-TR-2.SG.II then 2SG.I=PROSP tell-T-3.II

'Whoever you meet, just tell them.'

(TSLA)

The subject extraction suffix does not trigger glide epenthesis in the same environment, but undergoes partial deletion: the vowel is deleted, and only the [t] surfaces:

- (62) a. Baa gyet.
 baa=a gyet
 run=CN person
 'A person ran.'
 b. Wilaayu gyeda baat. (not *baayt*)
 wilaay-u=a gyet=a baa-**it** ____
 know-1 SG.II=CN person=CN run-SX
 'I know the person who ran.'

In spite of surface level resemblance between subject and object extraction, I suggest that this differing morphophonological behaviour, which is also observed in Gitksan (Forbes 2018, 160), points to a distinction between the morphosyntactic marking of these two configurations.

Extraction therefore reveals underlying syntactic heterogeneity with respect to absolutive arguments: S and O generally 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).¹⁵ Transitive subject extraction is quite different from intransitive subject and object extrac-

¹⁵There is one other further environment that distinguishes between S and O in Sm'algayax: intransitive independent clauses with a participant (1/2 person) subject may trigger a marked agreement pattern in which a series I clitic surfaces and agrees with the subject, which itself surfaces as a series III pronoun. There are no environments in which a series I clitic may agree with an object.

- (1) Marked agreement: series I agrees with participant subject

Nam siipginsm.
 na=**m** siip-k-nsm.
 PFV=2.I sick-PASS-2PL.III
 'You (pl.) were sick.'

(Sasama 2001, 78)

These marked agreement configurations are described in more detail in Mulder (1994), Sasama (2001), Forbes (2018), Brown et al. (2020).

tion: 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 or expletive element. The additional presence of the *wh*-clitic *=(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 where an extracted element precedes a dependent clause headed by one of three subordinating elements (not unlike the agent extraction configuration described in §4). We also observe a configuration featuring a “bare” dependent clause: a clause exhibiting dependent clause morphology with no overt subordinating element. As we observed above for the core-argument extraction, we find that non-core arguments in their in-situ position are often identically marked (being introduced by the preposition *(d)a*), but extraction of these elements does not proceed identically. We again find that extraction exposes underlying heterogeneity that is not immediately apparent in sentences with canonical word order.

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. As we will see in detail in the following discussion, *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.

- (63) Ndeyu nam wil niidzu?
 ndeh=u nah=m **wil** niits-u
 where=Q PFV=2SG.II COMP see-1SG.II
 ‘**Where** did you see me?’

- (64) 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)

- (65) Goyu ma wila ’maga txaaw?
 goo=u m= **wila** ’mak[-t]=a txaaw
 what=Q 2SG.II MANR catch[-3.II]=CN halibut
 ‘**How** do you catch halibut?’

- (66) Goyu gan sis'aaxsin?
 goo=u **gan** sis'aaxs-n
 whatQ REAS laugh-2SG.II
 'Why are you laughing?'

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 extraction, *wil* introduces certain embedded clauses, often corresponding to 'that'-clauses in English. Clauses introduced by *wil* are always dependent clauses, as evidenced by the dependent clause person marking pattern wherein series I clitics agree with transitive subjects, and series II suffixes agree with intransitive subjects and objects, as well as the absence of the transitive vowel suffix:

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

Lu aam goodu wil gatgoydiksism.
 lu aam goot-u [**wil** gat-goydiks-sm]
 in good heart-1 SG.II COMP PL-arrive-2PL.II
 'I am very happy that you all came.'

(TSLA)

- (68) 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-1 SG.II COMP=3.I see-2SG.II
 'I'm happy that he saw you.'

Typical double object constructions in Sm'algyax feature an absolutive-marked theme and a goal introduced by the preposition (*da*) (69a). Extraction of the absolutive theme patterns with object extraction (69b) as described in §4:

- (69) 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
- 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 (70). Note that the preposition does not appear in the left-peripheral position under this pattern, nor is it stranded.¹⁶

¹⁶In all of the configurations described in this subsection, the subordinator is obligatory.

- (70) 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?
 güüdax-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

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

- (71) 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 non-core argument nominals which are introduced by the preposition (*d*)*a* extract identically. Below we see that the extraction of benefactives (72), causees in causative constructions (73), as well as locatives (formed with *ndaa/ndeh* + *wil*) (74) and realis/non-future temporals (formed with *goo* + *wil*) (75) all feature the *wil* complementizer and a dependent clause complement:¹⁷

- (72) Benefactive extraction:
- a. Sipaay'nu das Klalens.
 si-paay-'nu [da=s Klalens]
 make-pie-1.III PREP=PN Clarence
 'I baked a pie for Clarence.'
- b. Naayu wil sipaayn?
 naa=u **wil** si-paay-n ____
 who=Q COMP make-pie-2SG.II

¹⁷One 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:

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

‘Who did you make a pie for?’

(73) Causee extraction:

- a. Gwiniitsnta fismaan hagwilhuu a didaat.
 gwin-niist-’n-t-i[-t]=a fismaan=a hagwilhuu [a=a di-daat]
 CAUS-see-CAUS-T-TR[-3.II]=CN fisherman=CN rope PREP=CN PL-crew
 ‘The fisherman showed the rope to the crew.’ (‘show’ = ‘cause to see’)
- b. Naayu wilt gwiniitsnda fismaan hagwilhuu?
 naa=u **wil**=t gwin-niist-’n[-T]-t=a fismaan=a hagwilhuu ____
 who=Q COMP=3.I CAUS-see-CAUS-T-3.II=CN fisherman=CN rope
 ‘Who did the fisherman show the rope to?’

(74) 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?’

(75) (Realis) temporal extraction:

- a. Axłga’nu da Kxeen gits’iipda.
 axłk-’nu da=a Kxeen gits’iipda
 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)

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

(76) 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. Naat sduulda, łat goo k'ala aks?
 naa=ł sduul-t=a ____ ła=t 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'

(77) Instrumental extraction:

- 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?'

Two additional classes of oblique argument are introduced by the preposition (*d*)a in their in-situ position in the clause do not extract with a *wil* clause. These are (i) oblique objects of psych/experiencer predicates such as *baas* '(be) afraid', *buuysk* 'expect', *at'üüit* '(be) repelled'; and (ii) quirky objects of a closed class of (di)transitive predicate such as *siwaa* 'give a name to someone' and *giin* 'give food to someone'. The first exceptional class is characterized by nominalization of the (psych) predicate, while the second class features a bare dependent clause: a dependent clause that is not introduced by a dependent marker such as *in* or *wil*:

(78) Prepositional theme of psych-verbs:

- a. Baasi'nu a sgyet.
 baas-'nu [a=a sgyet]
 afraid-1SG.III PREP=CN spider
 'I am afraid of spiders.'
- b. Goyu 'nabaasn?
 goo=**u** 'na-baas-n
 what=Q NMLZ-afraid-2SG.II
 'What are you afraid of?' Lit. What is your fear?

(79) Quirky (di)transitive theme; naming verb recipients:

- a. Siwaatida łguułgm hana'axt as Emily.
 si-waa-t-i-t=a łguułk-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.'
- Naayut siwaada łguułgm hana'axt?
 naa=u=t si-waa[-T]-t=a łguułk-m hana'ax-t
 who-Q=3.I CAUS-name-T-3.II=CN child-ATTR woman3.II
 'What did she name her child?'

In spite of the oblique arguments above being introduced by the same prepositional element (*d*)*a*, they do not extract uniformly. This again points to heterogeneity that is not straightforwardly apparent when these arguments appear in their in-situ positions. These exceptional oblique argument extraction configurations are also attested in Gitksan (described in [Brown and Forbes 2018](#)). I set the psych-verb configuration aside here, and briefly discuss cases such as (79) in §5.2.

The next type of question containing a subordinating element is marked by the morpheme *wila* MANNER which introduces a dependent clause. These “manner” clauses are often translated to English using ‘how’.

- (80) Aam wila miilkt.
aam **wila** miilk-t
good MANR dance-3.II
‘He dances well’ Lit: It’s good how he dances.
- (81) 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.

Manner questions are formed with *goo* ‘what’ preceding *wila*:

- (82) a. Goyu wila miilgn?
goo=u **wila** miilk-n
what=Q MANR dance-2SG.II
‘How do you dance?’ Manner question
- b. Güüdagu goo wila miilgn.
güüdax-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
- (83) a. Goł wilat k’otsda lgu ’yuuta hoon?
goo=l **wila**=t k’ots-t=a lgu ’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. Güüdagu goo wilat k’otsda lgu ’yuuta hoon?
güüdax-i-u=a goo **wila**=t k’ots-t=a lgu ’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:

- (84) Anoogu (goo) wila liimit.
anoox-i-u goo **wila** liimi-t
like-TR-1SG.II what MANR sing-3.II

‘I like how she sings.’

(Headless) manner relative clause

- a. 'Nii wila hāteelst.
'nii **wila** hāteels-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.

- (85) Hanaanga aytga 'yuuta gan waalt.
hanaank=a ayt[-t]=a 'yuuta **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)

- (86) Dzakdida l̥yoon gan lu aam goot.
dzak-t-i-t=a l̥yoon **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.¹⁸

- (87) a. Sa oksga l̥gwoomlk.
sa oksk=a l̥gwoomlk
off fall=CN child
‘The child fell.’

Baseline

- b. Goyu gan sa oksga l̥gwoomlk?
goo=u=a **gan** sa oksk[-t]=a l̥gwoomlk
what=Q=CN REAS off fall[-3.II]=CN child
‘Why did the child fall?’

Reason question

- c. Güüdagu goo gan sa oksga l̥gwoomlk.
güüdax-i-u=a goo=u=a **gan** sa oksk[-t]=a l̥gwoomlk
ask-TR-1SG.II=CN what=Q=CN REAS off fall[-3.II]=CN child
‘I asked why the child fell.’

Embedded reason question

¹⁸This subordinator may also appear with the *wh*-expression *naa* ‘who’ in questions such as the following:

- (1) 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’

- (88) a. Giigida hoon.
 giik-i-t=a hoon
 buy-TR-3.II=CN fish
 ‘She bought fish’ Baseline
- b. Goyu gant giiga hoon?
 goo=u gan=t giik[-t]=a hoon
 who=Q REAS=3.I buy[-3.II]=CN fish
 ‘Why did she buy fish?’ Reason question
- c. Gүүдaгу goo gant giiga hoon.
 gүүдax-i-u=a goo gan=t giik[-t]=a hoon
 ask-TR-1 SG.II=CN what REAS=3.I buy[-3.II]=CN fish
 ‘I asked why she bought fish.’ Embedded reason question

As above, this element may appear in (headless) relative clauses and focus constructions:

- (89) a. Akndi anooga goo gan dawłt.
 aka=n=di anoox[-t]=a goo gan dawł-t
 NEG=1 SG.I=FOC like[-3.II]=CN what REAS leave-3.II
 ‘I don’t like (the reason) why she left.’ (Headless) reason relative clause
- b. Gwa’a gant giiga hoon.
 gwa’a gan=t giik[-t]=a hoon
 this REAS=3.I buy[-3.II]=CN fish
 ‘This is why she bought fish.’ Reason focus

In sum, a number of non-core-argument questions and \bar{A} -movement processes are characterized by the extracted/*wh*-expression appearing in the left-peripheral position, followed by a dependent clause headed by a subordinating element, either *wil*, *wila*, or *gan*. The first element, *wil* appears in the extraction of oblique DPs, locatives, and temporals. The second element *wila* occurs in manner questions/constructions (those translated with ‘how’) and *gan* occurs in reason questions/constructions (those translated with ‘(that’s) why’). This is schematized in (90).

- (90) a. X(=CN) [*wil/wila/gan* PRED-II_S (S) ____] X extraction with intransitive predicate
 b. X(=CN) [*wil/wila/gan*=I_A PRED-II_O (A) (O) ____] X extraction with transitive pred.

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 what I refer to as a bare dependent clause: that is, a dependent clause with no overt subordinating particle such as *wil*, *wila*, or *gan*. 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 arguments introduced by the preposition (*d*)*a* extract in this manner as well — including those selected by naming verbs. The bare extraction configuration is observed below. In (91a) we see the baseline

(91)

a.	Siwaatida		ɬguuɭgm	hana'axt	as	Emily.	
	si-waa-t-i-t=a		ɬguuɭk-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	siwaaða		ɬguuɭgm	hana'axt.		
	anooḳ-i-u=t	si-waa[-T]-t=a		ɬguuɭk-m	hana'ax-t		
	like-TR-1 SG.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	siwaaða		ɬguuɭgm	hana'axt.		
	Emily=t	si-waa[-T]-t=a		ɬguuɭk-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	siwaaða		ɬguuɭgm	hana'axt?		
	naa=u=t	si-waa[-T]-t=a		ɬguuɭk-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	siwaaða		ɬguuɭgm	hana'axt.	
	güüdax-i-u=a	naa=t	si-waa[-T]-t=a		ɬguuɭk-m	hana'ax-t	
	ask-TR-1 SG.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						

(92) a. Dm daawłit Dzeen dzigits'iip.
dm daawł=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. Güüdagu dzindeh dm daawłs Dzeen.
güüdax-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 (75) and below. These are instead marked with *wil*.

- (93) Gits’iip wil gilks axgis Dzon
gits’iip **wil** gilks axk[-t]=s Dzon
yesterday COMP back arrive[-3.II]=PN John
‘Yesterday John arrived.’

The bare extraction pattern is schematized below:¹⁹

- (94) a. X(=CN) [PRED-II_S (S) ____] X extraction with intransitive predicate
b. X [=I_A PRED-II_O (A) (O) ____] X 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. Similar to what is observed in the domain of core-argument extraction, a number of non-core arguments that are marked identically in their in-situ position (that is, introduced by the preposition (*da*)) do not extract identically. The main configurations are summarized below.

- (95) Non-core argument/adjunct extraction in Sm’algyax:
- | | | | |
|-------------|----------------|---|--------|
| <i>wil</i> | (intransitive) | X [wil PRED-II _S ____] | = (72) |
| | (transitive) | X [wil=I _A PRED-II _O ____] | = (73) |
| <i>wila</i> | (intransitive) | X [wila PRED-II _S ____] | = (82) |
| | (transitive) | X [wila=I _A PRED-II _O ____] | = (83) |
| <i>gat</i> | (intransitive) | X [gan PRED-II _S ____] | = (87) |
| | (transitive) | X [gan=I _A PRED-II _O ____] | = (88) |
| “bare” | (intransitive) | X [(=CN) PRED-II _S ____] | = (92) |
| | (transitive) | X [=I _A PRED-II _O ____] | = (91) |

Let us now turn briefly to long-distance extraction.

¹⁹As with agent extraction, the presence or absence of the common-noun connective on the extracted element is not categorical.

In addition to the local extraction configurations described in the previous sections, Sm'algayax also allows long-distance extraction wherein an element is extracted from an embedded clause to appear in a left-peripheral position of a higher clause. In this section I show that long-distance extraction bears extraction morphology in both the embedded clause(s) and the matrix clause, and that the same morphosyntactic parallelism between *wh*-movement, focus movement, and relative clause formation observed in local extraction is also observed in long-distance extraction. I also show that while long-distance movement is possible, it is not boundless. Sm'algayax obeys a number of islands to movement such as adjunct islands, complex noun phrase islands, and *wh*-islands (Ross 1967). One notable exception, however, is the apparent availability of extraction from subject islands, as noted by Forbes (2017) for Gitksan.

Long-distance extraction in Sm'alyax bears extraction morphology in both the embedded and matrix clauses. Let us begin with the extraction morphology that appears in the embedded clause (where the extracted element is base generated). As observed in local extraction in §4 and §5, embedded clause extraction morphology reflects the grammatical role of the extracted element. We see this below in (96)–(98), where the extraction morphology (in bold) associated with S(ubject), O(bject), and A(gent) extraction appears in the embedded clause from which an S, O or A has been *wh*-moved, relativized, or focus fronted. Note, however, that the left-edge common-noun connective associated with extraction does not appear in the embedded clause. For instance, if there were a connective in the embedded clause, we would expect to see the unattested form in (96d) **Naayu anooltis dzi'isa dm galmiilgit*.

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.’

Baseline

c. Ap ksat Bidaa anooltis dzi'is dm
 ap ksa=t Bidaa [=a anool-t-i[-t]=s dzi'is ____ [dm
 VER only=PN Peter =CN allow-T-TR-3.II=PN grandmother PROSP

galmiilgit.
galmiilk-**it** ____]]
play-SX

‘It was only Peter that grandma allowed to play.’

Focus

- d. 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?’

Question

(97) Long-distance O extraction:

- 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 1SG.I=PROSP visit[-3.II]=CN
‘nasiip’insgu.
‘na-siip’insk-u]
POSS-friend-1SG.II

‘Grandma allowed me to visit my friend.’

Baseline

- b. Nah txal’waayu hana’a anooltis dzi’is dm
nah txal’waa-i-u=a hana’a [=a anool-t-i[-t]=s dzi’is ____ [dm
PFV meet-TR-1SG.II=CN woman =CN allow-T-TR[-3.II]=PN grandmother PROSP
ts’ilaayin.
ts’ilaay-**i**-n ____]]
visit-TR-2SG.II

‘I saw the woman that grandma allowed you to visit.’

Relative clause

- c. ‘Niis Luusi anooltis dzi’is dm ts’ilaayin.
‘niit=s Luusi [=a anool-t-i[-t]=s dzi’is ____ [dm ts’ilaay-**i**-n ____]]
3.III=PN Lucy =CN allow-T-TR[-3.II]=PN grandmother PROSP visit-TR-2SG.II

‘It was Lucy that grandma allowed you to visit.’

Focus

- d. 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-2SG.II
‘Who did grandma allow you to visit?’

Question

(98) Long-distance A question:

- a. Wilaayu lgu ‘yuuta anooltis dzi’is dm
wilaay-i-u=a lgu ‘yuuta [=a anool-t-i[-t]=s dzi’is [dm
know-TR-1SG.II=CN small man =CN allow-T-TR-3.II=PN grandma PROSP
int ts’ilaays Lucy.
in=t ts’ilaay=s ____ Lucy]]
AX=3.I visit=PN Lucy

‘I know the boy that grandma allowed to visit Lucy.’

Relative clause

- b. 'Nüün anooltis dzi'is dm int ts'ilaaya hana'a.
 'nüün [=a anool-t-i[-t]=s dzi'is [dm **in=t** ts'ilaay=a ____ hana'a]]
 2SG.III =CN allow-T-TR-3.II=PN grandma PROSP AX=3.I visit=CN woman
 'It's you that grandma allowed to visit the woman.' Focus
- c. 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?' Question

We also observe that long distance movement of obliques also triggers predicted extraction morphology in the embedded clause. Consistent with local oblique extraction described in §5.1, the long-distance extraction of the oblique goal in (99) triggers a dependent clause headed by *wil*, while in (100) we see the bare dependent-clause configuration, characteristic of extraction from naming-verbs outlined in §5.2.

(99) 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?'

(100) 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?'

The extraction morphology that appears in matrix or intermediate clauses varies depending on the valency of the predicate. For example, all the extraction configurations in (96)-(100) feature a matrix predicate marked with the transitive vowel. There are two possible explanations for the appearance of the transitive vowel here: (i) the matrix verb is transitive and there is no dependent marker present; the transitive vowel appearing here is not related to extraction, and simply appears in line with the canonical licensing conditions of this morpheme, or (ii) the transitive vowel indexes \bar{A} -movement. We observe in (101) and (102) evidence for option (ii).

In the baseline sentence in (101), the intermediate clause *t niisdit Meeli* is clearly a dependent clause, as evidenced by the appearance of series I ergative morphology and the absence of the transitive vowel. This is contrasted with the long-distance question in (101), in which the intermediate clause *niidzis Meeli* lacks series I morphology, and is marked with a transitive vowel. The focus construction in (102) also shows this shift from the baseline dependent clause *t anooldit dzi'is*, which again bears series I morphology and lacks the transitive vowel, to the independent clause *ap ksat Lusii anooltis dz'is* which bears the transitive vowel and lacks series I agreement. This shows that intermediate and matrix clause morphosyntax is sensitive to these long-distance \bar{A} -dependencies.

- (101) a. Ha'ligoots Billt niisdit Meeli dawłs Dzon.
 ha'ligoot[-t]=s Bill [=t niist-t=t Meeli [dawł[-t]=s Dzon]]
 think[-3.II]=PN Bill =PN see-3.II=PN Mary leave[-3.II]=PN John
 'Bill thinks Mary saw that John left.' Baseline
- b. Naat ha'ligootdut Bill niidzis Meeli dawłit?
 naa=ł ha'ligoot-t=u=t Bill ____ [niist-i[-t]=s Meeli ____ [dawł-it ____]]
 who=IRR.CN think-3.II=Q=PN Bill see-TR-3.II=PN Mary leave-SX
 'Who does Bill think Mary saw leave?' Question
- (102) a. Ha'ligoodut anooldit dzi'is dm galmiilga łgu 'yuuta.
 ha'ligoot-u [=t anool-t=t dzi'is [dm galmiilk=a łgu 'yuuta]]
 think-1SG.II =3.I allow-3.II=PN grandmother PROSP play=CN small man
 'I think that grandma allowed the boy to play.' Baseline
- b. Ha'ligoodu ap ksat Lusii anooltis dz'is dm
 ha'ligoot-u [=a ap ksa=t Lusii anool-t-i[-t]=s dzi'is ____ [dm
 think-1SG.II =CN VER only=PN Lucy allow-T-TR-3.II=PN grandmother PROSP
 galmiilgit.
 galmiilk-it ____]
 play-SX

‘I think it was only Lucy that grandma allowed to play.’

Focus

In addition to these transitive bridge predicates that embed clauses, there are also intransitive predicates that embed clauses. Below we see that the predicate *anool* ‘allow’ with the valency reducing suffix *-k(s)* functions as a monovalent predicate that can take a DP or clausal complement (103).

- (103) 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.’

Long-distance movement over an intransitive predicate triggers the appearance of the intransitive subject extraction morpheme, while the embedded clause exhibits predicted S, O, or A extraction morphology corresponding to the role of the extracted element:

(104) Intransitive bridge predicate morphology:

- a. 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?’
 b. 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?’
 c. 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?’

(105) Intransitive bridge predicate morphology:

- a. Bida anoolksit dmt in ts’ilaays Lu’ux
 Bida [=a anoolks-**it** ____ [dm=**t** **in** ts’ilaay=s ____ Lu’ux]]
 Peter =Cn allow-PASS PROSP=3.I AX visit=PN Lucy
 ‘It’s Peter who was allowed to visit Lucy.’

Focus

- b. Niidzu lgu 'yuuta gu anoolksit dmt in ts'ilaays
 niist-i-u=a lgu 'yuuta [gu anoolks-**it** ____ [dm=**t** **in** ts'ilaay=s gap
 see-TR-1SG.II=CN small man REL allow-PASS PROSP=3.I AX visit=PN

Lu'ux.

Lu'ux]]

Lucy

'I saw the boy that is allowed to visit Lucy.'

Relative clause

A number of words which correspond to canonical bridge verbs are nominals in Sm'algyax, including *ha'ligoot* 'think', *k'omtga goot* 'hope', and *hasax* 'want'. These words are not marked with verbal morphology such as the transitive theme vowel *-i*, but are instead inflected with Series II person markers, which also function as markers of possession. Long-distance extraction over these bridge nominals is again marked as expected in the embedded clause. However, no extraction morphology apart from the common-noun connective occurs in the matrix clause:

- (106) Naal ha'ligootdut Meeli dawlit?
 naa [=l ha'li-goot-t=u=t Meeli [dawl-**it** ____]]
 who =IRR.CN on-heart-3SG.II=Q=PN Mary leave-SX
 'Who does Mary think left?' = who is Mary's thought...

- (107) Goyu ha'ligoodn guuys Meeli?
 goo=u [=a ha'li-goot-n [guu-**i**[-t]=s Meeli ____]]
 what=Q =CN on-heart-2SG.II shoot-TR[-3.II]=PN Mary
 'What do you think Mary hunts?'

- (108) Naayu ha'ligoodn int sigüünksa la'ask?
 naa=u [=a ha'li-goot-n [**in**=**t** si-güünks[-t]=a ____ la'ask]]
 who=Q =CN on-heart-2SG.II AX=3.I CAUS-dry[-3.II]=CN seaweed
 'Who do you think dries seaweed?'

This absence of extraction morphology on the nominal bridge predicates above is consistent with (local) extraction of the arguments of possessed nominals:

- (109) Goyu di pdeegn?
 goo=u [=a di pdeex-n]
 what=Q =CN FOC crest/clan-2SG.II
 'What is your crest?'

To conclude, we find that long-distance extraction is possible, and shares extraction morphology described in the local extraction sections. The clause from which the element is extracted bears predictable marking indicating whether an A, S, O, or oblique has been moved, while the upstairs clause appears to bear morphology indicating the relationship between the matrix predicate and its clausal complement. For formally transitive bridge predicates which select an agent DP and a clausal complement, extraction from that clause registers object extraction morphology on the

bridge predicate (as in (96)). Intransitive predicates which select a clausal complement are marked with subject extraction morphology when extraction occurs from that clausal complement (as in (103)). Therefore in Sm'algayax, the extraction from a clausal complement mirrors the extraction of an argument. This is schematized below:

- (110) a. WH=CN PRED-SX ____ Local S extraction
 b. WH=CN PRED-SX [_{CP} ... ____ ...] Extraction over intransitive bridge predicate
- (111) a. WH=CN PRED-TR-II A ____ Local O extraction
 b. WH=CN PRED-TR-II A [_{CP} ... ____ ...] Extraction over transitive bridge predicate

6.2 Barriers to extraction

Although we have seen in the section that extraction may cross clausal boundaries, this movement is sensitive to a number of well-known island constraints (Ross 1967). For example, attempts to extract from adjunct islands, complex noun phrases, and *wh*-islands result in ungrammaticality. The following ungrammatical examples, constructed in line with the morphosyntactic generalizations described in §6.1 for grammatical long-distance movement, were systematically rejected by my consultants:

- (112) Adjunct Island:
- a. Dawłit Meeli awil ła goydiks Bill.
 dawł=t Meeli [awil ła goydiks=s Bill]
 leave=PN Mary because PROX arrive=PN Bill
 ‘Mary left because Bill arrived.’
- b. * naa=u dawł-it Meeli ____ [awil ła goydiks-it ____]
 who=Q leave-SX Mary because PROX arrive-SX
 Intended: *Who_i did Mary leave because (they_i) arrived
- c. Naayu goydiksit gan dawłs Meeli?
 naa=u godiks-it ____ gan dawł=s Meeli
 who=Q arrive-SX REAS leave=PN Mary
 ‘Who arrived causing Mary to leave?’ Volunteered correction of (112b)
- (113) 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_i did John eat the fish that (they_i) smoked?
- (114) *Wh*-island

- Focus fronting and relativization are also island sensitive:

- This ungrammatical example in (113) also shows that resumption (in this case the overt series II suffix *-t* indexing agreement with the extracted subject) does not ameliorate these island violating sentences.

In the presentation of cross-clausal extraction in (110), it is shown that intransitive matrix predicates may take clausal complements, and long-distance extraction from within this clause is possible. This would suggest that a well-known island constraint, the subject-island constraint (Ross 1967), is violable in Sm'algyax. The subject-island constraint, which prohibits movement from inside a sentential subject, is shown in English below:

- The ability to extract from clausal complements of intransitive predicates is also attested in Gitksan, as noted in Forbes (2017). Below we see the intransitive predicate *aam* ‘(be) good’ allows an element to be extracted from its clausal complement. As in Sm’algyax, extraction over an intransitive bridge predicate triggers subject-extraction morphology.

- Given that other island constraints are obeyed, it is not immediately clear why subject islands would be violable. One possibility is that these clausal arguments are not actually in subject position, but instead occupy some distinct complement position. More careful investigation of these constructions across Tsimshianic needs to be done to adequately diagnose the syntactic position of these clausal elements.

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 ergative and does not typically 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. A number of periphrastic and exceptional extraction configurations in this domain points to further underlying differences between elements that are often identically marked in their in-situ positions.

I have presented a number of additional facts that warrant a closer look in the future. We observe that multiple-*wh*-questions are not possible, and *wh*-expressions must undergo movement to be interpreted as interrogative elements (that is, there is no *wh*-in situ). In the domain of long-distance movement, we see that each clause bears extraction morphology, suggesting that this process occurs in a step-by-step (or successive cyclic (Chomsky 1986, 2000, 2001, 2008, Rackowski and Richards 2005, van Urk and Richards 2015)) fashion, leaving evidence of extraction in each intermediate clause, rather than moving in “one fell swoop”. 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 (*d*)*u* 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.

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