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Appendix I: Conversion chart from the Hindle and Rigsby practical orthography to the APA

Appendix II: Pronominal paradigms

1 Introduction

Gitksan is an endangered indigenous language spoken in the drainage of the upper Skeena River in northwestern British Columbia, Canada, with currently fewer than 400 remaining first language speakers. Together with neighbouring Nisga’a, spoken in the Nass River Valley, Gitksan comprises the Interior branch of the Tsimshianic language family; though the two languages are very closely related and mutually intelligible, both language communities consider them to be distinct. Gitksan itself is not one language but rather a chain of dialects that run along the Skeena River, with a major distinction between the Western (downriver) and Eastern (upriver) dialects. This chapter contains language data from speakers of four dialects: Gitanyaaw (Kitwancool) and Gijigyukwhla (Gitsegukla) from the West, and Ansba’yaxw (Kispiox) and Gitan’maaks (Hazelton) from the East. On occasion, we will also refer to Nisga’a data: we use the term ‘IT’ (for Interior Tsimshianic) to cover the whole ‘Nass-Gitksan’ dialect continuum.2

Aside from the Interior branch, the Tsimshianic family also includes the slightly more distantly related Maritime branch, consisting of Coast Tsimshian (Sm’algyax) and Southern Tsimshian (Sgúuíxs: now no longer spoken). Though Tsimshianic is unmistakably part of the central northwest coastal Sprachbund (Beck 2002), no convincing evidence has been forthcoming for a

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1 We gratefully acknowledge the indispensable contributions of our Gitksan consultants Myrna Aksidan, Thelma Blackstock, Perrine Campbell, Vincent Gogag, Hector Hill, Phyllis Haizimsque, Ray Jones, Barbara Sennott and Louise Wilson. We are also very grateful to the members of the UBC Gitksan Lab, an anonymous reviewer who revealed himself to be Jason Brown, and the editors of this volume. Research was supported by the Social Sciences and Humanities Research Council of Canada (grants #410-2011-0431 and #435-2015-1694) and by the Jacobs Research Fund.

2 Due to the range of dialects represented in the paper, the reader will notice that the same word is often spelled in two or more different ways, depending on pronunciation. Phonological variation between dialects is complex and understudied, but is largely irrelevant to the concerns of this paper.
genetic relationship between it and any other language family, in spite of persistent attempts to lump the family into the hypothetical Penutian stock, whose other members are found far to the south in Oregon and California (see for example Sapir 1921 and Tarpent 1997).

There are good descriptive grammars of both Gitksan (Rigsby 1986) and Nisga'a (Tarpent 1987). Although, as is typical of such work, neither treats quantification systematically or in depth, both contain much valuable data and analysis, which we have drawn on as background to the current study. Mention should also be made of Hunt’s pioneering (1993) dissertation on Gitksan syntax.

Until now, no published work has been devoted specifically to the quantificational system of any Tsimshianic language. The current article builds on initial research by Davis and Van der Zwan (2011) and presents a survey of the quantificational landscape of Gitksan, rather than an in-depth investigation of any particular aspect of the system. Many areas remain under-explored, in particular the interaction of quantificational expressions with the very extensive system of plural marking in the language (for a brief introduction to the latter, see Section 3).

The core quantifiers in Gitksan are summarized in Table 1. These are each discussed in detail below. Where there are different spellings given for the quantifiers, these reflect dialect differences.  

<table>
<thead>
<tr>
<th>QUANTIFIER</th>
<th>GLOSS</th>
</tr>
</thead>
<tbody>
<tr>
<td>helt / hilt</td>
<td>‘many’</td>
</tr>
<tr>
<td>hlebuu / hlibuu</td>
<td>‘(a) few’</td>
</tr>
<tr>
<td>sdu'u / sdo'o, sda</td>
<td>‘half’</td>
</tr>
<tr>
<td>hlagats'uuu / hlagats'oo</td>
<td>‘some, other’</td>
</tr>
<tr>
<td>taax'nitsxw / txaa'nitxws</td>
<td>‘all of, whole of’</td>
</tr>
<tr>
<td>’walk’a / gwalk’a (’nit)</td>
<td>‘all’</td>
</tr>
<tr>
<td>mahla k'i'y / mehla k'i'y ~ ky'ul</td>
<td>‘each and every’</td>
</tr>
</tbody>
</table>

For Gitksan-internal reasons, we have elected to depart from the structure of the questionnaire that forms the basis for many of the articles in this volume. The questionnaire makes a three-way split between existential, proportional and universal quantifiers, and within each of those sections, divides the discussion into D-type vs. A-type quantification. However, the main syntactic and semantic division within the Gitksan system is between quantifiers over entities and quantifiers over events: while quantifiers over entities can be both D-type and A-type.

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3 Data are presented in the Hindle-Rigsby orthography (Hindle and Rigsby 1973); see Appendix I for a conversion chart to the Americanist Phonetic Alphabet.
quantifiers over events are always A-type. Furthermore, while quantifiers over entities may be subdivided into universal and non-universal subcategories, no such clear-cut division holds within the class of event quantifiers.

Within the domain of entity-related quantification, we have made a further distinction between D-type quantifiers on the one hand and indefinite, existential, and interrogative expressions on the other: the latter involve discontinuous combinations of operators and indefinite noun phrases, and thus are compositionally quite distinct from D-type quantifiers.

Since Gitksan is unlikely to be familiar to most of our readers, in Section 2 we provide a sketch of the major relevant morphological and syntactic properties of the language. This sketch is a little longer than would be necessary for a better-studied language; we hope it will be helpful not only in providing background knowledge but also in understanding the example sentences in the text. Section 3 is devoted to a somewhat more detailed examination of two aspects of Gitksan grammar which are particularly important in understanding the quantificational system: plurality and the count-mass distinction. Sections 4-6 contain our core survey of quantification: Section 4 deals with D-type quantification, Section 5 with indefinite, existential, negative and interrogative expressions, and Section 6 with event-related quantification. Section 7 concludes.

2 A sketch of Gitksan syntax and morphosyntax

In this section we provide a sketch of the major morphological and syntactic properties of Gitksan. Readers who are pressed for time may wish to read the paper beginning at Section 3 and use Section 2 as a reference.

2.1 Basic morphological profile

It will probably helpful to bear in mind two aspects of phonology before we begin. First, though there are no underlying voiced stops or affricates in Tsimshianic languages, there is a pervasive process of allophonic voicing before vowels (including epenthetic ones). This is reflected in the orthographic system, which as a result sometimes obscures underlying morphological relations. Second, schwa is frequently epenthesized for phonotactic reasons (obligatorily between tautosyllabic stops and resonants); its phonetic value varies according to the preceding stop, so that it may surface orthographically as i, a, u, or o.

IT is described as ‘having a mixed analytic to synthetic morphological structure’ by Tarpent (1983:123); Rigsby (1989:248) concurs, adding that German ‘with its many compound nominals and Verb Phrases’ is comparable to Gitksan in morphological complexity.

Reduplication and other types of stem modification are frequent in IT, as are both prefixation and suffixation (with the former dominating in the derivational and the latter in the inflectional component of the morphology). Compounding is extensive and productive: the first member of the compound (known as a ‘preverbal’ or ‘prenominal’ in the IT literature) is unstressed and sometimes phonologically reduced. Cliticization is pervasive: both encliticization and procliticization are frequent (with some clitics being ‘ambi-directional’); encliticization of phrase-initial elements such as determiners often leads to mismatches between syntactic and
prosodic constituency.

2.2 Categorial inventory

Though some languages in the northwest coast Sprachbund are famous in the typological literature for the (now discredited) claim that they lack standard lexical categorial distinctions (see Davis et al. 2014), this controversy has never touched the Tsimshianic languages, which have a robust noun-verb distinction. More recently, Gitksan has also been shown to have a distinct category of adjectives (Forbes 2012: see Section 2.7 below).

Morphosyntactic evidence for the distinction between nouns on the one hand and verbs and adjectives on the other is provided by their contrasting behaviour in argument positions. Arguments in Gitksan follow the predicate, and are introduced by enclitic determiners known as ‘connectives’ (see 2.5). While nouns in argument positions are unmarked, as in (1a) and (2a), verbs and adjectives must be affixed with extraction morphology, as in (1b) and (2b), respectively. This shows that nouns may be directly selected as arguments, but verbs and adjectives may not.4,5

Data from our fieldwork are annotated with the speakers’ initials. We follow the Leipzig Glossing Rules where possible. Other abbreviations used: I/II/III = series I/II/III pronoun, AFF = affirmative, ATTR = attributive, AX = A (transitive subject) extraction, CAUS2 = second sub-type of causative, CIRC.POSS = circumstantial possibility, CL.CNJ = clausal conjunction, COLL = collective, CN = common noun connective, CNT.AMT = count amount, CNTR = contrastive, DESID = desiderative, DM = determinate connective, DwID = domain widener, EPIS = epistemic, EXPR = experiential, HAB = habitual, HUM = human, INCEP = inceptive, LV = light verb, PH.CNJ = phrasal conjunction, PN = proper noun, PREP = preposition, PREV = prior evidence, MASS.AMT = mass amount, PROS = prospective, REP = reportative, RESTR = restrictive, SPT = spatio-temporal, SX = S (intransitive subject) extraction, T = ‘T’ morpheme (see Tarpent 1987:634). Affixes are marked by a dash (-), clitics by an equals sign (=), and reduplicants by a tilde (~).

Direct evidence that ‘verbs’ in argument positions are actually the predicative nuclei of headless relative clauses is provided by some Eastern dialect speakers, who allow an overt WH-relative pronoun in cases such as (ib), but not (ia):

4 Data from our fieldwork are annotated with the speakers’ initials. We follow the Leipzig Glossing Rules where possible. Other abbreviations used: I/II/III = series I/II/III pronoun, AFF = affirmative, ATTR = attributive, AX = A (transitive subject) extraction, CAUS2 = second sub-type of causative, CIRC.POSS = circumstantial possibility, CL.CNJ = clausal conjunction, COLL = collective, CN = common noun connective, CNT.AMT = count amount, CNTR = contrastive, DESID = desiderative, DM = determinate connective, DwID = domain widener, EPIS = epistemic, EXPR = experiential, HAB = habitual, HUM = human, INCEP = inceptive, LV = light verb, PH.CNJ = phrasal conjunction, PN = proper noun, PREP = preposition, PREV = prior evidence, MASS.AMT = mass amount, PROS = prospective, REP = reportative, RESTR = restrictive, SPT = spatio-temporal, SX = S (intransitive subject) extraction, T = ‘T’ morpheme (see Tarpent 1987:634). Affixes are marked by a dash (-), clitics by an equals sign (=), and reduplicants by a tilde (~).

5 Direct evidence that ‘verbs’ in argument positions are actually the predicative nuclei of headless relative clauses is provided by some Eastern dialect speakers, who allow an overt WH-relative pronoun in cases such as (ib), but not (ia):
Aside from the lexical categories of noun, verb, and adjective, Gitksan also has two prepositions. The first, a, functions as a general oblique marker, which attaches to all non-core arguments (e.g., indirect objects in dative constructions, as in (3));\(^6\) it has the special form loo when it takes a pronominal object (4).\(^7\) The second preposition, goo/go'o/ga'a, is more specifically locative (5).\(^8\)

Prepositions clearly form a closed-class functional category in Gitksan: they play no part in the derivational morphology, and unlike NPs, APs, and VPs, PPs are never predicative. Other closed class categories include the complementizer-like element an (used to mark extraction of arguments in A function) and the general-purpose complementizer wil (win in Western dialects). In addition, there are a number of ‘dependent markers’ — auxiliary-like elements with aspectual, modal, or adverbial meaning which form a monoclausal unit with the main predicate and trigger dependent person marking (see 2.4 below), as well as a set of evidential enclitics (see Peterson 2010), a small class of sentence-final particles responsible for clause-typing (e.g., the yes-no question particle (y)aa), and an array of discourse particles whose

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\(^6\) The two different verbs for ‘give’ in (3) and (4) have different argument structures: gin in (3) takes the recipient as its direct object and the theme as its oblique-marked indirect object (as in English ‘endow x with y’) whereas gi’nam takes the theme as its direct object and the recipient as its oblique-marked indirect object (as in English ‘give y to x’).

\(^7\) These two forms may also co-occur, yielding a=loo=hl (PREP=OBL=CN) and a=loo=s (PREP=OBL=PN).

\(^8\) In addition to a and go'o, certain members of the heterogeneous class of prenominals have prepositional semantics, including lax ‘on’ and ts’im ‘in’; however, these elements differ in that they directly select NPs, without determiners, rather than DPs.
semantic and/or pragmatic contribution is often elusive: the latter include \( k'ay \) ‘just, still, yet’, \((k\)'wihl\) ‘around, about’, \( gi \) ‘prior evidence’ (see Heins and Matthewson 2015) and \((k\)'ap\) ‘verum’ (see Matthewson 2015, Gutzmann et al. 2016).

2.3 Valency and voice

Both transitive and intransitive verbs in IT may be either underived or marked by various transitivizing and intransitivizing affixes: examples of ‘causative’, ‘passive’, and ‘antipassive’ derivations are given below. Though common, none of this marking is fully productive or fully compositional: there is a great deal of morphophonological opacity in the system, and many combinations are lexicalized. Transitivity itself, however, is crucial to the morphosyntax, since it conditions the form and distribution of pronominal marking and extraction morphology: see Sections 2.5 and 2.6 below.

\[
\begin{align*}
(6) & \quad \text{a. } \text{hit-xw} & \quad \text{t-usd=ist} \\
& & \quad \text{stand-INTR} & \quad \text{DM-DEM.DIST=AFF} \\
& & \quad \text{‘It is standing up.’} & \quad \text{INTRANSITIVE (VG)} \\
& \quad \text{b. } \text{hid-in-t} & \quad \text{t-usd=ist} \\
& & \quad \text{stand-CAUS2-3.II} & \quad \text{DM=DEM.DIST=AFF} \\
& & \quad \text{‘S/he stood it up.’} & \quad \text{CAUSATIVE (VG)}
\end{align*}
\]

\[
\begin{align*}
(7) & \quad \text{a. } \text{hahlut'axhl-in-i'y=hl} & \quad \text{aks} \\
& & \quad \text{boil-CAUS-1SG.II=CN} & \quad \text{water} \\
& & \quad \text{‘I boiled the water.’} & \quad \text{CAUSATIVE (VG)} \\
& \quad \text{b. } \text{hahlut'axhl-xw}=hl & \quad \text{aks} \\
& & \quad \text{boil-PASS=CN} & \quad \text{water} \\
& & \quad \text{‘The water was boiled.’} & \quad \text{PASSIVE (VG)}
\end{align*}
\]

\[
\begin{align*}
(8) & \quad \text{a. } \text{yukw=t giba=s TJ t} & \quad \text{Michael} \\
& & \quad \text{IPFV=3.1} & \quad \text{wait=PN TJ DM} & \quad \text{Michael} \\
& & \quad \text{‘TJ is waiting for (awaiting) Michael.’} & \quad \text{INTRANSITIVE} & \quad \text{VG (cf. Rigsby 1986:328)} \\
& \quad \text{b. } \text{yukw=hl gibee-\textit{esxw}=s TJ e=s} & \quad \text{Michael} \\
& & \quad \text{IPFV=CN} & \quad \text{wait-ANTIP=PN TJ PREP=PN} & \quad \text{Michael} \\
& & \quad \text{‘TJ is waiting around for Michael.’} & \quad \text{ANTIPASSIVE} & \quad \text{VG}
\end{align*}
\]

One productive use of ‘passive’ morphology applies to nouns rather than verbs, yielding denominal predicates with the meaning ‘have x’, where x is the referent of the noun (9). (Gitksan

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\( ^9 \) The causative suffix -(d)in/-(d)an is in complementary distribution with the ‘transitive’ suffix -(y)i/-(y)a discussed in footnote 21 below. We assume the latter is underlyingly present with the causative, but undergoes a morphophonological deletion rule following a nasal: see Hunt (1993:230).
lacks a lexical verb ‘have’.) See Rigsby (1986:336), Tarpent (1987:661), and Ikegami (2007).

(9)  
a. us t Henry
dog DM Henry  
‘Henry is a dog.’

b. us-xw t Henry
dog-PASS DM Henry  
‘Henry has a dog.’  
(Ikegami 2007)

2.4 Clause typing and pronominal marking

Clausal morphosyntax in Tsimshianic languages is organized around a fundamental split between independent and dependent clauses. In Gitksan, all subordinate clauses are dependent, but not all main clauses are independent: dependent inflection on a following predicate is induced by a set of pre-predicative ‘dependent markers’, including certain aspectual operators (e.g., hlaa ‘inceptive’, yukw ‘imperfective’), clausal coordinators (ii ‘clausal conjunction’), and the negator nee ‘no, not’. In addition, dependent clauses are sometimes used as main clauses in narrative contexts, and are often viewed as the unmarked member of the pair; Tarpent (1987) explicitly recognizes this by referring to dependent clauses in Nisga'a as ‘regular’ and independent clauses as ‘predicate focused’.

Pronominal morphology in the two clause-types is organized quite differently, though there is overlap in the elements involved, and in both types, morphological alignment is predominantly ergative. There are three sets of pronouns, sharply distinguished by morphological type, as seen in Table 2, as well as distribution, as seen in Table 3. For reference, complete pronominal paradigms are given in Appendix II.

<table>
<thead>
<tr>
<th>TYPE</th>
<th>POSITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>SERIES I</td>
<td>clitic</td>
</tr>
<tr>
<td>SERIES II</td>
<td>affix</td>
</tr>
<tr>
<td>SERIES III</td>
<td>independent word</td>
</tr>
</tbody>
</table>

Table 3: Distribution of pronouns by clause-type and function

---

10 The terms are from Rigsby (1986), and replace Boas’s original distinction between ‘indicative’ and ‘subjunctive’ clauses – appropriately, since clause-typing in IT is not sensitive to mood.
11 We do not adopt Tarpent’s terminology, since there is no evidence that independent clauses have any special focusing properties. See Hunt (1993:247-250) for a careful evaluation of both the syntactic and semantic predictions of Tarpent’s analysis.
12 For recent discussion of ergativity in Tsimshianic, see Peterson (in press).
<table>
<thead>
<tr>
<th>INDEPENDENT</th>
<th>DEPENDENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>II</td>
</tr>
<tr>
<td></td>
<td>I (+II when A is 3PL or represented by an overt DP)</td>
</tr>
<tr>
<td>S</td>
<td>III</td>
</tr>
<tr>
<td></td>
<td>II</td>
</tr>
<tr>
<td>O</td>
<td>III</td>
</tr>
<tr>
<td></td>
<td>II (III when II = A)</td>
</tr>
</tbody>
</table>

(NB: We employ the standard abbreviatory convention where A = transitive subject, S = intransitive subject, O = object.)

Series I pronouns are used exclusively in A (ergative) function in dependent clauses, where they are obligatory. They occur pre-predicatively, but are realized phonologically as either proclitics (10) or enclitics (11). In the latter case, encliticization gives rise to a mismatch between syntactic and prosodic constituency which is also characteristic of the connective system (see 2.5 below).

(10) k'ay hi-yukw na=gin=hl gyet
    still DUR-IPFV ISG.I=give.food=CN person
    ‘I’m still feeding the people.’ (VG)

(11) nee=dii=n t’is-t
    NEG=FOC=ISG.I hit-3.II
    ‘I didn’t hit him.’ (VG)

Series II pronouns are suffixes. They are used in A function in independent clauses (12) and usually in absolutive (S/O) function in dependent clauses (13)-(14). They are also employed as possessors on nouns (15):

(12) t’is-i-y ‘nit
    hit-TR-ISG.II 3SG.III
    ‘I hit him/her.’ (VG)

(13) nee=dii bah-a’y
    NEG=FOC run-ISG.II
    ‘I didn’t run.’ (BS)

(14) nee=m=dii t’is-t

13 Pronominal suffixes with an initial resonant (i.e. -’y ‘1SG.II’, -n ‘2SG.II’, -’m ‘1PL.II’) trigger schwa epenthesis with consonant-final stems (which may then in turn trigger other phonological processes such as prevocalic voicing or intervocalic lenition on the stem-final consonant). In such cases (e.g., t’isi’y), epenthetic schwa is phonologically indistinguishable from the ‘transitive’ schwa which is morphosyntactically present in transitive clauses in the independent mode. However, transitive schwa can be readily distinguished with non resonant-initial pronominal suffixes, such as 3.II -t: compare t’is-i-t ‘hit-TR-3.II’ to t’is-t ‘hit-3.II’.

9
NEG=2SG.I=FOC hit-3.II
‘You didn’t hit him.’ (VG)

(15) ‘witxw=hl ansiip’insxw-i’y ky’oots
arrive=CN friend-1SG.II yesterday
‘My friend came yesterday.’ (BS)

The third person Series II suffix -t is normally deleted when immediately followed by a coindexed lexical DP, and therefore appears to be in complementary distribution with an overt DP argument. However, Tarpent (1988) has argued convincingly that it is underlyingly present whether or not it co-occurs with a lexical DP, on the basis of the fact that when an evidential enclitic such as =gat ‘reportative’ intervenes between -t and the following DP, the -t surfaces, as shown in (16):

(16) a. hlimoo-yi=s Kathy t John
help-TR=PN Kathy DM John
‘Kathy helped John.’

b. hlimoo-yi-t-ga(t)=s Kathy t John
help-TR-3.II=REP=PN Kathy DM John
‘I heard that Kathy helped John.’ (Hunt 1993:19)

Though in order to simplify glossing we will not represent the deleted Series II -t in example sentences such as (16)a, the reader should bear in mind that it is nevertheless underlyingly present in these contexts.

There are two circumstances where Series II suffixes unexpectedly mark A rather than O function in dependent clauses, and thus ‘double’ a Series I clitic (see Hunt 1993, Davis and Forbes 2015). The first is with the third person plural A pronoun, which is marked both with the preverbal Series I clitic =t and with the Series II plural suffix -diit (17)a; the second is where both third person Series I =t and third person Series II -t agree with an immediately post-verbal DP (17)b. (Note that in the latter case, Series II -t is deleted before the following DP, but still underlyingly present, as discussed above.) In both these cases, the O function is taken over by a Series III pronoun (see Davis and Forbes 2015).

(17) a. nee=dii=t yats-diit 'nii'y
NEG=FOC=3.I beat-3PL.II 1SG.III
‘They didn’t beat me.’ (BS)

b. nee=dii=t his~yats=s Michael 'nidiit
NEG=FOC=3.I PL~beat=PN Michael 3PL.III
‘Michael didn’t beat them.’ (BS)

Series III pronouns are independent words, based on the pronominal root √'n(i)i plus a Series II suffix. They are used in absolutive (S/O) function in independent clauses (18)-(19) as well as in O function in dependent clauses in cases where both Series I and Series II pronouns cross-
reference the subject (see (17) above).

(18) dis-t'is-i-t  'nuu'm
    PL.-hit-TR-3.II 3PL.III
    ‘S/he hit us.’ (BS)

(19) gol  'nisi'm
    PL.run 2PL.III
    ‘You (plural) ran.’ (VG)

Unlike Series I and Series II pronouns, Series III pronouns never co-occur with coindexed lexical DPs, and unlike DPs, they are never cross-referenced with other pronoun series. However, they may undergo focus fronting (see Section 2.6), and when they do so, they induce the same extraction morphology as regular DPs.

There has been debate in the IT literature as to the syntactic status of the three pronoun series. Tarpent (1988) argues that Series I and Series II pronouns saturate argument positions, and therefore that lexical DPs (including Series III pronouns) are (clitic-dislocated) adjuncts. Her arguments are based on the fact that Series I and Series II pronouns are obligatory: however, this could equally well be used to argue that they are agreement morphemes, with overt DPs (including Series III pronouns) occupying argument positions. This latter analysis is explicitly proposed by Hunt (1993), and though a full exposition of the issue is beyond the scope of this introduction, there are strong morphological, syntactic and semantic reasons to adopt Hunt’s rather than Tarpent’s view. On the morphological side, the fact that arguments can sometimes be cross-referenced by both Series I and Series II pronouns is hard to account for if both series saturate argument positions. In the syntax, argument DPs can readily be distinguished from adjuncts on the basis of word order, direct versus oblique marking, and extraction asymmetries, which is unexpected if argument DPs are adjuncts (see Davis and Brown 2011). And on the semantic side, DPs cross-referenced with Series I and Series II pronouns show none of the characteristic properties of (clitic) dislocation – they need not be definite, specific, or even referential.

2.5 Argument and adjunct marking

All argument DPs with the exception of Series III pronouns are obligatorily introduced by phrase-initial ‘connectives’ which are distinguished according to nominal type. The basic distinction is between common and proper nouns, though the latter class also includes demonstratives, the WH pronoun *nəa* ‘who’, and ascending kinship terms: it is usually referred to as ‘determinate’ in the Tsimshianic literature.

The common noun (non-determinate) connective =*hl* always encliticizes to the previous phonological word, which leads to systematic mismatches between syntactic and prosodic constituency, as shown in (20)a; in fronting environments (where there is no preceding phonological host) =*hl* deletes altogether, as in (20)b. (The =*hl* following *smax* in the latter example introduces the clausal remnant of S-extraction, and is unconnected to the fronted
nominal.)\(^{14}\)

(20)  

a.  gyukw\(sx\w=\text{hl}\) sm\(\text{ax}\)  
    wake\(=\text{CN}\) bear  
    ‘The bear woke.’ (BS)  

b.  (*\(\text{hl}\)) sm\(\text{ax}=\text{hl}\) gyukw\(sx\w-it\)  
    (*\(\text{CN}\)) bear\(=\text{CN}\) wake\(=\text{sx}\)  
    ‘It was a bear that woke.’ (BS)

The determinate connective \(t\) is less strictly enclitic than \(=\text{hl}\); for some speakers, it may optionally surface preceding a fronted proper noun, for example, as in (21)b.

(21)  

a.  gyukw\(sx\)  
    wake \(\text{DM}\) Michael  
    ‘Michael awoke.’ (BS)  

b.  (\(t\)) Michael\(=\text{hl}\) gyukw\(sx\w-it\)  
    (\(\text{DM}\)) Michael\(=\text{CN}\) wake\(=\text{sx}\)  
    ‘It was Michael that woke.’ (BS)

Also unlike the common noun connective, the determinate connective has a plural form, \(\text{dip}\), which may introduce both plural and singular arguments (shown in (22) and (23), respectively). In the latter case, the combination of singular DP and plural connective is interpreted as an associative plural (‘X and them’): see Forbes (2013) for analysis.

(22)  

hlip\(\sim\)hlabix\(sx\w\)  
    \(\text{dip}\) Barbara  
    gan\(=t\) Mark  
    ‘Barbara and Mark are tired.’ (Rigsby 1986:268)  

(23)  

saks  
    \(\text{dip}\) Dan  
    lax \(t'ax\)  
    ‘Dan and them went to the lake.’ (BS)

When a DP introduced by \(\text{dip}\) is fronted, \(\text{dip}\) is always retained:

(24)  

\(\text{dip}\) John  
    an\(=t\) gup\(=\text{hl}\) suusit  
    ‘John and them ate the potatoes.’ (Davis and Brown 2011:69)

The connective system is further complicated by a third element, \(=s\) (glossed here as \(=\text{PN}\) for ‘proper noun’) which replaces \(t\) just in case a determinate DP immediately follows a predicate suffixed with an agreeing Series II pronoun \(-t\). This happens only with DPs in A function in

\(^{14}\) In fast speech, \(=\text{hl}\) is not infrequently deleted by our consultants; however, it is always restored in appropriate environments in more careful speech.
independent clauses, but with any DP in dependent clauses. (Recall that Series II -t itself deletes immediately preceding a coindexed DP; however, where another clitic such as the reportative evidential =g at intervenes, underlying -t surfaces, as in (25)c.)

(25)  

a.  
\[
\text{limix } t \quad \text{Vince gyaxxw}^{15} \\
\text{sing DM } \text{Vince last.night}
\]

‘Vince sang last night.’ (BS)

b.  
\[
\text{nee=dii } \text{limix=s } \quad \text{Vince gyaxxw} \\
\text{NEG=FOC } \text{sing[-3.II]=PN } \text{Vince last.night}
\]

‘Vince didn’t sing last night.’ (BS)

c.  
\[
\text{nee=dii } \text{limix-}t=\text{ga}(t)=s \quad \text{Vince gyaxxw}^{16,17} \\
\text{NEG=FOC } \text{sing-3.II}=\text{REP}=\text{PN } \text{Vince last.night}
\]

‘I hear Vince didn’t sing last night.’ (BS)

d.  
\[
\text{nee=dii } \text{limix=s } \quad \text{dip } \quad \text{Vince gyaxxw} \\
\text{NEG=FOC } \text{sing[-3.II]=PN PL.DM } \text{Vince last.night}
\]

‘Vince and them didn’t sing last night.’ (BS)

(26)  

a.  
\[
\text{gya’a-t } \quad t \quad \text{Michael} \\
\text{see(TR)-3.II } \quad \text{DM } \quad \text{Michael}
\]

‘S/he saw Michael.’ (BS, VG)

b.  
\[
\text{gya’a=s } \quad \text{Michael} \quad \text{’(nit)} \\
\text{see(TR)=PN } \quad \text{Michael } \quad (3SG.III)
\]

‘Michael saw him.’ (BS)

c.  
\[
\text{nee=dii=t } \quad \text{gya’a=s } \quad \text{Michael} \\
\text{NEG=FOC=3.I } \quad \text{see(TR)=PN } \quad \text{Michael}
\]

‘S/he didn’t see Michael.’ (BS)

d.  
\[
\text{nee=dii=t } \quad \text{gya’a=s } \quad \text{Michael} \quad \text{’(nit)} \\
\text{NEG=FOC=3.I } \quad \text{see(TR)=PN } \quad \text{Michael } \quad (3SG.III)
\]

‘Michael didn’t see him/her.’ (BS)

Note that unlike determinate t, =s co-occurs with the plural determinate marker dip, as in (25)d:

---

15 An epenthetic i (schwa) is variably present in the verb lim(i)x ‘to sing’.
16 In dependent clauses, evidential enclitics (including =g at ‘reportative’ and =im(a’)a ‘epistemic’) may either encliticize to the main predicate, as in (25)c, or to the pre-predicative dependent marker, as in (i):

(i)  
\[
\text{nee=g at=dii } \quad \text{lim(i)x=s } \quad \text{Vince gyaxxw} \\
\text{NEG=REP=FOC } \text{sing[-3.II]=PN } \text{Vince last.night}
\]

‘I hear Vince didn’t sing last night.’ (BS)
17 The final t of =g at is optionally deleted before =hl or =s.
We assume that connectives should be treated as members of the syntactic category D, on the basis of the fact that they systematically introduce all argument DPs.\textsuperscript{18} It should be noted, however, that aside from the determinate/non-determinate contrast, connectives lack semantic content: they have no deictic force, and are not distinguished along standard determiner dimensions such as definiteness or specificity. The common noun connective =hl in particular is used indiscriminately in definite, specific indefinite, and non-specific indefinite contexts, as shown by the textual extract in (27) (where =hl is present with both novel and familiar discourse referents) and the elicited dialogue in (28). See also Section 5.1 below.

(27) ii yukw 'nii-t'aa-t=hl hlgu-t'ihlxw goo=hl lax se'e-t k'i'y=hl sa
CL.CNJ IPFV on-sit-3.II=CN small-young LOC=CN on lap-3.II one=CN day
‘One day a little child sat on his lap.’

ii=t 'nii-'is=hl hlgu-t'ihlxw=hl gi 'maxs-t
CL.CNJ=3.I on-pee=CN small-young=CN DIST pants-3.II
‘and the little child urinated on his pants.’

ii he=hl nigwoot-t=hl hlgu-t'ihlxw gi, sim'oogit gi
CL.CNJ say=CN father-3.II=CN small-young PREV chief DIST
‘And the father of the little child, the chief, said:’

“Dim gi'nam-i-'y=hl ayukws, 'neexhl lu-n.”
PROS give-TR-1SG.II=CN crest whale OBL-2SG.II,
“ ‘I will give you the crest, the whale.’” (BS, “How We Got the Killer Whale Crest”)

(28) A: t'ip-k'oj-i-'y=hl gan
down-cut-TR-1SG.II=CN tree
‘I chopped down a tree.’ (VG)

B: 'nuu'm an=t t'ip-k'ots=hl gan t-ust
1PL.III AX=3.I down-cut=CN tree DM-DEM.DIST
‘We are the ones who cut down that tree.’ (VG)

The distribution of connective elements is summarized in Table 4.

<table>
<thead>
<tr>
<th>COMMON NOUN</th>
<th>PROPER NOUN SUBJECT</th>
<th>PROPER NOUN OBJECT</th>
</tr>
</thead>
</table>

\textsuperscript{18} The common noun connective is also used to introduce a range of other constituents, including the remnants of S and O extraction and the complements of certain dependent markers (e.g., imperfective yukw). It is unclear if and how these non-DP uses of =hl should be related to its primary function as a determiner; we set this issue aside here.
While verbs directly select for DPs with A, S, or O functions, all non-core arguments (for example, the indirect objects of ditransitives) must be licensed by the general oblique preposition a or its pronominal alternant loo (see the fourth line in (27) above). Locative adjuncts are introduced by the locative preposition go()o (see the first line in (27)). Clausal adjuncts are introduced by the complementizer wil/win (the former in Eastern and the latter in Western dialects):

\[
\begin{align*}
\text{(29)} & \quad \text{ha'w} & \quad \text{t} & \quad \text{James} & \quad \text{wil}=t & \quad \text{boogabaaga}=s & \quad \text{Jane} & \quad \text{t} & \quad \text{Bill} \\
& \quad \text{leave} & \quad \text{DM} & \quad \text{James} & \quad \text{COMP}=3.1 & \quad \text{kiss}=\text{PN} & \quad \text{Jane} & \quad \text{DM} & \quad \text{Bill} \\
& \quad \text{‘James left because Jane kissed Bill.’} & \quad \text{(Davis and Brown 2011)}
\end{align*}
\]

Non-clausal temporal adjuncts appear as bare adverbials, generally following arguments at the end of the clause:

\[
\begin{align*}
\text{(30)} & \quad \text{yee} & \quad \text{t} & \quad \text{John} & \quad \text{go'o}=\text{hl} & \quad \text{Terrace} & \quad \text{ky'oots} \\
& \quad \text{go} & \quad \text{DM} & \quad \text{John} & \quad \text{LOC}=\text{CN} & \quad \text{Terrace} & \quad \text{yesterday} \\
& \quad \text{‘John went to Terrace yesterday.’} & \quad \text{(Hunt 1993:24)}
\end{align*}
\]

## 2.6 Word order and extraction

Basic clausal word order in Gitksan is rigidly Predicate-Subject-Object-Adjunct for full DPs in both independent and dependent clauses.\(^{19}\) However, basic word order is often obscured by a

\[
\begin{align*}
\text{\textbf{INDEPENDENT INTRANSITIVE}} & \quad \text{=hl NP} \quad \text{t NP (sg.)} \quad \text{dip NP (pl.)} \quad \text{–} \\
\text{\textbf{INDEPENDENT TRANSITIVE}} & \quad \text{=hl NP} \quad \text{=s NP (sg.)} \quad \text{=s dip NP (pl.)} \quad \text{t NP (sg.)} \quad \text{dip NP (pl.)} \\
\text{\textbf{DEPENDENT INTRANSITIVE}} & \quad \text{=hl NP} \quad \text{=s NP (sg.)} \quad \text{=s dip NP (pl.)} \quad \text{–} \\
\text{\textbf{DEPENDENT TRANSITIVE}} & \quad \text{=hl NP} \quad \text{=s NP (sg.)} \quad \text{=s dip NP (pl.)} \quad \text{when adjacent to the verb:} \quad \text{=s NP (sg.)} \quad \text{=s dip NP (pl.)} \quad \text{when not adjacent to the verb:} \quad \text{t NP (sg.)} \quad \text{dip NP (pl.)}
\end{align*}
\]

\(^{19}\) The sole exception is in independent clauses where a Series III pronoun in an absolutive function co-occurs with an overt DP in ergative function; in that case, Rigsby (1986:263-264) reports that Verb-Object-Subject order is unmarked for older speakers, as in (i); the same is true in Nisg’ála’, according to Tarpent (1988:109). For ‘younger’ fluent speakers, including all of our consultants, however, this exception has been eliminated in favour of a uniform Verb-Subject-Object order for all overt DPs, including Series III pronouns, as shown in (ii).
fronting process that moves focused DPs (including Series III pronouns), PPs and CPs to a clause-initial position, leaving a distinctive morphological signature, which differs according to the grammatical function of the fronted constituent. For S extraction, the verb is marked by the suffix -it/-at/-ut/ot, which we gloss as sx. (The suffixal vowel is underlyingly schwa, whose surface quality is determined by the previous consonant.)

(31)  Tyler=hl   limx-it
       Tyler=CN   sing-sx
       ‘It was Tyler who sang.’  (Davis and Brown 2011)

For A extraction, the special complementizer an (glossed AX) is employed, usually with an encliticized third person Series I pronoun =t (though the clitic is sometimes procliticized and sometimes omitted altogether):20

(32)  (t)  John  an=t  gup=hl   suusiit
        (DM)  John   AX=3.I  eat=CN   potato
        ‘It was John that ate a potato.’  (Davis and Brown 2011)

For O extraction, the verb is marked in the same way as in a transitive independent clause, with a distinctive ‘transitive’ schwa morpheme preceding a Series II suffix in A function. (Note that this schwa surfaces as -i, -a, -u, or -o, depending on the immediately preceding consonant, and is preceded by a glide when immediately following a vowel.)21

(33)  suusiit=hl  gub-i-y
       potato=CN  eat-TR-1SG.II
       ‘It was a potato that I ate.’  (BS)

20 The complementizer an is homophonous with a nominalizing prefix an-, as in an-siip'insxw-i'y ‘my friend’, literally ‘my loving’: see Tarpent (1987:250). It is unclear whether there is any synchronic relation between the two, however.

21 The function of the ‘transitive’ schwa has been the subject of debate in the IT literature. Rigsby (1986) analyzes it as a transitivizer, parallel to causative -(d)in/-(d)an, but Tarpent (1987, 1988) points out that unlike causative suffixes (and other valency-increasing morphology) it suffixes to inherently transitive verbs; and unlike any other valency-related morpheme, it is confined to independent clauses and the clausal remnant of O-extraction. Tarpent dubs it ‘control’, noting the term is ‘not fully satisfactory … but suitably vague’ (Tarpent 1988:140). Finally, observing that it is in complementary distribution with Series I (ergative) pronouns, Hunt (1993:190) identifies transitive schwa as the default head of a ‘Tr(ansitive)P’, present if and only if Series I agreement is absent.
PPs, including non-core arguments (34) and adjuncts (35), as well as adverbs (36), require the presence of the complementizer wil/win to extract:

(34)  
\[(e=s) \quad \text{Katie wil}=n \quad \text{gi'nam}=hl \quad \text{daala} \]
\[(\text{PREP}=\text{CN}) \quad \text{Katie \ COMP}=1\text{SG} \quad \text{give}=\text{CN} \quad \text{money} \]
‘It was (to) Katie I gave the money.’ (VG)

(35)  
\[(\text{go'o}=hl) \quad \text{Australia \ wil}=\text{dii} \quad \text{daa'whl}=s \quad \text{Katie} \]
\[(\text{PREP}=\text{CN}) \quad \text{Australia \ COMP}=\text{FOC} \quad \text{leave}=\text{PN} \quad \text{Katie} \]
‘It was Australia that Katie left for.’ (BS: see Hunt 1993:124)

(36)  
\[(\text{ky'oots} \quad \text{wil}=t \quad \text{hlimoo}=s \quad \text{John \ t} \quad \text{Mary} \]
\[(\text{yesterday} \quad \text{COMP}=3.1 \quad \text{help}=\text{PN} \quad \text{John \ DM} \quad \text{Mary} \]
‘It was yesterday that John helped Mary.’ (BS: see Hunt 1993:124)

Aside from focus fronting, the extraction morphology seen in (31)-(36) is also triggered by a number of other A'-dependencies, including relativization (see 2.7 below), WH-question formation, and cleft-formation (Davis and Brown 2011). Gitksan appears to lack A-movement altogether (Hunt 1993:66-77), though this depends on the status of passives (see 2.3 above).

### 2.7 Structure of DP

Aside from connectives and a head noun, DPs may also contain prenominal modifiers and postnominal relative clauses and demonstratives (Forbes 2012).

There are two types of prenominal modifiers: attributives and ‘reduced’ relatives. Any intransitive predicate may serve as an attributive modifier, linked to the head noun by one of two attributive suffixes: -m, with an epenthetic vowel after consonants, or -a.\(^{22}\) The choice between these allomorphs appears to be lexically determined.

(37)  
\[(\text{giigw-i'-y}=hl) \quad \text{maaxwsxw-a} \quad \text{ixsdaa-m} \quad \text{anaax} \]
\[(\text{buy-TR-1SG.II}=\text{CN}) \quad \text{white-ATTR} \quad \text{sweet-ATTR} \quad \text{bread} \]
‘I bought a white cake.’ (literally ‘sweet bread’) (Forbes 2012:55)

(38)  
\[(\text{xsduutxw}=hl) \quad \text{liipaygw-um} \quad \text{ts'uuts'} \]
\[(\text{noisy}=\text{CN}) \quad \text{fly-ATTR} \quad \text{bird} \]
‘The flying birds are noisy.’ (Forbes 2012:54)

Reduced relatives are categorially restricted to the class of adjectives. Though they are affixed with the same extraction morphology as (intransitive) relative clauses, they may never appear

---

\(^{22}\) We follow Rigsby (1986), Tarpent (1987), and Forbes (2012) in treating the attributive markers as suffixes. There is a case to be made that they are in fact enclitics, based on the fact that the connective =hl – a bona fide enclitic – is sometimes used with an attributive function in a similar environment (e.g., with numerals: see 4.1.1 below); however, we know of no conclusive evidence in favour of either analysis.
with an overt WH-relative pronoun, unlike full relative clauses.

(39)  
\[ \text{gi'nam-}i'-y=hl \quad \text{sip a=}hl \quad \text{(*naa=}hl) \quad \text{[t'uits'xw-it=}hl \quad \text{us]} \]
\[ \text{give-TR-1SG.II=}CN \quad \text{bone \ PREP=}CN \quad \text{(*who=}CN) \quad \text{[black-SX=}CN \quad \text{dog]} \]
\[ \text{‘I gave a bone to the black dog.’} \]

(Forbes 2012:64)

Full relative clauses appear postnominally, and are unrestricted by lexical category or transitivity. Speakers from Eastern dialects allow WH-relative pronouns in addition to the head noun, as in the (b) cases below: see Davis and Brown (2011).

(40)  
(a)  
\[ \text{ixsdaa=}hl \quad \text{[suusiit=}hl \quad \text{gub-i=}s \quad \text{John]} \]
\[ \text{tasty=}CN \quad \text{[potato=}CN \quad \text{eat-TR=}PN \quad \text{John]} \]
\[ \text{‘The potato John ate was tasty.’} \]

(b)  
\[ \text{ixsdaa=}hl \quad \text{[suusiit} \quad \text{gwi=}hl \quad \text{gub-i=}s \quad \text{John]} \]
\[ \text{tasty=}CN \quad \text{[potato} \quad \text{what=}CN \quad \text{eat-TR=}PN \quad \text{John]} \]
\[ \text{‘The potato which John ate was tasty.’} \]

(41)  
(a)  
\[ \text{wilaay-i-n=}hl \quad \text{[gya=}hl \quad \text{limx-id}=a} \]
\[ \text{know-TR-2SG.II=}CN \quad \text{[man=}CN \quad \text{[sing-SX]}=}Q \]
\[ \text{‘Do you know the man who sang?’} \]

(b)  
\[ \text{wilaay-i-n=}hl \quad \text{[gya} \quad \text{[naa=}hl \quad \text{limx-id}=a} \]
\[ \text{know-TR-2SG.II=}CN \quad \text{[man} \quad \text{[who=}CN \quad \text{sing-SX]}=}Q \]
\[ \text{‘Do you know the man who sang?’} \]

(42)  
(a)  
\[ \text{gya’a-’y=}hl \quad \text{[gya} \quad \text{[an=}t \quad \text{gup=}hl \quad \text{suusiit]} \]
\[ \text{see(TR)-1SG.II=}CN \quad \text{[man} \quad \text{[AX=}3.1 \quad \text{eat=}CN \quad \text{potato]} \]
\[ \text{‘I saw the man that ate the potato.’} \]

(b)  
\[ \text{gya’a-’y=}hl \quad \text{[gya} \quad \text{[naa an=}t \quad \text{gup=}hl \quad \text{suusiit]} \]
\[ \text{see(TR)-1SG.II=}CN \quad \text{[man} \quad \text{[who AX=}3.1 \ quad \text{eat=}CN \quad \text{potato]} \]
\[ \text{‘I saw the man who ate the potato.’} \]

Aside from relatives, Gitksan also allows postnominal modification by demonstratives. There are

\[ \text{23 All speakers permit (and most prefer) WH-pronouns in ‘headless’ relative clauses, as shown in (i)-(ii) below:} \]
\[ \text{(i) gy'a-’y=}hl \quad \text{[gu=}hl \quad \text{jab-i-t]} \]
\[ \text{see(TR)-1SG.II=}CN \quad \text{[what=}CN \quad \text{[make-TR-3.II]} \]
\[ \text{‘I saw what s/he made.’} \]
\[ \text{Consultant’s comment: “Better” [than without gu].} \]
\[ \text{(ii) gy'a-’y} \quad \text{[naa [an=}t \quad \text{jagw-i=}hl \quad \text{smax]} \]
\[ \text{see(TR)-1SG.II} \quad \text{[who [AX=}3.1 \quad \text{kill-T=}CN \quad \text{bear]} \]
\[ \text{‘I saw the one who killed the bear.’} \]
\[ \text{Consultant’s comment: “Better with naa than without.”} \]

18
four demonstratives, cross-classified by number and distance from the speaker. They are given in Table 5:

<table>
<thead>
<tr>
<th></th>
<th>singular</th>
<th>plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>proximal</td>
<td>t-un / =s-un</td>
<td>dip-un</td>
</tr>
<tr>
<td>distal</td>
<td>t-ust / =s-ust</td>
<td>dip-ust</td>
</tr>
</tbody>
</table>

Demonstratives are always introduced by reflexes of the determinate connectives $t /=s$ (singular) and $dip$ (plural); however, on demonstrative roots, the connective elements are not separable, and we therefore treat them as prefixes rather than clitics.

Demonstratives may never act as syntactic predicates in IT, and are therefore confined to argument positions. As well as occurring post-nominally within DP, they appear pronominally as arguments on their own:

(43) $gya'$a-y=hl us $t$-ust, $ii$ ap nee=diil=n
      see(TR)-1SG.II=CN dog DM-DEM.DIST CL.CNJ VERUM NEG=FOC=1SG.I
      $gya'a=s-un$
      see=PN-DEM.PROX
      ‘I saw that dog, but not this one.’ (BS)

2.8 Coordination

IT distinguishes between clausal and non-clausal coordination. The clausal coordinator is $ii$ ‘and then’ which induces dependent inflection on the following clause and is particularly common in narrative contexts; see for example the text fragment in (27) above. Together with $(k')ap$ ‘verum’, $ii$ is also used for ‘but’, as in (43) above.

The phrasal coordinator (used mainly for DPs, and some PPs) is $gan$. As in English coordination, $gan$ appears before every conjunct except the first, though it can be omitted in long lists of items.

(44) $luu$ dox=hl $smax$ $gan=hl$ $anaax$ $gan=hl$ maa'y ts'im $dihlxw=s$ Lisa
      in lie.PL=CN meat PH.CNJ=CN bread PH.CNJ=CN berries in bag=PN Lisa
      ‘There’s meat, bread, and berries in Lisa’s bag.’ (Forbes 2013:14)

In spite of appearances, however, there is evidence that $gan$ is not a standard conjunction of the English type: extraction is possible from the first (but not the second) conjunct of a coordinate DP, violating the Coordinate Structure Constraint:

---

24 The underlying forms of the proximal and distal demonstrative roots are $\sqrt[4]{xwin}$ and $\sqrt[4]{xwist}$, respectively ($\sqrt[4]{gwin}$ and $\sqrt[4]{gwist}$ in Nisga'a); this explains why the initial $t$ in $tun/tust$ and the $p$ in $dipun/dipust$ are not voiced by the regular rule that voices stops before vowels.

25 Forbes (2013:14) reports that obliques with $a$ cannot be coordinated, though locative PPs headed by $go'oo$ can.
(45)  a.  gub-i=s  Henry=hl  smax  gan=hl  miyup  
    eat-TR=PN  Henry=CN  meat  PH.CNJ=CN  rice  
    ‘Henry ate meat and rice.’  (Davis and Brown 2011)

b.  gwi=hl  gub-i=s  Henry  gan=hl  miyup  
    what=CN  eat-TR=PN  Henry  PH.CNJ=CN  rice  
    * ‘What did Henry eat and rice?’  (Davis and Brown 2011)

c.  * gwi=hl  gub-i=s  Henry=hl  smax  gan?  
    what=CN  eat-TR=PN  Henry=CN  meat  PH.CNJ  
    * ‘What did Henry eat meat and?’  (Davis and Brown 2011)

Forbes (2013) analyzes gan as a comitative preposition (akin to ‘with’ in English), which accounts for the extraction facts, as well as for the fact that coordination with gan can be discontinuous, with the second conjunct appearing on the right periphery of the clause:

(46)  nee=dii=n  jap=hl  anaax  gan=s  Colin  
    NEG=FOC=1SG.II  make=CN  bread  PH.CNJ=PN  Colin  
    ‘Colin and I didn’t make bread.’  (Forbes 2013:44)

Disjunction in Gitksan is conveyed by the combination oo ligi; oo is the disjunctive coordinator, and ligi is a particle whose function generally appears to be that of a domain widener (see Section 5.1.1 below). Either DPs or clauses may be coordinated:

(47)  nee=hl  ’wii'u-n  a=hl  ligi  duus  oo  ligi  us  
    NEG=CN  like-2SG.II  PREP=CN  DWID  cat  or  DWID  dog  
    ‘Do you like cats or dogs?’  (Forbes 2013:58)

(48)  nee=hl  ’wii'u-n  a=hl  ligi  duus  oo  ma  ligi  gasgootxw-diit  
    NEG=CN  like-2SG.II  PREP=CN  DWID  cat  or  2SG.II  DWID  dislike-3PL.II  
    ‘Do you like cats or do you dislike them?’  (Forbes 2013:58)

3  Plurality and the count-mass distinction

Plural marking in IT is extensive and complex. It occurs at both derivational and inflectional levels of the morphology. At the inflectional level, we have already encountered the third person plural suffix -diit (see (17) above and Appendix II) as well as the plural determinate connective dip (more properly treated as an associative plural, as in Forbes 2013: see (23)). Here we provide a brief introduction to stem-level plural marking, and then address the relation of plural marking to the count-mass distinction in IT.

3.1  Stem-level plural marking

Stem-level plural marking is quite pervasive. Plurality is marked on both nouns and verbs and
may take many different forms, the first being prefixes (49):  

(49)  
<table>
<thead>
<tr>
<th>akx</th>
<th>drink</th>
<th>la-'aks</th>
<th>PL-drink</th>
</tr>
</thead>
<tbody>
<tr>
<td>xoox</td>
<td>yawn</td>
<td>ga-xoox</td>
<td>PL-yawn</td>
</tr>
<tr>
<td>do'o</td>
<td>cheek</td>
<td>di-do'o</td>
<td>PL-cheek</td>
</tr>
<tr>
<td>jap</td>
<td>make</td>
<td>jip-jap</td>
<td>PL-make</td>
</tr>
<tr>
<td>gwee'y</td>
<td>be.poor</td>
<td>gwix~gwee'y</td>
<td>PL-be.poor</td>
</tr>
</tbody>
</table>

(Rigsby 1986:92-103) identifies five different subclasses of regular plural prefixes, which have differing phonological forms: la/-li-, ga-, and three different reduplicated forms. One of each is represented in the examples in (49). Rigsby also reports irregular plural forms.  

Gyat also has a collective or generic reading as ‘people’.

26 Rigsby (1986:92-103) identifies five different subclasses of regular plural prefixes, which have differing phonological forms: la/-li-, ga-, and three different reduplicated forms. One of each is represented in the examples in (49). Rigsby also reports irregular plural forms.

27 G yat also has a collective or generic reading as ‘people’.

Suppletion is also common, as seen in (50):

(50)  
<table>
<thead>
<tr>
<th>bax</th>
<th>run</th>
<th>gol</th>
<th>PL.run</th>
</tr>
</thead>
<tbody>
<tr>
<td>gyat27</td>
<td>man, person</td>
<td>ii'wxt</td>
<td>PL.man</td>
</tr>
<tr>
<td>hlgu</td>
<td>small</td>
<td>k'uba</td>
<td>PL.small</td>
</tr>
<tr>
<td>t'aa</td>
<td>sit</td>
<td>wan</td>
<td>PL.sit</td>
</tr>
<tr>
<td>'mas</td>
<td>grow.up</td>
<td>limx</td>
<td>PL.grow.up</td>
</tr>
</tbody>
</table>

(Rigsby 1986:73)

(Rigsby 1986:74)

(Rigsby 1986:75)

(Rigsby 1986:77)

(Rigsby 1986:76)

Sometimes plural formation involves more than one process:

(52)  
<table>
<thead>
<tr>
<th>gyamk</th>
<th>be.hot</th>
<th>lim~lamk</th>
<th>PL~PL.be.hot</th>
</tr>
</thead>
<tbody>
<tr>
<td>ayee</td>
<td>go.fast</td>
<td>a-li-yee-t</td>
<td>PFX-PL-go.fast-PL</td>
</tr>
</tbody>
</table>

(Rigsby 1986:112)

On the other hand, there are also gaps in plural marking at the stem level: some stems (both nominal and verbal) simply lack plural alternants. This is only partially predictable from lexical semantic classes: while categories such as plants and animals are usually unmarked and humans usually marked for plurality, there are lexical exceptions in both directions.

Hunt (1993:154-161) notes that pluralized telic verb stems (achievements and accomplishments) are ambiguous between event-related and argument-related readings (see also Rigsby 1986:269, Tarpent 1987:723). Hunt observes that on their event-related readings, pluralized telic verbs...
denote iterated events, while on their argument-related readings, they mark plurality of an absolutive (S or O) argument.

(53)  
\[
\text{his~yaj-i-'y=hl} \quad \text{gan} \\
\text{PL~beat-TR-1SG.II=CN} \quad \text{tree} \\
\text{‘I banged on the tree (repeatedly).’ or ‘I beat sticks.’} \quad \text{(Hunt 1993:154)}
\]

(54)  
\[
\text{‘nii-t'ahl-d-i-'y=hl} \quad \text{lakw} \quad \text{ lax} \quad \text{an-lakw}^{28} \\
\text{on-PL.put-T-TR-1SG.II=CN} \quad \text{fuel on place-fire} \\
\text{‘I put (more than one piece of) wood on the fire.’} \quad \text{(Hunt 1993:153)}
\]

Atelic verb stems (activities and states) undergo a separate ‘durative’ CV- reduplication process (Rigsby 1986:369).

(55)  
\[
\text{al~algax=hl} \quad \text{gyat} \\
\text{PL~talk=CN} \quad \text{man} \\
\text{‘People are talking.’} \quad \text{(Hunt 1993:153)}
\]

Stem-level plurality is generally obligatory: for example, with a plural object, the plural form of a verb must be used, if one exists ((56)b versus c). However, a plural verb may be used with a singular object to indicate repeated action (d).

(56)  
\[
\begin{align*}
\text{a. } & \text{yats-diit} \quad \text{'nii'y} \\
& \text{beat-3PL.II} \quad \text{1SG.III} \\
& \text{‘They beat me.’} \quad \text{(BS)}
\end{align*}
\]
\[
\begin{align*}
\text{b. } & \text{his~yats-diit} \quad \text{'nuu'm} \\
& \text{PL~beat-3PL.II} \quad \text{1PL.III} \\
& \text{‘They beat us.’} \quad \text{(BS)}
\end{align*}
\]
\[
\begin{align*}
\text{c. } & \text{*yats-diit} \quad \text{'nuu'm} \\
& \text{beat-3PL.II} \quad \text{1PL.III} \\
& \text{(BS)}
\end{align*}
\]
\[
\begin{align*}
\text{d. } & \text{his~yats-diit} \quad \text{'nii'y} \\
& \text{PL~beat-3PL.II} \quad \text{1SG.III} \\
& \text{‘They beat me (repeatedly).’} \quad \text{(BS)}
\end{align*}
\]

3.2 The count-mass distinction and number marking

In many (but not all) languages, number marking distinguishes between mass and count nouns. For example, mass nouns do not generally pluralize in English, unless measured out by an

\[\text{28} \quad \text{Hunt has } \text{lakxw} \text{ for ‘firewood, fuel’: this would appear to be a mistranscription.}\]
\[\text{29} \quad \text{In spite of this, it is not uncommon to find singular forms of both nouns and verbs in unambiguously plural contexts. The exact circumstances under which this is possible are still unclear, and merit further investigation.}\]
explicit or implicit apportionment function; implicit functions are available when apportionment is conventionalized, so that for example *coffees* (i.e., cups of coffee) is felicitous, but *snows* is not, because snow lacks a conventionalized apportionment function.

The ability to pluralize is often treated together with the property of countability (the ability to be directly selected by a numeral) as a diagnostic for the mass-count distinction. In particular, it has often been observed that so-called ‘classifier languages’ such as Mandarin, where a numeral classifier must be used to count nouns, also systematically lack productive plural morphology. This correlation has been used to argue that classifier languages lack a lexical class of count nouns (see e.g. Chierchia 1998), and though subsequent work has thrown into doubt the idea that two types of language can be separated on the basis of such a simple distinction, it remains useful on a typological level.

As might be expected from its extensive plural marking, Gitksan is not a classifier language in Chierchia’s sense. Count nouns may be directly selected by numerals, as illustrated in (57), whereas mass nouns generally require classifying or measure phrases in order to be counted. The attributive modifiers *gald-im* and *and-a* in (58) and (59) act as general-use container classifiers:

(57)  
\[ \text{gilbil}=\text{hl} \quad \text{gan-gan}(=\text{hl}) \quad \text{gya'a'-y} \]  
\[ \text{two}=\text{CN} \quad \text{PL~tree}(=\text{CN}) \quad \text{see(TR)-1SG.II} \]  
\[ \text{‘I see two trees.’} \]  
\[ \text{(VG)} \]

(58)  
\[ \text{gi'nam-i'-y}=\text{hl} \quad \text{gilbil-t}=\text{hl} \quad \text{gald-im} \quad \text{k'ihee'e} \quad \text{go'o}=\text{hl} \quad \text{wilp-siipxw} \]  
\[ \text{give-TR-1SG.II}=\text{CN} \quad \text{two-3.II}=\text{CN} \quad \text{container-ATTR} \quad \text{blood} \quad \text{LOC}=\text{CN} \quad \text{house-sick} \]  
\[ \text{‘I donated two bottles of blood at the hospital.’} \]  
\[ \text{(VG)} \]

(59)  
\[ \text{ksax} \quad \text{gi'nam-i'-y}=\text{hl} \quad \text{gilbil}=\text{hl} \quad \text{k'uba} \quad \text{and-a} \quad \text{ihlee'e} \]  
\[ \text{only} \quad \text{give-TR-1SG.II}=\text{CN} \quad \text{two}=\text{CN} \quad \text{PL~small} \quad \text{container-ATTR} \quad \text{blood} \]  
\[ \text{‘I only donated two bottles of blood.’} \]  
\[ \text{(HH)} \]

The container modifier *and-a* may also form lexical compounds with either mass or count nouns, as in (60)-(61), respectively.

(60)  
\[ \text{and-a'-is} \]  
\[ \text{container-ATTR-urine} \]  
\[ \text{‘bladder’} \]  
\[ \text{(Rigsby 1986:395)} \]

(61)  
\[ \text{and-a-hawil} \]  
\[ \text{container-ATTR-arrow} \]  
\[ \text{‘quiver’} \]  
\[ \text{(Rigsby 1986:395)} \]

Measure phrases may be formed from verbs. Below in (62), the measure phrase *k’ots* is derived from the verb ‘to cut’. The example in (63) is instructive, as it involves the noun *smax*, whose meaning is ambiguous between ‘bear’ (a count noun) and ‘meat’ (a mass noun). A measure phrase is necessary to yield a count interpretation of ‘meat’; if omitted, the only countable interpretation of the nominal is ‘bear’:

(62)  
\[ \text{and-a'-is} \]  
\[ \text{container-ATTR-urine} \]  
\[ \text{‘bladder’} \]  
\[ \text{(Rigsby 1986:395)} \]

(63)  
\[ \text{and-a-hawil} \]  
\[ \text{container-ATTR-arrow} \]  
\[ \text{‘quiver’} \]  
\[ \text{(Rigsby 1986:395)} \]
(62) gilbil=hl  **gas-k'oj-asxw** smax gub-i-'y
two=CN  PL~cut-ANTIP meat eat-TR-1SG.II
‘I ate two pieces (‘cuts’) of meat.’ (BS)

(63) gilbil=hl  smax gub-i-'y
two=CN  bear eat-TR-1SG.II
‘I ate two bears.’ (only interpretation) (BS)

However, just as in English, measure phrases are not always obligatory. In examples (64)-(65) we see that container nominals appear only optionally with ‘coffee’ but that a distinct measure function in each case is contextually understood.

(64)  *Context: At breakfast*
gilbil=hl  kopi  (kyaps)  aks-i-'y
two=CN  coffee  (cup)  drink-TR-1SG.II
‘I drank two coffees.’ (BS)

(65)  *Context: In the grocery store*
giigw-i-'y=hl  gilbil-t=hl  (and-a)  kopi
buy-TR-1SG.II=CN  two-3.II=CN  (container-ATTR)  coffee
‘I bought two packets/bags of coffee.’ (BS)

Examples (66)-(68) illustrate that the nominal *anaax* ‘bread’ needs a measure phrase for ‘pieces’ or ‘slices’, but not for ‘loaves’:

(66)  gwila'l=hl  **gap-k'ap=hl**  anaax=hl  gub-i-'y
three=CN  PL~piece=CN  bread=CN  eat-TR-1SG.II
‘I ate three pieces of bread.’ (BS)

(67)  gwila'l=hl  **k'ots**  anaax=hl  gub-i-'y³⁰
three=CN  cut  bread=CN  eat-TR-1SG.II
‘I ate three pieces of bread.’ (VG)

(68)  gwila'l=hl  anaax=hl  giigw-i-'y
three=CN  bread=CN  buy-TR-1SG.II
‘I bought three loaves of bread.’ (VG, BS)

Other nominals, such as *(k')ihlee'a/e* ‘blood’ and *maaxws* ‘snow’ always require an overt measure phrase:

(69)  a.  gya'a-'y  gilbil-t=hl  **t'ip-lag-it=hl**  ihlee'a

³⁰ Compare this example, with non-plural *k'ots*, to the otherwise parallel example in (59), with plural *gas-k'ots*. We have not yet investigated the circumstances under which measure phrases can or must be pluralized.
(70) a. gya'a-y=hl gilbil 'naa maaxws lax sga'nist see(TR)-1SG.II=CN two patch snow on mountain
   ‘I saw two patches of snow on the mountain.’
   (BS)

   b. * gya'a-y=hl gilbil maaxws lax sga'nist see(TR)-1SG.II=CN two snow on mountain

In general, countability in Gitksan goes along with the ability to pluralize; most mass nouns lack stem-level plurals, and those that do pluralize yield count meanings: for example, the plural of aks ‘water, drink’ is la-aks, which means ‘drinks’, not ‘waters’. One interesting exception is maaxws ‘snow’, which has the plural form mis~maaxws. However, the plural form always requires an overt measure phrase, whether selected by a numeral or not:

(71) a. gya'a-y=hl 'naa mis~maaxws lax gilbil-t=hl sga'nist see(TR)-1SG.II=CN patch PL~snow on two-3.II=CN mountain
   ‘I saw patches of snow on two mountains.’
   (BS)

   b. * gya'a-y=hl mis~maaxws lax gilbil-t=hl sga'nist see(TR)-1SG.II=CN PL~snow on two-3.II=CN mountain

   c. * gya'a-y=hl gilbil mis~maaxws lax sga'nist see(TR)-1SG.II=CN two PL~snow on mountain

Using the plural form of a predicate with a mass noun argument yields mixed results. Sometimes, a classifying expression is required:

(72) a. gyemk=hl aks warm=CN water
    ‘The water is warm/hot.’
    (VG)

   b. lim~lemk=hl *(gald-im) aks PL~warm=CN *(container-ATTR) water
    The *(containers of) water are warm.’
    (VG)

At other times, however, a pluralized predicate yields an ‘augmentative’ reading:

(73) a. jem-i'-y=hl miyup cook-TR-1SG.II=CN rice
    ‘I boiled rice.’
    (VG)
More investigation is needed here. Overall, however, it seems clear that Gitksan distinguishes mass from count nouns along more or less the same lines as English, with direct counting and pluralization possible for count nouns, but either explicit or implicit measure phrases necessary for mass nouns.

4 D-type quantifiers over entities

With this background in place, we now turn to our survey of quantificational elements in Gitksan. As indicated in Section 1, our taxonomy makes a primary distinction between quantifiers over entities and those over events: we begin in Section 4 with D-type quantification over entities, followed in Section 5 by (A-type) quantification over indefinites.

4.1 Non-universals

We divide non-universals into cardinal (numeral) quantifiers (4.1.1), value-judgement (weak) quantifiers (‘few’, ‘many’) (4.1.2), and inherently proportional (strong) quantifiers (‘some of’, ‘half of’) (4.1.3).

4.1.1 Cardinal (numeral) quantifiers

Cardinal quantifiers are those for which QAB depends only on the cardinality of the intersection of A and B (the number of As that are Bs), hence the alternative term ‘intersective quantifiers’.

The only unambiguously cardinal D-Quantifiers in Gitksan are the numerals. There are up to three different forms for numerals, depending on whether animals, things, or people are being counted, as shown in Table 6:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>THINGS</td>
<td>PEOPLE</td>
<td>ANIMALS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>k'i'y</td>
<td>k'yul</td>
<td>k'eeekw</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>gibil</td>
<td>bagadi</td>
<td>t'ipxaat</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>gwila'l/gwile'l(t)</td>
<td>gwilun</td>
<td>gwilan(t)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>txalpx / tk'alpx</td>
<td>txalpxdul</td>
<td>txalpx / tk'alpx</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>xwsdins</td>
<td>xwsdinsul</td>
<td>xwsdins</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>k'oo'lt</td>
<td>k'oo'ldul</td>
<td>k'oo'lt</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>t'ipxoo'lt</td>
<td>t'ipxoo'ldul</td>
<td>t'ipxoo'lt</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>gandoo'lt / k'yuxdaa'lt</td>
<td>gandoo'ldul / k'yuxdaa'ldul</td>
<td>gandoo'lt</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>xwsdimoos</td>
<td>xwsdimoosul</td>
<td>xwsdimoos</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Note that the forms for animals are not differentiated from those for things except with the numbers 1-3 and 10, and the forms for people are derived from those for things by means of simple suffixation of -ul, again with the exception of the numbers 1-3 and 10. In other words, the forms for things are clearly morphologically unmarked, and in fact may be used as a default even when people or animals are being counted.

As might be expected, the forms for the numeral ‘one’ take a singular restriction (74), while forms for numerals two and higher take plural restrictions (75):

(74)  
\[
\begin{array}{llll}
\text{k'yul}=&\text{hl} & \text{hanak'}=&\text{hl} \text{ bax-at} \\
\text{one.HUM}=&\text{CN} & \text{woman}=&\text{CN} \text{ run-sx} \\
\end{array}
\]

‘One woman ran.’

(75)  
\[
\begin{array}{llll}
\text{bagadii}=&\text{hl} & \text{hankaak'}=&\text{hl} \text{ gol-t} \\
\text{two.HUM}=&\text{CN} & \text{PL.women}=&\text{CN PL.run-sx} \\
\end{array}
\]

‘Two women ran.’

Syntactically, numerals appear either inside post-predicative noun phrases, as in (76)-(77) or clause-initially, as in (78)-(79). Inside noun phrases, they generally occur prenominally, like adjectives (see Section 2.7), but are connected to the head noun by the connective =hl (Section 2.5), rather than by one of the attributive suffixes which mark other prenominal modifiers, including value judgment quantifiers (see Sections 2.7, 4.2).

(76)  
\[
\begin{array}{llll}
\text{gya'a}-=\text{y}=\text{hl} & \text{gilbil}=\text{hl} & \text{smax} \\
\text{see(TR)}=\text{1SG.II}=\text{CN} & \text{two}=\text{CN} & \text{bear} \\
\end{array}
\]

‘I saw two bears.’

(77)  
\[
\begin{array}{llll}
\text{gya'a}=\text{hl} & \text{t'ihlxw-um} & \text{hanaka}=\text{hl} & \text{t'ipxaadit}=\text{hl} \\
\text{see(TR)}=\text{CN} & \text{young-ATTR} & \text{woman}=\text{CN} & \text{two.ANIMAL}=\text{CN} \text{ PL~dog} \\
\end{array}
\]

31 One of our consultants (VG) uses k'yap as a general word for ‘ten’, irrespective of whether things, animals or humans are being counted.

32 There are two possible structural analyses for clause-initial numerals. The first treats the quantifier and its restriction as having undergone movement to a clause-initial A’-position; the second treats the quantifier as a main predicate, taking the rest of the clause as a relative clause headed by the restriction. See 4.1.2 for discussion.

33 Forbes (2012) does give one example where the numeral ‘one’ is linked to a following noun by an attributive marker, shown in (i). Though we have yet to come across other cases of this pattern, the forms used by some speakers for ‘twice’ (gilb-a) and ‘thrice’ (gwilel-a) appear similar: see Section 6.1.1.

(i)  
\[
\begin{array}{llll}
\text{am} & \text{ky'u}-\text{a} & \text{gyat} & \text{'nit} \\
\text{only} & \text{one.HUM-ATTR} & \text{man} & \text{3SG.III LOC=CN} \\
\end{array}
\]

‘He’s the only man at the party.’

(Forbes 2012:55)
‘The girl saw two dogs.’

(78) \text{gilbil}=\text{hl} \quad \text{gan}=\text{gan}=\text{hl} \quad \text{gya'a-}'y \\
\text{two}=\text{CN} \quad \text{PL-tree}=\text{CN} \quad \text{see(TR)-1SG.II}

‘I see/saw two trees.’

(79) \text{bagadil}=\text{hl} \quad \text{tk'ihlxw} \quad \text{gya'a-}'y \\
\text{two.HUM}=\text{CN} \quad \text{young} \quad \text{see(TR)-1SG.II}

‘I see two children.’

Comparing the structures in (76)-(77) vs. (78)-(79), the post-predicative position in (76)-(77) is dispreferred for at least some speakers. One consultant volunteered the information that the structure in (78)-(79) is ‘more traditional’, and the structure in (76)-(77) is more modern.

Numerals cannot ‘float’ (i.e., they do not occur in pre-predicative position with a stranded post-predicative restriction), as shown in (80)b. Sentences with a pre-predicative numeral and a post-predicative DP yield only (marginally acceptable) event quantification readings, as suggested by the speaker’s comment (see Section 6.1 for numeral quantification over events).

(80) a. \text{miihluxw}=\text{hl} \quad \text{bagadil} \quad \text{ha'nak'} \\
\text{dance}=\text{CN} \quad \text{two.HUM} \quad \text{PL-woman}

‘Two women danced.’

b. * \text{bagadil} \quad \text{miihluxw}=\text{hl} \quad \text{ha'nak'} \\
\text{two.HUM} \quad \text{dance}=\text{CN} \quad \text{PL-woman}

‘Two women danced.’

\text{Consultant’s comment:} “No. It would make me wonder if the women danced twice. It could mean that, but it’s not perfect.”

‘Bare’ numerals may appear marginally in post-predicative argument positions if the discourse context is rich enough to allow their nominal restriction to be recovered. In (80), the numeral is suffixed with the series II pronominal marker -t, yielding a partitive interpretation similar to ‘three of them.’

(81) \text{Context: You went into town and there was a special on shirts. You’re explaining to your friend what you bought.}
\text{gya'a-}'y \quad \text{am-}'am-a \quad \text{kshla'w} \quad \text{wsxw} \quad \text{ii}=\text{n} \quad \text{giik}=\text{hl} \quad \text{gwile'}l-t \\
\text{see(TR)-1SG.II} \quad \text{PL-good-ATTR shirt} \quad \text{CL-CNJ}=\text{1SG.I} \quad \text{buy}=\text{CN} \quad \text{three-3.II}

‘The shirts were nice so I bought three.’

4.1.1.1 ‘At least’ versus ‘at most’ with numerals

There is no direct way of saying ‘at least’ or ‘at most’ in Gitksan: when asked to translate sentences containing these expressions, speakers offer paraphrases such as the following:

(82) \text{ligi} \quad \text{bagadil} \quad \text{tk'ihlxw} \quad \text{ii} \quad \text{nee}=\text{dii} \quad \text{ky'ap} \quad \text{gabi}=\text{hl} \quad \text{siwilaksxw}
However, numerals in initial position can optionally be followed by *gabi* ‘number, (count) amount’, glossed here as CNT.AMT. For example, (78) has the alternate realization in (83), and (68) above has the alternate realization in (84):

(83)  
\[
gilbi=hl \quad \text{gabi}=hl \quad \text{gan} \sim \text{gan}=hl \quad \text{gya}'a'y
\]
\[
two=CN \quad \text{CNT.AMT}=CN \quad \text{PL.tree}=CN \quad \text{see(TR)}-1\text{SG.II}
\]

‘In total I saw two trees.’  (speaker’s translation)  (VG)

(84)  
\[
gwila'l=hl \quad \text{gabi}=hl \quad \text{anaax}=hl \quad \text{giigw-i}'y
\]
\[
\text{three}=CN \quad \text{CNT.AMT}=CN \quad \text{bread}=CN \quad \text{buy-TR-1SG.II}
\]

‘I bought three loaves of bread in all.’  (speaker’s translation)  (VG)

These sentences are truth-conditionally equivalent to their alternants without *gabi*, but speakers recognize a subtle distinction in meaning between the two cases, apparent from the translations given by the consultant above. When asked further about this difference, speakers typically describe sentences without *gabi* as involving an explicit operation of counting, whereas those with *gabi* are used to express a final or total number. This in turn often leads to an ‘at most’ reading for the latter, as shown in (86) below:

(85)  
\[
\text{Context: You are reading a picture book to a child. The book is teaching children to count and on each page you are supposed to count men in a village. So on one page it says: ‘There is one man in the village’; on the next it says ‘There are two men in the village’, on the next ‘There are three men in the village’, etc.}
\]
\[
gwilun=hl \quad \text{ii'uxwt} \quad \text{ts'im} \quad \text{gals'ep}
\]
\[
\text{three.HUM}=CN \quad \text{PL.man} \quad \text{in} \quad \text{village}
\]

‘There are three men in the village.’   (VG)

(86)  
\[
\text{Context: In one particular village, only three men live there in total.}
\]
\[
gwilun=hl \quad \text{gabi}=hl \quad \text{ii'uxwt} \quad \text{go'o}=hl \quad \text{ts'im} \quad \text{gals'ep}
\]
\[
\text{three.HUM}=CN \quad \text{CNT.AMT}=CN \quad \text{PL.man} \quad \text{LOC}=CN \quad \text{in} \quad \text{village}
\]

‘There are three men in the village.’   (VG)

Consultant’s volunteered translation: ‘There’s not more than three men in the village.’

The same construction is also used (via the inference from ‘not more than’ to ‘less than’) when translating English sentences with ‘less than’:

(87)  
\[
\text{ky'ap}=hl \quad \text{gabi}=hl \quad \text{gyet} \quad \text{uu'w-i}'y \quad \text{ii} \quad \text{nee}=\text{dii}
\]
\[
ten=CN \quad \text{CNT.AMT}=CN \quad \text{person} \quad \text{invite-TR-1SG.II} \quad \text{CL.CNJ NEG}=\text{FOC}
\]
\[
gwalk'a \quad \text{bakw-diit}
\]
\[
\text{all} \quad \text{come-3PL.II}
\]
‘Less than 10 people came to my party.’ (Literally: ‘The amount of people I invited to the party was (not more than) ten and not all of them came.’)\(^{34}\) (VG)

4.1.2 Value judgment (weak) quantifiers

Value judgment quantifiers correspond to English *many*, *few* and *enough*; they can introduce cardinalities or proportions, in either case relative to an implicit contextual standard. In the literature, they are often referred to as “weak” quantifiers, following Milsark (1977), on the basis of their ability to occur in existential (“there insertion”) contexts.

Value judgment quantifiers over individuals in Gitksan include *helt/hilt* ‘many’ and *hlebuu/hlibuu* ‘(a) few’. Argument-internal uses are illustrated in (88)-(90) for *helt/hilt* and (91) for *hlebuu/hlibuu*; there are no restrictions on which argument roles these elements may fulfill. Like numerals, value judgment quantifiers appear between the common noun connective \(=hl\) and the NP. However, unlike numerals, but like other prenominal modifiers (Section 2.7), they take the attributive suffixes \(-m/-a\) when appearing inside argumental noun phrases.

(88) \(\text{gya'a-y}=hl\quad \text{held-a} \quad \text{xbiist}\)
\(\text{see(TR)-1SG.II}=CN\quad \text{many-ATTR} \quad \text{box}\)
‘I saw many boxes.’ (BS)

(89) \(\text{jab-i'-y}=hl\quad \text{held-a} \quad \text{hu-wilb-ist}\)
\(\text{make-TR-1SG.II}=CN\quad \text{many-ATTR} \quad \text{PL~house-AFF}\)
‘I built a lot of the houses.’ (BS)

(90) \(\ldots \text{k'ap} \quad \text{txooxkw}=hl\quad \text{'wii} \quad \text{hild-im} \quad \text{ts'uuts'}\)
\(\ldots \text{VERUM} \quad \text{PL.eat}=CN \quad \text{great} \quad \text{many-ATTR} \quad \text{bird}\)
‘… the multitude of birds were simply feeding.’ (Nisga'a; Boas 1902:115.2.3)

(91) \(\text{gya'a-y}=hl\quad \text{hlebuu-m} \quad \text{smax} \quad \text{duu'u}\)
\(\text{see(TR)-1SG.II}=CN\quad \text{few-ATTR} \quad \text{bear} \quad \text{over.there}\)
‘I saw a few bears over there.’ (BS)

Like numerals, value judgment quantifiers occur clause-initially as well as in post-predicative argument positions: clause-initial examples are shown in (92)-(94) for *helt/hilt* and (95)-(96) for *hlebuu/hlibuu*.\(^ {35}\)

\(^{34}\) Gitksan lacks any lexical quantifier which is monotone decreasing on its second argument (e.g., ‘no’, ‘not all’, etc.): see Section 5.4 below.

\(^{35}\) Unlike numerals, however, value judgment quantifiers never appear with *gabi* ‘number, (count) amount’:

(i) \(\text{helt}=hl\quad (*\text{gabi}=hl)\quad \text{ii'uxwt} \quad \text{ts'im} \quad \text{galt's'ep}\)
\(\text{many}=CN\quad (*\text{CNT.AMT}=CN)\quad \text{PL.man} \quad \text{in} \quad \text{village}\)
‘There are many men in the village.’ (VG)

(ii) \(\text{hlibuu}=hl\quad (*\text{gabi}=hl)\quad \text{smex} \quad \text{go'o}=hl \quad \text{s-ust}\)
\(\text{few}=CN\quad (*\text{CNT.AMT}=CN)\quad \text{bear} \quad \text{LOC}=CN \quad \text{DM-DEM.DIST}\)
(92)  Context: I just walked in from the woods and say this out of the blue.
\[\text{hilt}=\text{hl} \quad \text{ul}=\text{hl} \quad \text{gya'a}'y\]
\[\text{many}=\text{CN} \quad \text{bear}=\text{CN} \quad \text{see(TR)-1SG.II}\]
‘I saw many bears.’  

(93)  
\[\text{helt}=\text{hl} \quad \text{(and-a)} \quad \text{kopi}=\text{hl} \quad \text{aks-i}'y\]
\[\text{many}=\text{CN} \quad \text{(container-ATTR)} \quad \text{coffee}=\text{CN} \quad \text{drink-TR-1SG.II}\]
‘I drank a lot of coffee.’ (many cups of coffee)  

(94)  
\[\text{helt}=\text{hl} \quad \text{ii'uxwt ga-miilugw-it}\]
\[\text{many}=\text{CN} \quad \text{PL.man PL-dance-SX}\]
‘Many men are dancing.’  

(95)  
\[\text{hlebuu}=\text{hl} \quad \text{k'amksiwiwa ts'aw-it}\]
\[\text{few}=\text{CN} \quad \text{white.person clever-SX}\]
‘There’s a few white men that are smart.’  

(96)  
\[\text{k'am} \quad \text{hlibuu}=\text{hl} \quad \text{wan an=t} \quad \text{di'akhlkw}=\text{hl} \quad \text{huut-diit}\]
\[\text{only few}=\text{CN} \quad \text{deer AX=3.1 able}=\text{CN} \quad \text{escape(PL)-3PL.II}\]
‘Only a few deer were able to escape.’  

Examples like these are potentially structurally ambiguous in a way familiar to students of quantification in the Pacific Northwest (Matthewson 1998, Gillon 2006/2013). Given that value judgment cardinals can function as main predicates (see (110-117) below), it could be that the quantifier is acting as a main predicate in (92), for example, with a relative clause headed by \(ul\) ‘bear’ as its argument (97), or it could be that the argument hilthl ul ‘many bears’ has been fronted over the verb gya'a'y (98). Either of these two analyses would predict the same extraction morphology (here consisting of the ‘transitive’ schwa which marks object extraction in subordinate clauses).

(97)  
\[\text{hilt}[=\text{hl} \quad \text{ul}=\text{hl} \quad \text{gya'a}'y]\]

(98)  
\[\text{[hilt=hl ul]=hl gya'a}'y}\]

However, the syntax of modification, as elucidated by Forbes (2012), provides a test to distinguish the two analyses. Forbes observes that modifiers marked with the intransitive A'-extraction marker -\textit{it} ‘sx’ show a categorial asymmetry: full relative clauses based on verbs are strongly preferred to appear in post-head position (99), but notional adjectives are strongly preferred to appear pre-nominally, even when they have the same morphology (100)-(102).

(99)  
\[
\begin{align*}
\text{a.} & \quad \text{ts'axw}=\text{hl} \\
& \quad [[[\text{hlgu mihlatxw-um ganaa}'w]\quad \text{hajiks-it}] \\
& \quad \text{clever}=\text{CN} \\
& \quad [[[\text{small green-ATTR frog}]\quad \text{swim-sx}] \\
\end{align*}
\]

‘There are few bears around here’  

36 BS normally employs \textit{miiluxw} for ‘dance’; however, this example was rechecked, with the same result. When explicitly asked about it, BS said \textit{miilukw} was “okay for younger speakers”.

---

36
‘The small swimming green frog is clever.’ (Forbes 2012:59; VG)

Literal: ‘The small green frog which is swimming is clever.’

b. * ts'axw=hl [hlgu mihlatxw-um hajiks-it ganaa'w] (Forbes 2012:59; VG)

(100) a. wok=hl ['wii t'uuts'xw-it smax]
sleep=CN [big black-sx bear]
‘The big black bear is sleeping.’ (VG)

b. * wok=hl ['wii smax t'uuts'xw-it] (VG)

(101) a. 'miin-bats-d-i-'y=hl [sdin-it xbiist]
up-lift-T-TR-1SG.II=CN [heavy-sx box]
‘I lifted the heavy box.’ (Forbes 2012:59; BS)

b. * 'miin-batsdi-'y=hl [xbiist sdin-it] (Forbes 2012:60; BS)

(102) a. di-dalg-a-'y=hl [hlgu ts'aw-it t'ihlxw]
with-talk-T-TR-1SG.II=CN [small clever-sx child]
‘I talked with the clever child.’ (Forbes 2012:60; BS)

b. * di-dalg-a-'y=hl [hlgu t'ihlxw ts'aw-it] (Forbes 2012:60; BS)

It follows that if we find a value judgment quantifier in the environment [Q NP ADJ-it], the structure must be [Q NP] [ADJ-it], with extraction of a quantified argument, rather than *Q [NP ADJ-it], with the Q acting as main predicate accompanied by an (illegitimate) relative clause. And we do in fact find cases of Q NP ADJ-it, as shown in (103)-(104).

(103) a. [hilt=hl ul] t'uuts'xw-it
[many=CN bear] black-sx
‘There are a lot of bears that are black – but not all.’ (VG; translation volunteered)

b. [helt=hl smax] t'uuts'xw-it
[many=CN bear] black-sx
‘There are many black bears.’ (BS; translation volunteered)

(104) a. [hlibuu=hl k'amksiiwa] ts'aw-it
[few=CN white.person clever-sx
‘Few white men are smart.’ (VG; translation volunteered)

b. [hlebuu=hl k'amksiiwa] ts'aw-it
[few=CN white.person clever-sx
‘There’s a few white men that are smart.’ (HH; translation volunteered)

These data show that at least in cases with the surface form Q NP ADJ, we must have fronting of an entire quantified noun phrase to clause-initial position.
Like numerals, value judgments quantifiers may not ‘float’ away from their restriction. Attempts to elicit examples of floated *helt* or *hlibuu* are interpreted as (marginal) instances of event quantification, as in (105)b: for the latter interpretation, see Section 6.3 below.

(105)  

(a)  

\[
\begin{align*}
\text{gya'a'y}=\text{hl} & \quad \text{held-a} \quad \text{hun} \\
\text{see}-\text{(TR)}-\text{1SG.II}=\text{CN} & \quad \text{many-ATTR} \quad \text{fish} \\
\end{align*}
\]

\‘I saw many fish.’ \quad (BS)

(b)  

\[
\begin{align*}
\text{helda} & \quad \text{gya'a-'y}=\text{hl} \quad \text{hun} \\
\text{many-ATTR} & \quad \text{see}(\text{TR})-\text{1SG.II}=\text{CN} \quad \text{fish} \\
\end{align*}
\]

\‘I saw fish lots of times.’ \quad (BS)

Also like numerals (cf. 4.1.1), ‘bare’ *hlibuu* and *helt* occur marginally in post-predicative argument positions, suffixed with a third person Series II pronoun, yielding a quasi-partitive interpretation. It is unclear whether these are genuine cases of bare quantifiers, or involve NP ellipsis: further investigation is needed.

(106)  

\[
\begin{align*}
\text{anoog-a-'y} & \quad \text{kshla'wxws} \quad \text{dip-un} \quad \text{ii} \\
\text{like}-\text{TR}-\text{1SG.II} & \quad \text{shirt} \quad \text{PL.DM-DEM.PROX} \quad \text{CL.CNJ} \\
\text{na}=\text{dok}=\text{hl} & \quad \text{hlibuu-t} \\
\text{1SG.I}=\text{PL.hold}=\text{CN} & \quad \text{few-3.II} \\
\end{align*}
\]

\‘The shirts were good so I bought a few (of them).’ \quad (VG)

There is no lexical quantifier corresponding to ‘enough’; the meaning of ‘enough’ is either approximated by *helt/hilt* ‘many’ or by *amhl gabi* ‘good number’, as shown in (107)-(109):

(107)  

\text{Context: Someone is wondering if enough people come to your party.}  
\begin{align*}
\text{ee,} & \quad \text{helt}=\text{hl} \quad \text{bagw-it} \\
\text{yes} & \quad \text{many}=\text{CN} \quad \text{PL.come-SX} \\
\end{align*}

\‘Yes, enough came.’ \quad (Literally: ‘Yes, many came.’) \quad (MA)

(108)  

\text{Context: Wondering if enough people come to the bingo to raise money.}  
\begin{align*}
\text{am}=\text{hl} & \quad \text{gabi}=\text{hl} \quad \text{bagw-it} \\
\text{good}=\text{CN} & \quad \text{CNT.AMT}=\text{CN} \quad \text{PL.come-SX} \\
\end{align*}

\‘Enough came.’ \quad (Literally: ‘A good number came.’) \quad (PH)

(109)  

\begin{align*}
\text{am}=\text{hl} & \quad \text{gabi}=\text{hl} \quad \text{gyat}=\text{hl} \quad \text{bagw-it} \\
\text{good}=\text{CN} & \quad \text{CNT.AMT}=\text{CN} \quad \text{person}=\text{CN} \quad \text{PL.come-SX} \\
\end{align*}

\‘Enough people came.’ \quad (Literally: ‘A good number of people came.’) \quad (BS)

The negation ‘not enough’ can be rendered by ‘not good’, as shown in (110):

(110)  

\begin{align*}
\text{nee}=\text{dii} & \quad \text{aam}=\text{hl} \quad \text{ga'-nagw-in} \\
\text{NEG}=\text{FOC} & \quad \text{good}=\text{CN} \quad \text{DISTR-long-2SG.II} \\
\end{align*}

\‘You’re not tall enough.’ \quad (Literally: ‘Your height is not good.’) \quad (BS)
4.1.2.1 Cardinal versus proportional readings of value judgment quantifiers

We turn now to the semantics of the value judgment cardinals. The examples in (111)-(113) show clear cases of cardinal (non-proportional) readings of *helt/hilt*.

(111)  ii  he-t  ji  ma=naksxw=hl  'wii-nagw-it=hl  gyat  ii  sim  helt  dim  
  CL.CNJ  say-3.II  IRR  2SG.I=marry=CN  big-tall-SX=CN  man  CL.CNJ  true  many  PROS  
  x-hlgi-n  
  EXPER-PL.child-2SG.II  
  ‘And she said, if you marry the tall man, you will have many children.’  
  (TFS Working Group 2010, Fortune Teller; BS)

(112)  ii  t’aas  Jenny  ii  he-t  ii  ap  helt=hl  paay  gan=hl  cake  
  CL.CNJ  sit=PN  Jenny  CL.CNJ  say-3.II  CL.CNJ  VERUM  many=CN  pie  CL.CNJ=CN  cake  
  ii  saks-xw=hl  kitchen  ii  nee=di  gwi  dim  jab-i’-y  
  CL.CNJ  clean-PASS=CN  kitchen  CL.CNJ  NEG=FOC  what  PROS  make-TR-1SG.II  
  ‘And Jenny sat and said, “But there are many pies and cakes and the kitchen is clean and 
  I will not have to make anything.”’  
  (TFS Working Group 2011, Bake Off; BS)

(113)  helt=hl  bi’lust  ts’im  lax-ha  gyaxxw  
  many=CN  star  in  in-sky  last.night  
  ‘There were lots of stars in the sky last night.’  
  (Hunt 1993:80)

The data in (114)-(117) show clearly cardinal uses of *hlebuu/hlibuu* ‘(a) few’. Examples (115)-(117) are all variants on a basic set-up in which a small number of chiefs came, and these are all the contextually relevant chiefs. As discussed by Partee (1988) (who cites Huettner 1984), such sentences would be false under a proportional reading of ‘few’, but are true under a cardinal reading.

(114)  hlibuu=hl  gitxsan  
  few=CN  Gitksan  
  ‘There are few Gitksan.’  
  (VG)

(115)  (am)  hlibuu=hl  si’moogit=hl  bagw-it  ap  am  ’nit=hl  gabi=hl  
  (only)  few=CN  chief=CN  PL.come-SX  VERUM  only  3SG.III=CN  CNT.AMT=CN  
  si’moogit-xw-u’em  
  chief-PASS-1PL.II  
  ‘(Only) a few chiefs came but that’s the number of chiefs we have.’  
  (BS)

(116)  hlibuu=hl  simgigyet=hl  bagw-it  go’o=hl  li’ligit.  gwalk’a  ’nidiit  
  few=CN  PL.chief=CN  PL.come-SX  LOC=CN  feast  all  3PL.III  
  si’moogit-xw-u’em  
  PL.chief-PASS-1PL.II  
  ‘Few chiefs came to the feast. They were all the chiefs we have.’  
  (VG)
All the chiefs we have came to the feast. They were only a few.’

In (118)-(120) we see unambiguously proportional uses of helt/hilt ‘many’. In these cases, a proportional reading is forced, because on a cardinal reading we would either get a contradiction (‘There are few x who know y, and there are many x who know y and are old’) or a non-coreferent reading (‘There are few x who know y, and there are many z≠x who know y and are old’).

A proportional use of helt is shown in (121). We see that a cardinality of 10 healthy children is not sufficient to license helt (a), but if the proportion is large, helt is appropriate (b).
Consultant’s comment: “No. Because 5 are sick and 10 are not.” (BS)

(123) \( (\text{k'am}) \) hlibuu=hl daxgigayd-it ts'im wilp-siipxw
(only) few=CN pt..healthy-sx in sick-house
‘Only a few are healthy in the hospital.’

a. \( \square \) Context: 10 out of 50 kids in the sanatorium are well.

b. \( \# \) Context: 10 out of 15 kids in the sanatorium are well. (VG)

Further clearly proportional cases of hlebuu/hlibuu are shown in (124)-(125).

(124) Context: There are 30 million people in Canada. 10 million voted NDP.
\( (\text{k'am}) \) hlibuu=hl gyet en=t ksgya'a=hl NDP
(only) few=CN person AX=3.1 choose=CN NDP
‘Few people chose the NDP.’ (adapted from Kobele and Zimmermann 2012:255; VG)

(125) Context: There are 30 million people in Canada. 10 million voted NDP.
\( (\text{am}) \) hlebuu=hl gyat an=t anook=hl NDP
(only) few=CN person AX=3.1 like=CN NDP
‘Few people chose the NDP.’ (adapted from Kobele and Zimmermann 2012:255; BS)

With respect to the syntax-semantics interface, we observe that many of the cases showing cardinal uses of value judgment quantifiers are existential sentences, which have the quantifier itself appearing in predicate position (see, for example, (113) and (114)). Conversely, the cases we have of unambiguously fronted DPs involving the structure [Q NP] ADJ-it all have proportional readings: see (119)-(121). At least in initial position, then, there appears to be a correlation between predicative status and a cardinal reading, and argument status and a proportional reading. These are preliminary results, but represent a promising avenue for further research.37

Another topic for further investigation is the frequent presence of k'am/am ‘only’ with hlebuu/hlibuu ‘few’, as in (122)-(125) (see also the Nisga'a example in (96) above). There is speaker variation on this, with for example BS preferring the presence of ‘only’ to a greater extent than VG does. Whether k'am/am favours either the proportional or the cardinal reading is a matter for future research. See also Section 4.2.5.3 below.

4.1.2.3 The count-mass distinction with value judgment quantifiers

As demonstrated in (126)-(129), helt and hlibuu cannot combine directly with mass nouns, but they may do so indirectly with a measure phrase (130)-(131):

(126) * gal helt=hl t'ook' lax=hl ha'niiwan

37 At the current time, we do not have sufficient data to make a generalization about the available readings for value judgment quantifiers in post-predicative argument positions, as these are much rarer than Q-initial structures.
too many=CN mud on=CN floor
‘There’s too much mud on the floor.’ (RJ)

(127) * gya'a-y=hl held-a ihlee'a see(TR)-1SG.II=CN many-ATTR blood
‘I saw a lot of blood.’ (BS)

(128) * gal hliboo=hl t'ook' too few=CN mud
‘too little mud’ (RJ)

(129) * gya'a-y=hl hlibuu=hl ihlee'a see(TR)-1SG.II=CN few=CN blood
‘I saw a bit of blood.’ (BS)

(130) helt=hl k'ots anaax=hl gub-i'-y
many=CN cut bread=CN eat-TR-1SG.II
‘I ate many slices of bread.’ (VG)

(131) aks-i'-y hlibuu gald-im biya
drink-TR-1SG.II few container-ATTR beer
‘I drank a little bit of beer.’ (VG)

Just as we saw in Section 3.2, the nominal ‘coffee’ optionally takes a measure phrase when occurring with a value judgment non-numerical quantifier. Regardless of the presence of the measure phrase, this noun receives a count reading in (132). This suggests that ‘coffee’ is ambiguous between a mass noun (in which case it takes a measure phrase), or a count noun (in which case it does not require one and has a count interpretation).

(132) Context: Okay for many small cups of coffee, but not one big cup.
  helt=hl (and-a) kopi=hl aks-i'-y
  many=CN (container-ATTR) coffee=CN water-TR-1SG.II
  ‘I drank a lot of coffee.’ (BS)

The consultants’ spontaneous comments reveal their awareness that helt and hlibuu are count-only quantifiers. One consultant (BS) comments that “hlibuu is like numbers of things”. Another (RJ) comments that “t'ook' [mud] and other things like t'ook', you can’t specifically identify them in numbers or quantities, it’s not quantifiable, t'ook' … helt implies specific objects.”

In order to directly quantify a mass noun, the prenominals 'wii t'is ‘great big’ ('wii 'big' (SG), t'is 'big’ (SG)) or ts'uu's(x)/ts'oos(x) ‘small’ (SG) can be used:

(133) gan 'wii-t'is=hl mo'on hoox-diit ts'im t-un
too big-big=CN salt use-3PL.II in DM-DEM.PROX
‘There is too much salt in this (food).’ (MA)
4.1.3 Inherently proportional quantifiers

There are only two inherently proportional non-universal quantifiers in Gitksan: sdo'o/sdu' or sda ‘half’ and hlagats'oo/hlagats'uu ‘some, others’. There is no lexical item for ‘most’: its meaning is conveyed by mooja/maaja ‘almost’ plus a universal quantifier, as discussed in Section 4.2.5.1 below.

4.1.3.1 ‘Half’

Turning first to ‘half’, we have elicited two Gitksan elements which convey this meaning, sdo'o/sdu'u and sda, both apparently originating from the word for ‘side’. Examples are given in (137)-(140).

(137)  
ii  'nit=hl hla k'ap=hl lax-yip=hl lax-gibuu=hl  
CL.CNJ 3SG.III=CN NMLZ piece=CN on-land=CN Wolf.Clan=CN  
an-sdo'o=hl ksi txemsim ii wagayt 'wudin  
NMLZ-half=CN river Nass CL.CNJ entirely along.length  
daawhl-t gado'o=hl 't'aam meji'aadin  
leave-3.II behind=CN lake Meji'aadin  
‘This is part of the Gibuu clan territories, which includes half of the Nass River and continues all the way along the river to beyond Meji'aadin Lake.’  
(VG, “The Founding of Gitanyow”)

(138)  
Context: We are dividing up the berries we picked.  
dim dog-o-'y sdo'o-t m=ii=m dok-hlxw sdo'o-t  
PROS get-TR-1SG.II half-3.II 2.SG.I=CL.CNJ=2SG.I get-INTR half-3.II  
‘I’ll take half, and you take half.’  
(LW)

(139)  
ti'hlxw-um ha'nak' dim an=t gup=hl sdo'o/sda iksda-m anaax ii  
young-ATTR PL.woman PROS AX=3.I eat=CN half sweet-ATTR bread CL.CNJ

[^38]: There are two Series I subjects in this sentence. The example was rechecked with the same speaker who originally produced it, and judged grammatical; for at least some speakers, it thus appears that doubling of a Series I clitic is permitted.
t'ihlxw-um i'uxwt dim an=t gup=hl k'i'y=hl sdo'o/sda iksda-m anaax
young-ATTR PL.man PROS AX=3.1 eat=CN one=CN half sweet-ATTR bread
‘The boys can have half of the cake, the girls can have the other half.’

(140)  Context: A pre-school where they have nap time, but the nap room only holds half the kids, so they have to sleep in two groups.
am sdo'o=hl tk'i'ihlxw dim woog-at gyu'un
only half=CN young PROS sleep-SX now
‘Half the children need to sleep now.’

(141)  k'am sda=hl t'kam'u-t 'nii-gyehl-xw-it lax xwpts'an
only half=CN body-3.II in-carve-PASS-SX on pole
‘Only half its body is carved on the pole.’

Some speakers reject sda with a human restriction (142)-(143), and some have an even stronger restriction on sda which has yet to be fully understood, but may be connected to (in)alienability (144). 39

(142)  am xsaa sdo'o/*sda=hl t'ihlxw an=t lax'n'i=hl he-yi'-y
only only half/*half=CN young AX=3.1 hear=CN say-TR-1SG.II
‘Half of the kids listened to what I said.’

(143)  k'am hli sdo'o=hl/*sda=hl gabi=hl tk'i'ihlxw 'naŋ'ni-sxw-it
only NMLZ half=CN/*half=CN CNT.AMT=CN young hear-AVTIP-SX
‘Half of the kids listened.’

Consultant’s comment: “Seems to me we only use sda for body parts.”

(144)  dim gub-i=hl tk'i'ihlxw-um i'uxwt hli sdo'o=hl/*sda=hl
PROSP eat-TR=CN young-ATTR PL.man NMLZ half=CN/*half=CN cake, ii dim gup=hl tk'i'ihlxw-um haanaŋ' hli sdo'o-t
cake CL.CNJ PROSP eat=CN young-ATTR PL.woman NMLZ half-3.II
‘The boys can have half of the cake, the girls can have the other half of it.’

Some other typical properties of sdo'o are shown in the examples above. The first is the optional

39 In support of this idea, the speaker who made the comment in (143) followed it up by volunteering (i), which clearly involves an inalienable subpart. (Note also the different translation into English of sda here.)

(i)  sda dahliixs
   half sock
   ‘other part of a sock’

Although most speakers appear to have no constraints on the type of restriction for sdo'o/sdu'u, one speaker (TB) offered the judgment that hli sdu'u (with the hli nominalizer) is “only for things, not people.”

40 However, when followed by gabi ‘count amount’ sda can quantify over individuals, including humans: see Section 4.4.2, where sda gabi acts as a quantifier over individuals in a scope test.
use of gabi ‘number, (count) amount’ to introduce the restriction of sdo'o when it is quantifying over count nouns, as shown in (143). In this respect, sdo'o resembles numeral quantifiers and differs from value judgment quantifiers.

A second feature of sdo'o is its frequent occurrence with the particle hli/hla, glossed here as ‘nominalizer’. The function of this element is quite elusive. Tarpent (1987:471) terms it ‘restrictive’ and lists a number of contexts where it is used in Nisg'a, of which the most relevant is in possessive environments where “the possessed noun … is seen as separate from the whole”. This description naturally extends to the separation entailed by dividing something in half, though a more precise formulation of the role of hli/hla remains for future work.

Finally, note the frequent presence of (k')am ‘only’ with sdo’o, as in examples (140)-(143)
It is possible that ‘only’ is used to render an ‘at most’ rather than an ‘at least’ reading for the quantifier: again, more investigation is warranted.

4.1.3.2 ‘Some (others)’

The second inherently proportional D-quantifier in Gitksan is hlagats'oo/hlagats'uu ‘some (others)’, illustrated in (145)-(147).

(145) gya’a-y t Michael gan=hl hlagats'uu=hl gyet 
see(TR)-1SG.II DM Michael PH.CNJ=CN some=CN people ‘I saw Michael and some other people.’ (VG)

(146) lu-xwdii-dixt=hl hlagats'uu tk'ihlxw
PL-hungry-PL=CN some young
‘Some of the children are hungry.’ (VG)

Accepted in context: There are 20 children in the daycare. You are in a room with five of those children, and you notice that those five are all hungry.

(147) gub-i-y=hl maa'y ii=n esi-dox hlagats'uu 
eat-TR-1SG.II=CN berry CL.CNJ=1SG.I set.aside-PL=lie some
‘I ate some of the berries, and I stored away/put away the rest.’ (VG)

Hlagats'oo/hlagats'uu has not been recorded in predicate position, seeming always to appear DP-internally. In terms of its semantics, it tends to be anaphoric to a previously introduced set in the discourse, and to be proportional. In this respect it resembles the unfamiliar (i.e., non-presuppositional) proportional quantifier nukw ‘other’ in St’át’imcets (Lillooet Salish), discussed by Matthewson (1998, 2009). In line with its partitive semantics, hlagats'oo/hlagats'uu frequently occurs as hlagats'uudii ‘others of them’, as in (148).

(148) yee=hl t'ihlxw-um ha'nak' goo=hl wilp miihluxw ii ap 
go=CN young-ATTR PL.woman LOC=CN house dance CL.CNJ VERUM 
nec=dii yee=hl hlagats'uu-dii wil sip~siipxw-dii 
NEG=FOC go=CN some-3PL.II COMP PL~sick-3PL.II
‘Some girls went to the dance, but some of them stayed home sick.’ (BS)
In combination with \((k')am\) ‘only, just’ (see Section 4.2.5.3), \textipa{hlagats’oo/hlagats’uu} can also be used to render English ‘a few’, as shown in (149).

(149)  \begin{align*}
\text{am} & \text{ hlagats’uu=hl jik~ts’ik} \\
\text{only} & \text{ some=CN PL.car} \\
\text{dip-un=sa=hl} & \text{ PL.DM-DEM.PROX=here=CN PL.good-SX}
\end{align*}

‘Only a few of these cars here are good.’  \quad \text{(BS)}

The restriction of \textipa{hlagats’oo/hlagats’uu} must be plural: it cannot appear with singular or mass nominals. With singular nouns, a form of the numeral ‘one’ is used instead (150)-(151); with mass nouns, a measure phrase (e.g., ‘a piece of’) is used, as in (152).

(150)  \begin{align*}
\text{bagadil=hl} & \text{ k’uba tk’ihlxw-um ha’nak’ ii daa’w=hl} \\
\text{two.HUM=CN} & \text{ PL.small young-ATTR PL.woman} \\
\text{hli ky’ul-it ii gina t’aa=hl hli ky’ul-it} & \text{ CL.CNJ leave=CN}
\end{align*}

‘There were two girls. One girl left, the other one stayed.’  \quad \text{(Literally: ‘… One of them left and one of them stayed.’)}  \quad \text{(BS)}

(151)  \begin{align*}
\text{daa’w=hl} & \text{ ky’ul=hl tk’ihlxw-um haanak’ ii gina wil=hl ky’ul-t} \\
\text{leave=CN one.HUM=CN young-ATTR PL.woman} & \text{ CL.CNJ behind COMP=CN one.HUM-3.II}
\end{align*}

‘One girl left and the other one stayed.’  \quad \text{(Literally: ‘One girl left and one stayed.’)}  \quad \text{(VG)}

(152)  \begin{align*}
\text{gub-i’y=hl} & \text{ hla k’ap anaax ii=n esgi=hl} \\
\text{eat-TR-1SG.II=CN NMLZ piece} & \text{ CL.CNJ=1SG.I set.aside=lie=CN NMLZ piece-3.II}
\end{align*}

‘I ate some (a piece) of the bread, and saved some (a piece of it) for later.’  \quad \text{(VG)}

\subsection*{4.1.4 Complex non-universal quantifiers}

Quantifiers over individuals are rarely structurally complex in Gitksan, and those that can be have not been subjected to detailed analysis yet. (153) shows how one speaker renders ‘more than (half)’, by means of the predicate \textit{giisxw} ‘over, surpassing’.

(153)  \begin{align*}
\text{hlaa=t} & \text{ giisxw sdo’ hun=hl} \\
\text{INCEP=3.I} & \text{ gwel~gwelgw-it} \\
\text{pass half} & \text{ fish=CN PL~dry-SX}
\end{align*}

‘More than half of the fish are dry.’  \quad \text{(VG)}

‘More than 10’ is illustrated in (154); the sequence \textit{gay ky’ee/ gay ky’aa} means ‘more’, and is generally used for comparatives: see 4.4 below.

(154)  \begin{align*}
\text{gay} & \text{ k’yaa held-im ky’ap} \\
\text{CNTR more} & \text{ many-ATTR ten}
\end{align*}

‘(many) more than 10’  \quad \text{(VG)}

‘Less than 10’, conversely, involves \textit{gay ky’ee/ gay ky’aa hlibuu}, literally ‘more few’:
Speakers do not always use this construction for ‘less than’, however: more often, they employ paraphrases with just hlebuu/hlibuu ‘few’ or clausal negation, as shown in (156) and (157) respectively.

(156)  hlibuu=hl  hun  lisxw-it,  hlisxw-it  
        few=CN  fish  PL.hang-SX  finish-SX  
        ‘Less than half of the fish are ready.’  (VG)

        Literally: ‘Few of the fish are hanging, finished.’

(157)  nee=dii  sdo’o=hl  hun  lisxw-it,  hlisxw-it  
        NEG=FOC  half=CN  fish  hang-SX  finish-SX  
        ‘Less than half of the fish are ready.’  (VG)

        Literally: ‘It is not the case that half of the fish are hanging, finished.’

Note that the ‘less than’ reading is only an implicature in (157): it can be readily be cancelled, as evidenced by (158), which the same speaker provided as a possible follow-up.

(158)  gwalk’a  lisxw!  
        all  hang  
        ‘They’re all hanging (i.e., ready)!’  (VG)

‘About 10’ is translated into Gitksan by the numeral plus gabì ‘count amount’, as in (159) (but notice the consultant’s comment here). The epistemic modal =ima(a) may be used in addition, as in (160).

(159)  Context: I see you preparing a big meal. I ask “How many people are coming?” and you say “About 10.”
        xbul  gabì  dim  bagw-it  
        ten.HUM  CNT.AMT  PROSP  come-SX  
        ‘Ten people are coming.’  (LW)

        Consultant’s comment: “But it doesn’t say about 10 though, it just says 10.”

(160)  xbul=ima  dim  gabì-diit  
        ten.HUM=EPIS  PROSP  CNT.AMT-3PL.II  
        ‘Maybe 10.’  (LW)

Another speaker renders ‘about 10’ by means of the domain widener ligi, which is also used with epistemic or evidential meaning (see Section 5.1.1 for discussion).

(161)  ligi  ky'ap  dim  bagw-it  
        DWID  ten.ANIMAL  PROSP  come-SX  
        ‘About 10 / maybe 10 will come.’  (VG)
As described more fully in section 4.2.5.1 below, mooja/maaja ‘almost’ combines with the universal quantifiers to form the expression ‘most’/‘almost all’. An example is provided in (162):

(162) maaje gwalk'a 'ni=hl ansiip'inxw-i'y hadiks-it
    almost all 3SG.III=CN friend-1SG.II swim-SX
‘Almost all of my friends go swimming.’  

Complex value judgement quantifiers may be formed using gal ‘too’ (also pronounced gan in Western dialects). Its use is illustrated in (163)-(165).

(163) gal helt=hl abils giigw-i-n
    too many=CN apple buy-TR-2SG.II
‘You bought too many apples.’  

(164) Context: The church is getting really crowded and it is becoming a safety hazard, they are all in the aisles and piled up.
    gal luu helt=hl gyat wi=hl ts'ee'u church t-un
    too in many=CN man LV=CN edge church DM-DEM.PROX
‘There are too many people inside the church.’  

(165) gal hliboo=hl gyat wil-t church t-un
    too few=CN person LV-3.II church DM-DEM.PROX
‘There are not enough people in this church.’  

Consultant’s volunteered translation: “There’s too few people in this church.”

Gal can also precede t'is ‘big’ and ts'uuwx ‘little (sg.)’ to form complex mass quantifiers, as in (166).

(166) gal ts'ooxs=hl tl'ook' hooy-i-'m sa
    too little=CN mud use-TR-1PL.II here
‘We’re using too little mud.’  

4.2 Universals

We have identified three universal quantifiers in Gitksan: txaa'nitxws/taax'ntsxxw ‘all, whole’, 'walk'a/gwalk'a ('nit) ‘all’ and mahla k'i'y/mehla k'i'y ~ ky'ul ‘each one, each and every’. These forms are discussed in Section 4.2.1-4.2.3, respectively. It should also be noted that sometimes English sentences with universal quantifiers are translated as simple plurals:

(167) iksda-din-diid-is
    tasty-CAUS-3PL.II-AFF
‘Everyone likes the food.’ (Literally: ‘They like the food.’)
This suggests that the default interpretation of plural DPs involves a maximality implicature, independently of overt quantificational elements.

### 4.2.1 Txaa'nitxws/taa'x'nitxw ‘all of’, ‘the whole of’

The universal quantifier txaanitxws/taax'nitxw (the pronunciations are those of Western and Eastern dialects, respectively)\(^{41}\) can take either a singular or a plural restriction, like English ‘all of’: in the former case, it quantifies over individual parts of a single entity, in the latter, over plural entities. In cases where plurality is not marked morphologically (i.e., with nouns and verbs which have no distinct plural forms), ambiguity results:

\[(168)\]
\[
\text{litsxxw-i'y} \quad \text{txaanitxws}=\text{hl} \quad \text{enilitsxxw} \\
\text{read-TR-1SG.II} \quad \text{all}=\text{CN} \quad \text{book}
\]

(i) ‘I read all the books.’
(ii) ‘I read the whole book.’\(^{42}\) (VG)

Diachronically, txaanitxws/taax'nitxw contains the root txaax/taa, the third person Series III pronoun 'nit, and the intransitivizing suffix -xws, glossed as ‘passive’ by Rigsby (1986:266). While these components are probably not synchronically analyzable, a prenominal variant txaax ‘whole’ is occasionally used by BS and a related preverb txaabaj 'the whole (of)' by VG, as illustrated in (169)-(170):

\[(169)\]
\[
\text{ap lip jab-i'y=hl} \quad \text{taax} \quad \text{wilb-i'y} \\
\text{VERUM SELF} \quad \text{make-TR-1SG.II}=\text{CN} \quad \text{all} \quad \text{house-1SG.II}
\]

‘I built all of my house myself.’ (BS)

\[(170)\]
\[
\text{txaabax-gup-d-i'y=hl} \quad \text{hun} \\
\text{whole-eat-T-TR-1SG.II}=\text{CN} \quad \text{fish}
\]

‘I ate the whole fish.’ (VG)

In terms of its distribution, txaanitxws/taax'nitxw usually occurs argument-internally. It is generally unrestricted with respect to grammatical function, occurring on arguments in any of S, A, or O functions (shown in (171)-(173), respectively). It may also occur in either post-predicative (a) or pre-predicative (‘focused’) (b) positions; however, one of our consultants (BS) strongly prefers it in pre-predicative position, and sometimes rejects it post-predicatively.

---

\(^{41}\) Unusually, the Eastern Gitksan variant taa'x'nitxws begins with an aspirated rather than a voiced or glottalized stop, historically due to metathesis of the fricative $\chi$ with the following vowel. It is possible that cases like this provide evidence of an emerging class of contrastive aspirated stops, or alternatively, that there is a ‘hidden’ fricative here, as in the demonstrative stem $t$-$un$ (< $t$-$xwin$; cf. Nisga’a $txwin$ ‘this’). The Eastern form taa'x'nitxw also involves a second metathesis, of $xws$ to $sxw$; cf. its Nisga’a cognate txaanitkws (Tarpent 1987:128).

\(^{42}\) The two interpretations of this example, though both robustly attested, had to be elicited from the consultant on different occasions, due to the strong aversion of Gitksan speakers to ambiguity. This aversion has proven a particularly difficult obstacle to the elicitation of scope judgments: see Section 4.4.
(171)  a. ??  woo-wax=hl  taax'nitsxw=hl  ha'nak'
       PL~sleep=CN  all=CN  PL.woman
       ‘All of the women slept.’  (BS)

       b.  taax'nitsxw=hl  ha'nak'=hl  woo-wah-at
           all=CN  PL.woman=CN  PL~sleep-SX
           ‘All of the women slept.’  (BS)

(172)  a. ??  gub-i-s  taax'nitsxw=hl  ha'nak'=hl  suusiit
       eat-TR=PN  all=CN  PL.woman=CN  potato
       ‘All of the women ate potatoes.’  (BS)

       b.  taax'nitsxw=hl  ha'nak'  an=t  gup=hl  suusiit
           all=CN  PL.woman  AX=3.1  eat=CN  potato
           ‘All of the women ate potatoes.’  (BS)

(173)  a. ??  gub-i-s  Alyssa=hl  taax'nitsxw=hl  suusiit
       eat-TR=PN  Alyssa=CN  all=CN  potato
       ‘Alyssa ate all of the potatoes.’  (BS)

       b.  taax'nitsxw=hl  suusiit=hl  gub-i-s  Alyssa
           all=CN  potato=CN  eat-TR=PN  Alyssa
           ‘Alyssa ate all of the potatoes.’  (BS)

Pre-predicative txaa'nitsxw/ taax'nitsxw may sometimes strand its restriction in a post-predicative position (174)a. However, ‘quantifier floating’ of this type is generally preferred with gwalk'a/walk'a, as explicitly noted by BS in (174)b; for the latter, see Section 4.2.2.1 below.

(174)  a.  txaa'nitsxw  woo-wax=hl  haanak'
       all  PL~sleep=CN  PL.woman
       ‘All the women slept.’  (VG)

       b.  taax'nitsxw  woo-wax=hl  ha'nak'
           all  PL~sleep=CN  PL.woman
           ‘All the women slept.’
           Consultant’s comment: “Not bad, ‘walk’a is better.”  (BS)

In fact, when given examples of quantifier floating with txaa'nitsxw/ taax'nitsxw, speakers sometimes spontaneously correct the quantifier to gwalk'a/walk'a; and in other cases, they fail to interpret floated txaa'nitsxw/ taax'nitsxw altogether, as in (175), which is interpreted as a DP rather than a sentence:

(175)  taax'nitsxw=hl  miihluxw=hl  ha'nak'
       all=CN  dance=CN  PL.woman
       Consultant’s comment: “It would mean something different [than ‘All the women

45
danced’]: ‘All the women-dances.’ You could finish the sentence by ‘are in the book’. It’s like the title of a book.” (BS)

It is probably safe to say that quantifier floating with txaanitxws/taax’nitsxw is marginal, and certainly less robust than with gwalk’a/walk’a.

With respect to its interpretation, txaanitxws/taax’nitsxw is the only one of the three universal quantifiers in Gitksan which can directly quantify over individual parts of a singular entity (see (168) above). It is also the one most likely to quantify directly over mass nouns (easily for VG but more marginally for BS, as shown in (176)).

(176)  
Context: You go camping with your friends and you take 10 litres of water. While the rest of the group are hiking you and your friend get really thirsty and drink all the water. When your friends come back from hiking they are thirsty and you have to tell them, sorry:

a. aks-i-’m txaanitxws=hl aks
drink-TR-1PL.II all=CN water
‘We drank all the water.’ (VG)

b. ? aks-i-’m=hl taax’nitsxw=hl aks
drink-TR-1PL.II=all=CN all=CN water
‘We drank all the water.’ (BS)

4.2.2 Gwalk’a/walk’a (’nit) ‘all’

The second and perhaps most frequently used D-type universal quantifier in Gitksan is gwalk’a/walk’a (’nit) (gwalk’a is the Western and walk’a the Eastern dialect pronunciation). Though broadly similar in meaning to txaanitxws/taax’nitsxw, gwalk’a/walk’a (’nit) always takes a plural restriction: it cannot directly quantify over subparts of a singular entity.

(177)  
litsxxw-i-’y gwalk’a ’nit=hl enilitsxxw
read-TR-1SG.II [all=CN 3SG.III=CN book]
(i) ‘I read all the books.’
(ii) ‘I read the whole book.’ (VG)

(178)  
a. jip~jab-i-’y=hl ’walk’a ’nit=hl hu~wilb-ist
PL~make-TR-1SG.II=all 3SG.III=CN PL~house-AFF
‘I built all of the houses.’ (BS)

b. * ap lip jab-i-’y=hl ’walk’a (’nit=hl) wilb-i’y
VERUM SELF make-TR-1SG.II=all (3SG.III=CN) house-1SG.II
‘I built all of my house (myself).’ (BS)

Consultant’s comment: “Walk’a used more for ‘all of them,’ but not ‘all of it.’”

Plural inflection is triggered on both the argument with which gwalk’a/walk’a (’nit) is associated and on the verb (recall from Section 3.1 that verbs agree in number with their S or O arguments).
As shown in (179-182), number agreement is obligatory: neither the singular form of the verb nor of its S/O argument are acceptable with gwalk’a/walk’a (’nit).

(179)  
\[
\text{woowax}=\text{hl } \text{} \text{’walk’a} \quad \text{’nit}=\text{hl} \quad \text{ii’uxwt} \\
\text{PL=}[\text{CN all} \quad \text{3SG.III=CN} \quad \text{PL.man}] \\
\text{’All the men slept.’} \quad \text{(BS)}
\]

(180) * \n\[
\text{wok}=\text{hl} \quad \text{} \text{’walk’a} \quad \text{’nit}=\text{hl} \quad \text{ii’uxwt} \\
\text{~sleep}=\text{[CN all} \quad \text{3SG.III=CN} \quad \text{PL.man}] \\
\text{’All the men slept.’} \quad \text{(BS)}
\]

(181) ? \n\[
\text{woo~wa}=\text{hl} \quad \text{} \text{’walk’a} \quad \text{’nit}=\text{hl} \quad \text{gyat}^{43} \\
\text{PL=}[\text{CN all} \quad \text{3SG.III=CN} \quad \text{man}] \\
\text{’All the men slept.’} \quad \text{(BS)}
\]

(182) * \n\[
\text{wok}=\text{hl} \quad \text{} \text{’walk’a} \quad \text{’nit}=\text{hl} \quad \text{gyat} \\
\text{~sleep}=\text{[CN all} \quad \text{3SG.III=CN} \quad \text{man}] \\
\text{’All the men slept.’} \quad \text{(BS)}
\]

Like txaa’nixwstaax’nitsxw, gwalk’a/walk’a (’nit) contains the third person Series III pronoun ‘nit, but in the case of gwalk’a/walk’a the pronoun is partially syntactically active, rather than being a historical relic: together with its NP restriction, it can be replaced by other (plural) Series III pronouns, for example:

(183) a. \n\[
\text{woo~wa}=\text{hl} \quad \text{} \text{’walk’a} \quad \text{’nuu’im} \\
\text{PL=}[\text{CN all} \quad \text{1PL.III}] \\
\text{’All of us slept.’} \quad \text{(BS)}
\]

b. \n\[
\text{woo~wa}=\text{hl} \quad \text{} \text{’walk’a} \quad \text{’nisi’im} \\
\text{PL=}[\text{CN all} \quad \text{1PL.III}] \\
\text{’All of you slept.’} \quad \text{(BS)}
\]

c. \n\[
\text{woo~wa}=\text{hl} \quad \text{} \text{’walk’a} \quad \text{’niidit} \\
\text{PL=}[\text{CN all} \quad \text{3PL.III}] \\
\text{’All of them slept.’} \quad \text{(BS)}
\]

However, when there is an overt NP restriction, only singular ‘nit is permitted: compare (184) to (179) above:

(184) * \n\[
\text{woo~wa}=\text{hl} \quad \text{} \text{’walk’a} \quad \text{’niidit}=\text{hl} \quad \text{ii’uxwt} \\
\text{PL=}[\text{CN all} \quad \text{3PL.III=CN} \quad \text{PL.man}] \\
\text{’All the men slept.’} \quad \text{(BS)}
\]

^{43} The singular noun gyat ‘man’ is not infrequently used in plural contexts (whereas its plural counterpart ii’uxwt ‘men’ is never employed as a singular); this explains the relatively mild ungrammaticality of this example.
Furthermore, singular 'nit is ungrammatical by itself, as might be expected:

(185) * woo–wax=hl 'walk'a 'nit
   PL~sleep=[CN all 3SG.III
   ‘All of them slept.’

Like txaa'nitxws/taax'nitsxw, gwalk'a/walk'a ('nit) may modify any argument, including those in S, A, or O functions (as in (186)-(188), respectively), and in either post-predicative (a) or pre-predicative (b) ‘focus’ positions.

(186) a. miiluxw gwalk'a 'nit=hl haanak'
dance [all 3SG.III=CN PL.woman]
   ‘All the women danced.’ (VG)
   
   b. gwalk'a 'nit=hl haanak'=hl miiluxw-it
   [all 3SG.III=CN PL.woman]=CN dance-sx
   ‘All the women danced.’ (VG)

(187) a. gya'a=hl gwalk'a 'nit=hl haanak' 'nii'y
   see(TR)=CN [all 3SG.III=CN PL.woman] 1SG.III
   ‘All the women saw me.’ (VG)
   
   b. gwalk'a 'nit=hl haanak' an=t gya'a-'y
   [all 3SG.III=CN PL.woman] ax=3.1 see-1SG.II
   ‘All the women saw me.’ (VG)

(188) a. gya'a-'y gwalk'a 'nit=hl haanak'
   see(TR)-1SG.II [all 3SG.III=CN PL.woman]
   ‘I saw all the women.’ (VG)
   
   b. gwalk'a 'nit=hl haanak'=hl gya'a-'y
   [all 3SG.III=CN PL.woman]=CN see(TR)-1SG.II
   ‘I saw all the women.’ (VG)

4.2.2.1 ‘Floated’ walk’a/gwalk’a

While ‘floated’ txaa'nitxws/taax'nitsxw is only marginally attested (Section 4.2.1), walk’a/gwalk’a very commonly occurs as a floating quantifier in clause-initial position; this is possible if and only if it appears without 'nit, as illustrated in (189). Further examples of floated walk’a/gwalk’a are given in (190)-(191).

(189) a. woo–wax=hl 'walk'a 'nit=hl ii'uxwt
   PL~sleep=CN all 3SG.III=CN PL.man
   ‘All the men slept.’ (BS)
b. *  woo¬-wax=hl  'walk'a  ii'uxwt  
   PL¬-sleep=CN  all  PL.man  
   ‘All the men slept.’  (BS)

c.  'walk'a  woo¬-wax=hl  ii'uxwt  
    all  PL¬-sleep=CN  PL.man  
    ‘The men all slept.’  (BS)

d.  *  'walk'a  'nit  woo¬-wax=hl  ii'uxwt  
    all  3SG.III  PL¬-sleep=CN  PL.man  
    ‘All the men slept.’  (BS)

   (190)  'walk'a  jix¬-ts'ixw=hl  ha'aks  dip-un  
     all  PL¬-leak=CN  pail  PL.DM-DEM.PROX  
     ‘All these pails leak.’  (Hunt 1993:152)

   (191)  'walk'a  gub-i-'m=hl  anaax  
     all  eat-TR-1PL.II=CN  bread  
     ‘We all ate the bread.’  (BS)

Floated 'walk'a/gwalk'a triggers no extraction morphology, unlike focus-fronted DPs preceded by 'walk'a/gwalk'a 'nit (as in (186)b-(188)b above). This suggests that it is base-generated in initial position. In support of this, we have recorded cases where floated 'walk'a co-occurs with DP-internal taax'nitsxw: examples like these cannot be accounted for by movement of 'walk'a from a post-predicative argument position, because that position is still occupied by taax'nitsxw.

   (192)  'walk'a  miihluxw=hl  taax'nitsxw=hl  ha'nak'  
     all  dance=CN  all=CN  PL.woman  
     ‘All the women danced.’  (BS)

When 'walk'a/gwalk'a floats, it usually restricts the subject, but may associate with the object if the subject is unavailable (for example, if the latter is singular):

   (193)  'walk'a  sil-miihluxw-i-'y=hl  t'ihlxw-um  ha'nak'  
     all  with-dance-TR-1SG.II=CN  young-ATTR  PL.woman  
     ‘I danced with all the girls.’  (BS)

Floated 'walk'a/gwalk'a is somewhat degraded in embedded contexts (194)b, and its scope never extends beyond its immediately containing clause (194)c:

   (194)  a.  laxni-'y  wil=t  litsxxw=s  Savanna=hl  
     hear(TR)-1SG.II  COMP=3.I  read=PN  Savanna=CN

---

44 'Walk'a/gwalk'a is not analyzable as a main predicate, for the simple reason that universal quantifiers cannot be predicative.
"walk'a 'nit ha'niilitsxxw
all 3SG.III book
'I heard that Savanna read all the books.' (BS)

b. ? laxni-'y wil=t 'walk'a litsxxw=s Savanna=hl ha'niilitsxxw hear(TR)-1SG.II COMP=3.1 all read=PN Savanna=CN book
'I heard that Savanna read all the books.' (BS)

c. * 'walk'a laxni-'y wil=t litsxxw=s Savanna=hl ha'niilitsxxw all hear(TR)-1SG.II COMP=3.1 read=PN Savanna=CN book
'I heard that Savanna read all the books.' (BS)

In terms of interpretation, there appears to be no difference between floated and non-floated 'walk'a/gwalk'a; both are allowed with distributive and non-distributive predicates, the latter including strongly collective predicates such as sagayt bekw/bakw 'meet':

(195) a. sagayt bekw=hl gwalk’a 'ni[t]=hl gyet together PL.come=CN all 3SG.III=CN person
'All the people met.' (HH)

b. gwalk’a sagayt bekw=hl gyet all together PL.come=CN person
'All the people met.' (HH)

4.2.3 Mahla k'i'y/ mehla k'i'y ~ ky'ul 'each'

The third universal D-type quantifier in Gitksan, mahla k'i'y/mehla k'i'y ~ ky'ul, contains the distributive adverb mahla/mehla along with the numeral ‘one’ (for the latter, see 4.1.1). For BS, mahla k'i'y is invariant, no matter what class of nominal it restricts (196); for VG and HH, the form of the numeral is sensitive to the animacy of the quantified argument, as illustrated in (197)-(198). (See also Tarpent 1987:563 on the Nisga'a equivalents mahli k'i'l and mahli k'yoool.)

(196) mahla k'i'y=hl ts'uuuts' 'nii-wan-it lax gan each one=CN bird on-PL.sit-SX on tree
'Each bird is sitting in a tree.' (BS)

(197) dog-o=hl tk'ihlxw-um gyet(=hl) mehla k'i'y=hl hlit' PL.hold-TR=CN young-ATTR man(=CN) each one=CN ball
'A boy is holding each ball.' (VG)

45 The numeral for ‘one animal’ k'eekw, is never used with mahla/mehla:

(i) * dax-dog-o=hl hlgu t'ihlxw-um gyat mahla k'eekw=hl has~us firmly-PL.hold-TR=CN small young-ATTR man each ONE ANIMAL=CN PL~dog
'The boys are each holding a dog.' (BS)
(198) dog-o=hl mehla ky'ul=hl tk'ihlxw-um gyet(=hl) hlit'
   PL.\hold\-TR=CN each one.HUM=CN young-ATT man(=CN) ball
   ‘Each boy is holding a ball.’

In terms of syntactic distribution, like other universals, DPs containing *mehla k'iy/mehla k'i'y ~ ky'ul can be found both post-predicatively and pre-predicatively. In the examples above, they occur in post-predicative O (198) and A (199) positions. In (200) below, *mehla k'ul precedes a DP in a post-predicative oblique-marked indirect object position:

(199) gi'nam-i-'y=hl k'oots'ges a=hl mehla ky'ul=hl simgigyet
give-TR-1SG.II=CN gift PREP=CN each one.HUM=CN PL.chief
   ‘I gave a gift to all the chiefs.’

Like other pre-predicative (‘focused’) DPs, pre-predicative DPs introduced by *mehla k'iy/mehla k'i'y ~ ky'ul trigger A'-extraction morphology on the clausal remnant. The examples in (201) below show pre-predicative *mehla k'i'y~ ky'ul in A (a) and S (b) functions:

(200) a. mehla k'i'y=hl t'ihlxw-um ha'nak' an=t gym=hl am k'iy=hl k'awts
   [each one=CN young-ATT PL.woman] AX=3.1 eat=CN only one=CN carrot
   ‘Each girl ate only one carrot.’
   (BS)

b. mehla ky'ul=hl haanak'=hl miiluxw-it
   [each one.HUM=CN PL.woman]=CN dance-SX
   ‘Each woman danced.’
   (VG)

However pre-predicative, *mehla k'i'y/mehla k'i'y ~ ky'ul may not strand its restriction, as shown in the contrast between (201)a and (201)b:

(201) a. miiluxw mehla k'i'y=hl haanak'
dance each one=CN PL.woman
   ‘Each woman danced.’
   (BS)

b. * mehla k'i'y miiluxw=hl haanak'
   each one PL.dance=CN PL.woman
   ‘Each woman danced.’
   (BS)

In terms of its interpretation, *mehla k'i'y/mehla k'i'y ~ ky'ul is strongly distributive: it is incompatible with collective predicates like 'meet' (cf. (195) above with 'walk'a/gwalk'a):

(202) * sagayt bekw=hl mehla k'yul=hl gyet
   together PL.come=CN each one.HUM=CN person
   (HH)
   Consultant’s comment: “No: sagayt is ‘all’, and then you put mehla ‘individual’.”

*Mehla k'i'y/mehla k'i'y ~ ky'ul shows variable behaviour as to whether it takes a singular or plural restriction, even with the same speaker. Sometimes, a singular restriction is rejected, as in (203), but at other times it is preferred, as in (204):

51
(203) **mehla ky'ul=hl** haanak/*hanak*=hl miiluxw-it
**each** one.HUM=CN **PL.women/*SG.woman=CN** dance-sx
‘Each and every woman danced.’ (VG)

(204) yee 'niiy go'o=hl mehla k'i'y=hl wilp
go 1SG.III LOC=CN **each** one=CN **house**
‘I went to every house.’ (VG)

**Consultant’s comment:** “It’s okay. Can be huwilp [PL~house] but don’t have to. If you say mahla k'i'ihl then huwilp is awkward, but it’s fine after gwalk'a 'ni(t)hl.”’

Like (g)'walk'a ('nit) but unlike txaa'nitxws/taax'nitsxw, mahla k'i'y /mehla k'i'y ~ ky'ul cannot directly quantify over individual subparts of an entity: a classifier such as k'ap ‘part’ is necessary to yield a ‘part of’ interpretation.

(205) a. jab-i'-y=hl **mehla k'i'y=hl** wilp
make-TR-1SG.II=CN **each** one=CN **house**
‘I built each house.’ ≠ ‘I built each part of the house.’ (BS)

b. jab-i'-y=hl **mehla k'i'y=hl** gap~k'ap=hl wilp
make-TR-1SG.II=CN **each** one=CN **PL~part=CN** **house**
‘I built each part of the house.’ (BS)

### 4.2.3.1 Binominal ‘each’

Speakers vary in the exact construction they adopt as an equivalent for English sentences with binominal ‘each’. In example (206), the speaker simply uses a numeral to quantify the object nominal, whereas in (207)-(208), in addition to the numeral, mahla k'i'y/mehla k'i'y ~ ky'ul is used to provide a distributive reading of the subject.

(206) welix-i=hl ii'uxwt=hl gibil hun
carry-TR=CN **PL.man=CN** two **fish**
‘The boys carried two fish (each).’ (PH)

(207) gibil hun=hl welix **mehla k'yuul=hl** tk'ihlxw-um ii'uxwt
two **fish=CN** carry **each** one.HUM=CN young-ATTR **PL.man**
‘Each of the boys carried two fish.’ (VG)

(208) gibil=hl dog-o=hl **mehla k'i'y=hl** tk'ihlxw-um gyet
two=CN **PL.take-TR=CN** **each** one=CN young-ATTR **man**
‘Each of the boys carried two.’ (LW)

Examples (209) and (210), on the other hand, seem to be more closely equivalent to English binominal ‘each’: in both cases, the distributive quantifier mehla/mahla appears to be part of the object DP, ‘two fish’, though semantically it is distributing over the subject ‘the boys’.

52
To force a collective reading of the subject, *k'am* ‘only’ is used by the speaker in (211), whereas in (212) the same reading is forced due to the addition of numerals in both DPs:

(211)  
\[
\text{dog-o=hl \quad tk'ihlxw-um \quad ii'uxwt \quad k'am \quad gibil=hl \quad hun} \\
\text{PL.take-TR=CN \quad young-ATTR \quad PL.man \quad only \quad two \quad fish} \\
\text{The boys carried two fish between them.} \\
\text{(VG)}
\]

(212)  
\[
\text{gilbil \quad hun=hl \quad bats-d-i=hl \quad baga\text{\textit{di}}=hl \quad tk'ihlxw-um \quad gyet} \\
\text{two \quad fish=CN \quad lift-TR=CN \quad two.HUM=CN \quad young-ATTR \quad man} \\
\text{The boys carried two fish between them.} \quad \text{(Literally: ‘Two boys carried two fish.’)} \\
\text{(LW)}
\]

Note that in this last example the relevant reading is cumulative (scopally inert), rather than distributive (scopally active): see 4.4.1 for more on scope interactions with numerals.

### 4.2.3.2 Boolos sentences

‘Boolos sentences’ are expressions which establish a dependency between each member of a set and another quantified expression (‘for each X, there are z many Ys’). There is no direct way to express these in Gitksan: speakers produce a variety of different paraphrases. One way is to coordinate two clauses, the first containing an argument quantified by *mahla k'i'y* ‘each one’, the second containing the dependent quantifier (here, *gilbil* ‘two’):

(213)  
\[
\text{mahla \quad k'i'y=hl \quad hun=hl \quad 'mugw-i-y' \quad ii \quad gibil=hl \quad 'mukw=hl \quad ansiip'insxw-i'y} \\
\text{each \quad one=CN \quad fish=CN \quad catch-TR-1SG.II \quad CL.CNJ \quad two=CN \quad catch=CN \quad friend-1SG.II} \\
\text{For every fish I caught, my friend caught two.} \quad \text{(Literally: ‘I caught each fish and then my friend caught two.’)}^{46} \\
\text{(VG)}
\]

A second strategy is to use a ‘ratio phrase’ with the form ‘there are z many Ys to one X’:

(214)  
\[
\text{ky'ap=hl \quad gabi=hl \quad gyet=hl \quad ga-gwee'y-it \quad go'o \quad win} \\
\text{ten=CN \quad CNT.AMT=CN \quad person=CN \quad PL-poor-SX \quad LOC \quad COMP} \\
\text{ky'u=hl \quad ama \quad wil-t} \\
\text{one.HUM=CN \quad good \quad LV-3.II} \\
\]

---

46 The second clause here is unusual in that it lacks the schwa ‘transitive’ suffix which normally marks object extraction: the expected form would be *'mugwihl*, not *'mukwhl*. 

53
‘For every rich person there are ten poor people.’ (Literally: ‘The number of people is ten who are poor to one that is doing well.’) (VG)

A third strategy is to paraphrase using a proportion: that is, instead of saying ‘for each X there are z many Ys’, to give the equivalent of ‘out of the total number of Xs + Ys, there are z many Ys’. This is illustrated in (215):

(215) hlaa kwsdins=hl gabii=hl ant nee=diit hoox=hl gyaanimx
INCP five=CN CNT.AMT=CN AX=3.1 NEG=FOC=3.1 use=CN Gyaanimx
a=hl k'oo'ld-it=hl gyet
PREP=CN six-SX=CN person

‘For every person who speaks Gyaanimx there are five who do not.’ (Literally: ‘Now the number who do not use Gyaanimx is five from (out of) six people.’)\textsuperscript{47}

4.2.4 Summary of differences between universals

In Table 7, we summarize the differences between the three Gitksan universal quantifiers we have examined in this section:

Table 7: Universal quantifiers

<table>
<thead>
<tr>
<th>Q float?</th>
<th>(tx)a'ntxws/taa'ntxws</th>
<th>g(w)alk'a/walk'a ('nit')</th>
<th>mahla k'i'y</th>
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</thead>
<tbody>
<tr>
<td>(\checkmark) %</td>
<td>(\checkmark)</td>
<td>*</td>
<td>*</td>
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<tr>
<th>Quantification over proper subparts?</th>
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<tbody>
<tr>
<td>(\checkmark)</td>
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<table>
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<tr>
<th>Compatible with collective predicates?</th>
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<tbody>
<tr>
<td>(\checkmark)</td>
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<table>
<thead>
<tr>
<th>Singular restriction?</th>
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<td>*</td>
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4.2.5 Exception modifiers

In this section we discuss ‘almost all X’ constructions (the closest equivalent of ‘most’ in Gitksan) and ‘all X, only (not) Y’ constructions (the closest equivalent to ‘except’). We also include here exclusives (the equivalents of ‘only’), whose meanings are inversely related to exception modifiers (‘no X, only Y’).

4.2.5.1 Almost all/most

The typical strategy to express ‘most’ is to combine mooja/maaja\textsuperscript{48} ‘almost’ with one of the three universal quantifiers, as shown in (216)-(218)

(216) a. mooja \textit{walk'a} liipaykw=hl ts'uuts'

\textsuperscript{47} Gyaanimx is the language of the Gitanyaaw, who consider their dialect distinctive enough from Gitksan to give it a separate name (though the two are fully mutually intelligible).

\textsuperscript{48} ‘Almost’ has several variant pronunciations: mooji, mooja, mooje, maaja.
almost all  PL.fly=CN  bird
‘Most birds fly.’  (BS)

b. mooje t'aax'nitsxw=hl  ts'uuts' liiipaygw-it
almost all=CN  bird  fly-SX
‘Most birds fly.’  (BS)

(217) a. jip~jab-i-'y=hl  mooja  taax'nitsxw=hl  hu~wilb-ist
   PL~make-TR-1SG.II=CN  almost  all=CN  PL~house-AFF
‘I built most of the houses.’  (BS)

b. lip  jab-i-'y=hl  mooja  taax'nitsxw=hl  wilb-i'y
   SELF  make-TR-1SG.II=CN  almost all=CN  house-1SG.II
‘I built most of my house.’  (BS)

(218) hadiks 'nii'y  maaja mehla k'i'y  se
   swim 1SG.III  almost each one  day
‘I go swimming nearly every day.’  (VG)

In (216a), mooja occurs with ‘floated’ ‘walk’a, as evidenced by the lack of extraction morphology on the verb, while in (216b) it occurs with fronted t'aax'nitsxw, as shown by the presence of subject extraction (sx) marking.

The examples in (217) show that mooja txaa'nitsxws/taax'nitsxw ‘almost all’ may quantify either over individuals or parts of individuals, with the distinction triggered by number marking on the nominal.

More generally, the combination of mooja with a universal quantifier has exactly the same distribution as that of the universal quantifier on its own. This includes cases of ‘bare’ universal quantifiers, as shown in (219), where mooji modifies ‘bare’ gwalk'a, and the verb is suffixed with the third person Series II -t as in other cases of (non-predicative) bare quantifiers, including numerals and value-judgment quantifiers.\textsuperscript{49}

(219) am~'am=hl  khla'wsxw  ii  mooji=n  gwalk'a  giikw-t
   PL~good=CN  shirt  CL.CNJ  almost=1SG.I  all  buy-3.II
‘The shirts were good so I bought most of them.’  (PH)

Aside from its role in quantification, mooja, like English almost, also occurs in pre-predicative position without a quantifier as an event-modifying adverbial, as can be seen in (220):

(220) mooje liiipaykw=hl  ts'uuts'
almost fly=CN  bird
‘The birds almost flew.’  (BS; translation volunteered)

\textsuperscript{49} There is no question of gwalk'a being predicative here, since universals can never be main predicates.
It also appears to have entity-related readings in pre-predicative position if followed by a post-predicative quantified DP, as shown in (221).

(221) mooja=\l ap\l ip\l jap=hl taax'nitsxw=hl wilb-i'y
almost=\l SG.I VERUM SELF make=CN all=CN house-\l SG.II
'I built most of the house myself.' (BS)

4.2.5.2 Exception phrases

‘Every X but/except Y’ does not involve usually a complex D quantifier in Gitksan, but is instead expressed biclausally. In one common pattern, the first clause contains a universal quantifier, and the second (exception) clause involves ellipsis with ksax/xsaa ‘only, except’, with or without negation.

(222) nee=dii=t naa je bagw-it ksax Colin
NEG=FOC=DM who IRR PL.come-SX except Colin
‘Nobody came except Colin.’ (VG)

(223) nee=dii=t naa ji 'wihl wil-t ksax bagadil-daa
NEG=FOC=DM who IRR around LV-3.II except two.HUM-3PL
‘There was nobody around except the two of them.’ (BS, “Ansba'yaxw Love Story”)

(224) gwalk'a bakw uu'w-i-'y, ksax [t] Aidan
all come invite-TR-\l SG.II except [DM] Aidan
‘Everybody that I invited came, except Aidan.’ (VG)

(225) gwalk'a sga'waa-yi-'y, nee=dii=t ksax t Tony
all meet-TR-\l SG.II NEG=FOC=3.I except [DM] Tony
‘I met everybody, except not Tony.’ (VG)

A second pattern is similar, but without ksax; here negation is obligatory in the second clause, which may or may not involve ellipsis

(226) Context: A meal. You see all the little girls over at the side not eating their food.
gwalk'a 'ni[tl]=hl gyat an=t iksda-din=hl wineex, nee=hl a=hl
all 3.III=CN person AX=3.I tasty-CAUS=CN food NEG=CN PREP=CN
k'uba ha'anak'
PL.small PL.woman
‘Everyone except the girls liked the food.’ (Literally: ‘Everyone liked the food, not the girls.’) (PC)

(227) iksda-din 'walk'a 'nit=hl gyat=hl wineex ii ap nee=dii=t
tasty-CAUS=CN all 3SG.III=CN person=CN food CL.CNJ VERUM NEG=FOC=3.I
ixsda-din=hl bagadil-it=hl k'uba ha'anak'
tasty-CAUS=CN two.HUM-SX=CN PL.small PL.woman

56
‘Everyone except two of the girls liked the food.’ (Literally: ‘Everyone liked the food, but two of the girls didn’t like it.’)  

A third strategy involves reversing the polarity of the sentence and employing ksax with its usual meaning of ‘only’:

(228) **ksax** Colin an=t nee=dii=t iksda-din=hl wineex

*only* Colin AX=3.1 NEG=FOC=3.1 tasty-CAUS=CN food

‘Everyone except Colin liked the food.’ (Literally: ‘Only Colin didn’t like the food.’)  

Finally, we have recorded one example where ksax appears to directly modify the indeterminate pronoun naa ‘who, anyone’ in the scope of clausal negation:

(229) nee=dii=t naa **ksax** t Colin hadiks-it

NEG=FOC=DM *who except* DM Colin swim-sx

‘No one except Colin goes swimming.’ (Literally: ‘It is not the case that anyone except Colin swims.’)

4.2.5.3 Exclusives

We include exclusives (‘just’, ‘only’) here because of their close relationship in Gitksan to exception phrases: indeed, as we saw in the previous section, one of the two main exclusive particles in the language, **ksax** (Western) / **xsaa** (Eastern) means both ‘only’ and ‘except’.

As appears to be universally the case, exclusives in Gitksan pick out a distinguished value from a contextually determined set of alternatives whose domain is restricted by focus. It is beyond the scope of this survey to go into details about how focus domains are calculated in Gitksan, particularly since next to nothing is currently known about whether and how prosody is related to information structure. However, there does appear to be a close correlation between ksax/xsaa and ‘focus’ fronted argument and adjunct phrases: the following examples show focused S, O and A arguments with ksax:

(230) **ksax** t Maddy=hl 'witxw-it, neet a=s Aidan

*only* DM Maddy=CN come-sx NEG PREP=PN Aidan

‘Only Maddy came, not Aidan.’

(231) **ksax** mihletxw abals gub-i-y ii neet a=hl mismesxw-it

*only* green apple eat-TR-1SG.II CL-CNJ NEG PREP=CN red-sx

‘I only eat green apples, not red ones.’

(232) **ksax** t Maddy=an=t gya'a=s Aidan ii neet a=s Colin

*only* DM Maddy AX=3.1 see=PN Aidan CL-CNJ NEG PREP=PN Colin

The negative ellipsis construction illustrated in (230) and other examples in this section is used for contrastive focus. It has an unusual structure, consisting of the standard clausal negator nee with an unexplained t increment, followed by a PP containing the contrastively focused element.
‘Only Maddy saw Aidan, not Colin.’ (VG)

In contrast, the second exclusive, *k'am* (Western) / *am* (Eastern) ‘just, only’ typically associates both syntactically and semantically with the predicate, rather than its arguments. Note the absence of extraction morphology in the examples below with *k'am*, in contrast to its presence with the argument-associated examples given above with *ksax*, indicating that *k'am* is occupying a base-generated pre-predicate adverbial position.

(233)  
\[
\begin{array}{l}
\text{k'am} \quad \text{liluxw-i-}'y=hl \quad \text{daala, nee=diì=n} \quad \text{hoox-t} \\
\text{just} \quad \text{steal}-\text{TR}-1SG.II=CN \quad \text{money NEG=FOC=1SG.I} \quad \text{use-3.II} \\
\quad \text{‘I just stole} \quad \text{the money, I didn’t use it.’} \\
\end{array}
\]

(234)  
\[
\begin{array}{l}
\text{am} \quad \text{lilxws-i-s} \quad \text{Henlii=hl} \quad \text{daala-}'y \quad \text{ii} \quad \text{ap} \quad \text{nee=dìi=t} \\
\text{just} \quad \text{steal}-\text{TR}=CN \quad \text{Henry=CN} \quad \text{money-1SG.II} \quad \text{CL.CNJ} \quad \text{VERUM} \quad \text{NEG=FOC=3.I} \\
\quad \text{gup=hl} \quad \text{winee-}'y \\
\quad \text{eat=CN} \quad \text{food-1SG.II} \\
\quad \text{‘Henry only stole my money, he didn’t eat my food.’} \\
\end{array}
\]

The near-minimal pair of examples in (235)a,b show both the distributional and interpretive differences between *ksax/xsaa* and *k'am/am*: in (a), *ksax* introduce a focus-fronted locative adjunct, and evokes a set of alternatives to the denotation of the locative, while in (b) *k'am* attaches directly to the predicate, and evokes a set of alternatives to the denotation of the verb.

(235)  
\[
\begin{array}{l}
\text{a.} \quad \text{ksax} \quad \text{galdimwoot} \quad \text{win} \quad \text{yee-}'y, \quad \text{ii} \quad \text{neet} \quad \text{go'o}=hl \quad \text{bar} \\
\quad \text{only} \quad \text{store} \quad \text{COMP} \quad \text{walk-1SG.II} \quad \text{CL.CNJ} \quad \text{NEG LOC=CN} \quad \text{bar} \\
\quad \text{‘I only walked to the store, not to the bar.’} \quad \text{(i.e., I went to the store but not to the bar)} \\
\quad \text{(VG)} \\
\text{b.} \quad \text{k'am} \quad \text{yee} \quad \text{’nii’y} \quad \text{go'o}=hl \quad \text{galdimwoot} \quad \text{ii} \quad \text{neet} \quad \text{go'o}=hl \quad \text{bar} \\
\quad \text{just} \quad \text{walk} \quad 1SG.III \quad \text{LOC=CN} \quad \text{store} \quad \text{CL.CNJ} \quad \text{NEG LOC=CN} \quad \text{bar} \\
\quad \text{‘I just walked} \quad \text{to the store, not to the bar.’} \quad \text{(i.e., I went to both the store and the bar, but only walked to the store)} \\
\quad \text{(VG)} \\
\end{array}
\]

However, the difference between the two exclusives is not always as clear-cut as these examples indicate. To start with, some speakers, such as BS, permit *ksax/xsaa* and *k'am/am* to co-occur both in argument- and predicate-associated positions:

(236)  
\[
\begin{array}{l}
\text{(am)} \quad \text{xsaa} \quad \text{mihlatxw-a} \quad \text{abals} \quad \text{dii} \quad \text{gub-}'y \quad \text{ii} \quad \text{ap} \quad \text{neet} \\
\quad \text{(just)} \quad \text{only} \quad \text{green-ATTR} \quad \text{apple} \quad \text{FOC} \quad \text{eat-TR-1SG.II} \quad \text{CL.CNJ} \quad \text{VERUM} \quad \text{NEG} \\
\quad \quad \text{a=hl} \quad \text{mihlatxw-a} \quad \text{bananas} \\
\quad \quad \text{PREP=CN} \quad \text{green-ATTR} \quad \text{bananas} \\
\quad \quad \text{‘I only eat green apples but not green bananas.’} \quad \text{(BS)} \\
\end{array}
\]

(237)  
\[
\begin{array}{l}
\text{am} \quad \text{(xsaa)} \quad \text{sinhun} \quad \text{’nii’y, ii} \quad \text{ap} \quad \text{nee=dìi} \quad \text{silinasxw-}'iy \\
\quad \text{just} \quad \text{(only)} \quad \text{get-fish} \quad 1SG.III \quad \text{CL.CNJ} \quad \text{VERUM} \quad \text{NEG-FOC} \quad \text{hunt-3.II} \\
\quad \text{‘I only fish, but I don’t hunt.’} \quad \text{(BS)} \\
\end{array}
\]
Nevertheless, BS’s system still distinguishes the two exclusives, since only *xsaa* is obligatory in argument-associated positions, while only *am* is obligatory in predicate-associated positions.

Other cases, however, are not so easy to assimilate to the generalization that *ksax/xsaa* always adjoins to and semantically associates with arguments, while *k'am/am* is adjoined to and semantically associated with predicates. In (59) above, for example, *ksax* is VP-adjoined but semantically associated with a post-predicative object; and in examples (209) above and (262) below *k'am* appears to be both syntactically and semantically associated with an argument. A particularly interesting case of argument-associated *k'am* shows up in the Gitksan equivalents of examples such as (238), which are surface ambiguous in English:

(238) Only John said that he’d jump in and swim.

The ambiguity hinges on the interpretation of the pronoun: on the ‘coreferent’ interpretation, nobody except John said that John would jump in and swim, whereas on the ‘bound variable’ interpretation, nobody except John said that they would jump in and swim. In Gitksan, argument-associated *ksax* is used for the coreferent interpretation (239)b, and argument-associated *k'am* *ky'ul* ‘just one’ for the bound variable interpretation (239)b:

(239)  

a.  

\[ \text{*ksax John} \text{ he-t dim lōk'on gos-t} \]

\[ \text{only John say-SX PROS into jump-3.II} \]

‘Only John said that he (John) would jump in.’ (VG)

b.  

\[ \text{*k'am ky'ul John} \text{ he-t dim lōk'on gos-t} \]

\[ \text{just one.HUM John say-SX PROS into jump-3.II} \]

‘John was the only one that said they would jump in.’ (VG)

More investigation is obviously called for here.

4.2.6 Boolean compounds with universals

‘Not all’ is expressed in Gitksan by the clausal negator *nee* plus ‘*walk'a/gwalk'a* ‘all’. For three different speakers, the most preferred word order is that shown in (240)-(242): NEG – ‘floated’ all – predicate – subject.

(240)  

\[ \text{nee=dii gwalk'a k'amgoot=hl amxsiwaa} \]

\[ \text{NEG=FOC all greedy=CN white.person} \]

‘Not all white people are greedy.’ (TB)

(241)  

\[ \text{nee=dii gwalk'a wili'lak'ilxi=hl k'amxsiwaa} \]

\[ \text{NEG=FOC all learned=CN white.person} \]

‘Not all white people are learned.’ (VG)

(242)  

\[ \text{nee=dii 'walk'a lix-ts'axw=hl amxsiwaa} \]

\[ \text{NEG=FOC all PL-smart=CN white.person} \]
‘Not all white people are smart.’ (BS)

A speaker’s free paraphrase of English ‘neither every … nor every’ is given in (243).

(243) **gay ky’ee hlibu=hl siwilaksa ii hlibu=hl teachers bagw-it CNTR more few=CN study CL.CNJ few=CN teachers come-sx**
‘Neither every student nor every teacher came (to the party).’ (Literally: ‘Fewer students and few teachers came.’) (VG)

Consultant’s comment: “With the understanding that you were expecting more.”

‘Some/most but not all’ is not expressed as a compound D-quantifier. Instead, a bi-clausal construction is volunteered, as in (244)-(245).

(244) **sip~siipxw hlagats’uu=hl has~us-xw-um ii ap nee=dii ‘walk’a sip~siipxw PL~sick some=CN PL~dog-PASS-1PL.II CL.CNJ VERUM NEG=FOC all PL~sick**
‘Some but not all of our dogs are sick.’ (Literally: ‘Some of the dogs we have are sick, but not all are sick.’) (BS)

(245) **mooja gwalk’a sip~siipxw has~us-xw-um ii ap nee=dii ‘walk’a almost all PL~sick PL~dog-PASS-1PL.II CL.CNJ VERUM NEG=FOC all sip~siipxw-diiit PL~sick-3PL.II**
‘Most but not all of our dogs are sick.’ (Literally: ‘Almost all of the dogs we have are sick, but not all are sick.’) (BS)

### 4.3 Comparative quantifiers

Comparative quantifiers map two properties to a quantified NP denotation (Keenan and Moss 1984, Keenan 1987 and Beghelli 1994).

The comparative quantifier ‘more’ is rendered by k’yaa/k’yee ‘more, most, really’, usually preceded by gay ‘contrastive’, and followed by the value judgment quantifier helt/hilt ‘many’ and its restriction, as in (246)-(248). In all the examples we have elicited, this constituent occupies the pre-predicative (‘focus’) position, followed by the standard of comparison (represented by a prepositional phrase) and then the nuclear scope.

(246) **gay ky’ee helt=hl haanak’ e=hl gyet uu’wi-txw-it go’o=hl luu gwendinst CNTR more many=CN PL.woman PREP=CN man invite-PASS-sx LOC=CN in event**
‘More women than men are invited to the party.’ (Literally: ‘More many women than men are invited to the party.’) (VG)

(247) **gay ky’aa hilt=hl haanak’ a=hl gyet gya’a-’y ga’a=hl wilp li’ligit CNTR more many=CN woman PREP=CN man see(TR)-1SG.II LOC=CN house feast**
‘I saw more women than men at the feast house.’ (Literally: ‘More many women than men I saw at the feast house.’) (HH)
Further analysis of the structures and their compositional semantics is required.

The word for 'different' in Gitksan is sa. 'The same (amount)' is rendered by sayt 'different' and 'same':

(248) gay ky'aa hilt=hl hanak' a=hl gyet an di-dalg-a'y ga'a=hl wilp li'ligit CNTR more many=CN woman PREP=CN man SX with-talk-1SG.II LOC=CN house feast 'More women than men talked to me at the feast house.' (Literally: 'More many women than men talked to me at the feast house.') (HH)

'Less' is rendered in the same way, except with hlebuu/hlibuu 'few' rather than helt/hilt 'many':

(249) gay ky'ee hlibuu=hl hanak' e=hl gyet uu'wi-txw-it go'o=hl luu gwendinst CNTR more few=CN PL.woman PREP=CN man invite-PASS-SX LOC=CN in event 'Less women than men are invited to the party.' (Literally: 'More few women than men are invited to the party.') (VG)

The same (amount) is often abbreviated to sayt or just say:

(250) sayt k'i'y=hl gabi=gasgo'o=hl cake gub-i=hl hanak' gan=hl ii'uxwt together one=CN MASS.AMT =CN cake eat-TR=CN PL.woman PH.CNJ=CN PL.man 'The women and men ate the same amount of cake.' (Literally: 'The women and men together ate one amount of cake.') (VG)

(251) sagayt k'i'y=hl gabi=hl hanak' gan=hl ii'uxwt=hl di-dalg-a'-y together one=CN CNT.AMT=CNPL.woman PH.CNJ=CN PL.man=CN with-talk-TR-1SG.II go'o=hl sagayt wan LOC=CN together PL.sit 'I talked to the same number of men as women at the party.' (Literally: 'I talked to together one amount of men and women at the party.') (BS)

(252) liluxws-i=hl ligi=t naa enda-daal=hl sayt k'i'y=hl gabi=hl steal-TR=CN DWID=DM who container-money=CN together one=CN CNT.AMT=CN ii'uxwt gan=hl hanak' PL.man PH.CNJ=CN PL.woman 'Someone stole just as many men’s as women’s wallets.' (Literally: ‘Someone stole the wallet(s) of together one amount of men and women.’) (VG)

4.3.1 ‘Different’ and ‘same’: Type (2) quantifiers

The word for ‘different’ in Gitksan is likis/lixks. Examples of its use are given in (253)-(255). Further analysis of the structures and their compositional semantics is required.

(253) anoog-a'-y=hl likis gye~gyed-im agu like-TR-1SG.II=CN different PL~person-ATTR what 'I like different things.' (PC/PH)

51 Liks is almost certainly formed from the same root as the domain-widener ligi (see section 5.1.1 below), given that voiceless stops are voiced in pre-vocalic position (Rigsby 1986:133).
(254)  
\[
\text{liks gyet=hl limx lim-in-diit} \\
\text{different person=CN song sing-CAUS-3PL.II} \\
\text{‘Each person sang a different song.’} \\
\]  

(255)  
\[
\text{liks gyet=hl p'deek win bakw=hl dip Maddy gan=s Aidan} \\
\text{different person=CN clan COMP come=CN ASSOC Maddy PH.CNJ=PN Aidan} \\
\text{‘Maddy and Aidan are from different clans.’} \\
\]  

‘The same’ is illustrated in (256)-(257); just as in comparative quantification with ‘the same (amount)’ (see previous section), the pre-verbal element sagayt/say(t) ‘together’ is employed together with k'i'y, the numeral ‘one’ (cf. English ‘one and the same’).52

(256)  
\[
\text{‘wii 'walk'a say-k'i'y=hl limix-diit}\text{53} \\
\text{big all together-one=CN sing-3PL.II} \\
\text{‘They all sang the same song.’ (Literally: ‘They all together sang.’)} \\
\]  

(257)  
\[
\text{sayt-k'i'y=hl 'naat'ehl win si-gya'ad-i=hl mehla ky'u'l=hl gyet} \\
\text{together-one=CN group COMP CAUS1-see-T=CN each one.HUM=CN person} \\
\text{‘Each person voted for the same party.’} \\
\]  

4.4  
Scope interactions with quantifiers over entities

Scope interactions have been central to the theoretical literature on quantification, both for semantics (since they provide crucial evidence for the existence of generalized quantifiers (Barwise and Cooper 1981)) and for the syntax-semantic interface (since they appear to be sensitive to structural relations such as c-command).

However, it has proved challenging to establish even the basic facts of scope interaction in Gitksan. The main reason is that our consultants have a low tolerance for ambiguity, and thus for any given sentence and context, they tend to settle on a single scope interpretation (generally the most pragmatically favoured one), while in other sentences with the same configuration, previously rejected readings are favoured due to lexical or contextual factors. The result is that it is hard to generate minimal pairs which differ only in values for scope.

Nevertheless, it has been possible to piece together a partial picture of scope which, though incomplete, provides evidence that at least some quantifiers are scopally active. Here we provide two sets of data, one from the interaction of numeral quantifiers (see Section 4.1), the other involving the universal gwalk’a nít ‘all’ (Section 4.2.2) and the proportional quantifier sda ‘half’ (Section 4.1.3.1).

4.4.1  
Scope with numeral quantifiers

52 Tarpent (1987:381) observes that the corresponding Nisga'a element means ‘same’ when in combination with the root for ‘one’.

53 A speaker of another dialect, MA, gives exactly the same sentence as (256), but with a transitivized version of ‘sing’, limindiipt.
In sentences containing two numeral quantifiers, there are potentially three readings. Take for example the English sentence in (258):

(258) Three singers sang two songs.

On the *direct scope* reading, the subject takes scope over the object (which it precedes and c-commands). This reading permits (though does not require) as many as six individual songs to be sung by three singers (two each).

On the *inverse scope* reading, the object takes scope over the subject. This reading permits (but does not require) six individual singers to be singing the same two songs.

On the *cumulative* (scopeless) reading there are three singers and two songs, with any combination of singers and songs permitted, as long as each singer sings and each song is sung. This reading is a subcase of the set of readings permitted by non-quantified plural NPs, where the numeral simply serves to restrict the plural domain.

Now, let us turn to the Gitksan equivalents of (258), as supplied by one of our consultants (VG):

(259) bagadil=hl gyet an=t yee-di=hl gwile'=hl limix
two.HUM=CN man AX=3.1 go-CAUS=CN three=CN song
‘A duet sang three songs.’ *(consultant’s translation)*

This sentence was presented in different scenarios, designed to highlight particular scopal readings. The first is the ‘duo’ context.

(260) *Context A: At a gathering, a bunch of songs are sung. Most songs are traditionally sung by one person, but there are three songs that must be sung by two people. Question: Does the sentence describe the situation? Can there then be six singers (two for each song)?*

*Consultant’s response:* “Yes. It’s general enough that there’s six different people forming duets.”

VG’s answer here indicates that he permits the inverse scope reading for (259).

The second scenario is a ‘solo’ context, designed to be compatible with the direct scope reading:

(261) *Context B: At a gathering a bunch of songs are sung. Most singers just sing one or two songs, but there are two men who are particularly good, so they sing three songs each. Question: Does the sentence describe the situation? Can there then be six songs (two for each singer)?*

---

54 By “duet”, VG means a duo (i.e., two singers).
Consultant’s response: “It’s for a duet.”

Question: So it’s not general enough to be this situation?
Consultant’s response: “No.”

Surprisingly, the consultant here rejects the direct scope reading for (259). Instead, he provides the following alternative sentence:

(262) k'am bagadil=hl gyet k'uwx limix-it ii=t
only two.HUM=CN man HAB sing-SX CL.CNJ=3.I
yee-di=hl mehla ky'ul loo-diit=hl gwile'hhl limix
go-CAUS=CN each one.HUM PREP-3PL.II=CN three=CN song
‘Only two men sing and each of them sings three songs.’

There is good reason, however, to question whether the direct reading is actually unavailable here. The alternative provided by the speaker in (262) is plausibly an attempt to disambiguate the original sentence (259) (which it does, since it spells out explicitly that each of the two men of sang three songs), and thus could just as well reflect the speaker’s intolerance of ambiguity, rather than the absence of a direct scope reading.

This suspicion is reinforced by the responses given to the same test by another of our consultants, BS. Her version of the test sentence is given in (263):

(263) bagadil-it=hl gyat an=t limi=hl gwila'l-t=hl limix
two.HUM-3.II=CN man AX=3.I sing=CN three-3.II=CN song
‘Two men sang three songs.’

As can be seen by comparing (263) with (259) above, though there are minor differences in pronunciation and lexical choice attributable to dialect variation, VG and BS employ the same structure for the test sentence. BS’s responses to Contexts A and B, however, are the inverse of VG’s.55

(264) Context A: At a gathering, a bunch of songs are sung. Most songs are traditionally sung by one person, but there are three songs that must be sung by two people.
Question: Does it [263] describe the situation? Can there then be six singers (two for each song)?

Consultant’s response: “For six people it should be k'oo'lt (‘six’) instead of bagadil.”

BS’s volunteered alternative for the inverse scope reading is given in (265):

(265) sgidim gwila'l=hl limix dim limix=hl k'oo'lt=hl gyat
should three=CN song PROS sing=CN six=CN man
‘Three songs should be sung by six people.’

55 The contexts were provided in the same order to both speakers, so this is not an effect of the order of presentation.
In other words, in contrast to VG, BS rejects the inverse scope reading, and produces a paraphrase specifying the exact number of singers.

BS’s response to Context B is given in (266). The response clearly indicates that BS accepts the direct scope reading for (263), again, in contrast to VG.

(266) Context B: At a gathering, a bunch of songs are sung. Most singers just sing one or two songs, but there are two men who are particularly good, so they sing three songs each. Question: Does it [263] describe the situation? Can there then be six songs (two for each singer)?

Consultant’s response: “There’s still only two guys singing and they’re singing three songs so that is good.” (It is the same whether they sing three original songs each or if one man copies the previous singer.)

Could it be, then, that VG and BS have different (in fact, opposite!) grammars for quantifier scope? The answer is almost certainly not. With other parallel test sentences, for example, VG is (sometimes!) quite happy to provide a direct scope interpretation:

(267) Context: At a feast, the organizers are trying to figure out whether they need to make more coffee. They ask one of the servers how many people have drunk how much coffee. She replies:

k'yap=hl gyet en-t aks=hl gwile'l=hl gyem~gim aks
ten=CN man AX=3.1 drink=CN three=CN PL~hot water
‘Ten people drank three cups of coffee.’ (volunteered by consultant) (VG)

Question: How many cups of coffee were drunk?

Consultant’s response I: “Thirty cups drunk.”
Consultant’s response II: “Thirty cups.”
Consultant’s response III: “Sounds like ten people shared three cups.”

The direct scope interpretation (pragmatically favoured) is where each of ten people drink three cups: i.e., thirty cups of coffee are drunk. This is what VG gave as his response on both of the first two occasions when the sentence was tested (which were four months apart). But two months later, when the sentence was retested, he rejected the direct scope reading, substituting a cumulative interpretation in which, in some combination, ten cups of coffee were drunk by three people. On this occasion, he employs the disambiguating paraphrase in (268) for the direct reading:

(268) k'am k'yap=hl gabi=hl gyet en-t aks melha gwile'l=hl gyem~gim aks,
only ten=CN CNT.AMT=CN man AX=3.1 drink each three=CN PL~hot water
ii malha k'i'y=hl gyem~gyim aks=hl lhaqats'uu-diit

The inverse scope reading (in which three cups of coffee were each drank by ten people) is ruled out on pragmatic grounds.

---

56 The inverse scope reading (in which three cups of coffee were each drank by ten people) is ruled out on pragmatic grounds.
‘Only ten people drank three cups of coffee each, and the others drank one cup each.’

What can we conclude from what appears to be a confusing set of judgments? The answer is that all three readings are probably available for both speakers, but their low tolerance for ambiguity results in a situation where only one reading (and not necessarily the same one!) is proffered on each occasion. We conclude – tentatively – that scope ambiguity is present with numeral quantifiers, though its effects must be detected indirectly.

4.4.2 Scope with universals and ‘half’

In this section we provide the results of a test carried out to investigate scope interaction between the universals *txaan’nitsxw* (4.2.1) and *gwalk’a ‘nit* (4.2.2) on the one hand and the proportional quantifier *sdo’o/sda(=hl gabi)* ‘half (the amount)’ (4.1.3.1) on the other. Though preliminary, the results are more robust than with numeral quantifiers: they indicate that scopally active (more specifically, direct scope) readings are present, as would be predicted by a generalized quantifier analysis, but not by a non-scopally active (purely cumulative) analysis.

The scenario involved the following context, taken from Davis (2010), and presented to the speakers with accompanying illustrations on a whiteboard: four children (A(idan), B(elinda), C(olin), and D(an)) are meant to read four different books (T(om Sawyer), U(topia), V(ince’s biography), and W(innie the Pooh)) over the summer holidays. But what actually happens is that the children are lazy and they don’t read all four books.

The test sentences, each elicited from three speakers, are in (269)-(270):

(269) **Test sentence A:**

a. *k’am sda=hl gabi=hl enilitsx=hl litsx-a=hl gwalk’a ‘ni=hl tk’ihlxw only half=CN CNT.AMT=CN book=CN read-TR=CN all 3SG.III=CN young* ‘All the children read half the books.’ (VG, HH)

b. *am hli sdo’o=hl gabi=hl ha’niilitsxxw=hl litsxxw-i=hl only NMLZ half=CN CNT.AMT=CN book=CN read-TR=CN taa’nitsxw=hl t’ihlxw all=CN young* ‘All the children read half the books.’ (BS)

(270) **Test sentence B:**

a. *k’am sda=hl gabi=hl tk’ihlxw en=t litsx=hl gwalk’a ‘ni=hl only half=CN CNT.AMT=CN young AX=3.1 read=CN all 3SG.III=CN enilitsx book* ‘Half the children read all the books.’ (VG, HH)

---

57 The only difference between the test sentences as volunteered by VG and HH is that the latter employs *t’ihlxw* rather than *tk’ihlxw* for ‘young’.

66
The sentences were presented in the following five contexts:

Context (i):  
Aidan reads T&U, Belinda reads U&V, Colin reads V&W and Dan reads T&W (i.e., each child reads half of the books, and all the books are read)

Context (ii):  
Aidan reads T,U & V, Belinda reads T, U & W, Colin reads T, U, V&W, and Dan reads T&U (i.e., half the books are read by all the children, and the other half by only some of them)

Context (iii):  
Aidan reads T, Belinda reads U, Colin reads T and Dan reads U (i.e., all the children combined read half the books)

Context (iv):  
Aidan reads T&U, Belinda reads V&W, Colin and Dan don’t read anything (i.e., half the children combine to read all of the books)

Context (v):  
Aidan reads T, U, V&W, Belinda doesn’t read anything, Colin reads T, U, V&W and Dan doesn’t read anything (i.e., half the children read all of the books, and half don’t read anything)

The predictions for each reading are given in Table 8:

### Table 8: Predictions for book reading scope test

<table>
<thead>
<tr>
<th>Context</th>
<th>Test sentence A</th>
<th>Test sentence B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>direct</td>
<td>inverse</td>
</tr>
<tr>
<td>Context (i)</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Context (ii)</td>
<td>Yes/No*</td>
<td>Yes</td>
</tr>
<tr>
<td>Context (iii)</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Context (iv)</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Context (v)</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

* Yes on ‘at least’ reading, no on ‘exactly’ reading

Test sentence A was tested in contexts (i-iii), and test sentence B in situations (i), (iv) and (v); these are the contexts where at least one reading is predicted to be felicitous. Results are given in Table 9.

### Table 9: Book reading scope test

<table>
<thead>
<tr>
<th>Test sentence A</th>
<th>Test sentence B</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
First of all, note that the results are (relatively) consistent between the speakers: the only discrepancies are with sentence A in Context (iii), where HH gives a positive response and the other two speakers a negative one, and sentence B in Context (iv), where BS gives a positive response and the other two a negative one.

Second, the results by and large line up with the predictions of a direct scope analysis. In Context (i), sentence A will yield a positive judgment only on a direct scope reading: all three speakers judge it to be felicitous. (All three speakers also judge sentence B to be felicitous in Context (v), which is compatible with direct scope, but also with inverse scope and non-scopal cumulative readings.) On the other hand, no speaker gives a positive judgment for sentence A in Context (ii) or sentence B in Context (i), which are only felicitous on an inverse scope reading. And finally, both of the inconsistent results involve extra cumulative readings (with sentence A in Context (iii) for HH, and with sentence B in Context (iv) for BS).

In short, this scenario does give preliminary evidence for scopally active (direct scope) readings, and thus indirect evidence for a generalized quantifier analysis of both the universal quantifiers \textit{gwalk’a ’nit/taax’nitsxw} and the proportional quantifier \textit{sdo’o/sda(=hl) gabi ‘half’}. Obviously, further investigation is necessary, but the results seem promising.

### 5 Indefinite, existential, negative, and interrogative quantification

In this section, we group together four types of quantification with distinct structural characteristics from those of the D-type quantifiers we have seen so far. In particular, they are all based on non-quantificational indefinite associates with a higher operator, either covertly (as in the case of simple indefinites and existentials) or overtly (as in the case of negative existentials). We begin with simple indefinites.

#### 5.1 Indefinites

There is no counterpart in Gitksan to an English indefinite article, nor to the cardinal quantifier ‘some’ (see 4.1.3.2 for proportional ‘some’). English sentences with indefinite singulars, cardinal ‘some’, and mass nouns are all translated using the all-purpose common noun determiner \textit{=hl}. Examples are given in (271)-(276).

\begin{verbatim}
(271)  gya’a-y=hl us lax(=hl) genax
      see(TR)-1SG.=CN dog on(=CN) road
      ‘I saw a dog in the road.’  (VG)

(272)  gya’a-y=hl es~’us lax(=hl) genx
\end{verbatim}
I saw (some) dogs on the road.

(273)  

Context: Michael and Barbara are having coffee and chatting in the lounge of the Forestry building. Neither Michael nor Barbara knows anybody there. All of a sudden, a burst of music starts to play in a nearby classroom. Believe it or not, the professor in that classroom is dancing on his table. Barbara says to Michael: ‘Look! Some teacher is dancing on the table.’ (Context adapted from Alonso-Ovalle and Menéndez-Benito 2003:4)

gya'a=s-ust!   yukw=hl   miiluxw=hl   miin-i'm   lax   ha'niit'ookxw
see=PN-DEM.DIST   IPFV=CN   dance=CN   leader-1PL.II   on   table
‘Look! Some teacher is dancing on the table.’

(274)  

ii   bakw=hl   k'uba   t'ihhxw   uu'w-diit   'nit   dim   ma'us-t
CL.CNJ   PL.come=CN   PL.small   young   invite-3PL.II   3SG.III   PROSP   play-3.II
‘And some children came to invite her to play.’

(TFS Working Group 2010, Chore Girl; BS)

(275)  

yukw=hl   miinluxw=hl   ii'uxwt   lax   ha'niit'ookxw
IPFV=CN   dance=CN   PL.man   on   table
‘Some men are dancing on the table.’

(BS)

(276)  

k'ay   di~t'ehl=hl   maaxws
still   DUR~EXIST.INAN=CN   snow
‘Snow is still on the ground.’

(VG)

It is worth emphasizing that this does not necessarily mean that $=hl$ itself has an indefinite (or any!) meaning: it can equally well be translated back into English as definite, specific indefinite, or non-specific indefinite, depending on the context. For example, when the sentence in (273) was read back to the same speaker who produced it, but without the preceding context, the translation offered was ‘Look! Our teacher is dancing on the table!’ with the DP following $=hl$ translated as a definite.

5.1.1 Ligi

In order to grammatically distinguish indefinite from definite readings, speakers often employ the modifier *ligi* ‘some, any’. *Ligi* requires a targeted investigation in its own right; here we merely point out its many uses and flag the issue for future research. (See Matthewson 2014a,b for some discussion.)

One common use of *ligi* is as a domain widener, yielding meanings paraphrasable as ‘some x or other’ or ‘any x whatsoever’; in the latter, case *ligi* often co-occurs with *lip* ‘self’.

(277)  

Context: What is John doing?
yukw=t   litsxxw=hl   *ligi*   ha'niilitsxxw=imaa
IPFV=3.I   read=CN   DWID   book=EPIS
‘He is reading some book or other.’ (BS)

(278) ksi-goo=hl lip ligi ha’niilitsxxw
out-take=CN SELF DWID book
‘Take any book whatsoever.’ (VG)

Even more frequently, ligi occurs with indeterminate pronouns, whose most common use is as WH-words in information questions (see Section 5.4 below), but which also occur as indefinites in both polarity and non-polarity contexts (see Section 5.3 for more examples of the former).

Often, the combination of ligi + indeterminate yields a meaning paraphrasable by English ‘any’, as in (279)-(280).

(279) lip ligi=t naa=hl k’uba t’ihlxw an=t da’akhlxw
SELF DWID=DM who=CN PL.small young AX=3.I CIRC.POSS
dim=t ‘wa=hl hun
PROS=3.I find=CN fish
‘Any child can find fish.’ (VG)

However, the same combination is also used in contexts where English would use ‘some’, rather than ‘any’, as shown in (281)-(284):

(281) Context: You are talking to me on the phone and there is a knock on your door while we’re talking. You say:
go’onaa, kw’itxw ligi=t naa… kw’itxw=t Colin
hang.on arrive DWID=DM who arrive=DM Colin
‘Hang on, someone/*anyone arrived … it’s Colin.’ (HH)

(282) A: nee=ma gya’a=hl ligi=t naa yaa
NEG=2SG.1 see(TR)=CN DWID=DM who Q
‘Did you see someone/anyone?’ BS

B: ee’a, gya’a-’y=hl ligi=t naa
yes see(TR)-1SG.II=CN DWID=DM who
‘Yes, I saw someone/*anyone.’ (BS)

(283) ‘naa-dis~t’is-aa ligi=t naa
against.a.background-PL~hit-ANTIP DWID=DM who
‘Someone/*anyone knocked.’ (VG)

(284) gya’a’y=hl ligi agu
see(TR)-1SG.II=CN DWID what
‘I saw something/*anything.’ (VG)
The example in (285) shows ligi + indeterminate being modified in addition by mooji ‘almost’, with a universal ‘almost anything’ reading.

(285) mooji ligi agu=hl gub-i=s Mary almost DWID what=CN eat-TR=PN Mary 'Mary eats just about anything.' (VG)

Ligi plus an indeterminate can also co-occur with universal quantifiers with a universal reading, as shown in (286)-(287).

(286) gya'a-'y=hl gwalk'a lip ligi=t naa see(TR)-1SG.II=CN all SELF DWID=DM who 'I saw everyone.' (VG)

(287) Context: You are talking about bears, and I say that I see all of them.

gya'a-'y=hl taax'nitsxw lip ligi agwi see(TR)-1SG.II=CN all SELF DWID what 'I see all of them.' (BS)

Free relatives likewise utilise ligi, usually in combination with an indeterminate pronoun, as shown in (288)-(291).

(288) naa=hl ligi luu-wil-t ts'im room, 'nidiit dim an=t gup=hl who=CN DWID in-LV-3.II in room 3PL.III PROS AX=3.I eat=CN ikxda-m anaax sweet-ATTR bread 'Whoever is in the room can eat cake.' (BS)

(289) Context: A noisy classroom, kids running around and the teacher is trying to manage the class. The teacher says:

wan-sim, lip ligi hindâ wil litxw-sim sit-2PL.II SELF DWID WH.SPT COMP stand-2PL.II 'Wherever you are standing now, sit down.' (BS)

(290) nee=di=n wilaax-t ap ligi alp'a show hasa=k=s Barbara dim NEG=FOC=1SG.1 know-3.II VERUM DWID RESTR show want=PN Barbara PROS gya'a-t see(TR)-3.II 'I don’t know – whichever show Barbara wants to see.' (BS)


ii ap ligi agwi ji gya'a-n, nem=diì xpts'aw-in CL.CNJ VERUM DWID what IRR see(TR)-2SG.II NEG+PROS=FOC scared-2SG.II 'Whatever you see, don’t be frightened.' (BS)
This does not exhaust the range of environments where *ligi* is found: it also conveys disjunction, usually in combination with *oo* ‘or’ as shown in (292)-(293); see also Section 2.8 above.

(292) \[ \text{dim } \text{ 'witxw}=t \quad \text{Henry} \quad \text{oo } \text{ligi}=t \quad \text{Lisa} \quad \text{t'aahlakw} \]
\[ \text{PROS } \text{ arrive}=\text{DM} \quad \text{Henry} \quad \text{or } \text{DWID}=\text{DM} \quad \text{Lisa} \quad \text{tomorrow} \]
\[ \text{‘Lisa or Henry will come tomorrow (we don’t know which).’} \quad (\text{BS}) \]

(293) \[ \text{ii } (\text{hi})\text{nda wil } \text{saa-hlo'o-diit } \text{sin-smax-diit } \text{oo } \text{ligi } \text{sin-matx} \]
\[ \text{CL-CNJ WH.SPT COMP away-PL.go-3PL.II hunt-bear-3PL.II or } \text{DWID hunt-goat} \]
\[ \text{‘When they start out to hunt bear or to hunt goat.’} \quad (\text{BS, “Dihlxw”}) \]

Furthermore, in combination with *(k)'wihl* ‘around’, *ligi* conveys some kind of evidential and/or epistemic meaning, as illustrated in (294)-(295).

(294) \[ \text{'}\text{wihl } \text{ligi } \text{hlaa } \text{dim } \text{sigetxw-diit} \]
\[ \text{around } \text{DWID INCEP PROS PL.cry-3PL.II} \]
\[ \text{‘The people looked like they were going to cry.’} \quad (\text{VG}) \]

(295) \[ \text{Context: You doubt that Henry knows how to cook, but you see him doing stuff in the kitchen looking like he knows what he’s doing.} \]
\[ \text{'}\text{wihl } \text{ligi } \text{da'}\text{akhlxw-i}=s \quad \text{Henry } \text{dim}=t \quad \text{jam}=\text{hl wineeex} \]
\[ \text{around } \text{DWID CIRC.POSS-TR=}\text{PN Henry PROS=}3.1 \quad \text{cook=}\text{CN food} \]
\[ \text{‘Maybe Henry can cook (make food).’} \quad (\text{BS}) \]

Finally, *ligi* in combination with numerals gives the meaning ‘about’ (i.e., not exactly), as shown in (296)-(297); see also (161) above.

(296) \[ \text{Context: How many fish did you catch?} \]
\[ \text{ligi } \text{ky'ap}=(i)\text{ma’} \quad \text{hun} \]
\[ \text{DWID ten.ANIMAL=}\text{EPIS fish} \]
\[ \text{‘About ten fish.’} \quad (\text{VG}) \]

(297) \[ \text{ligi } \text{ky'ap} \quad \text{dim } \text{bagw-it} \]
\[ \text{DWID ten.ANIMAL PROS come-SX} \]
\[ \text{‘About 10 / maybe 10 will come.’} \quad (\text{VG}) \]

5.2 **Existentials**

Gitksan has no dedicated existential construction equivalent to e.g., English ‘existential *there*’. Existential sentences have the same form as ordinary intransitive predications, with locative or existential main predicates (most commonly the light verb *wil* ‘be, do’).

(298) \[ \text{hetxw=}\text{hl gyahl gan gaseeexw=}\text{hl k'i'y=}\text{hl wilp} \]
\[ \text{stand=}\text{CN totem.pole in.front=}\text{CN one=}\text{CN house} \]
\[ \text{‘There is a pole in front of a house.’ (Literally: ‘A pole stands in front of one house’) } \quad (\text{BS}) \]
5.3 Negative existentials

There is no quantifier over individuals meaning ‘no’ in Gitksan; the relevant sentences are rendered using the clausal negator *nee* together with an indefinite, the latter often accompanied by the domain widener *ligi*:

(303) **nee*** =dii *wil* *ligi* *hanak*, ii
goi 1SG.III LOC=CN house dance CL.CNJ NEG=FOC LV DWID woman CL.CNJ
hets'im ha'w-i'y
again go.home-1SG.II
‘I went to the dance hall, there were no women, so I went home.’ (Literally: ‘It is not the case that any woman was there.’) (RJ)

(304) **nee*** =dii *da'akhlxw=hl amksiwaa* dim=t hoox-diit algyax
NEG=FOC CIRC.Poss=CN white.person PROS=3.I use-3PL.II language
‘No white people can speak the language.’ (Literally: ‘It is not the case that white people are able to speak the language.’) (RJ)

The equivalents of the negative quantifiers ‘nobody’, ‘nothing’, or ‘nowhere’ are formed via clausal negation plus a WH-word, often accompanied by the irrealis marker *ji/je/ja* and sometimes in combination with *ligi*, as shown in (305)-(309).

(305) **nee*** =dii-t **naa** je x-miyeen-t ts'im *wilp*
NEG=FOC-3.II who IRR EXPER-smoke-SX in house
‘Nobody is smoking in the house.’ (VG)
(306) **nee=**dii- t  **ligi=** t  **naa** je  x-miyeen-t  ts’im  wilp  
NEG=FOC-3.II  **DWID=** DM  **who**  IRR  EXPER-smoke-SX  in  house  
‘Nobody smokes in the house.’  

(307) **Context:** There has been a crime and the police come around asking if anyone saw it happening  
**nee=**dii  **gya’a=** hl  **ligi=** t  **naa=** hl  **ligi**  **agu**  
NEG=FOC  see(TR)=CN  **DWID=** DM  **who=** CN  **DWID**  what  
‘Nobody saw anything.’  

(308) **ii**  ’nit  wil  gaks  he-t  **nee=**dii  **nda**  dim  
CL.CNJ  3SG.III  COMP  for.first.time  say-3SG.II  NEG=FOC  what  PROS  
**wil-si’im**  diya  
LV-2PL.II  QUOT.3SG  
‘Finally it spoke: “Nothing bad will happen to you,” it said.’  
(VG, “The house of Gwaas Hlaa’m and Wiixha”)  

(309) **Context:** You’re looking for Sam, and you ask ‘Where’s Sam?’  
**nee=**dii  **nda-t**  
NEG=FOC  **WH.SPT-** 3.II  
‘He’s nowhere (he’s completely disappeared).’  

(310) **naa**  an=t  **gup=** hl  suusiit  
**who**  COMP=3.I  eat=CN  potato  
‘Who ate a/the potato?’  
(Davis and Brown 2011:50)  

(311) **gwi=** hl  **gub-i=** s  John  
**what=** CN  eat-TR=PN  John  

---

58 ‘**WH-copies**’ are also possible for some speakers in the intermediate clauses of long-range **WH-questions** and relative clauses: see Davis and Brown (2011).  
59 The variation in the form for ‘what’ is determined by dialect: Eastern dialect speakers prefer forms with **gwi**, and Western speakers prefer forms with **gu**.
‘What did John eat?’

(For the distinctive morphology associated with extraction from particular argument positions, see Section 2.6 above.)

Relative and indefinite uses of naa are given in (312) and (313) respectively. Note that naa is unique amongst ‘indeterminate’ pronouns in selecting a determinate rather than a common noun connective, as in the common collocation ligi=t naa ‘somebody, anybody’.

(312)  
gya'a-’y(=hl gyat) naa an=t gup=hl suusiit  
see(TR)-1SG.II(=CN man) who COMP=3.1 eat=CN potato  
‘I saw (the man) who ate a/the potato.’

(Davis and Brown 2011:65)

(313)  
'naa-dis~t'is-aa=hl ligi=t naa  
against.a.background-PL~hit-DETR=CN DWID=DM who

‘Someone knocked.’

(VG)

‘How many?’ in conjunction with count nouns is rendered by (hi)ndahl gabi, as shown in (314)-(316), and in conjunction with mass nouns by (hi)ndahl gasgoo, as shown in (317). The distribution of these two elements furnishes straightforward evidence for the count-mass distinction (see Section 3.2 above).60 (Hi)nda is translated by Hindle and Rigsby (1973:50) as ‘how, where, when’, but can also be used for ‘which’ for some speakers. As it is possibly related to the spatio-temporal element daa, we gloss it as WH.SPT.

(314)  
nda=hl gabi=hl simgigyat bagw-it goo=hl t'uu'u  
WH.SPT=CN CNT.AMT=CN PL.chief PL.come-SX LOC=CN feast  
‘How many chiefs came to the feast?’

(BS)

(315)  
hinda=hl gabi=hl hu~wilp=hl jip~ja  
WH.SPT=CN CNT.AMT=CN PL~house=CN PL~make-2SG.II

‘How many houses did you build?’

(BS)

(316)  
Context: I see you preparing a big meal. I ask:  
nda gabi(=hl gyet) dim bagw-it  
WH.SPT CNT.AMT(=CN person) PROS PL.come-SX

‘How many (people) are coming?’

(LW)

(317)  
(n)da gasgoo=hl aks luu-gaj-it ts'im and-a aks  
WH.SPT MASS.AMT=CN water in-pour-SX in container-ATTR water

‘How much water is there in the jug?’

(HH)

Like other indeterminates, amount-denoting interrogatives have an indefinite meaning in argument positions, often with an accompanying domain widener ligi and the epistemic enclitic

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60 Both gabi and gasgoo appear to contain the distributive prefix ga-, which is semantically transparent for a count quantifier, but not for a mass one.
(318) jip~jab-i’-y=hl ligi hinda=yimaa=hl gabi=hl hu~wilp PL~make-TR-1SG.II=CN DWID WH.SPT=EPIS=CN CNT.AMT=CN PL~house ‘I built some (unspecified amount of) houses.’ (BS)

There is no dedicated word for ‘which’. In order to convey the meaning of D(iscourse)-linked WH-questions, Gitksan employs the regular indeterminates naa ‘who’ and (hi)nda (WH.SPT), often together with the domain-restricting adverb alp’a/elp’a (though the use of (hi)nda alp’a/elp’a for ‘which’ seems to be confined to Eastern dialect speakers).

(319) naa=hl si’moogit dim uu'w-u-m who=CN chief PROS invite-TR-1PL.II ‘Which chiefs shall we invite?’ (PH)

(320) Context: Asking a young girl which boy she likes.61

naa=hl elp’a siip’-in-in who=CN RESTR like-CAUS-2SG.II ‘Which do you like?’ (LW)

Consultant’s comment: “[This] is assuming there’s a group, and asking which one.”

(321) naa=hl alp’a simgigyat dim uu'w-i’-y who=CN RESTR PL.chief PROS invite-TR-1SG.II ‘Which chiefs will I invite?’ (BS)

(322) naa=hl alp’a ii’uxwt an=t jagw-i=hl smax who=CN RESTR PL.man AX=3.1 kill-T=CN bear ‘Who are the men who killed the bear?’ (BS)

(323) hinda=hl alp’a si’moogit dim uu'w-u-'m WH.SPT=CN RESTR chief PROS invite-TR-1PL.II ‘Which chief shall we invite?’ (BS)

(324) nde=hl hun ’mugw-i-n WH.SPT=CN fish catch-TR-2SG.II ‘Which fish did you catch?’ (HH)

‘Which’ questions in Gitksan can inflect as either singular or plural. A paradigm from one speaker showing naa (alp’a) with both singular and plural restrictions is given in (325). Plurality

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61 Compare this with (i), without elp’a:

(i) Context: Asking a young girl which boy she likes.

naa=hl siip’-in-in who=CN like-CAUS-2SG.II ‘Who do you like?’ (LW)

Consultant’s comment: “[This] is like ‘Who is he?’ It’s like she’s already chosen.”
is marked in (c-d) by a plural noun as well as by the associative marker *dip* (Forbes 2013); (325)d with *alp’a* is judged by the speaker as being ‘more specific’ than (325)c.  

(325)  

(a)  

\[
\begin{array}{llll}
\text{t} & \text{naa}=\text{hl} & \text{si’moogit} & \text{dim uu’w-u-’m} \\
\text{DM} & \text{who}=\text{CN} & \text{chief} & \text{PROS invite-TR-1PL.II} \\
\end{array}
\]

‘Which chief will we invite?’  

(b)  

\[
\begin{array}{llll}
\text{t} & \text{naa}=\text{hl} & \text{alp’a si’moogit} & \text{dim uu’w-u-’m} \\
\text{DM} & \text{who}=\text{CN} & \text{RESTR chief} & \text{PROS invite-TR-1PL.II} \\
\end{array}
\]

‘Which chief will we invite?’  

d.  

\[
\begin{array}{llll}
\text{dip} & \text{naa}=\text{hl} & \text{simigyat} & \text{dim uu’w-u-’m} \\
\text{ASSOC who}=\text{CN} & \text{PL.chief} & \text{PROS invite-TR-1PL.II} \\
\end{array}
\]

‘Which chiefs will we invite?’  

d.  

\[
\begin{array}{llll}
\text{dip} & \text{naa}=\text{hl} & \text{alp’a simigyat} & \text{dim uu’w-u-’m} \\
\text{ASSOC who}=\text{CN} & \text{RESTR PL.chief} & \text{PROS invite-TR-1PL.II} \\
\end{array}
\]

‘Which chiefs will we invite?’  

(326)  

\[
\begin{array}{lllll}
\text{naa}=\text{hl} & \text{k’ay ’mas-im gyat} & \text{an}=t & \text{gidax}=\text{hl} & \text{k’ay ’mas-im hanak’ dim} \\
\text{who}=\text{CN} & \text{still grow-ATTR man AX}=3.I & \text{ask}=\text{CN} & \text{still grow-ATTR woman PROS} \\
\text{miiluxw-dit dance-3PL.II} \\
\end{array}
\]

‘Which boys asked which girls to dance?’  

(327)  

A:  

\[
\begin{array}{lllll}
\text{naa}=\text{hl} & \text{tk’ihlxw-um hanak’ gidax} & \text{a}=\text{hl} & \text{tk’ihlxw-um gyet dim} \\
\text{who}=\text{CN} & \text{young-ATTR woman ask PREP=CN young-ATTR man PROS} \\
\text{sil-miiluxw-t with-dance-3.II} \\
\end{array}
\]

‘Which boys asked which girls to dance?’  

B:  

\[
\begin{array}{lllll}
\text{gidax} & \text{a}=\text{hl} & \text{Aidan}=t & \text{Maddy, k’ayaxa}=\text{s Luke}=t & \text{Katie dim miiluxw-t} \\
\text{ask PREP=CN Aidan=DM Maddy drag=PN Luke=DM Katie PROS dance-3.II} \\
\end{array}
\]

‘Aidan asked Maddy, Luke dragged Katie out to dance.’  

There are no multiple WH-questions in Gitksan. ‘Which x … which y’ constructions are expressed using a single WH-word quantifying over either subject or object, with the other argument represented by a plural DP, as shown in (326) and (327)A. These can receive pair-list answers, as shown in (327)B, but it is likely that these are just subcases of the set of interpretations independently available for a single WH-phrase interacting with a plural DP, as in English ‘Which boys asked the girls to dance?’ or ‘Which girls did the boys ask to dance?’  

For some speakers, the determinate marker *t* in (325)a-b is optionally retained before fronted *naa* ‘who’. Determinate *t* may also be present in (325)c-d; Forbes (2013) and Davis and Forbes (2015) argue that *dip* and *t* co-occur, but the co-occurrence is disguised by phonological reduction.

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^{62} For some speakers, the determinate marker *t* in (325)a-b is optionally retained before fronted *naa* ‘who’. Determinate *t* may also be present in (325)c-d; Forbes (2013) and Davis and Forbes (2015) argue that *dip* and *t* co-occur, but the co-occurrence is disguised by phonological reduction.
6 Quantifiers over events

In this section, we turn to quantification over events. As mentioned in the introduction, there is very limited overlap in Gitksan between entity and event quantification. In the morphology, derivational relations between the two domains are restricted to a single, somewhat marginal case (the derivation of ‘twice’ and ‘thrice’ from numeral roots: see Section 6.2.1).

In the syntax, D-type universal quantifiers (Section 4.4) and proportional quantifiers (Section 4.2.3) are limited to the domain of entities; conversely, none of the core A-type event quantifiers (Section 6.2) can quantify over entities. However, numerals in predicate position may be used as frequency quantifiers (Section 6.1), as can other non-universal entity-related quantifiers such as helt/hilt ‘many’, hlibuu ‘few’, and the ‘massifier’ t’is ‘big, a lot’ (Section 6.3).

It is also important to remember that stem-level plural marking can apply to both entities and events (see Section 3.2 above); further examples of event pluralization are given in (328)-(329):

(328)  

(329)  

In addition, the preverbal xhlii ‘all over’ can be used to convey event plurality.

(330)  

6.1 Numerical quantification over events

‘Once’ is often rendered by simply not having a pluralized verb:

(331)  

(332)  

For numerals higher than one, quantification over events is generally conveyed by cardinal numerals acting as main predicates, often in concert with (k’am ‘just, only’, with the event
quantified over being represented by a dependent subordinate clause (333)-(335); this is also possible with ‘one’, as shown in (336):

(333) (am)  
\begin{align*} 
gibil & \text{ na}='\text{naa-yaj-i}=\text{hl} \\
\text{(only) two} & \text{ 1SG.I=against.a.background-chop-T=CN tree} \\
& \text{‘I chopped a tree twice.’} 
\end{align*} 
(BS)

(334)  
\begin{align*} 
\text{gilbil} & \text{ yukw ma=t'is-i'y}=\text{is} \\
\text{two} & \text{ IPFV 2SG.I=punch-1SG.II=AFF} \\
& \text{‘You hit me twice.’} 
\end{align*} 
(PH)

(335)  
\begin{align*} 
am & \text{ gwila}'l=\text{hl yaj-aa-'y}=\text{hl lax anuhl} \\
\text{only three}=\text{CN hit-DETR-1SG.II}=\text{CN on drum} \\
& \text{‘I beat on the drum three times.’} 
\end{align*} 
(VG)

(336)  
\begin{align*} 
am & \text{ 'naa k'i'y}=t \text{ k'ots-diit}=\text{hl hun} \\
\text{only COMPL one}=3.1 \text{ cut-3PL.II}=\text{CN fish} \\
& \text{‘They cut the salmon only once.’} 
\end{align*} 
(BS)

6.1.1 Attributive numerals as frequency quantifiers

While the use of a numeral as a cardinality predicate seems to be the most common way for numerals to quantify over events, for some speakers, ‘twice’ can also be conveyed derivationally, using the root \(\sqrt{gilp}\) for ‘two’ followed by an attributive marker linking it to the verb of the event quantified over, as seen in (337). The result is a complex predicate (‘two-punch’) which acts as the main verb of an independent clause:

(337)  
\begin{align*} 
gilb-a & \text{ t'is-i-n 'nii'y} \\
two-\text{ATTR} & \text{ punch-TR-2SG.II 1SG.III} \\
& \text{‘You hit me twice!’} 
\end{align*} 
(TB)

HH can also use this construction for ‘thrice’, with the root \(\sqrt{gwire}'l\):

(338)  
\begin{align*} 
gwile'\text{l-a} & \text{ t'is-i-n 'nii'y gi} \\
three-\text{ATTR} & \text{ punch-TR-2SG.II 1SG.III DIST} \\
& \text{‘You hit me three times!’} 
\end{align*} 
(HH)

We have not yet recorded this construction with numerals greater than three; though our consultants reject it with higher numbers, it is possible that other speakers might allow it.

6.1.2 Rate phrases with numerals

The equivalents of English expressions such as ‘twice a day’ or ‘ten miles per day’ are constructed using numerals as frequency quantifiers, plus post-predicative temporal frame adverbials.
(328) **gilbil** yukw sa'-anaax=s Colin **k'i'y=hl** se
**two** IPFV CAUS-bread=PN Colin **one=CN** day
‘Colin bakes bread twice a day.’ (VG)

(331) **ky'ap=hl** miles bax=s *Terry Fox** **k'i'y=hl** sa
**ten=CN** miles **run=PN** *Terry Fox** **one=CN** day
‘Terry Fox ran ten miles a day.’ (VG)

‘Once’ as in ‘once a week’ is usually rendered implicitly, without an overt numeral:

(330) txoo'o 'nii'y *mahla k'i'y=hl* ganuutxw
get.paid 1SG.III **each one=CN** week
‘I get paid once a week.’ (literally: ‘I get paid every week.’) (VG)

Attributive numerals (see 6.1.1 above) are possible in this construction, as can be seen in (327)b, which the consultant suggested as an alternative way of expressing (327)a.63

(329) a. **gilbil** win ha'w-i'y a=hl **k'i'y=hl** k'uuhl
**two** COMP go.home-1SG.II **PREP=CN** one=CN year
‘I go home twice a year.’ (VG)

b. **gilb-a** *gasxw=hl* ha'w-i'y **k'i'y=hl** k'uuhl
**two-ATTR** amount=CN go.home-1SG.II **one=CN** year
‘I go home twice a year.’ (VG)

6.2 Non-numerical frequency quantifiers over events

We have investigated non-numeral quantifiers over events in less depth than those over entities, so our results here are more tentative. Our investigation has uncovered the following core forms:

<table>
<thead>
<tr>
<th>QUANTIFIER</th>
<th>GLOSS</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>gasxw</em></td>
<td>‘occasionally’</td>
</tr>
<tr>
<td><em>k'uxw</em></td>
<td>‘usually, habitually’</td>
</tr>
<tr>
<td><em>edigwil</em> / <em>egwili</em> / <em>adagwil</em></td>
<td>‘always, often’</td>
</tr>
<tr>
<td><em>gan(i) (wi)la</em></td>
<td>‘always, a lot, sometimes’</td>
</tr>
</tbody>
</table>

63 The measure noun *gasxw* has not been recorded elsewhere; however, it is clearly related to *gabi* ‘count amount’ and *gasgoo* ‘mass amount’, which both likely contain the ‘distributive’ pluralizer *ga-* (though it is effect is not necessarily distributive in these derivations). We gloss it here simply as ‘number’.
In terms of distribution, frequency quantifiers appear in pre-predicative position, but do not generally induce dependent morphology, which suggests they are adverbs rather than complement-taking predicates.

(339) a. **gaxba** yee 'nii'y go'o=hl ensiwilaksa
    occasionally walk 1SG.III LOC=CN school
    ‘I sometimes walk to school.’ (VG)

b. * yee 'nii'y go'o=hl ensiwilaksa **gaxba**
    walk 1SG.III LOC=CN school occasionally
    ‘I sometimes walk to school.’ (VG)

c. * yee 'nii'y **gaxba** go'o=hl ensiwilaksa
    walk 1SG.III occasionally LOC=CN school
    ‘I sometimes walk to school.’ (VG)

Where a subordinate clause is fronted, as in conditional constructions, the frequency quantifier precedes the non-initial main clause, rather than the initial subordinate clause (the initial clause here is the protasis, in dependent mode; the second clause is the apodosis, in independent mode).

(340) nde win gwelgwax-a'y, **edigwil** aks-i'-y dii
    WH.SPT COMP thirsty-1SG.II always drink-TR-1SG.II tea
    ‘Whenever I’m thirsty, I always drink tea.’ (VG)

(341) nde win maadim, **edigwil** jab-i-'m=hl gyed-im maaxws
    WH.SPT COMP falling.snow always make-TR-1PL.II=CN man-ATTR snow
    ‘When it snows, we always build a snowman.’ (VG)

Semantically, event-related quantifiers differ from those over entities in the range of meanings that they permit. In particular, unlike entity-related quantifiers, their semantics is often vague: for example, the words for ‘always’ can also mean ‘often’ or even ‘sometimes’, depending partially but not entirely on which speakers are consulted.

Since the precise range of frequency allowed by each of these quantifiers is vague, it is difficult to prove whether proportional readings are available. VG, a speaker of a Western dialect, uses **gaxba** to convey a range of meanings from ‘rarely’ to ‘sometimes’, as shown in (342)-(343).

(342) **gaxba** hooy-i-'y=hl anooya go'o=hl ensiwilaksa
    occasionally use-TR-1SG.II=CN tool LOC=CN school
    ‘I rarely drive to school.’ (Gitksan volunteered as translation of English) (VG)

(343) **gaxba** yee 'nii'y go'o=hl ensiwilaksa
    occasionally walk 1SG.III LOC=CN school
    ‘I sometimes walk to school.’ (Gitksan volunteered as translation of English) (VG)

*Accepted context: I walk every Monday; Tuesday to Friday I get the bus.*
Accepted context: I walk every Monday and Tuesday; Wednesday to Friday I get the bus.
Rejected context: I walk every Monday - Wednesday; Thursday and Friday I get the bus.
Accepted context: I walk one week a month.
Rejected context: I walk two weeks a month.
Rejected context: I walk to school every day.

BS, who speaks an Eastern dialect, lacks gasba and instead uses a negated form of gan wilal ‘always’ to express similar meanings. The frequency range is wider for this construction:

(344) nee=dii gan wilal ap yee-’y goo=hl wilp ansuwilaak’insxw
     NEG=FOC always VERUM walk-1SG.II LOC=CN house learning
     ‘I don’t always walk to school.’
     (BS)

Accepted context: I walk every Monday; Tuesday to Friday I get the bus.
Accepted context: I walk every Monday - Wednesday; Thursday and Friday I get the bus.
Rejected context: I walk to school every day.
Consultant’s comment: “It just means ‘I don’t always’. It doesn’t say how many days.”

VG generally uses edigwil to convey event quantification over a greater frequency and offers English translations of ‘constantly, every time, always’ for this lexical item. This form and egwilii, an alternate pronunciation used by another Western dialect speaker, HH, are illustrated in examples (345) and (346) respectively:

(345) edigwil gyuks-xw 'nii'y e=hl dipk'o'olt
     always wake.up-INTR 1SG.III PREP=CN seven
     ‘I always wake up at seven.’
     (VG)

(346) egwilii guxw64 hlook 'nii'y
     always wake.up early 1SG.III
     ‘I always wake up early.’
     (HH)

A speaker of the Eastern dialect (BS) has the form adagwil but uses it in limited contexts, such as to convey a continuous stative aspect, as illustrated in (347):

(347) adagwil maadim
     always winter
     ‘forever winter.’
     (BS)

This speaker prefers to use gan wilal to convey frequency quantification over events, as in (348)-(349). Another Eastern dialect speaker (LW) uses the shortened form gan la in (349). Example

64 HH uses guxw for ‘wake up’ (homophonous with the verb ‘to shoot’), in contrast to our other consultants, who use the expected form gyuksxw.

65 Conversely, VG primarily uses edigwil for frequency quantification over events, and gani wilal to convey a continuous state interpretation, as in the example below:

(i) gani wilal nee=dii=n hoox anooya=go'o=hl ensiwilaksa
(349) shows that this element does not always convey universal quantification over events.

(348) **gan wila** hlook 'nii'y a=hl hiihluxw
always early 1SG.III PREP=CN morning
‘I always wake up early in the morning.’ (BS)

**gan wila**=n aks=hl aks hinda wil gwalgwag-a'y
always=1SG.I drink=CN water WH.SPT COMP thirsty-1SG.II
‘I always drink water when I’m thirsty.’ (BS)

(349) **gan la** yee 'nii'y Smithers ii hoo=dii yee'-y Terrace=hl luu k'i'y-t
always go 1SG.III Smithers CL.CNJ also=FOC go-1SG.II Terrace=CN in one-3.II
‘I often go to Smithers, but sometimes I go to Terrace.’ (LW)

The element *k'uxw* is used to convey the meaning ‘usually’, as shown in (350)-(351):

(350) **k'uxw** x-maa'y 'nii'y e=hl hiihluxw
HAB exper-berry 1SG.III PREP=CN morning
‘Sometimes/usually I eat berries in the morning.’ (HH)

(351) **k'uxw** hlook 'nii'y a=hl hiihluxw
HAB early 1SG.III PREP=CN morning
‘I usually wake up early in the morning.’ (BS)

However, the following data support an interpretation of *k'uxw* as a marker of habitual aspect, rather than as a frequency quantifier. The contexts in which example (352) is acceptable demonstrate that this element has a wide range of frequency which includes ‘always’:

(352) **k'uxw** gub-i'-y=hl maa'y e=hl hiihluxw
HAB eat-TR-1SG.II=CN berry PREP=CN morning
‘I usually/sometimes eat berries in the morning.’ (VG)

Accepted context: *I eat berries every morning.*
Accepted context: *I eat berries Monday to Friday. Saturday and Sunday I eat something*

---

**always** NEG=FOC=1SG.I use tool LOC=CN school
‘I continue not to drive to school.’ (VG)

However, as illustrated in (ii) and (iii), alternate orderings of negation and the event quantifier yield different interpretations, suggesting that word order reflects the scope of these elements.

(ii) **gani wila** nii=dií hadiks'-y e=hl maadim
always NEG=FOC swim-1SG.II PREP=CN winter
‘I still don’t go swimming in winter.’ (VG)

(iii) **nee=dií gani wila** hadiks'-y e=hl maadim
NEG=FOC always swim-1SG.II PREP=CN winter
‘I still don’t go swimming in winter/I sometimes don’t swim in winter.’ (VG)

In this example, **gan wila** unexpectedly induces dependent morphology.
else.

Accepted context: I eat berries Monday to Wednesday. Thursday to Sunday I eat something else.

Accepted context: I eat berries on Monday and Tuesday. Wednesday to Sunday I eat something else.

Rejected context: I eat berries just on Monday. Consultant’s comment: “No, that’s when you use gaxba [‘occasionally’].”

K’uxw also occurs commonly with generic interpretations, as shown in (353). This reading is discussed further in section 6.5.

(353)  
\begin{verbatim}
  k’uxw hlaks-i=hl duus=hl es~us
  HAB scratch-TR=CN cat=CN PL~dog

  ‘Cats scratch dogs.’
\end{verbatim} 

When k’uxw is negated we receive the interpretation ‘never’ rather than ‘not usually’:

(354)  
\begin{verbatim}
  nee=dii k’uxw gina wog-o’y
  NEG=FOC HAB behind sleep-1SG.II

  ‘I never sleep in.’
\end{verbatim} 

There is no lexical item in Gitksan corresponding to ‘never’; instead, clausal negation is used, as further shown in (355)-(357). To emphasize the lack of occurrence, the elements ap/ k’ap ‘verum’ and/or luk’wil ‘very, really’ can be added:

(355)  
\begin{verbatim}
  nee=dii=n hoox anooya go’o=hl ensiwilaksa
  NEG=FOC=1SG.I use tool LOC=CN school

  ‘I never drive to school/ I don’t drive to school.’
\end{verbatim} 

(356)  
\begin{verbatim}
  luk’wil nee=dii=n hoox anooya go’o=hl ensiwilaksa
  very NEG=FOC=1SG.I use tool LOC=CN school

  ‘I never drive to school.’
\end{verbatim} 

(357)  
\begin{verbatim}
  k’ap nee=dii=n hoox=hl anooya go’o=hl ensiwilaksa
  VERUM NEG=FOC=1SG.I use=CN tool LOC=CN school

  ‘I never drive to school.’
\end{verbatim} 

The following table illustrates the frequency distribution of the various event quantifiers in one speaker (VG)’s dialect. The frame sentence is glossed in (358); judgments in the table are for this sentence with the relevant quantifiers substituted in.

(358)  
\begin{verbatim}
  edigwil t’aaahl maa’y ’nii’y e=hl gwooyim
  always pick berry 1SG.III PREP=CN spring

  ‘I always pick berries in spring.’
\end{verbatim} 

Table 11: Frequency range of event quantifiers for VG
6.3 Event quantification by entity-related quantifiers

While for the most part, there is no overlap between quantification over individuals and quantification over events in Gitksan, *helt* ‘many’ and *hlibuu* ‘few’ can sometimes function as event quantifiers. As with numerals (Section 6.1), when they do so, they occupy predicate position, with the quantified event represented by a dependent clause.

(359)  
\[
\text{helt na=gya'a wil } \text{gas-gats}=\text{hl ihlee'a}
\]
many 1SG.I=see(TR) COMP PL~drop=CN blood
‘I saw blood many times.’  \hfill (BS)

(360)  
\[
\text{am hlebuu na=gya'a wil } \text{gas-gats} \text{ ihlee'a}
\]
only few 1SG.I=see(TR) COMP PL~drop blood
‘I only saw blood a few times.’  \hfill (BS)

The mass domain equivalent of *helt* ‘many’, the adjective *t'is* ‘big, a lot’ (Section 4.2.2), can also be used as a frequency quantifier, meaning ‘often, a lot’. Like *helt*, it introduces a dependent clause, as illustrated in (361)-(362).\(^67\)

(361)  
\[
\text{t'is bah-a'y}
\]
big run-1SG.II
‘I go jogging a lot.’  \hfill (BS, HH, VG)

(362)  
\[
\text{t'is hloog-a'y a=hl hiihluxw}
\]
big early-1SG.II PREP=CN morning
‘I am up early a lot/I am often up early.’  \hfill (BS)

6.4 Complex quantifiers over events and Boolean compounds

Complex event quantifiers are rarely used in Gitksan: they are generally replaced by clausal paraphrases. Here we give a selection of relevant cases rather than a comprehensive survey.

\(^67\) The mass domain equivalent of *hlibuu* ‘few’, *ts'uus(xw)* ‘(a) little’, is either marginal or ungrammatical when used as a frequency quantifier: speakers typically comment that it is “awkward” or “gets the meaning across, but …”.
When used as an event quantifier, \textit{t'is} ‘big, much’ (6.3) can be modified by \textit{gal} ‘too’, in much the same way as in the entity domain (see Section 4.1.4):

\begin{verbatim}
(363) \textit{gal} t'is bah-a'y
too big run\textsuperscript{-1SG.II}
'I go running too much.'
\end{verbatim}

‘Almost never’ is approximately conveyed using a negated form of \textit{edigwil} ‘always’, as seen in example (364), or by a negated form of ‘almost’ (365):

\begin{verbatim}
(364) n\textsuperscript{ee}=di\textsuperscript{i}=n \textit{edigwil} hoox bus go'o=hl ensiwlaksa
\text{NEG}=\text{FOC}=\text{1SG.I} \text{always} use bus \text{LOC}=\text{CN} school
'I almost never take the bus to school.'
\end{verbatim}

\begin{verbatim}
(365) k'ap \text{maaje} n\textsuperscript{ee}=di\textsuperscript{i} k'u=xw gina wok=s Katie
\text{VERUM} \text{almost} \text{NEG}=\text{FOC} \text{HAB} behind sleep=\text{PN} Katie
'Katie almost never sleeps too late.'
\end{verbatim}

Though consultants were usually able to produce phrases equivalent to complex event quantifiers in English, they often remarked on their unnaturalness, such as in example (366) where a translation of ‘only occasionally’ is provided.

\begin{verbatim}
(366) a\text{m} suwi k'i'=y=hl na=hoox=hl 'wii jix-ts'ik
\text{only} \text{away} \text{one}=\text{CN} 1\text{SG.II}=\text{use}=\text{CN} big vehicle
'I only occasionally take the bus to school.'
\end{verbatim}

\textit{Consultant's comment:} “That would be very extravagant!”

There is no natural expression for ‘two by two’ or ‘in twos’ in Gitksan. This is evident from examples (367)-(369) below, based on the variability of the constructions employed by different speakers and the speakers’ comments on/glosses of these constructions:

\begin{verbatim}
(367) \text{Context: Explaining what happened at school when the kids were supposed to line up.}
mahla sim bagadil 'nidiit a=hl sil-im saks-diit
\text{each} \text{with+ATTR} \text{two.HUM} \text{3PL.III} \text{PREP}=\text{CN} \text{with-ATTR} \text{PL.leave-3PL.II}
'The kids lined up two by two / in twos.'
\text{Consultant's comment:} “There were two of them at a time as they went in.”
\end{verbatim}

\begin{verbatim}
(368) na sa-di~dok=hl tk'ihlxw ii hlo'o-diit
\text{RECP CAUS1-PL-}\text{hold}=\text{CN} \text{young CL.CNJ PL.go-3PL.II}
'The kids lined up two by two / in twos.'
\text{Consultant's comment:} “They walked together holding hands.”
\end{verbatim}

\begin{verbatim}
(369) bagadil win hogon-litxw tk'ihlxw-um haanak' ii 'wii='nakw litxw
\text{two.HUM COMP against-stand} \text{young-ATTR} \text{PL.woman CL.CNJ} \text{big}=\text{long} \text{stand}
'The girls lined up in twos.'
\end{verbatim}
Boolean compounds such as ‘usually but not always’ and ‘x and y except for z’ do not exist and are instead conveyed using constructions involving clausal conjunction:

(370) \[ \text{k'u}xw \text{ t'aahl[=}hl \ maa'y Maddy ii nee=di} \text{i edigmil t'aahl-xw-t} \]
\[ \text{HAB pick[=}CN \ berry Maddy CL.CNJ NEG=FOC always pick-INTR-3.II} \]

‘Maddy usually but not always picks berries.’ (Literally: “Maddy usually picks berries, but she doesn’t always pick them.”) (VG)

(371) \[ \text{gubi=s Maddy smex gan=}hl \ hun ii k'ap nee=di} \text{i=t gup=}hl \text{milit eat=}PN \text{Maddy meat PH.CNJ=CN fish CL.CNJ VERUM NEG=FOC=3.I eat=}CN \text{steelhead} \]

‘Maddy eats meat and fish except for steelhead.’ (Literally: Maddy eats meat and fish, but she doesn’t eat steelhead.’) (VG)

6.5 Generics

There is no dedicated generic construction in Gitksan. Sometimes speakers will simply use ordinary predications to translate English generics, with or without plural arguments:

(372) Context: You are teaching a very young child about dogs and what they do. You are teaching the child facts about dogs such as ‘dogs are mammals’, ‘dogs have fur’, ‘dogs chase cats’, etc.

a. \[ \text{k'ee} \text{gan=}hl \text{ has=}us=hl \text{ duus chase=}CN \text{ PL=}dog=CN \text{ cat} \]

‘Dogs chase cats.’ (BS)

b. \[ \text{k'ee} \text{gan=}hl \text{ us=}hl \text{ duus chase=}CN \text{ dog=}CN \text{ cat} \]

‘Dogs chase cats.’ (BS)

In order to differentiate generics from ordinary eventive sentences, some speakers employ the habitual marker \( \text{k'u}xw \) (see Section 6.2 above).

(373) \[ \text{k'ap k'u}xw \text{ iilen-e=}hl \text{ es=}us=hl \text{ duus VERUM HAB chase-TR=}CN \text{ PL-dog=}CN \text{ cat} \]

‘Dogs chase cats.’ (VG)

Consultant comment: “Means it’s in your DNA.”

(374) \[ \text{k'u}xw \text{ hlaks-i=}hl \text{ duus=}hl \text{ es=}us \text{ HAB claw-TR=}CN \text{ cat=}CN \text{ PL-dog} \]

‘Cats scratch dogs.’ (VG)

Another strategy to convey the sense of English generics is to employ overt universals, including both entity and event related quantifiers, as in (375) and (376), respectively.
(375)  
\[ \text{gwalk}'a \quad '\text{n}i(t)=\text{hl} \quad \text{es}=-\text{us} \quad \text{en}=\text{t} \quad \text{iilen}-\text{e}=\text{hl} \quad \text{duus} \]
\[ \text{all} \quad 3\text{sg}..\text{III}=\text{CN} \quad \text{pl}=-\text{dog} \quad \text{Ax}=3.1 \quad \text{chase}-\text{TR}=\text{CN} \quad \text{cat} \]

‘All dogs chase cats.’

(376)  
\[ \text{edigwil} \quad \text{iilen}-\text{e}=\text{hl} \quad \text{es}=-\text{us}=\text{hl} \quad \text{duus} \]
\[ \text{always} \quad \text{chase}-\text{TR}=\text{CN} \quad \text{pl}=-\text{dog}=\text{CN} \quad \text{cat} \]

‘Dogs always chase cats.’

However, ‘event-generics’ (sometimes called ‘classificatory sentences’) and ‘entity-generics’ are not quite semantically equivalent: an event-generic sentence like (376) is judged true even if every dog only sometimes chases cats, whereas an entity-generic sentence like (375) is judged false if only some dogs always chase cats. This shows that the universal quantifier over events edigwil can be interpreted non-maximally in generics, whereas the universal quantifier over entities gwalk’a (’ni(t)’ cannot, in line with the generally ‘vaguer’ semantics of event-related compared to entity-related quantifiers: see Table 11 in Section 6.2 above.

Finally, note that a generic interpretation with event-related quantifiers is allowed with singular as well as plural nominals, as shown in (377)a,b below, which differ with respect to number marking on the subject:

(377)  
\[ \text{a. gan wila} \quad '\text{wihl} \quad \text{dax-ygw-id}-\text{i}=\text{hl} \quad \text{ga}-\text{siilinas-xw-it}=\text{hl} \quad \text{kabaluu} \]
\[ \text{always} \quad \text{around} \quad \text{firmly-hold}-\text{TR}=\text{CN} \quad \text{pl}-\text{hunt-PASS}-\text{SX}=\text{CN} \quad \text{gun} \]

‘A hunter always carries a gun.’

\[ \text{b. mooja}=\text{t} \quad \text{gan wila} \quad '\text{wihl} \quad \text{yugw}-\text{i}=\text{hl} \quad \text{siilinas-xw-it}=\text{hl} \quad \text{kabaluu} \]
\[ \text{almost}=3.1 \quad \text{always} \quad \text{around} \quad \text{hold}-\text{T}=\text{CN} \quad \text{hunt-PASS}-\text{SX}=\text{CN} \quad \text{gun} \]

‘A hunter usually carries a gun.’

7 Conclusion

This paper comprises the first comprehensive examination of quantification in Gitksan – or in any Tsimshianic language. As such, it adds to the growing literature on the cross-linguistic expression of quantification in natural language, and more particularly, on the languages of the Pacific Northwest region of North America, which have been at the center of a lively debate on quantification ever since Jelinek (1995) made her famous claim that Northern Straits Salish (spoken well to the south of Tsimshian territory, in southwestern coastal British Columbia and neighbouring Washington State) completely lacked D-type quantifiers.

Interestingly, the quantificational landscape of Gitksan as surveyed here looks rather different from that of Salish. In particular, the existence of scope effects between quantified arguments contrasts with their absence in some and possibly all Salish languages (see Matthewson 2001, Davis 2010, 2013), and suggests that at least part of the Gitksan quantification system involves conventional generalized quantifiers, unlike that of Salish.

\[ {^68} \text{The (a) and (b) examples here also differ in pronominal marking: (a) is in the independent mode, while (b) is in the dependent mode, induced by mooja.} \]
However, there are also points of similarity between Gitksan and Salish which set them apart from Standard Average European systems. The most obvious is the absence of quantificational determiners: Gitksan determiners, like those of Salish languages (Matthewson 1998, 1999, 2001, Gillon 2006/2013, Lyon 2013) primarily contribute a domain-restricting function, and there are no direct equivalents of English determiners like ‘no’, ‘some’ or ‘every’. Several other related parallels can be observed: one is the use of non-universals like ‘many’ and ‘few’ as either predicates (with cardinality readings) or argument modifiers (with proportional readings); another is the use of indefinites/indeterminates in the scope of higher operators for existential constructions, including negatives and interrogatives. And finally, the notably ‘vague’ nature of event-related quantification in Gitksan also has parallels in Salish, where words for ‘always’, for example, also mean ‘often’.

Needless to say, many questions remain open. But we at least hope to have laid the foundations for more detailed and targeted investigation of many quantificational phenomena in Gitksan – and Tsimshianic more generally – which have remained undescribed until now.

References


Forbes, Clarissa 2013. Coordination and Number in the Gitksan Nominal Domain. MA forum paper, University of Toronto.


Huettner, Alison 1984. Semantics seminar paper on few and many. MS., University of Massachusetts, Amherst.


**Appendix I: Conversion chart from the Hindle and Rigsby practical orthography to the APA (Americanist Phonetic Alphabet)**

The Hindle-Rigsby orthography (Hindle and Rigsby 1973) is broadly phonetic rather than phonemic: it distinguishes voiced and voiceless stops, for example, which are non-contrastive in IT (the voiced allophones occur before vowels). Likewise, schwa is realized as i, a, u and sometimes o, depending on its consonantal environment. See Rigsby (1986:122-132) for exposition.
### Appendix II: Pronominal paradigms

**SERIES I (PREVERBAL CLITICS)**

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<thead>
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</table>

*The position of Series I clitics relative to preverbal elements is complex: sometimes they act as proclitics and at other times as enclitics. See Rigsby (1986:279).*

**SERIES II (SUFFIXES)**

<table>
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<td>-si'm</td>
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### SERIES III (INDEPENDENT PRONOUNS)

<table>
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<tbody>
<tr>
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