10.
Number, names, and animacy:
Nominal classes and plural interactions in Gitksan

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10.1   Introduction

This paper presents three types of nominal classification in Gitksan (Gitxsanim<u>x</u>, Gitxsenim<u>x</u>, Gyaanim<u>x</u>), a Tsimshianic language of the northern British Columbia interior. As this paper will show, Gitksan exhibits at least three distinct noun class contrasts in three distinct structural layers; I discuss individuation, animacy, and determinacy (proper/common). The major morphosyntactic cue that I use to investigate such nominal classification is *number*. The three types of classification are presented alongside three distinct morphological patterns of plurality: additive, pronominal, and associative plurals, respectively. Fundamentally, I examine these contrasts as pairs: a noun class contrast in correspondence with a type of plurality sensitive to that contrast.

Following Déchaine (this volume), this work sets out to identify the structural *locus* of noun class contrasts, and applies this idea further by identifying the locus of number as well. I show that these classification and plurality pairs can be represented as differing structurally: I locate each in a distinct functional projection in the nominal domain. Mass/count and *additive* plurality are located in a nominal AspP; semantic animacy and *pronominal* plurality are located in φP; determinacy and *associative* plurality are located in DP. The correspondences are summarized in Table 1. This paper demonstrates how the nature of the different nominal class contrasts, alongside the different behaviors of their associated types of plurality, provides insight into the articulated projections that make up the Gitksan nominal spine. As in Acquaviva (this volume), I take the different types of noun classes in the functional structure built upon a root as contributing to the interpretation of the noun as a whole.

Table 1: Summary of classification and plurality in the nominal structure

N. Classification	Plural	Phrase	Grammatical Association
Mass/Count	additive	nAsp	individuation
In/Animate	pronominal	φ	agreement reflex
Common/Determ.	associative	D	name, uniqueness

The paper is organized as follows: section 10.2 provides a basic introduction to Gitksan syntax, useful for readers who wish to follow the examples in detail. In section 10.3, I discuss the mass/count distinction and its relation to general, or additive, plurality. I identify the locus of this classification-and-number pair as a nominal inner Aspect Phrase (Wiltschko 2012). In section 10.4, I turn my eye to a higher point in the nominal domain: the position of the determinacy contrast. I discuss how this contrast is morphologically encoded, and the way that it conditions the availability of associative plural marking. I discuss the semantic interpretation of this plural

and how it is distinct from the previously mentioned additive plurality; further, I argue that that the paired set of determinate noun classification and associative plurality are located at the level of D. Finally, in section 10.5, I discuss semantic ANIMACY, which conditions the availability of plurality in pronouns and agreement. I suggest that pronominal features and this third type of classification are located in a third distinct functional projection, φP. Section 10.6 concludes.

10.2   The basics of Gitksan morphosyntax

Gitksan is spoken in the Northern Interior region of British Columbia. The language has 348 remaining speakers (FPCC 2015), and is spoken across six villages.[1] This section serves as a brief overview of Gitksan agreement and morphology so as to aid the reader in following subsequent examples.

Gitksan is predicate-initial, exhibiting a rigid VSO order. Auxiliaries, when present, precede the predicate but do not otherwise affect constituent order. Focused elements are fronted.[2] Verbs, nouns, and adjectives may all serve as the sentential predicate with the same syntax; there is no overt copula. The language is head-marking and does not have overt case distinctions (Davis and Forbes 2015; although see earlier work such as Hunt 1993 for an alternate analysis).

The agreement system is fundamentally ergative. Notably, however, the paradigms used to realize this alignment vary based on two syntactic splits which do not affect ergative alignment. The paradigms themselves are given in Table 2.

Table 2: Gitksan pronoun and agreement paradigms

	Pre-pred clitics (I)		Suffixes (II)		Independent (III)	
	SG	PL	SG	PL	SG	PL
1	n	(n) dip	-'y	-'m	'nii'y	'nuu'm
2	m	m...sim	-n	-si'm	'niin	'nisi'm
3		t	-t	-diit	'nit	'nidiit

I analyze the clitics (series I) and suffixes (series II) as agreement, and the independent personal pronouns (series III) as true pronouns. The pre-theoretical names given here (I, II, and III, following Rigsby 1986) refer to the order that these morphemes appear in relation to the VSO sentential template: Series I clitics precede the predicate, attaching to pre-predicate auxiliaries and operators; Series II suffixes attach to the predicate itself; and Series III full pronouns surface following the predicate, in the position that a DP argument would otherwise appear.

(1)   Aux=|I| Predicate-|II| Subject.|DP/III| Object.|DP/III|

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[1]The data in this paper is collected from individuals from three of these villages, spanning the territory: Ansbayaxw, Gijigyukwhla, and Git-anyaw. The name of the language differs across villages (*Gitxsanimx̲, Gitxsenimx̲, Gyaanimx̲*), so this paper adopts 'Gitksan', historically reconstructed and synchronically neutral, to refer to the language across dialects.

[2]See Davis and Brown (2011) and Forbes (to appear) for details on A-bar extraction patterns and morphology.

The pronominal morphology that surfaces in a given sentence is dependent on the *clause type* of that sentence. Gitksan exhibits a split in this regard: loosely, predicate-initial sentences (*independent* clauses) utilize different syntax than those which are introduced by an auxiliary or operator (*dependent* clauses; terminology from Rigsby 1986). The set of dependent clause triggers include negation, aspect marking, irrealis, subordination by a complementizer or coordinator, and the imperative mood. Both independent and dependent clauses have a basic ergative/absolutive alignment, but the paradigms that realize this alignment undergo *agreement switch* across the split. Series II suffixes, in particular, serve as the pivot of this switch by entirely changing their function: they mark ergatives in independent clauses (2a), but absolutives in dependent clauses (2b).[3] Dependent clauses with a third-plural or DP ergative argument are anomalous; Series I and II jointly mark the ergative, and an object must be spelled out as a Series III full pronoun (2c) (Hunt 1993; Forbes 2017).

(2)   a.   Yaji'y   'nit.
           yats-ə-'y   'nit.
           hit-TR-1SG.II 3.III
           'I hit him.'[4]
      b.   Neediin   yatst.
           nee=dii=n   yats-t.
           NEG=FOC=1.I hit-3.II
           'I didn't hit him.'
      c.   Neediit   yatsdiit   'nit.
           nee=dii=t   yats-diit 'nit.
           NEG=FOC=3.I hit-3PL.II 3.III
           'They didn't hit him/her.'   (BS)

Oblique arguments are always introduced following the VSO template, introduced by the oblique *a-* or the locative <u>goo-</u>. The distribution of core argument marking is summarized in Table 3.

Table 3: Argument marking morphology across clause types

	Independent	Dependent	Dependent (with DP/3PL A)
A	II	I	I + II
S	III	II	-
O	III	II	III

   The morphological structure of the predicate itself may be anywhere from bare to relatively

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[3] These suffixes are sometimes not visible on the surface, particularly when followed by a DP. I reconstruct this agreement in the second gloss line, following e.g. Tarpent (1987) and (Hunt 1993).

[4] Examples are from my own fieldwork or the collective fieldwork of the UBC Gitksan Research Lab except where otherwise cited. *'Wii t'isim ha'miiyaa 'nii'y as* my generous and helpful language teachers Barbara Sennott, Vince Gogag, Hector Hill, Louise Wilson, Rena Benson, PH, and many others. Consultants are attributed by their initials in the examples to follow.

complex. Morphology on a predicate is generally structured as presented in (3).

(3)   Advb Deriv-(Advb)-Pl-**Pred**-Voice-Trans-Agr.II

The predicate may be introduced with some number of adverbials, sometimes called proclitics in the Tsimshianic literature, which vary in character from straightforwardly compositional to opaque (similar to English particle verbs, e.g. *tell off*). These appear outside of, or sometimes inside of, apparent derivational prefixes such as nominalizers, verbalizers, and applicatives. Closest to the predicate is pluralizing morphology, including prefixes and reduplication. These pluralizers have a number of functions including iterativity, durativity, and agreement with a plural argument (discussed further in section 10.3.2). After the predicate is voice and valency-related morphology such as passive and antipassive marking. Such morphology is sometimes syntactically active, but in other cases seems to be frozen. Following this are morphemes which are clearly syntactically active: a morpheme which marks transitive predicates in independent clauses, and the Series II suffixes, where relevant.

The internal structure of nominals is largely parallel: Series II marking in a nominal indicates a possessor. With respect to the larger DP structure, nominals are introduced to the clause by enclitic determiners, known as *connectives*. These appear on almost all nouns[5] and are semantically light; they only seem to encode the common/determinate contrast (the subject of section 10.4). Nouns can also be preceded by additional plural marking (section 10.4.2) and followed by demonstratives.

(4)   =Det D.Pl **Noun** Dem

With this background, the next section begins our exploration into types of nominal classification and plurality in Gitksan.

10.3   Classification in AspP: the mass/count contrast

Bicevskis et al. (2017) investigate quantification and plurality in Gitksan, identifying a mass/count distinction that interacts with classification and plurality in a manner similar to English. This section considers this type of nominal classification in relation to plurality, and then analyzes each in relation to the nominal structure. In section 10.3.1 I present Bicevskis et al.'s (2017) evidence for the mass/count contrast and its interaction with plurality. Section 10.3.2 more closely examines the morphology and interpretation of this plurality, and then section 10.3.3 provides a syntactic analysis of the two, locating them both in a nominal inner Aspect phrase (Wiltschko 2012).

10.3.1   Mass/count in Gitksan

Bicevskis et al.'s (2017) study of quantification identifies a mass/count contrast in Gitksan. The authors demonstrate that Gitksan mass nouns require measure phrases in order to be counted, as in (5) with the mass noun *maaxws* 'snow'.

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[5]Exceptions include pronouns in core (not oblique) argument positions, and sometimes nouns with a prenominal modifier ('prenouns' or adnominals as parallel to the above-described class of adverbials). Connectives, which consist only of a single consonant (*t, s,* or *hl*) may also be dropped in fast speech, particularly before common nouns.

(5) a. Gya'a'yhl   gilbil 'naa maaxws lax̱ sg̱a'nist.
         gya'a-ə-'y   =hl gilbil **'naa maaxws** lax̱ sg̱a'nist
         see-TR-1SG.II =CN two   patch snow   on mountain
         'I saw two patches of snow on the mountain.'
     b. *gya'a-ə-'y   =hl gilbil **maaxws** lax̱ sg̱a'nist
         see-TR-1SG.II =CN two   snow   on mountain

<div align="right">(Bicevskis et al. 2017)</div>

Unclassified mass nouns cannot be counted. This is demonstrated in (6) with the ambiguous noun *smax*, which may have either the mass interpretation 'meat' or the count interpretation 'bear'. The mass interpretation that 'the speaker eats meat' is only possible where a measure phrase is used (6a); otherwise only the absurd count interpretation 'the speaker eats bears' is possible (6b).

(6) a. Gilbilhl   gasḵ'ojasxw   smax   gubi'y.
         gilbil   =hl **ḵ'əts~ḵ'ots-asxw smax**   gup-i-'y
         two   =CN PL~cut-ANTIP   bear/meat eat-TR-1SG.II
         'I ate two pieces ('cuts') of meat.'[6]
     b. Gilbilhl   smax   gubi'y.
         gilbil   =hl **smax**   gup-i-'y
         two   =CN bear/meat eat-TR-1SG.II
         'I ate two bears. (!!)'   (Bicevskis et al. 2017)

Most mass nouns lack distinct plural forms, though there are a few exceptions (Bicevskis et al. 2017). These plural forms largely appear when the mass noun is performing a different function, such as adjectival concord. In (7), the mass noun *maaxws* 'snow' is contained in the pluralized adjective *mismaaxwsxw* 'white (PL)', which modifies an argument (*ts'uuts'* 'bird') and indicates that multiple birds are being described.

(7) mismaaxwsxwm   ts'uuts
     məs~maaxws-xw-m ts'uuts'
     PL~snow-PASS-ATTR   bird
     'white birds'   (BS)

The existence of mass-plurals seems to be highly restricted, perhaps due to the generally-observed incompatibility of mass semantics with countability. However, Bicevskis et al. (2017) also present an interesting exception where plural marking and a measure phrase obligatorily co-occur on a mass noun:

(8) Gya'a'yhl   'naa mismaaxws   lax̱ gilbilthl   sg̱a'nist.
     gya'a-ə-'y   =hl *('naa) **məs~maaxws** lax̱ gilbil-it =hl sg̱a'nist
     see-TR-1SG.II =CN   patch PL~snow   on two-sx   =CN mountain
     'I saw patches of snow on two mountains.'   (Bicevskis et al. 2017)

Under prominent theories of individuation and classification, under which classifying elements

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[6]Tildes (~) are used in this paper to mark instances of reduplication, following the Leipzig convention (Max Planck Institute and University of Leipzig 2008).

and pluralizers are expected not to co-occur in a DP due to their occupancy of the same syntactic phrase (e.g. Ghomeshi 2003; Borer 2005), the example in (8) is perhaps unexpected. In response to this point, it should be noted that Gitksan does not typologically fit the profile of a 'classifier' language (Bicevskis et al. 2017); this therefore may not be the appropriate structure with which to understand this data. The syntax and the interpretation of measure phrases like *'naa* 'patch' above requires a detailed investigation.

There are also some questions concerning the example itself. Although I have replicated the example in (8) with two speakers, it was firmly rejected by three others. The pattern of acceptability cannot be easily explained as a matter of dialect. All speakers also accepted, and in some cases preferred, versions where the predicate hosts the measuring adverb, such as (9) (note that *naa* 'patch' precedes the verb rather than the mass noun argument), or where the mass noun itself serves as the predicate in some fashion, with accompanying measure adverb, as in (10).

(9)   Gya'a'y   win   'naa dit'ehl   maaxws go'ohl   gilbilhl   sga'nist.
        gya'a-ə-'y   win   **'naa** t'ə~t'ehl =hl **maaxws** go'o =hl gilbil =hl sga'nist
        see-TR-1SG.II COMP patch DUR~exist =CN snow   LOC   =CN two   =CN mountain
        'I saw that there was snow in patches on two mountains.'   (PH)

(10)   Gya'a'y   wil   'naa mismaaxwsxwhl   gilbilhl   sga'nist.
        gya'a-ə-'y   wil   **'naa məs~maaxws**-xw =hl gilbil =hl sga'nist
        see-TR-1SG.II COMP patch PL~snow-PASS   =CN two   =1.I mountain
        'I saw snow patches on two mountains (...that two mountains were snow-patched).' (BS)

In the latter case, the co-occurrence of mass noun and plurality is less surprising, since the mass noun is not functioning as an argument, but rather as a predicate. Plural marking of predicates may be conditioned by a number of other factors, including plurality of its arguments (possibly the mountains, here). I have not managed to replicate the pattern of co-occuring mass plural and measure phrase with another mass noun. For example, the mass noun *aks* 'water', which as a verb can have two possible plural forms depending on its meaning ('drink' vs. 'be wet'), resists this usage. The relationship between mass nouns and pluralization requires further investigation, seemingly on a case by case basis. The ability of the mass noun to serve as a sentential predicate and adopt plural marking in that domain may influence its behavior in this respect. The conclusion remains that mass properties and pluralization do not generally co-occur, or at least that the combination is associated with a count, not mass, interpretation.

10.3.2   *Properties of stem-level plurality*

This subsection considers the nature of nominal and verbal plural marking more closely. To better contrast it from other types of plurality to be discussed later in the paper, I refer to this kind of plurality as *stem-plurality*, due to its morphological placement on nominal and verbal stems. A significant amount of attention has been paid to description of stem-plurality in Tsimshianic syntax (Rigsby 1986; Tarpent 1983; Sasama 1995; Brown 2008); it can be morphologically marked in a variety of ways, and is associated with a number of semantic interpretations. Here, I review this morphology and its interpretations.

Four frequent types of morphological plural-formation methods are presented in Table 4. The major type of plural-formation pattern is reduplication, which can use any of three different prefixal templates: CV~, CVC~, and CVX~. There are also two non-reduplicative prefixes

Table 4: Morphological plural types in Gitksan

Singular	Plural	Gloss	
do'o	*di~do'o*	'cheek'	Reduplication
jap	*jip~jap*	'make'	
gwee'y	*gwix~gwee'y*	'poor'	
aks	*la-'aks*	'drink'	Prefixation
xoox	*ga-xoox*	'yawn'	
t'aa	*wan*	'sit'	Suppletion
smax	*smax*	'bear'	Zero

which denote plurality: *li-/la-* and *ga-*. Suppletion (entire or partial) is another common pluralization method. Finally, a not insignificant number of words lack distinct plurals altogether. For example, many animal terms have this pattern. Stems may incorporate more than one plural-formation method or utilize an opaque, irregular strategy.[7]

Plurals cannot be produced for names. The division between names and regular nominals will be relevant for later discussion of determinacy in section 10.4; I therefore refer to the class of nouns which are not names, and therefore which can have morphological plurals, as *property nouns*. Names are not generally used in a property-denoting sense in Gitksan.

Appropriate stem-plurals for property nouns are determined on an item-by-item basis. Some words have distinct plurals used for particular senses.

(11)   *gyat* 'man, person, people'

    a.   *gigyat* 'people'
    b.   *ii'uxwt* 'men'

(12)   *aks* 'water, wet, drink'

    a.   *ax'aks* 'be wet (PL)'
    b.   *la'aks* 'drink (PL)'

There is frequently variation across the lexicon of plurals that different speakers use or remember. Some speakers may lack a particular attested plural for a word, and simply use a zero-pluralization strategy; other times speakers' chosen plural form will differ for the same word. Brown (2008) concluded from the results of a nonce word task that while reduplication was the most common type of plural-formation method in the lexicon, none of the patterns noted above were used as a consistent productive means of forming new plurals.[8] Thus, while the

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[7]There are a number of phonologically irregular and/or semi-suppletive examples such as *'nakw ~ hi'niiluxw* 'long', which cannot be classed easily under any of these strategies. There are also a small number of vowel-lengthening plurals, such as *gwila ~ gwiila* 'blanket', and some verbs are pluralized with a *g ~ l* alternation, such as *giihl ~ laahl* 'lay'.

[8]Tarpent (1983, 1987) discusses pluralization in the neighboring language Nisga'a, mutually intelligible with Gitksan, where she identifies CVX~ reduplication as the most productive pluralization strategy. She lists a number of CVX~ plural forms that I have not come across in Gitksan. This may then be a point of divergence between the two very

overall complexity of morphological plural-formation can be likened to that of English past-tense formation, the process itself differs in that it is ultimately lexical rather than productive.

Stem-plurality appears robustly in both the nominal and verbal domains. For nominals, stem-level plurals induce an additive reading: they denote more than one of the mentioned NP. Some particular morphological markers are associated with particular interpretations, as noted by Rigsby (1986): *g̲a-* is a distributive pluralizer, and it indeed occurs on a number of nouns where a distributive plural is most natural, such as *g̲a-k'uukw'* 'tails', and also occurs in a number of spatial terms. The passive marker *-xw* is often used to pluralize kinship terms in a collective sense.

Singular nominals are regularly interpreted as singular, not general. However, plural marking does not clearly pattern as obligatory. Pluralized NPs are heavily preferred where applicable, but singular forms are sometimes accepted for a plural interpretation, particularly when a plural verb elsewhere in the sentence helps to disambiguate, as in (13) and (14). That is, plurality must be marked somewhere, but it need not be marked everywhere.

(13)   Yukw dim   an asii   t'ahlihl   gwila/gwiila.
        yukw dim   n asii   **t'ahl**-ə-t   =hl **gwila/gwiila**.
        IPFV   PROSP 1.I away put.PL-T-3.II =CN blanket.SG/PL
        'I am putting the blankets away.'   (LW)

(14)   Tx̲alpx̲hl   os/has'os   dim   dibagwi'y.
        tx̲alpx̲   =hl   **os/'əs**~**'os**   dim   di-**bakw**-ə-'y.
        four   =CN dog/PL~dog PROSP COM-arrive.PL-TR-1SG.II
        'I will bring four dogs.'   (BS)

Speakers frequently comment that sentences with pluralized nouns or verbs are 'more correct' than alternate version using a singular form, but these plural form versions are not always volunteered, in either elicitation or narrative contexts. Similarly, plural agreement and concord patterns between verbs, their DP arguments, and any modifiers of those arguments are judged as preferable, but are not always volunteered. Sasama (1995) notes for Coast Tsimshian that the more 'lexically marked' the plural formation method (e.g. suppletion), the more likely it is that use of the plural form will be required where applicable; conversely, the more 'unmarked' or productive the plural formation method (e.g. reduplication), the less likely it is that use of the plural will be required where applicable. This has been my experience as well; speakers strongly reject forms where fully suppletive plurals are not used.[9]

Verbs are pluralized for one of two reasons: to mark iterativity of a telic verb as in (15), or to agree with a plural absolutive NP as in (16) (Hunt 1993; Corbett 2001).

(15)   a.   Yatsdiit   'nii'y.
              yats-diit   'nii'y
              beat-3PL.II 1SG.III
              'They beat me.'

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similar language varieties.

[9]No systematic textual or corpus analysis of plural marking has been conducted to my knowledge, but a reviewer points out that it would be an interesting route for future investigation of this issue.

b.　Hisyatsdiit　　　’nii’y.
　　yəts~yats-diit　’nii’y.
　　PL~beat-3PL.II 1SG.III
　　‘They beat me (repeatedly).’　　　　　　　　(BS; Bicevskis et al. 2017)

(16)　a.　*yats-diit　　**’nuu’m**.
　　　　　beat-3PL.II 1PL.III

　　b.　Hisyatsdiit　　　’nuu’m.
　　　　yəts~yats-diit **’nuu’m**
　　　　PL~beat-3PL.II 1PL.III
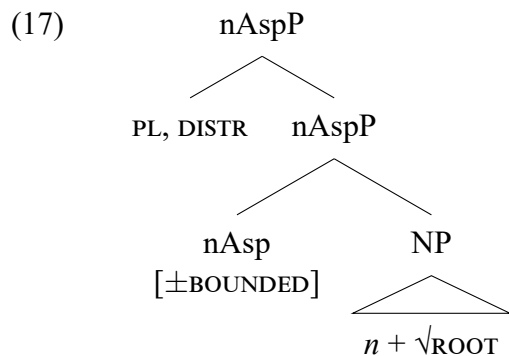　　　　‘They beat us.’　　　　　　　　　　　　(BS; Bicevskis et al. 2017)

A sentence with a plural verb *and* a plural absolutive argument is ambiguous with regard to iterativity. For example, (16b) may be interpreted iteratively or not. Durative marking is also possible for atelic predicates, but this is generally done with CV~ marking, in addition to other plural marking that may be applicable.

10.3.3　The structure of mass/count and stem-plurals

This subsection provides a syntactic structure for the mass/count contrast, which involves the contrast between individuated and unindividuated nouns, and stem-plurality, which involves an additive and therefore individuated interpretation. I suggest an analysis of the mass/count division utilizing an inner aspectual phrase AspP, following Wiltschko (2012). This is motivated by the familiar relationship that both verbal and nominal stem-plurality have with *boundedness*. The grammatical availability of nominal stem-plurality is dependent on a noun being count, rather than mass, while the availability of verbal stem-plurality is dependent on the telicity of the verb, as well as the plurality of arguments within the VP. Adopting a structure that holds parallel across verbal and nominal stem-plurality accommodates the fact that the same morphological pluralizing strategies are used in both domains.

Hunt (1993) locates the site of Gitksan verbal plurality in an aspectual head AspP between the projections of a split VP, following Travis (1992). Although she did not identify this Aspect head as encoding inner or outer aspect, the analysis is most consistent with an inner aspectual interpretation. She references a small number of predicates (e.g. *ha’w* ‘go home’ or *jok* ‘dwell’) where pluralization indicates multiplicity of something other than the grammatical arguments – instead a multiplicity of *groups* of people, or a multiplicity of houses in which people dwell. The item-specific nature of these interpretations is more characteristic of inner (lexical) aspect, rather than outer (viewpoint) aspect. This, then, matches the projection in which Wiltschko (2012) situates both the mass-count distinction (for nouns) and telicity (for verbs).

Although Hunt (1993) treats plurality like a head, I argue here that such an analysis faces difficulties in light of Wiltschko’s (2008) diagnostics of inflectional versus non-inflectional marking – that is, Gitksan plurals do not exhibit the formal behavior expected of syntactic heads. I suggest that it is necessary to analyze plural marking in Gitksan instead as adjuncts or specifiers, though I do not attempt to differentiate the predictions of either option in this paper. For now, I propose that while the head of AspP encodes the boundedness of a VP or NP (i.e. this is the mass/count classification point for nouns and the telicity classification point for verbs), different types of plurals are adjoined above this head, as in (17).

(17)

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              nAspP
             /    \
      PL, DISTR   nAspP
                 /    \
              nAsp     NP
           [±BOUNDED]   /\
                      n + √ROOT
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This is motivated mainly by the less-than-obligatory nature of plural marking, discussed in the previous subsection. Were the plural feature located on a syntactic head, Wiltschko (2008) argues that it must be obligatorily marked on a plural NP, and that it must trigger obligatory agreement on that NP's modifiers wherever applicable. I have shown in the previous section that this is not the case in Gitksan. There is some difference between the non-obligatory behavior of Gitksan plural-marking, which is consciously preferred by speakers and which may be influenced by the morphological type of plurality, and the apparent free optionality Wiltschko describes for Halkomelem (Salish), but the formal property of *obligatoriness* is lacking in each.[10]

Wiltschko (2008) discusses another diagnostic: non-inflectional plurals are expected to appear inside of compounds and inside of derivational morphology, following the intuition that derivation follows inflection.[11] This is the case in Gitksan. Example (18) provides cases of pluralization occurring internal to a number of derived words. Roots are listed where known. These examples utilize prefixal and suppletive plurals. Example (19) gives an instance of productive derivation: the prefix *si-* verbalizes the plural noun *huwilp* 'houses'. This noun is pluralized via reduplication.

(18)   a.   *'malu* 'crazy' – *'ma-**ga**-lu* 'PL'
        b.   *ayee* 'fast' – *a-**li**-yee* 'PL' (cf. root *yee* 'go')
        c.   *ha'niit'aa* 'chair' – *ha'nii**wan*** 'PL' (cf. root *t'aa* ~ *wan* 'sit')

(19)   Aam ji   sihuwilpxwshl   gyet.
        aam ji   si-**wə**~wilp-xws-t   =hl gyet
        good IRR CAUS-PL~house-VAL-3.II =CN people
        'It would be good to house people.'   (VG)

As another point, it is possible for unmarked nouns, but not plural nouns, to appear under numerals and quantifiers. That is, some nouns that are morphologically unmarked for plural can be interpreted as plural. The expected pluralization strategies for the nouns in (20) and (21) are CVX~ reduplication and suppletion, respectively, yet these markers typically do not appear on the

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[10]The 'more obligatory' behavior of suppletive plurals is interesting, and merits further investigation. I can think of two possibilities to account for such behavior: either different morphological plurals are indicative of different syntactic structures for plurality (i.e. heterogeneous plural marking strategies are indicative of heterogeneous structures), or the way that plurality is incorporated morphologically onto a suppletive plural verb triggers some additional constraints on usage. Systematic investigation of these different morphological options is required.

[11]This diagnostic of the 'non-inflectional' nature of plurality may simply be indicative of a low syntactic position for the feature, however.

quantified nominal.

(20)   Txalpxhl   os dim dibagwi'y.
         txalpx   =hl **os** dim di-bakw-ə-'y.
         four   =CN dog PROSP COM-arrive.PL-TR-1SG.II
         'I will bring four dogs.'   (repeated from 14)

(21)   Dax yukwdihl   gwile'lhl   git k'am k'i'ihl   an'ixwdiit.
         dax-yukw-də-t =hl gwile'l =hl **git** k'am k'i'y =hl an-'ixw-diit
         firm-hold-TR-3.II =CN three   =CN man only one   =CN NMLZ-fish-3PL.II
         'The three men are holding one fishing pole.'   (HH)

Were plurality functioning as a head, following Wiltschko (2008), an unmarked noun would be expected to have a strict singular interpretation, and would not be permissible in this context. The usual singular interpretation of nouns which are unmarked for plural is therefore analyzed as a consequence of semantics or pragmatics, rather than the formal syntax.

 Further, the different plural markers are not in strict complementary distribution. Some plural markers may induce slightly different readings, which can co-occur on a single noun. For nominals, the plural morpheme *ga-* in particular tends to induce a more distributive reading. This suffix may co-occur with other stem plurals in the appropriate context, deriving a more distributive interpretation. Example (22) shows a case where a child is discussing multiple (distributed) pairs of ears; the word *muxw* 'ear' can be optionally double-pluralized.

(22)   *Context: A child has drawn a bunch of animals, and is drawing on the ears last.*
         'Walk'a ga(hu)muxwda   gyuu'n.
         'walk'a **ga-(mə~)muxw**-da gyuu'n
         all   **DISTR-(PL~)ear**-3PL now
         'They all have ears now. (They are all ears-ed now.)'   (BS)

While the prefix *ga-* does fall into the general category of *stem-plural marker*, given that it serves as a basic pluralizer for some nouns, it can also be added to an already-plural or -pluralized stem.

 A similar pattern can be seen with verbs. The main type of verbal plurality, which denotes iterativity on telic verbs or a plurality of absolutive arguments, is usually encoded via CVC~ reduplication or suppletion. By contrast, CV~ reduplication in the verbal domain generally contributes a durative event interpretation. The two may co-occur, as in (23).

(23)   Jijipjebis   Bill ganhl   wakt   huwilp.
         jə~jəp~jep-ə-t   =s Bill gan =hl wak-t   wə~wilp.
         DUR~PL~make-TR-3.II =DN Bill COM =CN brother-3.II PL~house
         'Bill and his brothers build houses.'   (VG)

What this demonstrates is that stem-plurality, in both the nominal and verbal domains, cannot be reduced to a single functional head with a mixed bag of morphological reflexes. Instead, I suggest that it is the result of adjunction of plural feature(s) to an inner AspP above the nominal or verbal root (nAsp or vAsp, to disambiguate).[12]

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[12]It is also possible that such behavior might be the result of having multiple distinct projections to host each type of plurality. Further investigation into this area is necessary.

10.4 Classification in DP: the common/determinate contrast

In this section we turn to the most morphologically obvious type of noun classification system in Gitksan: the distinction between *common* and *determinate* nouns. This contrast is similar to a common/proper distinction, but has a few idiosyncrasies; tradition in Tsimshianic linguistics has maintained the terminology of *determinacy* to refer to the language-specific contrast.

Arguments in Gitksan are preceded by 'connectives', which prosodically attach to the preceding word in a manner superficially similar to articles in nearby Wakashan languages. The connectives mainly indicate the determinacy, or common/proper value, of the nouns they precede, as exemplified in (24).

(24) Gi'namis   Henryhl   wineex as   Aidan.
      gi'nam-ə-t =**s**   Henry =**hl** wineex a-t   =**s** Aidan
      give-TR-3.II =DN Henry   =CN food   OBL-3.II =DN Aidan
      'Henry gave food to Aidan.'   (VG)

In this section I demonstrate these and other properties of the common/determinate division. In section 10.4.1 I discuss the noun class divide itself. I show that the contrast is grammaticalized; it interacts closely with functional elements like pronouns and demonstratives. I also demonstrate that, contra traditional notions of the common/proper distinction which commonly reference only the property *name*, determinacy in Gitksan is necessarily linked to the notion of *animacy* as well. In section 10.4.2 I move on to the determinate-class plural marker, which I identify as an associative, and discuss its distribution. I present preliminary evidence that the syntactic locus of this type of noun classification is in the D projection of the nominal spine. In section 10.4.3 I contrast the semantics of determinate plurality with stem-plurality, demonstrating that they are distinct, and adopting a particular associative semantics. Finally, in section 10.4.4, I propose a syntax for the determinacy contrast and determinate plural marker which locates them in DP, in contrast to stem-level plurality in nAspP.

10.4.1 *Properties of the common/determinate distinction*

The three connective morphemes are presented paradigmatically in Table 5.

Table 5: Common and determinate connective morphemes

	Common	Determinate
Context 1	*=hl*	*t*
Context 2		*=s*

These elements lean prosodically on the preceding word, but are syntactically associated with the following word.[13] Common nouns are introduced by *=hl*, regardless of syntactic context, as in

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[13] To some degree *t* is more prosodically flexible than the other two connectives, which are strictly enclitics; it can appear sentence-initially, and has been described as a flexible pro- or en-clitic (Rigsby 1986: 412).

(25); the connective for determinate nouns alternates between =*s* and *t*, as shown in (26).[14] The common noun connective =*hl* is sometimes dropped or inaudible in fast speech, or in the speech of some younger speakers, but determinate =*s* is consistently present.

(25)   Sgihl   sip goohl   la<u>x</u>yip.
            sgi   =**hl** sip goo-t =**hl** la<u>x</u>yip
            lie.on =CN bone LOC-3.II =CN ground
            'There is a bone on the ground.'   (BS)

(26)   'Witxwt   Lisa ii ap needii   'witxws   Henry.
            'witxw =**t** Lisa ii ap nee=dii 'witxw-t =**s** Henry
            come   =DN Lisa and VER NEG=FOC come-3.II =DN Henry
            'Lisa came, but Henry didn't come.'   (BS)

The common/determinate contrast is found across the Tsimshianic family, with each language exhibiting similar patterns (Davis and Forbes 2015; Davis 2016). Table 6 lists the classes of nominals which qualify as *determinate* (cf. 'proper') and *common*, respectively.

Table 6: Nouns patterning as determinate vs. common

Determinate	Common
personal names	most property nouns
ascending kinterms	other kinterms
demonstratives	places, placenames
human WH-pronouns	other WH-pronouns
independent pronouns	

    The set of 'personal names' associated with the determinate class may refer to humans or animals. Lexical nouns referring to animals may be utilized as names; when they do so, they surface with a determinate connective, as in (27) and (28).

(27)   Anoo<u>g</u>as/*hl   Sweeney t Aidan.
            anoo<u>k</u>-ə-t   =**s/*hl** Sweeney t Aidan
            like-TR-3.II   =DN/*CN Sweeney DN Aidan
            'Sweeney (my dog) likes Aidan.'   (VG)

(28)   Iit   wilaaxs   Axwt   ahl   wis   Ts'imilix.
            ii=t   wilaax-t =**s** Axwt   a-t   =hl wil-t =**s** Ts'imilix
            and=3.I know-3.II =DN Porcupine OBL-3.II =CN do-3.II =DN Beaver
            'And Porcupine realized what Beaver was doing.'   (BS)

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[14]The *t/s* alternation, attested across the Tsimshianic languages with minor variations in distribution, has a long history of analysis as case (Dunn 1979; Hunt 1993; Peterson 2004), although it does not clearly resemble any common case or split-alignment pattern. I assume instead that it arises through morphophonological interaction of the single determinate connective *t* with agreement markers on the predicate, following recent work (see Davis and Forbes 2015; Davis 2016 for details), although I have left =*s* as =*s* in the gloss line of examples in this paper. The ultimate source of the =*s/t* alternation is not relevant to argumentation in this paper.

When a determinate-class noun such as a name receives a restriction via modification, it usually receives common noun marking, as in (29).

(29)   Ii   dulpxwithl   Michael dim hetxwit   goohl   amgoo<u>k</u>.
          ii   dulp-xw-it =**hl** Michael dim het-xw-it   goo-t   =hl amgoo<u>k</u>
          and short-PASS-SX =CN Michael PROSP stand-PASS-SX LOC-3.II =CN front
          'And the short Michael must stand in the front.'   (LW)

Possession does not function as a restriction in this way. Kinship terms referring to previous generations ('upward' kinship terms) appear with determinate marking regardless of whether they are possessed, as shown in (30).

(30)   Yukw dim   'witxws   no<u>x</u>t   loo'y.
          yukw dim   'witxw-t =**s**   no<u>x</u>-t   loo-'y
          IPFV   PROSP come-3.II =DN mother-3.II OBL-1SG.II
          'His/her mother is coming to see me.'   (BS)

Notably, names of places pattern as common nouns in Gitksan, unlike the proper/common distinction in many languages (including English). This holds regardless of the native or borrowed origin of the name: (31) shows some instances of borrowed placenames, and (32) an instance of a native placename, all of which appear with the common noun connective.

(31)   a.   Ii 'nakwhl   hlidaa 'wihl jogo'y   go'ohl   Snauk...
              ii 'nakw-t =hl hlidaa 'wihl jo<u>k</u>-'y   go'o-t   =**hl** Snauk
              and long-3.II =CN time   around live-1SG.II LOC-3.II =CN Snauk
              'I have lived in Snauk for a long time...'
        b.   ... dip siwadihl   False Creek.
              dip si-wa-di-t   =**hl** False Creek
              1PL.I CAUS-name-TR-3.II =CN False Creek
              '...(Snauk is) what we call False Creek.'   (VG)

(32)   Yukwhl   ts'uusxt go'ohl   Ansbayaxw.
          yukw =hl ts'uusx-t go'o-t   =**hl** An-sba-yaxw
          IPFV   =CN small-3.II LOC-3.II =CN NMLZ-off-hide
          'She was young in Kispiox (the Hiding Place).'   (RB)

This suggests that determinate nouns might not have grammaticalized strictly from the notion of *names* (the trigger for proper noun syntax in e.g. Ghomeshi and Massam 2009) but could instead, or additionally, be a grammaticalized extension of *animacy*. All determinate-class items refer to animate things, with the exception of demonstratives, which are grammatically determinate but may refer to anything. Below, (33a) may be interpreted as animate or inanimate, and (33b) is a locative demonstrative (it is hosted on the locative preposition).[15]

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[15]Demonstratives appear with a connective and pattern as determinate regardless of whether they appear as pronouns or modifiers.

(33) a. tun
          t=xwin
          DN=PROX
          'this (person, thing)'

      b. g̲oosun
          g̲oo-t   =**s**=xwin
          LOC-3.II =DN=PROX
          'here'

Because of the inclusion of demonstratives in this set, determinacy cannot be derived compositionally from other properties like [NAME] + [ANIMACY]. I treat determinacy as a syntactic primitive for the purposes of this paper. Additionally, due to the classification of highly functional elements like demonstratives and personal/WH-pronouns as determinate, it seems to be a grammaticalized type of classification. Unlike grammatical gender, which is assigned on a comparatively arbitrary basis and has been analyzed as appearing low in the nominal structure, particularly on the nominalizing head *n* (e.g. Kramer 2015), the determinacy distinction seems comparatively 'high', particularly because it can be semantically coerced. The fact that determinacy may be used to transform a common noun into a name – that is, to modify the semantic interpretation of the common noun – as well as its clear association with uniqueness, suggests that it is a property found in the D domain (see see e.g. Kučerová this volume, or Panagiotidis this volume, for discussion on 'high' and 'low' gender).

10.4.2 Determinate number

Determinate nouns do not only differ from common nouns with respect to the connective that is used to introduce them. They receive a distinct type of plural marking in the form of the marker *dip*; names cannot receive stem-level plural marking of the type described in section 10.2.

Below are several examples demonstrating the possible interpretations of pluralized determinate nouns. Nouns marked with *dip* generally refer to groups of people. In (34), a pluralized name refers to that individual and a group of others, while in (35), a pluralized *ts'iits'* 'grandmother' refers to a group of grandmothers. It may also refer to a group led by a grandmother (where the grandmother serves as the main referent for the group).

(34) 'Wihl wil dip   Michael.
      'wihl   wil **dip**   Michael
      around do ASSOC Michael
      'Michael and them are around.'   (BS)

(35) Ii   sag̲ayt   wans   dip   ts'iits'   k'i'ihl   sa.
      ii   sag̲ayt   wan-t   =s   **dip**   ts'iits'   k'i'y =hl sa
      and together sit.PL-3.II =DN ASSOC grandmother one   =DN day
      'And the grandmothers gathered together one day.'   (BS)

The overt noun pluralized by *dip* is a representative of the group, while the other members are determined based on the context (an *associative* interpretation); note that this may look additive, as in (35). However, the overt referent can also be clearly singular (e.g. (37) does not refer to plural fathers).

(36) **dip** Clarissa
      ASSOC Clarissa
      'Clarissa and the people with her (maybe friends)'

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

Plural marking via *dip* is optional when the membership of the group is entirely spelled out via coordination, as in (38). Constructions with *dip* can, but need not, refer to a group of the listed individuals as well as some others.[16]

(38) Eejdis   (dip) Lisa gant   Henry anaax.
      eets-də-t =s (**dip**) Lisa gan =t Henry anaax
      fry-TR-3.II =DN ASSOC Lisa COM =DN Henry bread
      'Lisa and Henry fried bread.'   (HH)

Crosslinguistically, associatives tend to be restricted to contexts with semantically human or animate nouns (Corbett 2001; Vassilieva 2005; Daniel and Moravcsik 2011; Biswas 2014). In Gitksan, however, the relevant restriction is determinate-class nouns. The associative marker *dip* may not appear with a common noun, even when it is animate, human, and highly salient, like *sim'oogit* 'chief', as in (39). One consultant comments explicitly on the fact that the use of *dip* with a common noun generates a proper noun interpretation, as in (40).

(39) a. Bakw   dip   John goohl   li'ligit.
          bakw   **dip**   John goo-t   =hl li'ligit
          come.PL ASSOC John LOC-3.II =CN feast
          'John and his family arrived at the feast.'
      b. *bakw   **dip**   sim'oogit goo-t   =hl li'ligit.
          come.PL ASSOC chief   LOC-3.II =CN feast
          Intended: 'The chief and his/her family arrived at the feast.'   (VG)

(40) a. Eda   ts'imil uu'whl   t'ihlxw.
          eda   ts'imil uu'w-t   =hl t'ihlxw
          go.on inside invite-3.II CN child
          'Call in the children.'   (LW)
      b. #eda   ts'imil uu'w-t   =hl **dip**   t'ihlxw
          go.on inside invite-3.II CN ASSOC child
          Comment: No, you're saying there's people called 'Kids', their names are Kids.

This pattern demonstrates that the distribution of *dip* is restricted based on syntactic properties, rather than more crosslinguistically typical semantic properties like [HUMAN]. Does this mean that *dip*, an associative plural marker restricted to determinate noun contexts, can be considered an equivalent counterpart to the stem-level plural markers found on property nouns, discussed in

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[16]A difference in interpretation of the construction with *dip* may be in the interaction with the comitative quasi-coordinating preposition *gan* (Forbes 2014) that introduces the second individual. The speaker noted that in the version with *dip*, Lisa and Henry both fry bread, while without *dip*, it might be a situation of one only helping the other.

section 10.2? In the remainder of this section I argue that it cannot; *dip* must be analyzed as semantically and structurally dissimilar to to stem-plurals.

10.4.3 The semantics of dip

Crosslinguistically, associative markers often have the same morphological form as 'regular' additive plural markers; one might interpret this as a result of these markers having ambiguous or vague plural semantics. The example in (41) demonstrates additive and associative readings resulting from use of the same plural affix in Turkish, and furthermore the apparent correlation of each reading with insertion of the affix at different points in the structure, based on the suffix's linear order with respect to possession.

(41)   a.   Teyze-**ler**-im
              aunt-PL-1SG
              'my aunts'

        b.   Teyze-m-**ler**
              aunt-1SG-PL
              'my aunt and her family/friends/associates'   Turkish (Görgülü 2011: 74)

    The question is whether Gitksan plural markers, of both the common and determinate type, exhibit the same type of fluidity between additive and associative readings, and merely differ with respect to their availability across the common/determinate contrast. The alternate possibility is that the stem-level and associative plurals are distinct in all respects: in their morphological form and also in their interpretation. I here demonstrate that the latter hypothesis is true.

    We may break the question down into two prongs. First, is is possible for stem-level plurals to have associative readings? Second, is it possible for the determinate plural *dip* to have an additive reading? I show that neither of these are possible. With respect to the first question, the following examples indicate that stem-level plurals cannot trigger an associative interpretation. When the common nouns *sip* 'bone' or *gwila* 'blanket' are pluralized, the interpretation is necessarily additive; there is no reading where the overt element stands as a representative for a heterogeneous group.

(42)   Do<u>x</u>hl   sipsip   goohl   la<u>x</u>yip.
           do<u>x</u>   =hl **səp~sip** goo-t   =hl la<u>x</u>yip
           lie.PL =CN PL~bone LOC-3.II =CN ground
           'There are bones on the ground.'   (BS)

           Question: Could there be one bone, and other dog toys on the ground?
           Comment: No.

(43)   #Eda t'ahlis   gwiila   goohl   jixjik.
           eda   t'ahl-ə-t   =s **gwiila**   goo-t =hl jixjik
           go.on take.PL-T-3.II =DN blanket.PL LOC-3.II =CN vehicle
           'Take the blankets to the car.'   (LW)

           Context: You have one blanket, a tent, and some bags laid out for a camping trip.
           Comment: They would only take the blanket to the car (not the rest).

As for the second question, it is more difficult to show that *dip* does not allow a straightfowardly

17

additive reading, but I argue that this is nonetheless the case. Contexts that involve plural individuals of the same name (an additive reading) are largely compatible with the associative group reading normally triggered by this morpheme. Yet, in these additive-name contexts, some speakers indicated that *dip* was not sufficient to trigger the necessary interpretation, and so code-switched in the English plural marker *-s*. This *-s* could be considered a stem-level plural for a name, for this speaker.

(44) Saksins   dip   Michaels   hla   ga'windiit.
      saks-in-ə-t   =s   **dip**   Michael-**s**   hla   ga-'win-diit
      clean-CAUS-TR-3.II =DN ASSOC Michael-PL NMLZ DISTR-teeth-3PL.II
      'The Michaels cleaned their teeth.'   (BS)

      Comment: (after volunteering the sentence) I'm not sure if 'Michaels' is right, but it seems like there should be something there.

Contexts where names are used in a general or indefinite sense, incompatible with a definite group interpretation, are still more illuminating. Although these are precisely the contexts where names require pluralization in languages like English, *dip* is unavailable. The addition of *dip* in both of the examples below was rejected, with consistent comments that *dip*'s inclusion would trigger a more definite interpretation referring to particular group of individuals

(45) Dildalhl   txaa'nitxws (*dip) Michaelhl   wilaayi'y.
      dəl~dal =hl txaa'nitxws (*dip) Michael   =hl wilaax-ə-'y
      PL~loud =CN all   (ASSOC) Michael   =CN know-TR-1SG.II
      'All the Michaels I know are very loud.'   (LW)

      Comment: 'Dip' is for the three Michaels you know, not just general.

(46) Neediin   wilaax ji ligi wanhl   (*dip) Michaels goohl   Sweden.
      nee=dii=n   wilaax ji ligi wan =hl (*dip) Michael-s goo-t   =hl Sweden.
      NEG=FOC=1.I know   IRR DWID sit.PL =CN (ASSOC) Michael-PL LOC-3.II =CN Sweden
      'I don't know if there are any Michaels in Sweden.'   (BS)

      Comment: The 'dip' makes it Michael and his friends.

Based on this pattern, it does not seem to be the case that determinate *dip* is ambiguous between associative and additive semantics; it is restricted to determinate-class nouns, and affords only an associative interpretation with names.

However, if *dip* is exclusively associative, it is still necessary to derive apparent additive readings with other nominals. As has already been shown in examples such as (35), repeated below in (47), additive readings are possible with determinate kinship terms.

(47) Ii sagayt wans   dip   ts'iits'   k'i'ihl   sa.
      ii sagayt wan-t   =s   **dip**   ts'iits'   k'i'y =hl sa
      and together sit.PL-3.II =DN ASSOC grandmother one   =DN day
      'And the grandmothers gathered together one day.'   (BS)

Another case is that of demonstratives, which counter a few of the generalizations I have so far set forth: demonstratives may refer to inanimate items, as in (48), and plural demonstratives often exhibit an apparently additive interpretation.

18

(48) Dibagwi'y   dipun.
     di-bakw-ə-'y   **dip**=xwin
     COM-come.PL-TR-1SG.II ASSOC=PROX
     'I brought these (cookies).'   (HH)

Following Nakanishi and Ritter (2009), we can reach an analysis for *dip* with a single associative semantics which is still capable of generating additive-like ('pseudoadditive') readings for elements like demonstratives. Their analysis utilizes the following function for the Japanese associative marker *-tati*, referring to the group function that Kratzer (2009) employs to account for the group denotation of 1st and 2nd person plural pronouns.

(49) $[\![\text{-}tati]\!]^c = \lambda x : x$ is human. $\text{group}(x)(c)$

The Japanese morpheme is capable of combining with either proper or common nouns. When it is combined with a proper noun, the familiar associative group interpretation is triggered, but when it is combined with a common noun, it seems to trigger the additive interpretation ('many NOUNs'), as in (50).

(50)   Gakusei(**-tati**)-ga   sono biru-o   torikakonda.
        student-ASSOC-NOM that   building-ACC surrounded
        '(The) students surrounded that building.'   (Nakanishi and Ritter 2009)

They derive this apparently ambiguous interpretation from a consistent associative semantics. The difference between the associative interpretation triggered by names and the additive interpretation triggered by common nouns – or rather, property nouns of type *<e,t>* – is a result of what precisely is plugged into the associative function that determines the composition of the associated group. For property nouns, the composition of the associative GROUP is determined by the available characteristic function of the noun (namely, its denotation).

(51)   a.   *student*-ASSOC
        b.   *student* is a member of a group which consists of _____
        c.   *student* is a member of a group which consists of *individuals who are also students*

This analysis can immediately account for pseudoadditive readings with kinship terms in Gitksan. For proper nouns (or rather, names), the composition of the GROUP is determined by the context. Under the assumption that names are type *e*, and exclusively entity-referring, no function is available to fill the gap, so the GROUP must seek information from elsewhere in the context.

Nakanishi and Ritter (2009) note that third persons in Japanese pattern like common (property) nouns with respect to allowing an additive interpretation. I extend this to the demonstratives in Gitksan: for demonstratives, the composition of the associative GROUP is determined by the available deictic content of the demonstrative.

(52)   a.   DEM.PROX-ASSOC
        b.   DEM.PROX is a member of a group which consists of _____
        c.   DEM.PROX is a member of a group which consists of *items which are also proximate*

In this way, we limit the semantics of *dip* to deriving associative readings, while still allowing for the ambiguous 'pseudoadditive' interpretation possible with demonstratives. We need attribute

19

only one interpretation for *dip* to be able to generate this pattern. The primary difference between Japanese *-tati* and the Gitksan morpheme *dip* is the semantic restriction of the former to humans, versus the syntactic restriction of the latter to determinate-class nouns.

10.4.4 Structuring determinacy and associativity

Having argued that *dip* has a strictly associative meaning, in contrast to stem-plurality, which only allows additive readings, I will now propose a morphosyntax for the common/determinate distinction in relation to the two types of plurality previously discussed. The key factor of this proposal is that associative plurality and stem-level plurality differ not only with respect to their semantics, but also with respect to their structure. In short: stem-level plurality is introduced to a nominal below the level of the common/determinate contrast, while associative plurality is introduced above it, as an adjunct.

First, let us review the differences between common and determinate nouns. These are the form of the connectives compatible with each class (common *=hl*; determinate *=s/t*), the number morphology commonly used with each (reduplication etc. for property nouns, which are mainly common nouns; *dip* for determinates), and the interpretation of that plural marking (additive and associative, respectively). The common and determinate connectives appear in complementary distribution, one per NP, suggesting that this distinction might be on a single head.[17] Is the same complementarity found between associative and stem-level plurals? Recall, stem-level plurals are found on property nouns, and there is a small set of property nouns which are also classed as determinate: kinship terms. We might therefore predict that both associative plurality and stem-level plural marking might be found on kinship terms.

This is indeed the case, as demonstrated in (53), where the associative *dip* may be added optionally.

(53)   Hlo'o (dip) ganits'iits'   goohl   galdimwoot'.
        hlo'o (**dip**) **ga**-nits'iits'   goo-t   =hl galdim-woot'
        go.PL ASSOC PL-grandmother LOC-3.II =CN place-sell
        'The grandmothers went to the store.'   (BS)
        Comment: It can't mean one grandma and her family went... It could mean one from every family went.
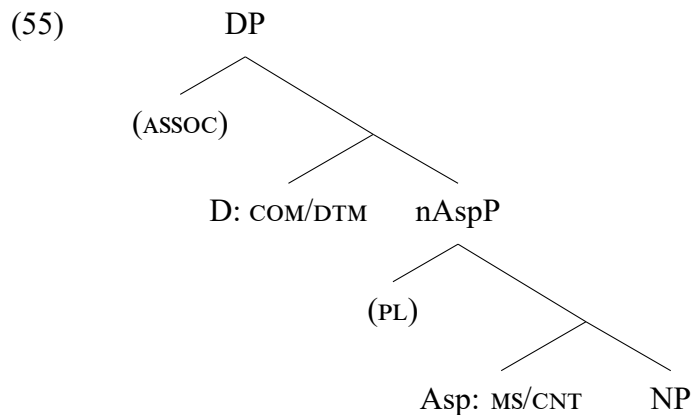
When stem-level and associative plurals co-occur, as above, an additive interpretation is forced (i.e. it is necessary that multiple grandmothers are involved), but note that it is also compatible with a pseudoadditive associative reading (i.e. the grandmothers may comprise a GROUP). The denotation of associativity adopted from Nakanishi and Ritter (2009) and Kratzer (2009) allows for either internally heterogeneous (strict associative) or internally homogenous (pseudoadditive) group composition. The use of both plural markers (stem-level and *dip*) is therefore expected to be compatible with only a (pseudo)additive reading. Contrast (54), which involves only *dip* and allows both pseudoadditive and strict associative readings.

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[17]This assumption requires a closer look at a small set of complex nouns like *=hl ligi=t naa* 'someone, anyone', which appears to contain two connectives. The structure of these nouns has not been investigated.

(54) Yee dip   ts'iits'   goohl   galdimwoot'.
      yee dip   ts'iits'   goo-t =hl galdim-woot'
      go ASSOC grandmother LOC-3.II =CN place-sell
      'The grandmothers went to the store.'
      'The grandmother and her family went to the store.'   (BS)

The ability of the stem-plural and associative morphemes to overtly co-occur in (53) provides evidence for two distinct structural types of plural in the Gitksan nominal domain, conditioned by different properties. The availability of each appears to correlate with a noun's status as individuated and determinate, respectively. Determinate *dip* appears outside the distributive stem-plural *ga-*, suggesting that it is higher in the structure.

   The structure of these two types of plurality should be determined in conjunction with the different noun class contrasts that condition their availability. In section 10.3 I argued that the mass/count contrast is found in a nominal inner aspect phrase (AspP), with additive stem-plurals like reduplication being adjoined to this projection. The properties of determinate nouns, being closely associated with uniqueness and definiteness, suggest that this contrast should be located in D. In addition, I interpret the ability of common nouns to be coerced into determinate syntax – with their interpretation changing predictably as a result – to be indicative of the 'high' nature of this noun classification. If the determinacy contrast is found on the D head, the associative plural can subsequently be identified as an adjunct to DP, just as in Hirose's (2004) account of the Japanese associative plural. The structure of classification and plurality therefore mirror each other, appearing in the structure at equivalent points, but as heads and adjuncts respectively:

(55)   DP
           /   \
      (ASSOC)   \
                /   \
         D: COM/DTM   nAspP
                    /   \
                 (PL)   \
                         /   \
                  Asp: MS/CNT   NP

The tight dependency of these plurals on the feature value of the head might lend itself to an alternate analysis, where they merge as specifiers. The tree in (55) above would largely be unaffected, but it is not generally held that adjuncts should be sensitive to the feature values of the heads they adjoin to, as would be the case for *dip*, the determinate plural. Given the largely formal nature of lexical items picked out as determinate, it would be difficult to pick out this group a strictly semantic basis and govern *dip*'s distribution that way. Specifiers, on the other hand, are expected to have a much closer relation to their respective heads. A specifier analysis may be supported in light of *dip*'s second function, as a first person plural clitic (Series I). Given that first person plurals are naturally associative in their interpretation, the link between these two uses and how they may or may not differ in their syntax and semantics should be explored further.

The nominal connectives appear higher than either of these classifying phrases DP and nominal AspP – specifically, they appear outside of all other nominal morphology. Following Wiltschko's (2010) analysis of articles in Okanagan, which are similarly light, I suggest that the Gitksan connectives are located in a KP layer above DP, functioning mainly to link arguments with a clause, and that their morphological form is sensitive to the value of the determinacy feature in the DP complement.

Thus far I have demonstrated two distinct types of noun classification in Gitksan, and two distinct types of plural corresponding with each. The next section identifies a third pair.

10.5   Classification in φP: the animacy contrast

Somewhat removed from either the mass/count contrast or the common/determinate contrast are *pronouns and agreement*. In this section, I will demonstrate that the Gitksan φ-system, and the number contrast within it, is sensitive to yet another type of nominal classification: semantic animacy. Gitksan's three series of person-marking morphemes are presented again in Table 7.

Table 7: Gitksan pronoun and agreement paradigms (repeated)

	Pre-pred clitics (I)		Suffixes (II)		Independent (III)	
	SG	PL	SG	PL	SG	PL
1	n	(n) dip	-'y	-'m	'nii'y	'nuu'm
2	m	m...sim	-n	-si'm	'niin	'nisi'm
3	t		-t	-diit	'nit	'nidiit

With respect to the nominal classes previously discussed, the Series III pronouns are individuated, or bounded, and function grammatically as determinate DPs. Though pronouns appear without connectives in core argument positions, the determinate connectives resurface when pronouns appear as objects of prepositions, as in (56).[18]

(56)   G̲ol   'nii'y g̲ans   'niin ky'oots.
       gol   'nii'y g̲an-t   =s **'niin** ky'oots.
       run.PL 1SG.III COM-3.II =DN 2SG.III yesterday
       'You and I ran yesterday.'   (VG)

As in many languages, pronouns are used mainly with human reference in Gitksan. The next section explores how inanimates are marked in this system, and presents some consequences for agreement functions within the clausal structure.

10.5.1   *The inanimate φ-system*

If inanimates are considered a different category of person (e.g. Lochbihler et al. 2015 for Dene and Algonquian languages), we can understand the paradigm presented in Table 7 differently. Although there is a number contrast in the third person for two of the three person-marking series

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[18]We might perhaps interpret this as pronouns having a special zero-connective in core argument positions.

(suffixes and pronouns), number is neutralized in the clitic series of agreement, and also for all inanimates.

Starting with the suffixal agreement series, we find that the third person plural agreement marker *-diit* is restricted to animates. It is barred from marking agreement with inanimate plurals, which are instead indexed by the singular/unmarked third person suffix *-t*.

(57)　Responses to *Naa ant guphl xcookies'y?* 'Who ate my cookies?'

    a.　'Nii'y ant　gupt.
       'nii'y an=t　gup-**t**.
       1SG.III AX=3.I eat-3.II
       'I ate them.'

    b.　#'nii'y an=t　gup-**diit**
       1SG.III AX=3.I eat-3PL.II
       Comment: I guess 'diit' is for people, not cookies.　(BS)

More generally, we find a restriction on the use of independent pronouns. Not even the third person singular/neutral pronoun *'nit* may be used to mark an inanimate; these are instead obligatorily null.

(58)　a.　Lip digwantxw!
      self fall.down
      'It (a vase) fell by itself!'

    b.　#Lip digwantxw **'nit**!
      self fall.down　3.III
      Comment: No, 'nit is for people.　(BS)

This can be linked to the form of weak pronouns. Singular animates can be referred to with the full pronoun *'nit*, or with Ø when contextually licensed.

(59)　a.　Waatxw **'nit** 'wii sa.
      cry　　3.III big　day
      'He cried all day.'

    b.　Waatxw 'wii sa.
      cry　　big　day
      'He cried all day.'　(BS)

This might be interpreted simply as a matter of *pro*-drop. However, examination of plural arguments present a different perspective, as they cannot simply be dropped: rather than alternating between the full form *'nidiit* (60a) and a zero-form, they surface instead as a specialized suffix *-da* in weak pronoun contexts (60b).[19] The suffix *-da* cannot co-occur with the full pronoun (60c), but one of the two must be present (60d).

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[19]There seem to be both contextual and syntactic restrictions on animate *pro*-drop (or rather, Ø/*-da* usage). My fieldwork suggests that it is limited to certain positions; intransitive arguments of independent clauses consistently see variability between *'nidiit* and *-da*, while other positions seem to disallow *-da*. This requires further investigation.

(60) a. Luxdax   'nidiit.
       lə-xwdax   **'nidiit**
       PL-hungry 3PL.III
       'They're hungry.'
    b. Luxdaxda.
       lə-xwdax-**da**
       PL-hungry-3PL
       'They're hungry.'
    c. *lə-xwdax-**da**   **'nidiit**
       PL-hungry-3PL 3PL.III
    d. *lə-xwdax
       PL-hungry

(BS)

This is evidence of a strong/weak pronoun alternation, rather than an alternation between overt and dropped pronouns. Following this, it is apparent that animate weak pronouns maintain a number contrast: Ø for singulars, and *-da* for plurals. This is in contrast to inanimates, which use only the form of the singular/neutral weak pronoun: Ø. If we add this animacy contrast to the previous paradigm, incorporating the strong/weak distinction, a modified table of person markers is as in Table 8. From this, we can see that plurality is a feature entirely absent from agreement and pronominal reference for inanimates.[20] A similar pattern for third person number agreement is discussed in the Dene/Athabaskan languages by Rice and Saxon (2008).

Table 8: Gitksan pronoun and agreement series, revised for animacy

	Pre-pred clitics		Suffixes		Independent	
	SG	PL	SG	PL	SG	PL
1	n	(n) dip	-'y	-'m	'nii'y	'nuu'm
2	m	m...sim	-n	-si'm	'niin	'nisi'm
3anim.		t	-t	-diit	'nit / Ø	'nidiit / -da
3inan.		t		-t		Ø

The neutralization of inanimate number in the agreement system does not mean that inanimate plurality goes entirely unmarked in the grammar, however. The next sections consider the animate-specific pronominal plurality I have presented here, and discuss where and how it diverges from Asp-level and D-level number.

10.5.2 *Pronominal plurality is not stem-plurality*

Most strikingly, although φ-plurality is insensitive to the plurality of inanimate nouns, verbal (stem-level, Asp) plurality is not. This means that verbs can be pluralized even when their pronominal agreement is singular (or rather, neutral/default).

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[20]We may even consider the inanimate agreement reflexes to be morphological defaults, though this hypothesis merits further exploration.

(61) Wilaayi'y   nwin   jipjept,   ii   neediin   anoo<u>k</u>t.
      wilaax-ə-'y   n=win   **jəp**~jep-**t**   ii   nee=dii=n   anoo<u>k</u>-t
      know-TR-1SG.II 1.I=COMP PL~make-3.II and NEG=FOC=1.I like-3.II
      'I know I made them (those houses), but I don't like them.'   (VG)

In (61) above, the embedded clause and following subordinate clause both involve a plural inanimate object (houses) referenced only by Series II agreement suffixes on the verb. This agreement surfaces in each clause with singular/unmarked, not plural agreement, as expected for inanimate arguments following the discussion above. More interesting is the first clause, where the verb *jap* 'make' is reduplicated to indicate a plural absolutive object, even while the φ-agreement for that object is singular.

 This indicates that the two types of plurality (stem-plurality and verbal agreement) cannot be tracking the same property. The verbal AspP responsible for plural marking on the verb is not sensitive to the number-related φ-features of the object DP in its complement; we might even analyze inanimate DPs as lacking grammatical person-number features altogether. This runs contra to Hunt's (1993) account of the verbal plural projection as being sensitive to the grammatical features of the object. I argue that verbal AspP instead tracks *notional* plurality. That is, in addition to verbal pluractionality, AspP is sensitive to overt additive, associative, and φ-plurals, but also covert plurality, as with the unmarked plurality of inanimate null pronouns. This may be a result of AspP engaging in semantic agreement with a grammatically singular object (see e.g. Johnson and Joseph 2014), or alternately of an agreement probe with a general or underspecified target, able to agree with multiple features (not just the grammatical number of the object). Further investigation is needed to distinguish between these possibilities.

 These plural sensitivities also shed light on the structure of the clause more generally. Because verbal AspP is sensitive to notional plural properties for absolutives, but not ergatives, I assume following Hunt (1993) that absolutives are merged in the c-command domain of AspP, while ergatives are merged higher in *v*P. Suffix agreement, on the other hand, can register the features of ergatives; the locus of this agreement is correspondingly higher. It tracks φ-properties, and is independent of event structure.

10.5.3 *Pronominal plurality is not equivalent to associativity*

Here I consider how pronominal plurality is represented within the group of φ-properties, and whether or not it corresponds to associativity and the morpheme *dip*. I argue that the two types of plurality are syntactically distinct, and are located in different syntactic projections.

 Pronouns are determinate, and therefore fall into the class of nouns which are syntactically compatible with an associative feature. Further, pronominal plurality itself can be interpreted as having a fundamentally associative reading, given that plural pronouns represent groups of distinct individuals. We might then expect the plurality expressed within a pronoun to be equivalent to the associative plurality expressed by *dip* when added to a determinate noun. However, pronouns seem to pattern morphologically as bare determinate nouns, and can appear in conjunction with *dip*, for emphasis (Tarpent 1981).

(62) dip   'nuu'm
      ASSOC 1PL.III
      'us guys'   (Tarpent 1981: 400)

There are two possible ways to interpret this fact:

1. *dip* and pronominal plurality are in the same phrase, but *dip* is a modifier while the pronominal part is a head (cf. Wiltschko 2008).
2. *dip* and pronominal plurality are in different phrases, and can therefore co-occur.

I have already argued that *dip* occupies a non-head position in DP, based on evidence from its optionality with different plural NPs (repeated below). The fact that it may co-occur optionally with plural pronouns further supports this analysis.

(63)   Eejdis   (dip) Lisa g̲ant   Henry anaax.
       eets-də-t   =s (**dip**) Lisa g̲an =t   Henry anaax
       fry-TR-3.II =DN ASSOC Lisa COM =DN Henry bread
       'Lisa and Henry fried bread.'   (HH)

(64)   Hlo'o (dip) g̲anits'iits'   goohl   g̲aldimwoot'.
       hlo'o (**dip**) **g̲a**-nits'iits'   goo-t   =hl g̲aldim-woot'
       go.PL ASSOC PL-grandmother LOC-3.II =CN place-sell
       'The grandmothers went to the store.'   (BS)

The difference between these two hypotheses lies in the status of pronouns (which I assume are bundles of φ-features) themselves. If independent pronouns in Gitksan are D-type pronouns (Déchaine and Wiltschko 2002), then they would be predicted to appear in the structure as D heads, in the same position as the introduction of the determinacy contrast. Alternately, they may be φ-type pronouns, merged in a lower functional projection below D, and then subsequently combined with a determinate feature in D.

Preliminary evidence suggests that the independent pronouns in Gitksan may be φ-type pronouns, based on the fact that they may be bound as variables, as in (65). Déchaine and Wiltschko (2002) argue that the ability to function as variables is a property of N- and φ-type pronouns; D-type pronouns can be computed only as R-expressions. However, more rigorous investigation is needed to determine whether variable binding is consistently at play here, rather than coreference.

(65)   Gwalk̲'a 'nihl   ii'uxwt anigoodit   ji   anook̲s   Mary 'nit/'nidiit.
       gwalk̲'a 'nit =hl ii'uxwt ha'niigoot-it ji   anook̲-t =s   Mary **'nit/'nidiit**
       all   3.III =CN man.PL thought-sx   IRR like-3.II =DN Mary 3.III/3PL.III
       'Every man thought that Mary liked him.'[21]   (VG)
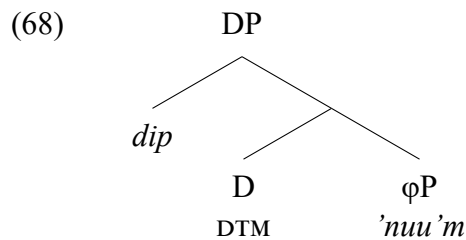
To supplement this preliminary finding, we see also that the third person independent pronoun *'nit* may be used as a predicate, functioning as a predicate or root in (66) and perhaps as a predicating element in cleft constructions, as in (67).

_____

[21] The role of the third person pronoun within the quantificational expression *gwalk̲'a 'nihl ii'uxwt* 'every man' is interesting; I have nothing concrete to say about the syntax of this expression. It is unclear whether it contains the whole pronoun *'nit* or only the historical base, *'ni-*.

(66)　a.　’Nidaa?
　　　　’nit=aa?
　　　　3.III=YNQ
　　　　‘Is that so?’
　　　b.　’nidasxw
　　　　’nit-asxw
　　　　3.III-ANTIP
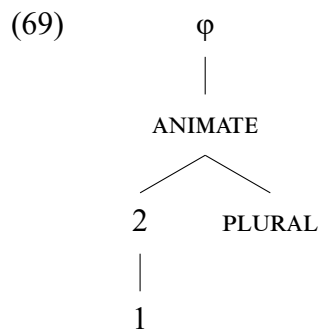　　　　‘to affirm’　　　　　　　　　　　　　　　　　　　　　　　(BS)

(67)　’Nit tun　　　dim　wili’m.
　　　’nit t=xwin　dim　wil-ə-’m
　　　3.III DN=PROX PROSP do-TR-1PL.II
　　　‘This is what we will do.’　　　　　　　　　　　　　　　　(BS)

We can therefore say that pronouns, and the plurality which they express, are syntactically distinct from the D projection and the determinacy contrast within. The φ-features they express are merged in a projection under D.

(68)

```
              DP
          ╱        ╲
    dip
          D          φP
         DTM       'nuu'm
```

The plurality occurring in each functional projection is sensitive to different nominal type contrasts; namely, the one which appears in the head of that phrase. The D-projection expresses plurality for determinate referents only (via *dip*), even if they are exceptionally inanimate, and φ-pronouns express plurality only for animate referents, regardless of whether they are common or determinate.

　　We might model the contrast between animate and inanimate pronominal reference through a feature geometry, incorporating animacy within the geometry itself. The Gitksan pronominal relations would require plurality to be a dependent of an animate class feature, as in (69).

(69)

```
        φ
        │
     ANIMATE
      ╱   ╲
     2    PLURAL
     │
     1
```

Inanimates would be represented as a bare φ root node, and would receive only the most neutral or default agreement (Lochbihler et al. 2015).

A final point regards the impact of this analysis on agreement with full DPs. I here analyze animate plural agreement as something restricted to a φP; if full nominals lack φP, then they would not be expected to trigger third person plural agreement. This is indeed the case, as demonstrated in (70). All verbal agreement with overt nominals is singular/unmarked.

(70)   a.   <u>G</u>apgaabidimaahl   duushl   aats'ip.
                <u>g</u>əp~<u>g</u>aap-ə-**t**=imaa   =hl duus =hl aats'ip.
                PL~scratch-TR-3.II=EPIS =CN cat   =CN door
                'The cats might have scratched the door.'
        b. *<u>g</u>əp~<u>g</u>aab-**diit**=imaa =hl duus =hl aats'ip.
                PL~scratch-3PL.II=EPIS =CN cat   =CN door

                                                    (BS)

This is not to say that full nominals must lack φP in their structure; they do trigger third person agreement, so they must bear some kind of φ-features, even the most minimal. I leave this question open, simply noting that the animate-restricted type of plurality that I locate in φP is strictly pronominal; it is in complementary distribution with with full nominals. This complementary agreement pattern is an interesting point that might serve as the basis for a larger crosslinguistic study, given that full nominals in many other languages trigger plural agreement quite straightforwardly.

10.6   Conclusion

This paper has laid out the details of three different language-internal types of nominal classification, in Gitksan. I examined these contrasts particularly by way of their associations with three different types of plurality, and identified these pairs as existing independently at different levels of nominal structure. These three classification types, pluralities, and structures are summarized in Table 9.

Table 9: Summary of classification and plurality in the nominal structure

N. Classification	Plural	Phrase	Grammatical Association
Mass/Count	additive	nAsp	individuation
In/Animate	pronominal	φ	agreement reflex
Common/Determ.	associative	D	name, uniqueness

I discussed the mass/count distinction, which largely interacts with stem-level plurality in the expected manner: pluralization is a property of count nouns, and mass nouns generally become count nouns when pluralized. The locus of this classification and plurality pair was determined to be a nominal inner Aspect phrase. Next, I presented determinacy, a robust type of noun classification which largely resembles a common/proper distinction with some dependence on animacy, except for its grammaticalization with pronouns and demonstratives. This classification system has its own, restricted type of plurality, an associative marker, and is located at the D level. Finally, an animacy distinction was identified in the pronoun and agreement system; plural

pronouns and plural agreement are only possible with animate referents. These were located in a φ phrase.

There is one theoretical issue underlying the main approach I have taken of discussing classification and plurality as pairs. Though plurality in Gitksan does not seem to exhibit head-like properties according to Wiltschko's (2008) diagnostics, it remains sensitive to the properties of the phrasal head, particularly the determinate plural *dip*. Why is this? Wiltschko (2008) analyzes non-inflectional plurals as *adjuncts*, and attributes much of the flexibility of their usage to this adjunct nature. Given the lesser degree of flexibility in usage for Gitksan plurals, it seems worth exploring the speculation from section 10.4.4 that the determinate plural may be a specifier rather than an adjunct. If so, we may need to expand our typology of plurals to elements which may be either heads, adjuncts, or also *specifiers* within the noun phrase, and what properties each of these is expected to exhibit. Otherwise, some other explanation is needed to account for the restriction of of *dip* to determinate nouns only.

The identification of different types of classification and plurality in a single language is evidence of the articulated nature of the nominal spine, and is indicative of the way structure and interpretation change as functional structure is layered over a root. This paper presents avenues for future crosslinguistic research. For example, we might expect this layering effect in the nominal domain to extend to the clausal domain as well, given the clear correspondence between nominal and verbal Asp-plurality in Gitksan. Perhaps different types of verbal plurality (e.g. any of the several types described by Corbett 2001) can similarly be identified at different points of clausal structure. Alternately, in the nominal domain, we might expect to find other types of number corresponding to nominal projections proposed in the literature which I have not discussed, such as *n*.

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