

ASSOCIATIVE PLURALITY IN THE GITKSAN NOMINAL DOMAIN*

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1. Introduction

This paper considers the morpheme *dip* in Gitksan (Tsimshianic). Previously, this morpheme has been described as a plural article (or *connective* in the Tsimshianic literature, following Boas 1911) which marks the class of determinate/proper nouns (Rigsby 1986; Tarpent 1987). This class is composed of personal names, independent pronouns, demonstratives, and upwards kinship terms; it lies in contrast with common nouns. In this work I propose that, while *dip* is clearly tied to the determinate class of nominals, it should be analyzed as an associative particle rather than a plural marker. Additionally, I suggest that it should be considered structurally distinct both from other plural markers, and from the class of articles.

The rest of this section explores Gitksan plural morphology, demonstrating that *dip* has a different syntactic distribution and semantic interpretation than common noun pluralization markers such as reduplication. Section 2 determines that *dip*'s interpretation and pattern of usage may be accounted for if it has a single associative plural interpretation; it does not additionally require an additive plural variant. In section 3 I present an account of Gitksan nominal structure, locating additive and associative number in different structural positions: just above NP and just above DP, respectively. Section 4 considers a new grouping for the Gitksan article system based on this analysis, and section 5 concludes.¹

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¹ Examples are taken from my own fieldwork or the collective fieldwork of the UBC Gitksan Research Lab except where otherwise noted. Abbreviations used: 1 first person; 2 second person; 3 third person; ACC accusative; AFFRM affirmative; ASSOC associative; ATTR attributive; CAUS causative; CMT comitative; COM common; CTRL control; DEM demonstrative; DET determiner; DIST distal; DSTR distributive; DTM determinate; EMPH emphasis; I series I person marking; II series II person marking; III series III person marking; IMPF imperfective; LOC locative; MOD modal; NMZ nominalizer; NOM nominative; OBL oblique; PASS passive; PFX prefix; PL plural; PROSP prospective; PROX proximal; QUOT quotative; REM remote; SG singular; SX intransitive subject extraction; TR transitive.

1.1 Plural morphology

There are two noun classes in Gitksan: common and determinate. The determinate class is composed of proper names, independent pronouns, WH-words, demonstratives, and upwards kinship terms.²

Pluralization of common nouns in Gitksan is generally achieved by reduplication of the lexical root or selection of a lexically-determined prefix (for extensive discussion of Gitksan plural morphology, see Rigsby 1986).

- (1) sip sip-sip
bone PL-bone

Determinate nouns, in contrast, do not reduplicate. Instead, number is morphologically marked through the connective/article system, shown in (2).³ Plurality on determinate nouns is marked with the morpheme *dip*, as in (3) and (4).

(2)

	SG	PL
Common		= <i>hl</i>
Dtm 1	= <i>s</i>	= <i>s dip</i>
Dtm 2	= <i>t</i>	<i>dip</i>

- (3) dip Clarissa
DIP Clarissa
'Clarissa and the people with her'

- (4) dip ni-ye'e
DIP PFX-grandpa
'grandfathers' (Rigsby 1986, p.116)

However, upon investigation it becomes clear that the determinate plural *dip* and the common noun reduplicative plural trigger different interpretations.

1.2 Plural interpretation

Noted in all previous accounts of the determinate plural marker *dip* is the fact that this morpheme triggers a "group" interpretation. Rather than denoting multiple

² Upward kinship terms are those terms denoting kin at the level of a parent, aunt, grandparent, or above. They do not denote siblings, cousins, children, grandchildren, or similarly "downward" relations.

³ The rows marked Dtm1 and Dtm2 alternate by what is described by Hunt (1993) and Belvin (1990) as Case. Further investigation into this alternation is required, and I do not attempt to discuss the conditioning factors here.

instances of a single referent, *dip* is capable of denoting a single referent augmented by a number of other individuals (Rigsby 1986; Tarpent 1987, 1981). The identity of these individuals is determined contextually.

- (5) Yukw=t giba=s Mary dip Lucy.
 IMPF=3.I wait.for=DET Mary DIP Lucy
 ‘Mary is waiting for Lucy ‘and them’.’ (Tarpent 1987, p.212)
- (6) dip nigwoot-’y
 DIP father-1 SG.II
 ‘my parents’; ‘my dad and his friends’

In contrast, pluralization of a common noun may not result in augmentation of the referent with a group. An additive interpretation is required, denoting plural instances of the referent itself.

- (7) Dox=hl sip-sip goo=hl lax=yip.
 lay.PL=DET PL-bone LOC=DET on=earth
 ‘There are bones on the ground.’
CF: Could there be one bone, and other dog toys on the ground?
BS: No.

Further, determinate nouns (but not common nouns) may appear with the pluralizing *dip* morpheme when modified by the comitative/conjunction *gan*, and retain a singular interpretation (Forbes 2013).

- (8) Sa-ankw-a=s dip ni-ts’iits’ gan=hl guxwda’in-t
 CAUS-bake-TR=DET DIP PFX-grandma CMT=DET grandchild-3SG.II
 a=hl cake.
 OBL=DET cake
 ‘The grandmother and her granddaughter made a cake.’

These facts point toward a contrast between the group-forming plurality marked by *dip* and more traditional additive plurality, marked by reduplication. In the literature, group-oriented plurality is known as *associativity*, which crosslinguistically takes the morphological form of an NP plus some marker. This NP serves as the named referent of the group—a representative member—while the other members of the group may be any contextually salient individuals. Crucially, the members of the group are not required to have properties identical to those of the named referent; the group is usually heterogeneous in nature (Daniel and Moravcsik 2011). This lies in contrast to *additive* plurality, which requires a group composed of members with fundamentally homogeneous properties.

While Corbett’s (2001) investigation of Central Alaskan Yup’ik has shown that associative and additive plurality may operate as independent categories in a language, it is crosslinguistically quite common for an associative marker to

be homophonous with the regular additive plural marker (Daniel and Moravcsik 2011). Though it is clear from the data presented here that the pluralizing reduplication employed by common nouns allows an additive-only interpretation, it is less clear whether *dip* is similarly strict, allowing only associatives, or whether it may serve both additive and associative functions. The next section considers a broader variety of determinate nominals pluralized with *dip* to tease these two interpretations apart.

2. Distinguishing additive and associative

In languages such as Ainu (isolate) and Turkish (Altaic), the plural marker has two distinct semantic interpretations (additive and associative), which surface in distinct morphological ways. For example, in Turkish, the plural suffix *-lar* appears to the left of a possessive under an additive interpretation, but to the right when marking an associative. Görgülü (2011) interprets this morphological difference as indicative of a distinct syntactic structure.

- (9) a. Teyze-*ler*-im
 aunt-PL-1SG
 ‘my aunts’
 b. Teyze-m-*ler*
 aunt-1SG-PL
 ‘my aunt and her family/friends/associates.’ (Görgülü 2011, p.74)

This linear ordering test is not telling for Gitksan. Here, *dip* and a possessive appear on different sides of the noun: preceding and following, respectively. If *dip* does shift between two different syntactic placements, this is therefore not realized overtly.

- (10) Seks **dip** no_x-’m bingo.
 go.PL DIP mother/aunt-1PL.II bingo
 ‘Our aunts and them went to bingo.’

We may examine a number of other distinctions which crosslinguistically appear contrasting additives and associatives. One notable property of associatives is their tendency to select only high-animacy referents; usually only items with the semantic feature [human] may be used in conjunction with an associative. However, while *dip* does have strict selectional requirements, they are not apparently made on a semantic basis. Note the following examples, where the human common noun *sim’oogit* ‘chief’ may not co-occur with *dip*:

- (11) Bakw dip John goo=hl li’ligit.
 arrive.PL DIP John LOC=DET feast
 ‘John (and his family) arrived at the feast.’

- (12) *Bakw **dip** sim'oogit goo=hl li'ligit
 arrive.PL DIP chief LOC=DET feast
 Intended: 'The chief (and his/her family) arrived at the feast.'

Above, only the determinate name *John* may appear with the associative reading marked by *dip*; indeed, *dip* may be used in conjunction with any noun of the determinate class. While most of these nouns do tend to be human in nature (personal names, kinship terms), there are cases where it may be used with items which are not necessarily human. Demonstratives, in particular, may refer to either humans or inanimate objects. Use of *dip* with these non-human referents, as in (14), gives rise to an interpretation that seems more additive in nature.

- (13) Naa dip=ust t=ya=t Alyssa gi?
 who DIP=DEM.DIST 3.I=QUOT=DET Alyssa REM
 'Who did Alyssa say they are?'
- (14) Di-bakw-'y dip=ust.
 CAUS-arrive.PL-1 SG.II DIP=DEM.DIST
 'I brought those (cookies).'

We see in (14) that *dip* may be used to mark plurality even when the referent of the demonstrative is non-human and non-animate and involves a homogeneous group (i.e. of cookies).⁴ This behavior is uncharacteristic of associatives, suggesting that *dip* is capable of functioning as a regular additive.

However, the cases where it appears that *dip* may be functioning as an additive are curiously limited, and not obviously productive. When attempting to elicit additive plurals for proper names, the consultants I worked with sometimes had a difficult time coming up with a plural form, and judged that *dip* was an inappropriate marker for the requested interpretation. Depending on dialect, *dip* either was not sufficient on its own and required some other overt indicator of plurality as in (15), or could not be used at all, as in (16).

- (15) Saks-in=s dip Michael-s hla ga-'win-dii.
 clean-CAUS=DET DIP Michael-PL NMZ DSTR-teeth-3PL.II
 'The Michaels cleaned their teeth.'
BS Comment: I'm not sure if "Michaels" is right, but it seems like there should be something there.
- (16) K'ap lukw'il wilix wila ky'uul-s=t Michael=hl wilaax-'y.
 EMPH very clever how one-PASS=DET Michael=DET know-1 SG.II
 'The Michaels I know are very smart.'
 (Requested: 'Michaels tend to be very smart.')

⁴ Though interestingly, one consultant preferred not to use *dip* to pluralize demonstratives with non-human referents, claiming it made it seem more as though humans were being referred to.

VG Comment: *How do I say a plural for Michaels?*

CF: *Could you say **dip Michael**?*

VG: *No, not in Gyaanimx.*

What this seems to demonstrate is a degree of morphological ineffability. While speakers are aware at some level of the distinction between additive and associative plurality, no morphological marker is available in the language to encode a strictly-additive interpretation on a determinate noun. Using *dip Name* alone does not serve this function.

It thus seems hasty to conclude based on the apparently-additive behavior of *dip* with demonstratives in (14) that this morpheme is ambiguous between an additive and associative interpretation. More likely, *dip* is acting as an associative with the demonstratives as well, but that this is not obviously apparent.

This precise situation is described by Nakanishi and Ritter (2009) in their consideration of the Japanese associative *-tati*. This morpheme is capable of modifying common nouns like *gakusei* ‘student’, resulting in an interpretation which is ambiguous between additive and associative.

- (17) *Gakusei(-tati)-ga sono biru-o torikakonda.*
 student-ASSOC-NOM that building-ACC surrounded
 ‘(The) students surrounded that building.’

Under their analysis, the use of an associative with a proper vs. common noun has a different impact on the context determining the properties of the associates. Proper nouns have no descriptive content, as they refer rigidly to entities; utterance-external context is therefore required to determine the membership of the group. In contrast, common nouns do have descriptive content; it is their characteristic function which informs the context for the membership of the group.

- (18) 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*

In the case of Gitksan demonstratives, it is possible that the context of the group is provided by the deictic content of the demonstrative. The group members are therefore interpreted as some number of entities within the area of the demonstrative’s deictic reference.

- (19) 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*

By assuming this analysis, we require only a single lexical entry for *dip*: one with associative semantics. With this single lexical entry, we are able to derive the apparently-additive interpretations which occur with some usages of *dip*, while simultaneously predicting the ineffability effects that speakers experience when a group reading is not desired with a plural determinate noun.

3. Proposing a nominal structure

This section will present an internal structure for the Gitksan noun phrase which incorporates additive and associative plurality in different positions. I will be following Wiltschko (2008) and Hirose (2004) in assuming that number is an adjoining feature in this language, rather than a functional head.

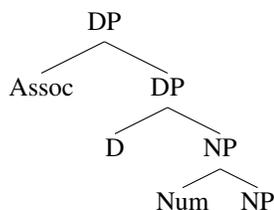
Determinate nouns and common nouns have different syntactic properties in Gitksan. Common nouns are capable of serving as clause predicates, while determinate nouns like proper names may not. In (20) and (21), while the common noun *lipleet* ‘priest’ may serve as the predicate taking the personal name *Larry* as its argument, the converse is not possible. *Larry* may only appear in initial position if the common noun bears extraction morphology (SX ‘subject extraction’), indicating that *Larry* has undergone A’-movement.

- (20) Lipleet=t Larry-ist.
 priest=DET Larry-AFFRM
 ‘Larry is the priest.’
- (21) a. *Larry=hl lipleet-ist.
 Larry=DET priest-AFFRM
 b. Larry=hl lipleet-**it**-ist.
 Larry=DET priest-SX-AFFRM
 ‘Larry is the priest.’

Following models of the nominal domain such as Cowper and Hall (2009), this difference in behavior suggests that the distinction between these classes would be best represented as merging at different points in the structure. I propose that common nouns are merged as the heads of NP, and determinate nouns are merged as the heads of DP (given the intrinsic definite and referential nature of determinate class items).

This correlates with the analyses of number put forth by Hirose (2004) and Görgülü (2011): additive number adjoins to NP, while associative number adjoins to DP. Note that the associative feature is one that necessarily applies to entities, not properties—this correlates to modification of a nominal with more functional structure.

(22)



The idea that determinates should be associated with some point high in the nominal structure is supported by the distinct behavior they exhibit when additional information is used to restrict their reference. In (23), when the kinship term *nibip* ‘uncle’ is used alone to refer to a single individual, it receives determinate marking. When an adjectival modifier is inserted to restrict reference, it receives common noun marking.

(23) Yee ’nii’y goo=hl wilp=**s/*hl** [nibip-’y].
 go 1SG.III LOC=DET house=DET.DTM/*COM uncle-1SG.II
 ‘I went to my uncle’s house.’

(24) Yee ’nii’y goo=hl wilp=**hl/*s** [’wii
 go 1SG.III LOC=DET house=DET.COM/*DTM [big
 ’nakw-it=**hl/*s** [nibip-’y]].
 long-SX=DET.COM/*DTM uncle-1SG.II]
 ‘I went to my tall uncle’s house.’

This can be related to the non-referential behavior of pronouns noted by Cowper and Hall (2009). Though they generally analyze English pronouns as merging higher than NP, they suggest that via a process of “degrammaticalization” lexical items may lose certain features in order to merge lower than their default position. Below, English pronouns co-occur with a determiner.

(25) Is that a he or a she? (Cowper and Hall 2009, p.108)

In Gitksan, I suggest that the grammatical feature [+/-determinate] is associated with the D projection. Determinate items normally merge in this position (for example, proper names; recall how these items may never be used as predicates or properties, and thus do not likely merge as Ns) but some, like kinship terms, may merge lower, perhaps losing their [+determinate] value in the process.

Merging proper names in D raises problems when considering Gitksan articles, however. In Gitksan, overt articles mark all arguments, including proper names. Demonstratives co-occur with articles as well, as shown in (26).

(26) a. t=un
 DET=DEM.PROX
 ‘this’

- b. *dip*=un
ASSOC=DEM.PROX
'these'
- c. *g_{oo}*=s=un
LOC=DET=DEM.PROX
'here'

The traditional view that articles should serve as the head of D creates a conflict in this respect; a proper noun or demonstrative could not merge in this position if an article was meant to occupy it as well. However, consider Wiltschko's (2010) alternative proposal regarding the position of articles within the nominal structure. Under this view, the position of articles should not be considered universally fixed, but rather dependent on the context of the language in question and the syntactic behavior of the article itself.

Wiltschko examines Okanagan, a Southern Interior Salish language, determining that the Okanagan article may be associated with the functional projection KP, above DP. This conclusion is made on the basis that the article precedes prepositions and locative content. Similar facts hold in Gitksan; while the oblique marker precedes the article, information about the locative content of a noun intervenes between the article and the nominal itself.

- (27) Sgi=dim ap luu sgi-t *g_{oo}*=hl ts'im maaxwsxw-a xbiist.
MOD=PROSP EMPH in lay-3SG.II LOC=DET in white-ATTR box
'It must be in the white box.'

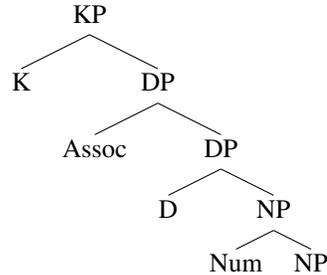
This is not always overtly the case; as in Okanagan, it is much more likely for a Gitksan article to be omitted in the presence of the locative prenoun.

- (28) *Luu ma_k-di-'y=hl hlit'=hl ts'im xbiist.
in put-CTRL-1SG.II=DET ball=DET in box
'I put the ball in the box.'

Gitksan articles mark all nominals (and other elements, such as relative clauses) which serve as arguments to predicates. If KP serves as the outermost layer of the nominal domain, parallel to the clausal CP, then this function is not unexpected. Just as complementizers link clauses to larger domains (e.g. the higher clauses within which they are embedded), so might K-articles be expected to link nominals to higher domains (e.g. the predicates which take them as arguments). The association that Gitksan articles have with the function of argumenthood is thus well-accounted for by an association with KP in the nominal domain.

The linear order of the article, *dip*, and nominal additionally fall out from this analysis, assuming head-initial projections.

(29)



In this section, then, I have proposed a basic model of the Gitksan nominal domain which incorporates two positions for associative and additive number, and reflects the syntactic distinction between determinate and common nouns. Additionally, the distinction between KP and DP which this analysis draws is useful for separating two unique functions: (i) the marking of argumenthood; and (ii) the marking of features like definiteness, unique referentiality, or deixis.

4. Reanalyzing the article system

Under this analysis of Gitksan nominal structure and the morpheme *dip*, there is basis for recategorization of the morphemes in the Gitksan connective system. *Dip* marks associativity and adjoins to DP, while the other three enclitics are markers of argumenthood and serve as the heads of KP. By splitting *dip* away from the rest of the connectives, the remaining article system looks as follows:

(30)

	Case 1	Case 2
Common		= <i>hl</i>
Dtm	= <i>s</i>	<i>t</i>

The morphemes which occupy the head of KP alternate only for determinacy and case; the determinate articles do not additionally alternate with respect to number. In fact, the articles are entirely *neutral* with respect to number. The appearance of *dip* is expected to be entirely independent of the enclitic articles; this makes it theoretically possible for *dip* to co-occur with any of the three morphemes.

Some of these combinations are not desirable, since we only ever see *dip* co-occur with =*s*, but the lack of co-occurrence is easily accounted for. As shown in section 2, the distribution of *dip* is not restricted by semantic class, but rather by a syntactic or lexical class: it only appears with nouns that are [+determinate]. Conversely, =*hl* only appears with common nouns. If *dip* is [+determinate] and =*hl* is [-determinate], then these two would naturally never appear together, as this would result in a clash of features.

This is not the case with the last article =*t*, which is presumably also specified for [+determinate]. However, it may be the case that =*t* and *dip* do co-occur, but the occasional proclitic properties of =*t* result in a phonological string of *t=dip*, which is then reduced to simply *dip*.

(31)

K head	Adding <i>dip</i>	Result
=hl	[+dtm] <i>dip</i> clashes with [-dtm] noun	=hl
=s	co-occurs with <i>dip</i>	=s dip
t	co-occurs with <i>dip</i> , reduction	t=dip → dip

More descriptively, how should *dip* itself be analyzed? It may be an associative pronoun; this is the conclusion Tarpent (1981) reached in consideration of how Nisga'a speakers translate phrases which involve *dip*. This would put *dip* on par with items such as English *both*, capable of serving as a pronoun or as a modifier.⁵

Further evidence for this is seen when noting *dip*'s apparent homophony with one of the first person plural pronouns in the language (series I). Note that the first person plural is a naturally associative category, in that it denotes the speaker plus a group (rather than multiple speakers).

(32)

	SG	PL
1st	=n	dip
2nd	=m	=m ... -si'm
3rd	=t	=t ... -diit

This may shed additional light on the nature of this pronoun paradigm in particular. Note that the second and third person plural forms are compositional, made up of the singular series I *plus* the appropriate series II plural pronoun. One hypothesis might be that the pre-predicative series I clitics =*n*, =*m*, and =*t* are in fact neutral for any kind of plurality distinction, and that some other mechanism is utilized to convey a plural interpretation: specifically, the addition of a plural pronoun from another paradigm. For the first person category, which is always associative, a different mechanism might be the use of an associative particle.

5. Conclusion

This paper has made a number of proposals from consideration of the morpheme *dip* in Gitksan (Tsimshianic). First, data contrasting the determinate plural marker

⁵ Though of course English *both* differs from Gitksan *dip* in that *both* has a dual, distributive interpretation (Ladusaw 1982), while *dip* simply has an associative one.

dip and the common reduplicative plural was presented, suggesting that *dip* truly marks associative plurality (restricted to the determinate noun class). I further argued that *dip* only marks associativity, and does not mark additive plurality, in contrast to accounts from ambiguous associative markers in Ainu and Turkish (Hirose 2004; Görgülü 2011).

Two positions for additive and associative number, respectively, were incorporated into a model of the Gitksan nominal domain in section 3. This is the first model of noun-internal structure that has been proposed for any Tsimshianic language. In considering the Gitksan article system, I suggested that a distinction between DP and KP be drawn, linking features like determinacy, deixis, definiteness, or referentiality to D, and the function of marking argumenthood to K. Separating these two notions allows for the co-occurrence of demonstratives and proper nouns with articles, while not requiring that these determinate items be merged at the same level as a common noun root. Two different merge levels account for the different syntactic behaviors that these noun classes exhibit with respect to their ability to serve as clausal predicates.

Finally, *dip* was separated from the Gitksan article system in section 4. I suggested that perhaps *dip* is a plural pronoun; this sheds some light on plural marking in the series I pronoun paradigm.

This investigation contributes significantly to our knowledge of the syntax of nouns in Gitksan, and provides a novel analysis of the Gitksan connective system while still remaining compatible with various accounts of Nass-Gitksan case (Tarpent 1987; Belvin 1990; Hunt 1993). It additionally contributes fresh data to the investigation of number and associativity crosslinguistically.

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