Murrinhpatha Noun Classifiers: Syntax and Discourse Functions

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Acknowledgements

I am very grateful and lucky to have been supported by a number of people throughout the year. First and foremost, I would like to express my heartfelt appreciation to my two wonderful supervisors Professor Rachel Nordlinger and Dr. John Mansfield, who have provided hours of insight, expertise, and guidance. Rachel, for her valuable expertise and incredible attention to detail; and John, for his sharp mind and deep understanding of the Murrinhpatha language. I am also grateful to John for allowing me access to the corpus. They have both not only greatly assisted in the development of this thesis, but provided me with knowledge and skills that will be invaluable beyond honours. Thank you, Rachel and John.

I would also like to thank Judith Bishop for sponsoring the Appen Prize for Excellence in Linguistics, which I was generously awarded at the beginning of the year. I am grateful for its symbolic significance, and also for the financial support.

Thank you to the teaching staff at the Melbourne University Linguistics department, from both honours and undergraduate years, who inspired and strengthened my passion for Linguistics: including but not limited to Peter Hurst, Rosey Billington, Janet Fletcher, Rachel Nordlinger, and Brett Baker. I would also like to thank Brett for his useful advice post-honours.

My friends and family have helped me keep everything in perspective and provided unconditional emotional support. Special thanks to Giovanni Ma for offering to read through the final draft, and providing helpful comments. My parents, Robin and Jiami, have been there for me since day one and have always supported me in so many ways. For that I am eternally grateful. And finally, to my partner Max, who helped me in more ways than I could have imagined. From your practical support, by reading many drafts of this thesis, to the emotional, by believing in me and always being there for me during the stressful final months of the thesis. Thank you for everything, Max.

Abbreviations and Glossing Conventions

(1), (2), etc	Verb Classifier Stems
1, 2, 3	1st, 2nd, 3rd person
ACC	Accusative
ANAPH	Anaphor
CLS	Clause
COND	Conditional
DAT	Dative
DIM	Diminutive
Dist	Distal
DO	Direct Object
Du	Dual
EMPH	Emphatic
F	Female
FUT	Future
INTJ	Injection
INTNS	Intensifier
IO	Indirect Object
LOC	Locative Marker
M	Male
NC	Noun classification marker

NC:ANIM	Noun classifier, animate
NC:FIRE	Noun classifier, fire
NC:HUMAN	Noun classifier, human
NC:LANG	Noun classifier, language
NC:PL/T	Noun classifier, time and space
NC:RESID	Noun classifier, residue
NC:SPEAR	Noun classifier, spear
NC:VEG	Noun classifier, vegetable
NC:VIOL	Noun classifier, violence
NC:WATER	Noun classifier, water
NEG	Negator
NFUT	Non-Future
NOM	Nominative
NSIB	Non-sibling
PC	Paucal
PERL	Perlative
PIMP	Past Imperfect
PIRR	Past Irrealis
PL	Plural
PROX	Proximal
PST	Past
RECN	Recognitional
RR	Reflexive/Reciprocal
SG	Singular

SIB	Sibling
sp.	Species (of e.g. plant)
TAG	Tag question marker
TEMP	Temporal Marker
TOP	Topicaliser
VOC	Vocative

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Chapter 1

Introduction

This thesis aims to describe nominal classification in the Australian language Murrinhpatha - specifically the syntactic behaviour and discourse functions of its classificatory elements. Nominal classification is the system of classifying nominals into subclasses through the use of such elements. In Murrinhpatha, these take the form of free morphemes standing next to the noun, which can be seen in example 1.0.1 below, wherein the animate classifier *ku* classifies the nominal *pangkuy* 'snake':

(1.0.1)   2011-08-16_P-B-K-M.110 (Conversation)

bam-ngkardu	***ku***	***pangkuy***	*ini=ka*
3SG.13.NFUT-see/look	**NC:ANIM**	**snake**	ANAPH=TOP

'I saw that snake'

In typologies of nominal classification, there are said to be two main types: noun class systems, whose classificatory elements - *noun classes* - trigger agreement on nominal material and/or on the verb; and noun classifier systems, whose elements - *noun classifiers* - have no agreement behaviour (Aikhenvald, 2000; Dixon, 1968; Seifart, 2010). Additionally, they typically take different forms: with noun classes realised as affixes or clitics; and classifiers as independent morphemes. Based on these definitions, Murrinhpatha sits undeniably as a classifier system.

In this thesis, I show that though Murrinhpatha noun classifiers display some syntactic and discourse functions typically described in nominal classification typology, they also exhibit behaviour which has been previously undocumented in the literature. Specifically, I find that not all noun classifiers behave in the same manner, and instead exhibit separate behaviour in discourse functions. To my knowledge, this is the only documented language which has a split system in *function* and not in its morphosyntax. Additionally, noun classifiers reveal distinctive patterns among a certain semantic class of nouns - body parts and kinship terms. As such, the results

from the thesis not only provide additional grammatical description for Murrinh-patha, but will also contribute to a broader understanding of nominal classification as a whole.

Nominal classification is an especially valuable area of research - often being discussed as possible evidence of a direct cognitive link between language and culture (Lucy, 1992; Lakoff, 1986). It has been a topic of research not just in linguistics, but also in psychology, philosophy, and anthropology (Craig, 1986b, and authors within). Such studies indicate that the establishment of, and contribution to, a typology of nominal classification systems would be of great use to many fields of research. A thorough description of the way this system is realised in Murrinhpatha will contribute significantly to the growing body of work on this topic.

In the remainder of this chapter, I provide the reader with a brief background of the Murrinhpatha language and its grammatical features which are fundamental to the forthcoming chapters. I then present an overview of the thesis.

1.1 The Murrinhpatha Language

Murrinhpatha is a non-Pama-Nyungan Australian language, spoken in and around Wadeye (formerly Port Keats) in the Northern Territory. It is a head-marking, polysynthetic language, spoken by approximately 2,500 people, and is one of the few Aboriginal languages that is still being acquired by children (Kelly, Nordlinger, & Wigglesworth, 2010). Murrinhpatha lies in the Daly River region, and is considered as such to form part of the geographical Daly River grouping, alongside the Ngan'gityemeri and Marrithiyel languages, among others. In a genetic grouping, however, Murrinhpatha has been harder to place. It was previously thought of as a language isolate (Tryon, 1974), but more recent research by Green (2003) has suggested that Murrinhpatha and Ngan'gityemeri are genetically related; forming their own Southern Daly subgroup. This relation is argued for based on similarities in the verbal auxiliary paradigm that can only be explained by genetics (Green, 2003, p. 128).

Though there has been some descriptive work on Murrinhpatha in recent years, such as Walsh (1976; 1997), Blythe (2009), Nordlinger (2010), and Mansfield (2019), there are many areas of the grammar which are still not fully described. This section summarises the current knowledge of nominal classification and noun phrase structure in Murrinhpatha.

1.1.1 Nominal Classification

The most prominent study of nominal classification in Murrinhpatha is Walsh (1997).
He provides a semantic analysis of Murrinhpatha nominal classification, by discussing noun categorisation and multiple class membership of nouns.[1] In keeping with Street (1987, p. 41-44), Walsh (1997, p. 256) identifies the following ten noun classifiers. I have further supplemented his descriptions and examples with additions from Mansfield (2019, p. 171):

1. kardu

   - "higher" animates: socially recognised people (usually Aboriginal)

     – *kardu thipman* 'NC:HUMAN person'
       black person (Aboriginal)
     – *kardu pule* 'NC:HUMAN old'
       old man (Aboriginal)

2. ku

   - "lower" animates: animals, meat, spirit beings, non-socially recognised humans

     – *ku thipman* 'NC:ANIM person'
       black person (Non-Aboriginal)
     – *ku pule* 'NC:ANIM old'
       old man (Non-Aboriginal)

3. kura

   - "water": water and water-based liquids

     – *kura ngipilinh* 'NC:WATER creek/river'
       creek/river

4. mi

---

[1] Walsh (1997) uses the term "noun class marker" rather than "noun classifier". Authors differ on their preference in how to refer to Murrinhpatha's classificatory elements. For some discussions, "noun class marker" may be desirable over "noun classifier" to reduce ambiguity with other aspects of the Murrinhpatha grammatical system (such as with "verbal classifiers"). As the focus of this thesis is on nominal classification systems, I will reserve the term "noun class" for elements of noun class systems, and "noun classifier" for those of noun classifier systems.

- "vegetable" category: consumable plant matter, fruit and vegetables, tabacco
  - *mi marrarl* 'NC:VEG native.tree.sp'
    fruit of a native tree (Terminalia ferdinandiana)

5. nanthi

   - "residue" category: miscellaneous inanimate objects, body parts
     - *nanthi thelput* 'NC:RESID house'
       house

6. thamul

   - "spears" category": types of spears
     - *thamul waya* 'NC:SPEAR fishing.spear'
       fishing spear

7. thu

   - "violence" category: weapons, acts of violence
     - *thu kuragadha* 'NC:VIOL boomerang'
       boomerang

8. thungku

   - "fire" category: fire, firearms, electricity
     - *thungku len* 'NC:FIRE coal'
       hot coals

9. da

   - "spatial and temporal" category: locations in time and place
     - *da pemanhay* 'NC:PL/T hill'
       sandhill

10. murrinh

    - "language" category: language, names, stories
      - *murrinh mamay* 'NC:LANG baby'
        baby talk

Noun classifiers in Murrinhpatha are found on the left-edge of the noun phrase, immediately before the noun if it is present. Aside from the small subset of nouns which are discussed below, all nouns are assigned a default classifier and this assignment is semantically motivated (Walsh, 1997, p. 256, references within). This can be seen with the examples above. There are some concepts, however, for which the relationship between noun classifier and noun is less transparent (Mansfield, 2019, p. 176-177). Some of these are presented below:

(1.1.1)   **mi**   *kamarl*
         NC:VEG   eye
         seed

(1.1.2)   **ku**   *burrburr*
         NC:ANIM   termite.mound
         snake which frequents termite mounds

(1.1.3)   **nanthi**   *muthingka*
         NC:RESID   old.woman
         bullroarer (ceremonial device associated with powerful female spirit)

Mansfield (2019, p. 177) suggests that these examples could be interpreted as conventionalised metaphors, derived from shape (example 1.1.1), ecological association (example 1.1.2), or ceremonial association (example 1.1.3). A small set of other instances appear to have no transparent or metaphorical association, such as the word for money *ku palyirr* 'NC:ANIM rock'. Nonetheless, most nouns are assigned on a semantic basis.

There are some nouns, too, which are not associated with any classifier. These include proper names, kinterms (per Blythe, 2009, p. 106), and nouns which do not behave like a typical nominal (Walsh, 1997, p. 281). For example, the word *nginipunh* can occur without a classifier, but changes meaning and function when it does. When it occurs with a classifier, it selects a concrete referent, and is clearly a nominal - it means 'body' with the residue classifier *nanthi nginpunh*, or means 'skin name' with the language classifier *murrinh nginipunh*. On its own, however, *nginipunh* is used in a relational function and is translated to 'like/similar': with no concrete referent, it does not function as a noun at all. When it has no nominal meaning, it cannot be assigned a noun classifier. Abstract nouns which have a clear connection to a verbal root, also occur without a classifier. For example, *ningkaninkga* 'permission', related to the verb root *ngka* 'allow', occurs without a

classifier (Walsh, 1997, p. 282). In general, then, all non-derived nouns are assigned a classifier.

Nouns which are assigned a classifier can belong to multiple categories. Class reassignment can introduce nuanced semantics, as exemplified below. Here, *thay* 'stick/tree' is assigned to the fire classifier *thungku* 'NC:FIRE' when referring to firewood, or to the residue classifier *nanthi* 'NC:RESID' when referring to regular wood:

(1.1.4)   Walsh (1997, p. 285)

thungku   *thay*
NC:FIRE   wood

'fire wood'

nanthi   *thay*
NC:RESID   wood

'wood'

An additional analysis would be that nouns themselves are not assigned a classifier as such - instead, noun referents select noun classifiers. This would explain why a single noun can be classified to multiple categories: because the same noun can refer to more than one referent. Choice of classifier, then, is dependent upon the referent at hand and how it is construed.

Noun classifiers can also co-occur with adjectives and demonstratives (Walsh, 1997, p. 262-263), such as in the examples below. Here, the classifier does not classify any noun and functions as the noun instead:

(1.1.5)   (Walsh, 1997, p. 262-263)

kardu   *pangkuy*
NC:HUMAN   long
bam-wunku-ngkardu-ngintha
1SG.13.NFUT-3PAUC.DO-see/look-DU.F.NSIB

'I saw the two tall people (one of whom is female).'

(1.1.6) ***kardu***   *kanhi*   *bam-∅-ngkardu*
      NC:HUMAN   this   lSGS-3SGO-see
      'I saw this person'

The noun classifier on its own can be used to specify the referent in the absence of nominal material. Mansfield (2019, p. 170) analyses this behaviour as classifiers functioning like a noun with general semantics. Blythe (2009, p. 60), on the other hand, describes this function as a 'vague pro-form', where the classifier stands in place of the full noun phrase without an overt antecedent. Successful reference identification, then, is reliant on discourse and cultural information. This is a common feature in Australian languages (Singer, 2010, p. 407). An example of this behaviour is provided by Blythe (2009, p. 60), extracted from a text about spiny chitons. The speaker never explicitly specifies "spiny chitons", despite clearly being aware of this creature, and uses instead the vague pro-form *ku* 'NC:ANIM' without further clarification:

(1.1.7) **ku**   *ningam-yirryirr=warda*
         NC:ANIM   3SS.27.NFUT-boil=then

"Then she boiled the things of the ku class (spiny chitons)."

Walsh (1997, p. 264) claims that agreement does not occur with Murrinhpatha noun classifiers. Mansfield (2019, p. 179), however, finds that agreement may occur with noun classifiers - though it is very uncommon. In example 1.1.8, the noun classifier attaches to both the noun and the modifying adjectives:

(1.1.8) (Mansfield, 2019, p. 159)

ku	*karrath*	**ku**	*purrkpurrk*	**ku**
NC:ANIM	devil	**NC:ANIM**	small.numerous	**NC:ANIM**

terert
many

'Many little devils'

Finally, there are conflicting statements on the frequency of noun classifiers in the noun phrase. Walsh (1997, p. 277) claims that the classifier is more frequently omitted from the noun than included when the noun is in its "unmarked" usage (though does not explain what is meant by "unmarked") while Mansfield (2019, p. 170) claims that noun classifiers appear in the vast majority of noun phrases. This issue is discussed in my results, where I also posit motivations for a classifier's presence or absence.

We see, then, that the ten noun classifiers categorise the majority of nouns, where a noun can belong to multiple categories, and can be used as general nouns

themselves, often functioning as "vague pro-forms" in place of a full noun phrase. I now turn to a description of Murrinhpatha noun phrase structure, to describe the general environments where noun classifiers can appear.

1.1.2   Noun Phrase Structure

The Murrinhpatha noun phrase, unlike its higher level constituents, has been described as having 'strict internal constituent structure' (Mujkic, 2013, p. 87), with relatively little nominal case morphology (Nordlinger, 2015, p. 493). There have been a number of authors who propose different approaches to noun phrase rules, though all describe similar underlying behaviour. In all descriptions of the noun phrase, noun classifiers always occur at its left edge, and - when both are present - must always have the order [NC N] with no intervening nominal element.

Walsh (1997), alongside his analysis of nominal classification, provides an account of noun phrase structure, and posits the following rule - where the entity is the only obligatory element - and provides associated examples:

(1.1.9)   Walsh (1997, p. 264)
(CLASSIFIER) ENTITY (QUALIFIER) (QUANTIFIER) (DEICTIC)

(1.1.10)

CLASSIFIER	ENTITY	QUALIFIER	QUANTIFIER	DEICTIC
ku	were	xx	perrkenku	ngay
NC:ANIM	dog	xx	two	my

'my two dogs'

CLASSIFIER	ENTITY	QUALIFIER	QUANTIFIER	DEICTIC
ku	were	murntak	perrkenku	ngay
NC:ANIM	dog	old	two	my

'my two old dogs'

Walsh's (1997) rule take a functional approach to noun phrase structure, with order described in terms of the function of its elements. Blythe (2009, p. 102) takes a formal approach, and describes the noun phrase structure with respect to its word classes. His rule is presented below, where there must be at least one overt nominal word. I demonstrate this rule in action, using the same examples presented for Walsh's (1997) rule above. I have included the possessive pronoun *ngay* '1SG' under 'enclitics' - further discussion of possessive constructions will be presented shortly:

(1.1.11) Blythe (2009, p. 102)

[(nominal classifier) (noun) (adjective) (demonstrative) (numeral)] = (enclitics)

(1.1.12)

[(nominal.classifier	*noun*	*adjective*	*demonstrative*	*numeral)]*
[(ku	were	xx	xx	perrkenku)]
NC:ANIM	dog	xx	xx	two)]

=*enclitics*
=ngay
=my

'my two dogs'

[(nominal.classifier	*noun*	*adjective*	*demonstrative*	*numeral)]*
[(ku	were	murntak	xx	perrkenku)]
[(NC:ANIM	dog	old	xx	two)]

=*enclitics*
=ngay
=my

'my two old dogs'

In addition to the above rule, Blythe (2009, p. 114) proposes another rule to capture the behaviour of possessive constructions, as seen in example 1.1.13 below. This rule states that the possessive pronoun must be the same gender as the possessor, where (Possessed) and (Possessor) are noun phrases:

(1.1.13) Blythe (2009, p. 114)

[(Possessed)(Possessor)α]=Proα

The possessive pronoun =*Pro*α is described here as an enclitic, which attaches to the word level of the preceding "possession" group. This is why *ngay* 'my' takes the position of the enclitic in example 1.1.12 above. Further examples of possessive constructions are shown in examples 1.1.14 and 1.1.15 below, where both the possessed and possessor are made explicit - though typically only one "possession" group is present:

(1.1.14) 6.16 (JB2005FN1, 133) (Blythe, 2009, p. 115)

[(nanthi	*trak)*	*(mark)]=nukunu*
[(NC:RESID	vehicle)	(Mark)]=3SG.M

"Mark's car"

(1.1.15) 6.19 Longbum Dinner (2004-09-12JB04, 0772.286) (Blythe, 2009, p. 115)

[*mangga-mangga*   *nganiminyi]=nigunu*
[woman's.son's.child-REDUP   nganiminyi]=3SG.F

"Nganiminyi's own son's child"

There is no formal distinction between alienable and inalienable possession in Murrinhpatha (Walsh, 1997, p. 265). In section 4.3, however, we see that noun classifiers are sensitive to these types of possession.

Mujkic (2013, p. 77) posits a revision to both the general noun phrase and possessive constructions rules from Blythe (2009). The new rules are almost identical, but makes explicit what nominal types can occur alone in the noun phrase. She also adds a coordination rule. Additionally, she finds an example of a possessive pronoun that occurs between a noun and an adjective, and not at the edge of the noun phrase as the rule in 1.1.13 would expect. This is included in the rule with (N POSSPRO), but she acknowledges that this may be an anomaly (Mujkic, 2013, p. 74):

(i) NP → { NC / PRO / N_1 / DEM }

(ii) NP → (NC) { (N) / (N POSSPRO) } (ADJ)* (DEM) (NUM)

(iii) NP → NP (i) NP

Where N_1 is a restricted set of nominals which can occur alone in the noun phrase - such as kin terms and proper nouns. Examples that illustrate this rule are identical to those above for Blythe. The rule is also stated in prose, which is quoted below for completeness:

(1.1.16) Mujkic (2013, p. 78)

- Only pronouns, noun class markers and some nouns (kin terms and proper nouns like personal names and place names) can occur alone as an NP

- All elements of the NP are optional, except for a head. NPs with more than one element must be headed by [NC], [N] or [NC N].

- NPs can be coordinated and apposed.

Though there has been discussion of Murrinhpatha noun phrase structure in previous literature, there has been relatively little discussion on the behaviour of noun classifiers in the noun phrase and in discourse, as well as potential differences between them. This thesis aims to fill this gap in the literature.

1.2   Structure of the Thesis

Now that we have covered the necessary background knowledge, I present the thesis as follows. In chapter 2, I provide an overview of the research into nominal classification as a means to contextualise Murrinhpatha in the literature. In this chapter, I discuss the morphosyntactic properties of nominal classification systems, and their potential uses in discourse: reference tracking, establishing a new perspective on the referent, and reference management. I also provide an overview of nominal classification systems in the neighbouring Daly languages of Ngan'gitymerri and Marrithiyel, which provide a challenge to nominal classification typology. At the conclusion of this chapter, I summarise the key issues in light of this discussion and present the research questions I aim to address in this thesis.

The methodology is provided in chapter 3, which includes details of the corpus, and the methodology for approaching the research questions.

Chapters 4 and 5 cover my results. Chapter 4 discusses the grammatical environments in which noun classifiers appear in the noun phrase, and presents evidence that noun classifiers appear in a separate level in the noun phrase from the other nominal types. Chapter 5 discusses the functions of noun classifiers in discourse throughout the corpus, and finds that noun classifiers are used for nominal reference tracking, to establish a new perspective on the referent, and sometimes to indicate specificity of the referent. It is here that we see not all noun classifiers behave as one homogeneous group.

Chapter 6 contextualises the results from chapters 4 and 5 with broader issues highlighted in chapter 2, and posits avenues for further research in light of these results.

Chapter 2

Nominal Classification

2.1 Definition of Nominal Classification

Nominal classification is the linguistic system of classifying nominals into subclasses, marked by "classificatory elements" on the noun, its dependents, and/or the verb (Louagie, 2017a). Systems of this kind are found in many parts of the world, and are common in the languages of northern Australia (Harvey & Reid, 1997, p. 1). In example 2.1.1 from Ngan'gitymerri, we see that the classifier *gagu* classifies the nominal *wamanggal* into the "animal" subclass:

(2.1.1) Ngan'gityemerri (Southern Daly, Australia; Reid, 1997, p. 215)

gagu	*wamanggal*	*kerre*	*ngeben-da*
NC:animal	wallaby	big	1SG.AUX-shoot

'I shot a big wallaby'

The phenomenon of nominal classification across languages has been neatly defined by Seifart (2010, p. 719) as displaying four primary features:

1. Nouns collocate in well-defined grammatical environments with classificatory elements (these may be free forms, clitics, affixes, etc., and these may also occur elsewhere).

2. The number of classificatory elements is larger than 1 but significantly smaller than the number of nouns.

3. Classificatory elements show different patterns of collocation with nouns, i.e. they impose a classification (some overlap is allowed; prototypically, there is a relatively equal division of the nominal lexicon by classificatory elements).

4. At least a substantial subpart of nouns are classified in this way.

This thesis will adopt this definition for practical use. The definition is broad enough to include different types of classification systems, presented in section 2.2 below, and narrow enough to exclude structures like compounding. Compounding applies to only a small subpart of the lexicon, and is therefore not considered as a type of nominal classification. An example of compounding can be seen in the English word 'berry'. Compound words like blueberry and strawberry do categorise types of berries, but the vast majority of English words are not classified in this way, so this is not a nominal classification system of the type examined herein (Louagie, 2017a, p. 22).

2.2 Nominal Classification Systems

The precise nature of nominal classification systems varies greatly across languages: from the specific form a "classificatory element" takes, to the variable levels of complexity in grammatical agreement patterns triggered by nominal classification (Seifart, 2010). Given this variance, Dixon (1968) first proposed a distinction that recognises two types of nominal classification in typological studies. These are: *noun class* systems, defined by clear grammatical realisations in the morphosyntax; and *classifier* systems, characterised instead by semantic and flexible use. These systems, Dixon (1982) further argues, reflect a diachronic relationship from classifier to class systems, as they follow the general free form to bound patterns in accordance with historical linguistic change.

These systems form a morphosyntactic, or lexical/grammatical continuum, along which a given language's nominal classification system can sit. Two languages with classification systems on opposite ends of the spectrum will behave dramatically differently from each other. Languages which are not on either extreme, however, often exhibit some qualities typical to either classification system - making it complicated to assess whether such a language is best thought of as a class system, a classifier system, or a combination of the two. The following sections will discuss the prototypical morphosyntactic behaviour of the two systems, followed by a discussion of the functions in discourse that nominal classification systems serve.

2.2.1 Noun Class/Gender Systems

Noun class systems are defined by the realisation of grammatical agreement on a constituent outside the noun to which they attach (Seifart, 2010, p. 720; Corbett & Fraser, 2000, p. 293). This is typically found on more than one target, such as articles, modifiers, or verbs. By this definition, the well-known "gender" systems also fall under this category, with many authors calling for gender assignment and noun class systems to be treated as one (Dixon, 1982; Aikhenvald, 2000; Grinevald, 2000). Examples from languages which display a noun class system are given below, where there is agreement on the article and modifier in Spanish; on the modifier and possessive pronoun in Yimas; and on the modifier, verb, and the noun itself in Swahili (Seifart, 2010, p. 720-721):

(2.2.1)   Spanish: two genders

    i. ***un-a***   *foto*   *bonit-**a***
        DEF-F photograph(F) pretty-**F**
        'A pretty photograph'

    ii. ***un***   *imagen*   *bonit-**o***
        DEF.M image(M) pretty-**M**
        'A pretty image'

(2.2.2)   Yimas: 10 noun classes

    i. *impran*   *ama-na-**m***
        basket(CLASS7.SG) 1SG-POSS-**CLASS7.SG**
        *kpa-**m***
        big-**CLASS7.SG**
        'my big basket'

    ii. *namtampara*   *ama-na-**Ø***   *kpa-**Ø***
        foot(CLASS9.SG) 1SG-POSS-**CLASS9.SG** big-**CLASS9.SG**
        'my big foot'

(2.2.3)   Swahili: 11 noun classes

    i. ***M**-toto*   ***m**-dogo*   ***a**-lianguka*
        CLASS1-child **CLASS1**-little **CLASS1**-fell.down
        'The little child fell down'

    ii. ***Ki**-kapu*   ***ki**-dogo*   ***ki**-lianguka*
        CLASS7-basket **CLASS7**-little **CLASS7**-fell.down
        'The little basket fell down'

    iii. ***Vi**-kapu*   ***vi**-dogo*   ***vi**-lianguka*
        CLASS8-basket **CLASS8**-little **CLASS8**-fell.down

'The little baskets fell down'

Although there can be a transparent semantic basis in some cases, noun class assignment is usually (at least synchronically) arbitrary. This is the case, for example, with the German word for girl, which takes the neuter 'gender': *das Mädchen*. Although 'girl' is biologically feminine, Mädchen takes the neuter 'das' for morphological reasons: nouns with the derivational suffix *-chen* always take neuter. In general, nouns which share the same derivational suffix take the same gender, making it a grammatical assignment and not a semantic one.

In the context of Australian languages, noun classes are typically expressed by a bound morpheme which "may include information on the number, case, or definiteness" (Sands, 1995, p. 250). They are most commonly found from the coast of Western Australia, to the Eastern coast of Arnhem land, and in the prefixing languages of northern Australia (Sands, 1995, p. 258).

2.2.2   Classifier Systems

Classifier systems define the lexical end of the spectrum, and are characterised by their limited grammatical scope: the classifier does not trigger agreement outside the noun (Seifart, 2010, p. 721). Class assignment in classifier systems, and unlike in noun class systems, is determined by the semantics of the noun. As outlined in chapter 1, Murrinhpatha exhibits both of these qualities, and is therefore considered a classifier system - though we will see in section 2.2.3 below that Murrinhpatha does not exhibit all typical properties of a classifier system. In addition to the noun classifier system, there are other types of "classifier" systems - the most common of which are numeral classifier and verbal classifier systems. The reader is referred to Senft (2000) for further information on numeral and verbal classifiers, as these systems are not present in Murrinhpatha.[2]

In the literature, noun classifier systems have received comparatively less attention than noun class systems and nominal classification in general (Louagie, 2017a, p. 27). The literature that is dedicated to noun classifiers primarily focusses on class assignment and their semantic functions, such as Allan (1977) and Denny (1986).

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[2]   Verbal classifiers here are not to be confused with verb classifier stems, the latter of which Murrinhpatha exhibits. In these definitions, verbal classifiers here classify arguments of the verb (i.e. nouns) on the verb, whereas verb classifier stems classify verbs.

Perhaps the two most influential studies of the morphosyntactic and discourse behaviour of noun classifier systems are Wilkins (2000) - discussed soon below - and Craig (1986a). Craig (1986a), who provides a thorough analysis of noun classifiers in the Mayan language Jacaltec, is discussed in the context of the discourse functions of nominal classification in section 2.4.

Noun classifiers take the form of free morphemes which occur either next to the noun, or at the peripherals of the phrase along with other determiners (Grinevald, 2000, p. 64). They are particularly common in Australian and Mesoamerican languages (Seifart, 2010, p. 722). A prototypical classifier system is Yidiny, which has 19 classifiers (Dixon, 1982) consisting of inherent classifiers (classifying characteristics e.g. *waguja* 'man, human male'); and functional classifiers (classifying functionality e.g. *minya* 'edible animal'). A noun phrase will typically include both a classifier and a noun, such as in the example below (Dixon, 1977, p. 480):

(2.2.4) Yidiny (Dixon, 1977, p. 480)

bama:l	*yaburuŋ,*	***miɲa***	*gungu:l*	*wawa:l*
person-ERG	girl-ERG	**animal**-ABS	wallaby-ABS	see-PST

'The girl saw the animal wallaby'

This noun classifier-noun format looks deceptively like a similar but distinct construction found in some other Australian languages: the generic-specific construction, where a generic noun may precede a more specific one (Sands, 1995, p. 335), seen below:

(2.2.5) Limilngan (Sands, 1995, p. 270)

ŋrinji	*(**laijan**)*	*lamay*	*linj-anbi*	*adjbuwadji*
you	(**meat**)	goose	2SG.A3.o-kill(FUTURE)	tomorrow

'You're going to kill goose tomorrow'

Drawing a line between these can prove quite difficult, given the obvious similarity of generic-specific constructions to noun classification (Sands, 1995, p. 331). A distinguishing property, particularly in Australian languages, is frequency: Sands (1995, p. 270) finds that generic-specific constructions appear less frequently in discourse than classifier-noun constructions. Wilkins (2000, p. 179) expands on this further, and argues that this distinction is born of deeper linguistic differences between the two. Classifiers apply to their nominals inherently, regardless of broader

semantic context. Generics by contrast are not tied to the noun they precede: they are present only to express some meaning in the phrase, and have no relationship to the noun when that meaning is absent. Frequency is an indicator inasmuch as generic constructions have significantly more restricted scope of meaning than do classifier constructions; so they will appear less often. For example, Wilkins (2000, p. 178) points to Yidiny, where the classifier *minya* 'edible animal' can be used with 'wallaby' *whenever* the entity is identified as being sufficient size to kill and eat - its meaning is general: 'animal that *can* be hunted'. On the other hand, Arrernte's generic *kere* 'game animal' may be used with 'wallaby' *only* in the context of the act of hunting, regardless of whether the wallaby's size has the potential for same - its meaning is restricted: 'animal that *is being* hunted'. The distinction between generics and classifiers, then, is that classifiers contribute meaning about the noun referent, and generics contribute meaning about the event depicted by the clause.

The two constructions are also distinguished by their relationship with the identifiability of referents. Jacaltec, a Mayan language, uses noun classifiers, and they are limited primarily to definite contexts, and never occur with non-referential nouns. Arrernte's generics on the other hand have no such link, and can appear regardless of definiteness (Wilkins, 2000, p. 158). This function of nominal classification is further explored in section 2.4.3.

2.2.3 Typical Differences Between Class and Classifier Systems

The defining feature that separates a noun class system from a noun classifier system is the existence or absence of *agreement* outside the noun. As agreement is a complex phenomenon, and affects other aspects of the grammatical system, there are a number of secondary prototypical qualities associated with noun class and classifier systems. These qualities were first proposed by Dixon (1968), and further affirmed by Grinevald (2000) and Senft (2000). A summary is provided below (Grinevald, 2000, p. 62):

We can see here that Murrinhpatha does not exhibit all properties of a prototypical noun classifier system. At only 10, Murrinhpatha has a relatively small number of categories for a classifier system. As a comparison, Yidiny - a prototypical classifier system - has 19 noun classifiers. By contrast, most noun class systems in Australia have approximately two to seven categories (Louagie, 2017a, p. 45), and Swahili

Noun Class/Gender System	Classifier System
classify all nouns	do not classify all nouns
into a smallish number of classes	into largish number
of a closed system	of an open system
fused with other grammatical categories(Def, Case)	independent constituent
can be marked on noun	not affixed to noun
realised in agreement patterns	marked once
N uniquely assigned to a class with no speaker variation	at speaker's will
no variation in register	formal/informal uses

Table 2.1: Typical differences between noun class/gender systems and classifier systems

has 11 noun classes, but it is still considered a definitive noun class language due to its large scope in agreement patterns. Additionally, the vast majority of nouns occur with a classifier in Murrinhpatha, which is more typical of a noun class system (Walsh, 1997, p. 278). Finally, Mansfield (2019, p. 179) finds that noun classifiers in fact sometimes exhibit agreement with adjectives, though so rarely it would still be considered a noun classifier system. While it is certainly a classifier system in form, these noun class-like features place Murrinhpatha closer to the middle of the spectrum. This is exemplified in the following informal representation.
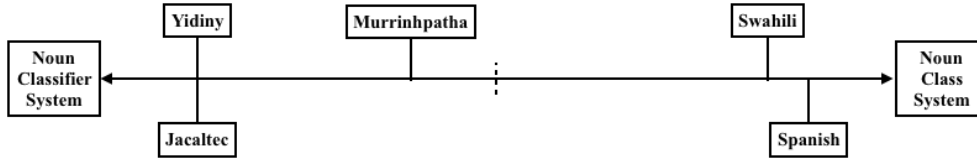
Figure 2.1: An informal representation of the lexico-grammatical continuum

Separating these two systems in typological discussion allows for more nuanced and thorough linguistic analysis. Past use of the terms "noun class" and "classifier" interchangeably in the literature have promoted a general unawareness of the differences and morphosyntactic complexities of these systems, and resulted in some studies missing generalisations and nuances in their language (Grinevald, 2000, p. 53). Of course, a clean separation is not possible: the systems lie on a continuum. The properties presented in the table are prototypical, and many languages contain systems displaying some subset of features from each side. In Louagie's (2017a) typological study of the noun phrases in 100 Australian languages, she found that approximately 37 languages have a classifier system[3], and 31 languages have a noun class system. She also found that 2 languages - the Daly languages Ngan'gitymerri

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[3]   Louagie (2017a) uses the term 'generic-specific' for both the noun classifier and generic-specific constructions discussed in section 2.2.2.

and Marrithiyel - sat *directly* in the middle of the continuum - making it impossible to define either as definitively a noun class or classifier system. These languages are discussed in section 2.3. The remaining languages in her study have nominal classification systems which are not discussed here.

2.3   The Daly Languages

We have seen that nominal classification systems which do not trigger agreement are on the lexical end of the continuum, and those which do are on the grammatical end. Furthermore, additional secondary features may shift a language toward the middle of the continuum. This is the case for Murrinhpatha, which has a classifier system - as markers do not typically trigger agreement - but nonetheless displays other behaviour more typical to a noun class system. Though the vast majority of documented languages adhere to this continuum without issue, there are two know languages - also from the Daly River region - that present a unique challenge to the typology: Ngan'gitymerri (Reid, 1997) and Marrithiyel (Green, 1997). They display a "split system", wherein some classes trigger agreement and others do not. It is difficult to neatly place these languages on the continuum, because the feature which defines a language to be a class or classifier system - agreement - does not uniformly hold across all classification markers.

Ngan'gitymerri has three sub-categories of noun classes, which have different morphosyntactic behaviour (Reid, 1997). The first group consists of clitics which are obligatorily attached to the head class with no equivalent free forms. There is optional agreement on modifying nominals. In example 2.3.1, the male class marker *wa* is obligatorily attached on the head nominal *wa=tyerrmusye* 'male=old.man', and is optional on the modifying nominal *wa=mirrisyarra* 'male=blind':

(2.3.1)   Ngan'gitymerri: Group 1 (Reid, 1997, p. 174)

wa=*tyerrmusye*   (**wa**=)*mirrisyarra*   *perrety-meny*
Male=old.man   (**Male**=)blind   die-3SGS:do

'The old blind man has died.'

The second noun class sub-category consists of both free and bound forms, where the latter triggers obligatory agreement on modifying nominals (Reid, 1997, p. 175). The bound form is obligatory on the head noun as a prefix and as a clitic on modifying nominals, and the free forms optionally precede the head noun to create a

generic/specific construction. In example 2.3.2, the free form *miyi* 'vegetable' optionally precedes the head nominal *meli* 'purple.plum', and the bound form *mi* 'VEG' is obligatorily attached to the head noun and modifying nominals as a prefix and clitic respectively:

(2.3.2) Ngan'gitymerri: Group 2 (Reid, 1997, p. 168)

(miyi)   **mi**-*meli*   **mi**=*kinyi*   **mi**=*warrakma*
(vegetable) **VEG**-purple.plum **VEG**=this **VEG**=three
mi=*ngayi*
VEG=mine

'these three purple plums of mine'

The third and final sub-category consists of only free forms, which optionally precede the head and modifying nominals (Reid, 1997, p. 178). As there is no obligatory agreement involved, this final sub-category is less typical of a noun class system than the other two sub-categories:

(2.3.3) Ngan'gitymerri: Group 3 (Reid, 1997, p. 177)

*(**syiri**)*   *magulfu*   *(**syiri**)*   *marrgu*
STRIKE cylindrical.fighting.stick **STRIKE** new
dem-wurity-dim
3SGS:AUX-make-3SGS:sit

'He is making a new cylindrical fighting stick.'

We can see that the three groups of classification markers demonstrate different degrees of grammaticalisation and agreement: the free forms may be absent and do not exhibit agreement in this case; and prefix bound forms are always present and therefore always display agreement. These patterns show that nominal classification in Ngan'gitymerri is in a split system.

Marrithiyel, another Daly language, has a nominal classification system similar to Ngan'gitymerri in that there is a split in agreement patterns. Again, this complicates the task of situating the language in the typology. All classifiers trigger agreement, though some exist only in free form (such as *wudi* 'water', *marri* 'language', *sjenjsji* 'fire'), and others have both a free form and bound form (which are *awu/a-* for lower animates, and *miyi/mi-* for the vegetable class, and *thawurr/tharr-* for trees). Unike Ngan'gitymerri, it is not the classification marker that exhibits agreement

variation, but rather the modifying nominal. Green (1997, p. 246) finds that there are two broad groups of modifying nominals: those which are normally marked for agreement (example 2.3.4); and those which freely do or do not display agreement (example 2.3.5):[4]

(2.3.4) Marrithiyel: Obligatory agreement (Green, 1997, p. 246)

    a*-madi*   ***a****-ngelfu*
    LA-barramundi   **LA**-many

    'Many barramundi'

(2.3.5) Marrithiyel: Optional agreement (Green, 1997, p. 246)

    a*-madi*   ***(a-)****yigin*
    LA-barramundi   **(LA**-)mine

    'My barramundi'

The grammatical behaviour exhibited by Ngan'gitymerri and Marrithiyel is visually represented in figure 2.2 below, on the same informal continuum presented in figure 2.1. These two languages display a split system where some classifiers show features of a noun class system, and others like a classifier system. It is for this reason that the *whole system* cannot be represented on the continuum, but instead each sub-category must be represented separately:
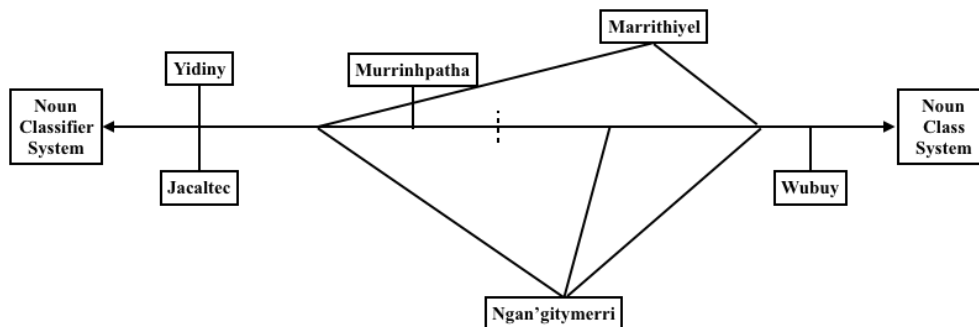
Figure 2.2: An informal representation of the lexico-grammatical continuum, including languages with a split system

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4   LA: Lower animate (per Green, 1997).

The Daly River languages discussed in Reid and Harvey (1997) are all situated either in in the middle of the continuum (Murrinhpatha), or in a number of different locations on the continuum (Ngan'gitymerri and Marrithiyel) - as indicated in figure 2.2 above. Given this fact, Harvey and Reid (1997, p. 13) suggest these languages could "be analysed as a rare areal example of systems in transition from classifier to class" - following Dixon's (1982) argument that nominal classification systems have a diachronic relationship.

Out of the three aforementioned languages, Murrinhpatha is the least "problematic" for the continuum, as it does not display a variety of agreement patterns like the other two Daly languages. Murrinhpatha noun classifiers do not trigger agreement, so it is easily defined as a classifier system overall. However, in chapter 5, we will find that there is a split between the ten classifiers when it comes to their *functions* in discourse. This brings us to a discussion of the functions of nominal classification in discourse generally.

2.4   Functions of Nominal Classification in Discourse

In addition to the morphosyntactic differences discussed above, nominal classification systems have also been claimed to function in different ways throughout discourse. Noun classes have been found to be used primarily for reference tracking through agreement patterns, and noun classifiers often serve to establish the intended referent, and to re-present it in different perspectives (summarised in Singer, 2016, p. 51). As such, the functions of noun class systems are known to be grammatical and discourse motivated, whereas noun classifiers serve to enrich the semantics of the noun. Though this is broadly accurate, it is likely not as clean a dichotomy as has been implied in earlier studies (Contini-Morava & Kilarski, 2013). This section will present the main discourse functions nominal classification systems are said to serve.

2.4.1   Reference Tracking

Reference identification - the process of identifying the referent within discourse - is a core function in all nominal classification systems and thus is arguably the most "basic" discourse function (Kilarski, 2013, p. 251). One method of reference identification is reference tracking, consisting of the two part process of introducing

the referent by the noun, followed by subsequent references of the same referent throughout discourse (Singer, 2010, p. 385). In the context of nominal classification, this is achieved through agreement patterns in noun class systems, and through anaphoric expressions in noun classifier systems. It has been previously thought that reference tracking is a primary function of only noun class systems (Corbett, 1991; Foley & Van Valin, 1986; Heath, 1983; summarised in Singer, 2016, p. 51), but more recent research suggests noun classifiers can function as anaphoric expressions (Sands, 1995, p. 248; Contini-Morava & Kilarski, 2013, p. 279).

The Australian language Wubuy utilises nominal classification for reference tracking, where noun classes are marked obligatorily on the verb (Heath, 1983, p. 140). The example below illustrates this, where the prefix on the verb is marked for noun class and grammatical function. Once the participants have been introduced as overt nominal arguments, the sentence can be reduced to just the fully inflected verb, as the noun class agreement marker *ngu* maintains the referents involved.[5]

(2.4.1) Wubuy (Australian) (Heath, 1983, p. 140)

na-*walyi-nyung*	**ngu**=*wi-ni*
MASC-man-HUM.SG	**3MASC.SG/3FEM.SG**=hit-PAST.CONT
ngara-mani-nyung,	**na**-*runggal*=*yung*
FEM-woman-HUM.SG	**MASC**-big-HUM.SG

'The big man hit the woman.' (literally 'man he-her-hit woman, big')

(2.4.2) **ngu**=*wi-ni*
3MASC.SG/3FEM.SG=hit-PAST.CONT
'He hit her'

The examples in 2.4.1 and 2.4.2 illustrate Heath's (1983, p. 139) sentiment that the Wubuy noun class system "appears to constitute the glue which holds the system together". Not only are noun classes used for reference tracking, but also allow for discontinuous noun phrases. It is through noun class agreement in example 2.4.1 that shows 'big' is unambiguously linked with 'man' (Heath, 1983, p. 193).

Reference tracking is also a function of noun classifier systems, where the noun classifier functions as an anaphoric expression. Anaphora is the linguistic phenomenon of linking specific referential entities, anaphors, to an aforementioned item

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5 Unfortunately, this example was the only one provided by Heath (1983) which neatly exemplifies class agreement as a means for reference tracking. If possible, a less violent example would have been selected instead.

within a body of discourse, the antecedent (Reuland, Everaert, & Volkova, 2011, p. 1). In the context of nominal classification, the noun classifier functions as the anaphor. Employing anaphora through nominal classification can assist greatly in the tracking of referents, as the link between the anaphor and its corresponding referent is clear when the anaphor itself is (likely) semantically related to the referent. Jacaltec, for example, performs anaphora exclusively through noun classifiers (Craig, 1992, p. 292), and is exemplified below. The referents - John and the snake - are introduced with the noun classifier and noun included in the noun phrase, and in its subsequent mention, the referent is referred to through anaphoric use of the noun classifiers *naj* 'NC:MALE' and *no7* 'NC:ANIMAL':

(2.4.3) Jacaltec (Mayan) (Craig, 1986a, p.264)

xil	***naj***	*xuwan*	***no7***	*lab'a*
saw	**NC:MALE**	John	**NC:ANIMAL**	snake

'John saw the snake'

(2.4.4)
xil	***naj***	***no7***
saw	**NC:MALE**	**NC:ANIMAL**

'He saw it'

2.4.2 New Perspective of Referents Through Classification

Establishing a new perspective on the referent is achieved through nominal classification when the noun is initially associated with one classification marker, and then is recategorised with a different one (Contini-Morava & Kilarski, 2013). By this definition, a referent may be reclassified by the speaker's own attitude toward the referent, or by physical change in the referent's form. This function has been traditionally ascribed only to classifier systems (Denny, 1986).

Ponca, a Siouan language with a classifier system, uses different noun classifiers to re-present the referent in different ways - when the referent has changed physical form (Contini-Morava & Kilarski, 2013, p. 289). The referent *ĩ'e* 'stone' is first established as a single round stone, and thus takes the *ȼã* 'round' classifier (CLF). Once the stone has been shattered, *ĩ'e* 'stone' is reclassified to *ge* 'scattered' classifier to signal this physical change in state:

(2.4.5) Ponca (Siouan) (Contini-Morava & Kilarski, 2013, p. 289; per Barron & Serzisko, 1982, p. 92)

ki	edítã	ĩ'e	**¢̵ã**		gatúbe
and	from.that	stone	**DEICTIC.CLF:ROUND**		beaten.fine

ugáeqtiã-biamá	majã	bȩ́uga	águdi	ctewá
it.was.scattered-QUOT.far.and.wide	land	the.whole	where	soever

í'e	**ge**
stone	**DEICTIC.CLF:SCATTERED**

'From the rock which was ground very fine came all the stones which are scattered far and wide over the whole earth, wheresoever they are'

This function is also found in the noun class system in the Australian language Mawng (Singer, 2016), and is exemplified in the following story. The story is centred around the origins of coral that is said to be the stump of a mythical tree (Singer, 2016, p. 67). As the story progresses, the referent takes different classes depending on the state of the referent.

The coral is first introduced with the vegetable class (VE) as it is viewed as a tree stump:

(2.4.6)   (Singer, 2016, p. 67)

Arrp-aya-nyjing	ta	k-ang-parlkparra-n	kirrk.
1pl.in/3**VE**-see-I1	LL	PR-3LL-clear-NP	COMPL

'We might see it (VE) if it (the water) is really clear.'

After the tree is cut down, the referent is represented with the land class (LL) instead, signalling a change in perspective through agreement on the verb.[6] Singer (2016, p. 68) claims that the reassignment is possibly because coral is "like a large rock".

(2.4.7)   (Singer, 2016, p. 67)

La	muj	ta	marlu,	marrik	**arrung**-aya-nyjing	mira.
CONJ	again	ED	wind	NEG	1pl.in/3**LL**-see-I1	EMPH2

'But when the wind comes back we can't really see it (LL)'

Additionally, at the conclusion of the story, the noun *waliwali* 'coral' does not take its typical masculine (MA) classifier, and instead takes the land class (LL):

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[6]   The participant initially pronounces the verb with the vegetable object agreement, but corrects themselves to the land agreement.

(2.4.8) (Singer, 2016, p. 68)

Ta	***waliwali***	*ta*	*k-**any**-u-ø*	*ta*	*kapa*	*la*	*kani*
LL	**coral**	LL	PR-**3LL**-lie-NP	LL	over.there	CONJ	here

ta	*karrkpin.*
LL	big

'The coral is as big as from here to there.'

It is clear that Mawng uses noun classes to re-present the referent in a new perspective: through both reassignment of the noun; and, in the absence of nominal material, through agreement on the verb. This function cannot, then, be particular to only noun classifier systems - as has been presented in the past (Denny, 1986; summarised in Singer, 2016, p. 51).

2.4.3 Reference Management

The final discourse function that will be addressed here is *reference management* through nominal classification - the management of referential status throughout discourse, such as thematic salience, and specificity (Contini-Morava & Kilarski, 2013, p. 283). These functions will be addressed in turn. The relationship between specificity and nominal classification has been acknowledged by Lucy (2000, p. 337), following Silverstein (1986): "a noun phrase typically indicates for a given referent its intrinsic type, its extrinsic individuation status, and its discourse presupposability". Reference management through nominal classification is particularly common in systems where the classificatory marker is optional - that is, in noun classifier systems (Contini-Morava & Kilarski, 2013).

In Jacaltec, noun classifiers are used to indicate the thematic salience of the referent: that is, when the referent is prominent and persistent in discourse (Craig, 1986a; Lyons, 1999, p. 226).[7] Jacaltec noun classifiers are included only in subsequent mentions of the referent - that is, only after the referent is established and is therefore salient. For example, the classifier *ch'en* 'NC:ROCK' is included with *ñach'en* 'cave' below, only once the referent is introduced. When it is first introduced, cardinal article *huneʔ* 'one' is used instead (Craig, 1986a):

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[7] Craig (1986a) argues further that Jacaltec noun classifiers also indicate for definiteness in these instances, while Lyons (1999, p. 226) maintains that they mark only for thematic salience. As this is an on-going debate, it would require a discussion of definiteness that is beyond the scope of nominal classification. I therefore only discuss the use of Jacaltec classifiers as thematic saliency.

(2.4.9)   Jacaltec (Craig, 1986a, p. 271)

Scawilal   *tuʔ*   *xil*   *naj*   **huneʔ**   **ñach'en**   *tz'ulik*
near   there   saw   he   **one**   **cave**   small

'Near there he saw a cave that was small.'

Maẍtic'a   *ch'illax*   *naj*   *yu*   *tz'ulik*   **ch'en**   **ñach'en.**
never   was-seen   he   for   small   **NC:ROCK**   **cave**

'He was never seen because the cave was small.'

Following Ramsay (1985), Craig (1986a) and Lyons (1999) find that Jacaltec noun classifiers are only used in the noun phrase after the referent has been introduced, and are particularly frequent with persistent referents. They all conclude that noun classifiers indicate referential prominence in discourse.

Noun classifiers can be used to indicate the specificity of the referent. This can be found in Hmong, a Hmong-Mien language of Southeast Asia (Jaisser, 1987). Noun classifiers in Hmong are obligatory when the referent is specific - that is, when the referent selects a unique entity from the world (Enç, 1991). For example, the classifier for living beings *tus* is obligatorily present when the referent is specific - in such cases, its omission is ungrammatical:

(2.4.10)   Hmong (Aikhenvald, 2000, p. 216; in Jaisser, 1987, p. 171)

tus   **tsov**   *tshaib*   *tshaib*   *plab*
CL:LIVING.BEING   **tiger**   be.hungry   be.hungry   stomach

'the tiger was hungry

(2.4.11)   *****tsov**   *tshaib*   *tshaib*   *plab*
            *****tiger**   be.hungry   be.hungry   stomach

'*tiger was hungry'

In the context of Australian languages, Baker (2008) finds that two sets of noun class prefixes in the Southeast Arnhem languages Ngalakgan, Marra, and Wubuy signal *topic* (what the sentence is about) and *focus* (new or contrastive information). Upon further examination into their behaviour, he argues that the primary function of topic class prefixes in these languages is to restrict the scope of an operator in complex nominal expressions. For example, the scope of the negation operator is

sensitive to the presence of the topic prefix - it is obligatory for a polarity meaning in Wubuy and Marra, and this reading is ungrammatical without the prefix:[8]

(2.4.12) Wubuy (Baker, 2008, p. 145)

    waaɻi   *ŋa-ŋu-kuʈaŋi*   **(**ana**)-ŋucica*
    nothing   1sgB-neut-catch.pc   **neut.top**-fish

    'I didn't get any fish'

(2.4.13) Marra (Baker, 2008, p. 145)

    ku-ŋa-ka-luji   **(**ŋana**)-kumpi*
    neg-1sg-3sg-have.ppot   **m.top**-beef

    'I don't have any beef'

Furthermore, in Wubuy at least, the non-topic form cannot have a polarity meaning and only a specific interpretation under a negation operator:

(2.4.14) *waaɻi*   *ŋan-tani*   *∅-ŋucica*
           nothing   1sgB/anim-spear.pc   fish
           'I didn't spear a fish (one in particular)'

It seems, then, that the topic prefix markers are sensitive to binding operators. These patterns have been found in determiners of languages such as Japanese and French - suggesting that the topic prefixes in Southeast Arnhem languages are somewhat like determiners (Baker, 2008, p. 163).

2.5 Summary and Research Questions

This chapter has shown that nominal classification is a complex linguistic phenomenon, with diverse morphosyntactic features and functions in discourse. Though nominal classification systems can generally be placed on a continuum, from a grammatical to lexical end, this is a non-trivial task. Many classification systems may exhibit features from both noun class and classifier systems, where they vary in the number of classification markers, the range of nouns which are classified, and the degree of grammaticalisation. Nominal classification systems also have a variety of

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[8]   It is now impossible to test this for Ngalakgan (as it is effectively moribund), though there are no counterexamples for this pattern in the data (Baker, 2008, p.145)

functions in discourse, which can be employed in both noun class and noun classifier systems. In addition to classifying nominals into subclasses, we see that nominal classification markers are also used to control the status of the referent: in reference tracking, reference management, and construing the referent in different ways.

Previous work on nominal classification in Murrinhpatha shows that its nominal classification system falls somewhere in the middle of a grammatical and lexical system, but is closer to the lexical system (Walsh, 1997, p. 278). Though there has been some previous work on the nominal classification system overall, there has not yet been a study on the grammatical and discourse functions of noun classifiers in Murrinhpatha. This thesis will therefore address the following research questions as they pertain to Murrinhpatha, where the results feed into a discussion of nominal classification typology generally:

1. What syntactic behaviour do noun classifiers have in the noun phrase?

2. What are discourse functions of noun classifiers?

3. Are there differences between noun classifiers, and if so, what are they?

In the following chapters, I show that noun classifiers have a syntactically dedicated position in the noun phrase, and exhibit a range of discourse functions. I argue that one of these is applicable to only a subset of Murrinhpatha noun classifiers - which are in all other senses formally and functionally identical. Though noun classifiers are *formally* similar, they can clearly be separated according to significant differences in their *functional* behaviour. This is a division that has not been observed before in either Murrinhpatha itself, or in other languages in the literature as far as I am aware.

Chapter 3

Methodology

3.1   Corpus

My data has been drawn from the Murrinhpatha morpho-corpus, one of the largest extant morphologically annotated databases of a polysynthetic language (Mansfield, Blythe, Nordlinger, & Street, 2018). The corpus consists of 218 texts, containing 100,000 words. The data has been collected through fieldwork by John Mansfield, Joe Blythe, Rachel Nordlinger, and Chester Street.

The corpus separates the texts into four genres: elicitation; conversation; narrative; and instruction. When quoting examples, I provide a source which gives the title of the text, followed by the reference points. For example, "20171403_AN.169-171" refers to text 20171403_AN at reference points 169 to 171. When I remove some section of an example, I use '/' to indicate which points are removed. For example, "20171403_AN.169-171/200-204" refers to reference points 169 to 171 and 200 to 204, with the intervening points excluded from the text. I also include the genre and subgenre where known. For titles that include participants' names, I have anonymised them to maintain their privacy, and keep only their initials in the title.

As the corpus contains data from a number of researchers, there were some inconsistencies with the orthography. I convert all orthography to the community's system. Laminals which were transcribed as *tj*, *dj*, and *ny*, were converted to *th*, *dh*, and *nh*. All morpheme boundaries are marked by '-', and all clitic boundaries are marked by '='. Distinguishing between morphemes and clitics is rarely clear, and it is not relevant to this thesis to detail their differences. I broadly assign the so-called "discourse markers" as clitics, as they can attach to almost any kind of word (Walsh, 1976, p. 260). These clitics are *=ka*, *=wa*, *=ya*, and *=yu*, roughly indicating topic (or contrast), emphasis, doubt, and possibly a clause boundary, respectively (Wilmoth, 2014; Mansfield, 2019). I have also assigned adverbial markers as clitics, such as *=warda* 'now, at that time' and *=gathu* 'toward', because - like the discourse markers - they can attach to any word class (Mansfield, 2019, p. 185). Tense marking, and case marking when present, are marked by morpheme boundaries. Finally, I use square brackets to indicate noun phrases where relevant.

3.2   Data Extraction and Quantitative Analysis

Given the size of the corpus, I used computational tools to pre-process the data. With the aforementioned research questions in mind, I first hypothesised the environments in which these may be best investigated. I then used the programming languages R and Python to increase efficiency in finding and extracting these, for further manual analysis. The following section outlines precisely how and why these tools were used, and the steps taken in extraction, for each research question.

3.2.1   RQ 1: Syntactic Behaviour

To address research question 1, which concerns the syntax of noun classifiers, I extracted potential noun phrases and adjacent noun phrases to investigate their behaviour at the phrasal level and the clausal level respectively. Identification of noun phrases was conducted in keeping with Blythe's (2009) description thereof, as presented in chapter 1. This fits the following order: [NC N Adj Dem Pro]; where any non-head nominal element is optional (that is, classifiers, pronouns, and nouns). Suffixes and clitics can be present, attached to any nominal type.

I used Python to search through the corpus, observing the parts of speech in each sequence of words. If the sequence adhered to the accepted noun phrase order,

then it was treated as a noun phrase and saved in a dataframe (a type of table). I then created a second frame from this, containing adjacent noun phrases. In doing so, I extracted all noun phrases and adjacent noun phrases which conform to previous descriptions of noun phrase structure, which greatly improved efficiency for analysis. It was acknowledged, however, that manual linguistic analysis would also be necessary, in case there were unexpected noun phrase structure. These unexpected orderings are discussed in section 4.1.3.

3.2.2   RQ 2: Discourse Functions

Research question 2 looks into the discourse functions of noun classifiers, which mostly involved analysing classifiers within the texts manually. However, one such discourse function - establishing a new perspective on the referent - did benefit from data extraction techniques. I employed R to pre-process the texts in search of referent re-classification events. I recognised re-classification as occurring when, within the same text, there were at least two noun phrases with an [NC N] construction, the nouns were identical, and the noun classifiers were different. I then filtered the output manually, to remove matching nouns with differing referents. I was thus left with a dataframe containing roughly all examples of referent re-classification. This method yielded only two texts, which are discussed in section 5.2.

I ultimately decided to exclude instances where a noun is typically classified in one way, but classified in another in a referent's first mention. For example, consider the following:

(3.2.1)   2011-10-10_LD_RD_3-1.1 (Narrative, Video stimulus)

kanhi=ka	***thungku***	***thay***
PROX=TOP	**NC:FIRE**	stick

‘this is firewood’

Thay ‘stick’ is typically associated with *nanthi* ‘NC:RESID’ in the rest of the corpus, but *begins* the example above classified to *thungku* ‘NC:FIRE’. It is possible that this is best considered a re-classification, in which *thay* has been altered from its implicit *nanthi* to a new *thungku*. It is also possible, however, that *nanthi thay* and *thungku thay* are considered different entities, and thus no re-classification has occurred. As this ultimately comes down to classifier semantics, I do not consider

these instances in my results. I focus only on the unambiguous *re*-assignment of noun classifiers in discourse, which more directly addresses the issue of discourse functions as outlined in research question 2.

3.2.3 RQ 3: Differences Between Noun Classifiers

Finally, research question 3 concerns the differences between noun classifiers. When analysing the texts manually, I noticed many instances of nouns occurring without a classifier. Further, this phenomenon was only observed with nouns typical to certain classifiers - for example, I noticed that nouns which typically occur with *ku* 'NC:ANIM' usually had the classifier present, whereas nouns that typically occur with *nanthi* 'NC:RESID' frequently did not have the classifier present. As such, this was a good area of investigation into classifier differences. I used R to anticipate what noun classifiers *would* occur in those non-classified noun phrases. To do this, I extracted every unique noun in the corpus and assigned it in a data frame to the classifier they most frequently occurred with: their "typical" classifier. As these data are merely illustrative of what is fundamentally a linguistic analysis, I used a naive search for the simple most frequent classifier (there were no ties). I could then automatically link each noun phrase without a classifier to its typical classifier, also in a data frame. This allowed me to efficiently locate all texts which exhibited any given type of classifier ellipses.

With this, I could additionally determine the likelihood of classifier ellipsis for each classifier. I calculated how many times each classifier was missing from a noun, and took the sum of these events. This left me with a data frame showing the relative frequency of ellipsis for each classifier. These results are discussed in sections 5.3 and 5.4.

Chapter 4

Syntactic Considerations

The literature on noun classifiers both in Murrinhpatha and in general has predominately focussed on the semantic and discourse functions of classificatory elements, with relatively little discussion around syntax. The present chapter seeks to address this issue, by examining the syntactic behaviour of Murrinhpatha noun classifiers. This will in turn provide further insight into the Murrinhpatha noun phrase, as well as contributing to a broader typology of noun classifier syntax.

As outlined in chapter 1, Murrinhpatha noun classifiers have been identified as occurring always at the left edge of the noun phrase, and always adjacent to the noun if it is present. With this in mind, we examine noun classifier behaviour through their interaction with other nominal types, with adjacent noun phrases, and in possessive constructions. We will also find evidence that noun classifiers appear in a dedicated position in the noun phrase.

4.1   Noun Classifiers in the Noun Phrase

4.1.1   Occurrence of Noun Classifiers in the Noun Phrase

In the corpus, we find instances of all ten noun classifiers occurring in the noun phrase. The noun classifier can function as a general noun (examples 4.1.1 - 4.1.3), or classify the subsequent nominal (examples 4.1.4 - 4.1.10):

(4.1.1)   20171403_AN.143 (Narrative, Family history)

> *[kardu*   *numi=ka]*   *larrwa*
> **NC:HUMAN**   one=TOP   pipe
>
> 'Another person lit a pipe'

44

(4.1.2)   CS1-017-A_01.18 (Narrative, Personal history)

dem-ngi-ralal   *[kura]*
3SG.POKE.RR(21).NFUT-1SG.DO-be.thirsty   **NC:WATER**

'I'm thirsty for water'

(4.1.3)   20180724-MP47.29 (Elicitation, Picture stimulus)

kanhi   *[thu]*
PROX   **NC:VIOL**
pam-nintha-thuk-dim
3SG.SLASH.RR(24).NFUT-DU.M.NSIB-fight-3SG.SIT(1).NFUT
ku   *kumpit*   *ku*   *buliki*
NC:ANIM   kangaroo   NC:ANIM   cattle

'a kangaroo and a cow are fighting'

(4.1.4)   20110824_JB_video_GYHM100_02.69 (Conversation,)

[da   *puth]*   *dangatha*
NC:PL/T   bush   still

'still in the bush'

(4.1.5)   CS1-002-A_01-Palibu.35

[ku   *ngurlmirl*   *terert]*
NC:ANIM   fish   many
wurdam-ngkarl-tharra
3SG.SHOVE.RR(30).NFUT-take/bring-moving

'I brought back lots of fish'

(4.1.6)   CS1-002-A_02-Tcheri.49

pumamka-wu-rtet-nime   *[nanthi*
3PAUC.HANDS(8).NFUT-DIM-start-PC.M.NSIB   **NC:RESID**
trak=yu]
vehicle=CLS

'they started the car'

(4.1.7)   2013-07-11_S-b_01.2 (Conversation,)

i   *[murrinh*   *thung*   *nimi-de=ka]*   *dingki*
and   [**NC:LANG**   song   other-same=TOP   dinghy

'and another song about a dinghy'

(4.1.8)   CS1-017-A_02.14 (Narrative, Personal history)

ngarra   *[mi*   *tharnka=warda-ngu]*
LOC   **NC:VEG**   yam.sp.=TEMP-DIR

'to get yams now'

(4.1.9)   20110901_JB_video_GYHM100_01.140 (Conversation,)

yu   *[thungku*   *lit*   *shell]*
yes   **NC:FIRE**   bullet   shell

'yeah you might find bullet shells'

(4.1.10)   20171403_AN.189 (Narrative, Family history)

bere   *nukunu=ka*   *[thamul*   *waya=warda]*
so   3SG.M=TOP   **NC:SPEAR**   iron.bar=TEMP
mangan-art
3SG.GRAB(9).NFUT-get/take

'Then he grabbed a wire spear.'

Noun classifiers are not obligatory in the noun phrase, and we find a number of instances where a noun phrase does not contain a noun classifier:

(4.1.11)   CS1-001-B_sm_06.6/23 (Narrative, Personal history)

[nanthi   *dingki]*
NC:RESID   dinghy

'a dinghy'
[17 clauses removed]

[dingki   *pangu=yu]*
dinghy   DIST=CLS

'That dinghy.'

In fact, noun phrases occur more frequently without a classifier than with they do with one, as shown in table 4.1.

	All Genres	Elicitation	Conversation	Narrative	Instructions
# of NPs	18879	2524	6864	9463	28
% of NPs with NC	44.71%	54.07%	40.25%	44.97%	25.76%
% of NP without NC	55.16%	45.93%	59.56%	54.89%	74.24%

Table 4.1: Relative frequencies of the presence or absence of a noun classifier within all noun phrases, separated by genre.

Overall, there are 11% more noun phrases without a classifier than with a classifier. This trend is exhibited in the conversation and narrative genres, where 60% and 55% noun phrases, respectively, do not contain a classifier. The instructions genre also follows the trend, though so severely that it may be considered an outlier due the small sample size of only 28 phrases.

The elicitation genre does not follow the same trend as the conversation and narrative genres, in that the elicitation genre has more 9% more noun phrases with a classifier than without. The issue of 'absent classifiers' will be tackled in sections 5.3 and 5.4, where we find two vital discourse factors that influence a classifier's presence or absence. Specifically, the absence of a subset of classifiers (i.e. *da* 'NC:PL/T', *nanthi* 'NC:RESID', *kardu* 'NC:HUMAN', *murrinh* 'NC:LANG', and *thu* 'NC:VIOL') indicates non-specificity on the referent's first mention, and they can then be optionally omitted in subsequent mentions. This would explain the relatively infrequent use of noun classifiers in all genres except the elicitation genre: elicitation is a restricted discourse environment, where elicited sentences are essentially the "first mention" of the referent and therefore prefers the noun classifier to be present in the noun phrase. This discourse based account helps explain the difference across genres in table 4.1 (further discussed in sections 5.3 and 5.4). Additionally, some nouns - body parts and kinship terms - do not occur with their classifier. This is examined in section 4.3.

4.1.2 Co-Occurrence of Nominal Types and Noun Classifiers

When a noun classifier appears in the noun phrase, it is most likely to be the sole member. In these instances, the sole [NC] construction can function as a general noun, such as in examples 4.1.12 and 4.1.13 below.

(4.1.12)   2011-07-19_CM-DB_2-2.2 (Narrative, Video stimulus)

[**mi**=*warda*]   *parnam-murrk*
NC:VEG=TEMP   3PL.BE(4).NFUT-eat

'They are eating food'

(4.1.13)   2015-07-17_L-P_apicals-trisyllable.9

[**ku**]   *dirrangan-pertirt-kanam*
NC:ANIM   3SG.WATCH(28).NFUT-delouse.hair-3SG.BE(4).NFUT
ngarra   *pelpith*
LOC   head

'he's pulling the lice from someone's head'

These examples are "vague pro-forms" as mentioned in chapter 1, described in Blythe (2009). As the classifier's scope of denotation is so broad, narrowing the scope of the potential referents is reliant on other aspects of the grammar and on cultural inference: *mi* 'NC:VEG' in example 4.1.12 must refer to 'food' because it is the object of the verb *parnam-murrk* '3PL.BE(4).NFUT-eat'; and *ku* 'NC:ANIM' in example 4.1.13 must refer to 'lice' due to selectional restrictions of the verb.

The overall distribution of the noun classifiers' co-occurrence with other nominal types is presented in table 4.2 below.

Co-Occurrence	Relative Frequency
NC	51.48
NC N	27.63
NC Adj	9.44
NC Dem	8.78
NC Pro	2.67

Table 4.2: Relative frequencies of nominal types that follow a classifier.

The sole [NC] construction is likely to be the most common because it is also used extensively for maintaining reference in discourse, as an anaphoric expression, which is discussed further in section 5.1.

As we can see in table 4.2, noun classifiers most frequently co-occur with nouns:

(4.1.14)   HALE_K06-004534.51 (Elicitation, Phrases)

[**nanthi**   **palyirr**=*gathu*]   *nangart*
NC:RESID   **rock**=hither   2SG.GRAB(9).FUT.1SG.IO.get

'grab a rock for me'

(4.1.15)   2011-07-19_CM-DB_3-12-3-15.6 (Elicitation, Picture stimulus)

i   *wurdam-lele*   *[ku*   *were]*
and   3SG.SHOVE.RR(30).NFUT-bite   **NC:ANIM**   **dog**
[ku   *puthikat*=*warda]*
NC:ANIM   **cat**=TEMP

'and this cat is scaring a dog'

Noun classifiers are found to also co-occur with every other nominal type, as seen in examples 4.1.16 and 4.1.17 with adjectives, and example 4.1.18 with demonstratives:

(4.1.16)   2011-09-17_G-C-E_part3.305 (Conversation,)

ma-na-nu   *da*   *[murrinh*
1SG.HANDS(8).FUT-3SG.M.IO-FUT   NC:PL/T   **NC:LANG**
terert=*matha]*   *mam*
many-INTNS   3SG.SAY/DO(34).NFUT

'I'll tell him, "everything, all those songs," I said'

(4.1.17)   2013-06-22_P-J_03.24 (Conversation,)

[ku   *murlak]*   *pun-ban-pakpak*
NC:ANIM   **dangerous**   3PL.DO-3SG.17.NFUT-put.down
kanhi=*yu*
PROX=CLS

'all kinds of wild creatures were put here'

(4.1.18)   2011-07-19_CM-DB_3-3.52 (Narrative, Video stimulus)

[mi   *ini*=*ka]*   *ban-pak*
NC:VEG   **ANAPH**=TOP   3SG.17.NFUT-put.down

'he lays out that food'

Noun classifiers also occur before a pronoun. In these cases, the pronoun functions as a possessive pronoun as in example 4.1.19:

(4.1.19)   2016-06-24_G-M-E-B_02.168 (Narrative, Picture stimulus)

> *awu*   *[**murrinh***   ***ngay**=warda]*
> no   **NC:LANG**   **1SG**=TEMP

'no, it's my story now!'

Within the noun phrase, we see that noun classifiers can function as a general entity, or classify the subsequent nominal type.

4.1.3   Unexpected Ordering of Nominal Types

There are some instances which exhibit unexpected noun phrase ordering. These examples suggests that noun phrase structure may be more flexible than previously thought, and some of these examples may be better analysed as being in apposition as described in Sadler and Nordlinger (2006). As this thesis is not concerned with a full description of the noun phrase, I do not assess this issue. They are relevant to the present discussion, however, it appears that an [NC N] sequence can be intervened by an adjective or demonstrative. In the following examples, we see that an [NC N] sequence can be intervened by an adjective:

(4.1.20)   20041016_Da-Nirrpi.12 (Narrative, Dreaming)

> *be*   ***kardu***   ***terert***   ***lathparri***   *punni-dha*
> so   **NC:HUMAN**   **many**   **black.duck**   3PL.FEET(7).PIMP-PST
> *kanhi=warda*   *wangu*   *punni-dha*   *ngurde*
> PROX=TEMP   DIR   3PL.FEET(7).PIMP-PST   place.name
> *da*
> NC:PL/T

'A large group of duck-people went this way towards Ngurde.'

(4.1.21)   2015-07-13_A-T_native-bees.12 (Narrative, Tradition)

> ***ku***   ***kunungingki***   ***thithay**=yu*   *nganamurrk*
> **NC:ANIM**   **small**   **sugarbag**=**CLS**   1SG.BE(4).NFUT.eat

'I eat a little bit of honey'

It is clear that the [NC Adj N] constructions above present a challenge to the current noun phrase structure: the noun classifier *kardu* 'NC:HUMAN' in example 4.1.20 must scope over the noun *lathparri* 'black duck', as the referents are not the

unmarked meaning of literal ducks, but instead humans. In example 4.1.21, the presence of the clitic =*yu* 'CLS' suggests that *ku kunungingki thithay* 'NC:ANIM small sugarbag' is also one noun phrase, as clitics typically occur only at the end of phrases (Wilmoth, 2014).

I also note that the only adjectives which intervene in an [NC N] construction in the corpus are those which delimit the size and quantity of the noun. This suggests that there is perhaps a distinct quantifier word class in Murrinhpatha which has a specific position between the classifier and the noun - though this may just be a gap in the corpus. As such, I will continue to refer to them as adjectives.

In addition to adjectives, demonstratives may also intervene an [NC N] construction (examples 4.1.22 and 4.1.23), and an [NC Adj] construction (example 4.1.24 and 4.1.25):

(4.1.22)   2015-07-17_R-B_02.54 (Elicitation, Phrases)

bu-mpa-pak-nu **nanthi** **pana**
1SG.17.FUT-2SG.IO-put.down-FUT **NC:RESID** **RECN**
thingkelet ***nhinhi***
t-shirt **2SG**

'shall I put your t-shirt on you?'

(4.1.23)   20110901_JB_video_GYHM100_01.137 (Conversation,)

yu **kardu** **kanhirda** **ngalantharr** **murntak** **kanhi**
yes **NC:HUMAN** **here** **old.man** **old** **PROX**
pardi-dha-ngime *kanhi*
3PL.BE(4).PIMP-PST-PC.F.NSIB PROX

'yeah the old people used to be here'

(4.1.24)   20070728JBvid01.99 (Conversation,)

ku ***kanhi*** ***lurruth*** ***ngalla*** *wurran=ka*
NC:ANIM **PROX** **strength** **big** 3SG.GO(6).NFUT=TOP
me *ngarra* *ma-manbi=yu*
NEG LOC 3SG.HANDS(8).FUT-help=CLS

'The big strong one won't help'

(4.1.25)   2008-09-25_T-N_Thithay.102 (Narrative, Dreaming)

ku	***kanhi***	***bamam***	*the-panthin*
NC:ANIM	**PROX**	**white**	ear-3PL.HAVE(22).NFUT
ini=ka		*kardu*	*diminin=warda*
ANAPH=TOP		NC:HUMAN	a.clan.group=TEMP
pamam			
3PL.SAY/DO(34).NFUT			

'all the white people know, this is kardu diminin'

Additionally, there are some examples where the classifier occurs after the noun, such as in the example below:

(4.1.26) 20110901_JB_video_GYHM100_01.31 (Conversation,)

buliki	***ku***	***terert***
cattle	**NC:ANIM**	**many**

'there are lots of cattle'

Further research would be necessary to determine whether this is best considered one noun phrase or as a sequence of two noun phrases, *[buliki]* and *[ku terert]*, in apposition. As with the other examples in this section, I simply flag the existence of these unusual noun phrase orderings and leave their analysis for further research.

4.2 Noun Classifiers at the Clausal Level

4.2.1 Grammatical Relations

Adjacent noun phrases with different grammatical relations always mark the noun phrase boundary with a classifier. That is, the classifier will always be included in the noun phrase on the right - though typically both classifiers are included. We see this in example 4.2.1 below, where the subject and object *ku were* 'NC:ANIM dog' and *ku puthikat* 'NC:ANIM cat' both include the classifier *ku* 'NC:ANIM':[9]

(4.2.1) 2011-07-19_CM-DB_3-12-3-15 (Video stimulus)

i	*wurdam-lele*	***[ku***	***were]***
and	3SG.SHOVE.RR(30).NFUT-bite	**[NC:ANIM**	**dog]**
[ku	***puthikat=warda]***		
[NC:ANIM	**cat=TEMP]**		

---

[9] In this particular example, this construction may be used to avoid ambiguity with *ku were puthikat*, which means 'cat' (Mansfield, 2019, p. 174).

'and this cat is scaring a dog'

This pattern holds throughout the broader corpus, which was verified with a dataframe containing all adjacent noun phrases.[10] From this dataframe, I extracted all adjacent noun phrases of the type [NC N][N] and [N][N]. If the adjacent noun phrases in these extractions had different grammatical relations, then the suggested pattern would be invalidated. In fact, all instances of [NC N][N] and [N][N] noun phrases have the *same* grammatical relation - that is, they are all coordinated noun phrases (discussed in section 4.4.1). Therefore, all adjacent noun phrases with different grammatical relations would repeat the classifier. This is exemplified below, where the second noun classifier is always present in the right-most noun phrase. The noun phrases may both have the same classifier (examples 4.2.1 and 4.2.2), different classifiers (example 4.2.3), or an absent classifier in the left-most noun phrase (example 4.2.4):

(4.2.2)   2015-01-29_A-M-N_NAATI-ProT2-CI2.111 (Narrative, Translation)

i	*[nanthi*	*purtek]*	*[nanthi*	*truck-dhangunu=yu]*
and	**NC:RESID**	land	**NC:RESID**	**truck**-source=CLS

'and **the dust** from **vehicles**'

(4.2.3)   2015-09-14_L-P_eye-tracking3 (Elicitation, Picture stimulus)

kardu	*[nanthi*	*karlay]*	*[ku*	*ngurlmirl]*
NC:HUMAN	**NC:RESID**	fishing.net	**NC:ANIM**	fish

dandhakthuk-wurran
3SG.POKE(19).NFUT-collect-3SG.GO(6).NFUT

'a man is collecting **fish** with **a net**'

(4.2.4)   20091121JBvid03.127 (Conversation,)

[pilampi]	*[ku*	*balli]*
mud	**NC:ANIM**	**mud.crab**

ngumpank-rta-ngime-dharra	*bere*
1PAUC.SLASH(23).NFUT-catch-PC.F.NSIB-moving	completion

'We were collecting **crabs** in **the mud**.'

---

[10]   Data extraction methodology for this dataframe is outlined in chapter 3.

We will see in section 5.3 below that nouns with the *nanthi* 'NC:RESID' classifier, among other classifiers, usually omit it when the referent is *non-specific*. However, the referent in the right-most noun phrase in example 4.2.2 is non-specific, yet the noun phrase contains the *nanthi* classifier. In general, classifiers mark the boundaries of noun phrases with different grammatical relations, even when the referent is non-specific. This demonstrates that marking noun phrase boundaries takes precedence over the specificity marking.

4.2.2 Equative Constructions

Adjacent noun phrases with the same referent may include both classifiers. This is typically of the form [NC N][NC Adj]:

(4.2.5)   2015-07-01_D-P_apicals-trisyllable.29 (Elicitation, Grammatical)

[mi	*thoklit]*	*[mi*	*kanthanhinh]*
NC:VEG	chocolate	**NC:VEG**	sweet

'chocolate is sweet'

Occasionally, adjacent noun phrases with the same referent may be of the form [NC N][NC NC], where the second noun classifier functions as a modifier - as is the case for *thungku* 'NC:FIRE' in the following example:

(4.2.6)   2015-07-09_S-L.136 (Conversation,)

kura	*[ku*	*thikin]*	*[ku*	*thungku]*	*en*
NC:WATER	**NC:ANIM**	chicken	NC:ANIM	**NC:FIRE**	and
mi					
NC:VEG					

'drinks, some hot chicken, and some bread'

These constructions can also function as the subject of a verb:

(4.2.7)   2015-02-02_A-M-N_NAATI-ParSample-SC1.1 (Narrative, Translation)

[kardu	*thipmam]*	*[kardu*	*ngalla]*	*ini=ka*
NC:HUMAN	black	**NC:HUMAN**	big	ANAPH=TOP
yibim-pup=warda				
3SG.LIE(2).NFUT-die=TEMP				

'an Aboriginal leader has passed away'

These patterns are also observed in Mansfield (2019, p. 179), as discussed in chapter 1. They are somewhat reminiscent of the optional agreement patterns in the Ngan'gitymerri and Marrithiyel free-form classifiers, as discussed in chapter 2. This suggests that Murrinhpatha classifiers occasionally exhibit agreement, where the modifier agrees with the class of the nominal through repetition of the classifier.

4.3   Noun Classifiers and Possessive Constructions

Noun classifiers are typically included in possessive constructions. Recall from section 1.1.2 that possessive constructions have the structure in example 4.3.1, where Possessed and Possessor are noun phrases and α is the gender. Examples of possessive constructions from the corpus are given in 4.3.2 - 4.3.4.

(4.3.1)   (Blythe, 2009, p. 114)
[(Possessed)(Possessor)α] Proα[11]

(4.3.2)   2014-10-01_S-D_NAATI-Par1-D2.9 (Narrative, Translation)

[ku	*mani*	*nganki=ka]*	*ku*	*ap*
NC:ANIM	**money**	**1PL.EXCL**=TOP	NC:ANIM	half
Centrelink=gathu-dha				
centrelink=hither-PST				

'some of **our money** comes from Centrelink'

(4.3.3)   2014-10-01_S-D_NAATI-Par1-D1.17 (Narrative, Translation)

[nanthi	*peint*	*ngay]*	*ngatha*	*ngani-part-nu*
NC:RESID	**painting**	**1SG**	if	1SG.BE(4).FUT-leave-FUT
kanhi=ka	*ku=ka*		*mani=ka*	
PROX=TOP	NC:ANIM=TOP		money=TOP	
tha-nga-mut			*da*	*marra=yu*
2SG.POKE(19).FUT-1SG.IO-give			NC:PL/T	new=CLS

'if I leave my paintings here will you give me money today?'

---

[11] I have removed the clitic from Blythe's formula, as possessive pronouns are not labelled as a clitic in the corpus, and are not pronounced as such (Mansfield, pers. comm). The rule is otherwise identical.

(4.3.4)   2013-06-22_P-J_02.240 (Conversation,)

puy   *[**murrinh**   **stori**   **nhinhi**=warda   pana=yu]*
keep.going   **NC:LANG**   **story**   **2SG**=TEMP   RECN=CLS
laswan   *nhinhi*
last.one   2SG

'keep going, this is the last story, the last one's yours'

As shown in the above examples, noun classifiers are generally included in possessive constructions. With certain sub-categories of nouns, however, noun classifiers do not occur in possessive constructions - specifically, kinship and body part terms (discussed in 4.3.1 and 4.3.2 respectively). This behaviour is interesting, as these sub-categories are those which are cross-linguistically marked by inalienable constructions (Dahl & Koptjevskaja-Tamm, 2001). Though Murrinhpatha has not been found to exhibit a difference between alienable and inalienable possession (Walsh, 1997), there is a predictable pattern in possessive constructions with noun classifiers and these terms specifically.

4.3.1   Kinship Terms

Typically, kinship terms appear with a possessive pronoun. The classifier is never included when a possessive pronoun is also present.

(4.3.5)   20040912Dingalngu.21/28 (Conversation,)

*[**Yile**   **nhinhi**]*   *kanhire*   *dini-dha=yu*
Fa   **2SG**   this.way   3SG.SIT(1).PIMP-PST=CLS

'Your father camped around here.'
[7 clauses removed]

*[**yile**]*   *ngangga*   *kem*   *[**thaminh**   **ngay**]*
father   there   3SG.SIT(1).PRSL   **grandmother**   **1SG**
damatha
just/only

'Your father was here, my (maternal) grandfather.'

(4.3.6)   CS1-017-A_06.41 (Narrative, Personal history)

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[kale   nganku]
Mo   1DU.SIB.EXCL

'... our mother'

Kinship terms may also appear alone in the noun phrase, such as in the second mention of *yile* 'father' in example 4.3.5 above, and example 4.3.7 below as coordinated nouns:

(4.3.7)   2016-06-24_G-M-E-B_01 (Picture Stimulation)

[paba]   *[mumak]*   *kanhi=yu*   *thing=warda*
brother   sister   PROX=CLS   think=TEMP
mam-dim
3SG.HANDS(8).NFUT-3SG.SIT(1).NFUT

'he's thinking now about his brothers and sisters'

Kinship terms very rarely occur with a classifier - in the whole corpus, there are only three instances of kinship terms which occur with a classifier out of 180 total kinship term tokens. Of the three examples where there is a kinship term with a classifier, one of these refer to the Virgin Mary: *ku kale* 'NC:ANIM mother'. Here, *kale* 'mother' refers to a person who is not kin to the speaker - its usage is as more like a general noun. Accordingly, *kale* 'mother' includes the classifier:

(4.3.8)   2012-06-30_L-P-B-P (Conversation)

nimi=ka   *[ku*   *kale*   *neki]*
other=TOP   **NC:ANIM   mother**   1INCL
ngurdu-mpayith-nu
1SG.SHOVE(29).FUT-2SG.IO-tell-FUT

'next, I'm going to tell you about the Virgin Mary'

The other two examples involve *kardu nangkun* 'NC:HUMAN husband', and are shown below:

(4.3.9)   20070728JBvid01.198 (Conversation,)

nhinhi   *[kardu*   *nangkun]*
2SG   **NC:HUMAN   husband**
ni-na-dha
2SG.SAY/DO(34).PIRR-3SG.M.IO-PST

'You were doing it [passing the lighter] to [your] husband.'

(4.3.10)   2015-07-08_L-P-l_02.2 (Elicitation, Phrases)

pugurna=ka   *marda*
2DU.SIB.VOC=TOP   give.oneself
pumam-kat-pibim=ka=ka
3PL.HANDS(8).NFUT-pass.by-3PL.STAND(3).NFUT-PAUC=TOP
[kardu   nangkun   numi   pangu-*nu*]
NC:HUMAN   husband   one   DIST-DAT

'the two sisters are married to that one man'

Barring these instances, kinship terms never appear with a classifier.

4.3.2   Body Parts

Like kinship terms, body parts generally occur alone in the noun phrase (example 4.3.11), or with a possessive pronoun (examples 4.3.12 and 4.3.13):

(4.3.11)   1974_CS1-4A_01.28 (Narrative, Tradition)

[kamarl]   *wurdani-ngka-puth*
eye   3SG.SHOVE(29).NFUT-RR-eye-extricate

'the eyes are cleared'

(4.3.12)   2015-07-05_D-P_apicals-trisyllables.40 (Elicitation, Phrases)

[marda   nukunu]
belly   3SG.M
ma-rntalal-dim
3SG.HANDS(8).NFUT-be.thirsty-3SG.SIT(1).NFUT

'his stomach hurts'

(4.3.13)   2012-06-02_P-D-W.171 (Narrative, Tradition)

[thimu   nhinhi]
nose   2SG
ma-nhi-yimit
3SG.HANDS(8).FUT-2SG.DO-nose-keep.something.for.oneself

'dust blocks up your nose'

Infrequently, body parts can occur with a noun classifier. The noun classifier here will either be the default classifier *nanthi* 'NC:RESID', as claimed in Walsh (1997) (examples 4.3.14 and 4.3.15); or a different classifier to indicate the function of the body part in a particular instance (example 4.3.16):

(4.3.14) 2015-01-29_A-M-N_NAATI-ProT2-D2.12 (Narrative, Translation)

[nanthi   me=ka]   wurdan-wi=warda
NC:RESID   foot=TOP   3SG.SHOVE(29).NFUT-swell=TEMP

'his leg swell up with infection'

(4.3.15) 20110901_JB_video_GYHM100_01.119 (Conversation,)

[nanthi   mange]   dam-ngkardu
NC:RESID   hand   2SG.13.NFUT-see/look

'did you see the hands?'

(4.3.16) 20161101-MP36.64 (Elicitation, Picture stimulus)

[thu   mange]
NC:VIOL   hand
kanthi-ngkarda-pirrim
3SG.HAVE(22).NFUT-point.out-3PL.SIT(1).NFUT

'the man showing **his fist**'

The presence of the *nanthi* 'NC:RESID' classifier with a body part is predictable: if the *nanthi* 'NC:RESID' classifier is included, then the referent has been established. If the body part does not include the *nanthi* 'NC:RESID' classifier, then the possessor is likely (though not always) unidentified. For example, in an elicitation task, the possessor is not identified and the classifier for *pemarr* 'hair on head' is not included:

(4.3.17) HALE_K06-004534.1 (Elicitation, Phrases)

[pemarr]   *pana*   *karrim*
hair.on.head   RECN   3SG.STAND(3).PRSL

'that's hair'

However, in a different text, the classifier is included when the participant is describing the appearance of a snake with hair that he dreamt about:

(4.3.18)   2011-08-16_P-B-K-M.119-112 (Conversation,)

a   ...   ku   pangkuy   ini
Oh   ...   NC:ANIM   snake   ANAPH
me-dha-dini
3SG.HANDS(8).PIMP-PST-3SG.SIT(1).PIMP

'ah, that snake was doing this'

ngay=ka   ngeme-dha-ngini
1SG=TOP   1SG.SAY/DO(34).PIMP-PST-body
ngirra-bath-tha-ngini
1SG.WATCH(28).PIMP-watch-PST
dem-purndurt=warda   *ini=yu*
body-3SG.POKE.RR(21).NFUT-arise=TEMP   ANAPH=CLS

'I was standing and watching as he rose up'

[nanthi   pemarr]   *ne*
NC:RESID   hair.on.head   TAG

'with hair like this'

This is also the case with *the* 'ear'. The following example is an extract of a narrative about a traditional doctor, and describes the act of clearing eyes and ears - without an identified possessor. As expected, the *nanthi* classifier is not included for *the* 'ear' and *kamarl* 'eye':

(4.3.19)   1974_CS1-4A_01.26-30 (Narrative, Tradition)

bere   murrinh   murrkmurrk
so   NC:LANG   instructions

'the instructions'

[kamarl]   *wurdan-ni-ngka-puth*
eye   3SG.SHOVE(29).NFUT-RR-eye-extricate

'the eyes are cleared'

wurdan-ni-ngka-puth
3SG.SHOVE(29).NFUT-RR-eye-extricate

'cleared eyes'

[the]   *wurdan-ni-ye-puth*
ear   3SG.SHOVE(29).NFUT-RR-ear-extricate

'the ears are cleared'

When the *nanthi* classifier is included with *the* 'ear' in a different narrative, it concerns the story about the frilled-necked lizard and how he received his large ears. The possessor for the body part *the* 'ear' is clearly established, and the classifier is included:

(4.3.20)   CS1-012-A.156-158 (Narrative, Dreaming)

nhini=ka   *ku*   *nertpi*   *pana-matha*
ANAPH=TOP   NC:ANIM   frilled.neck.lizard   RECN-INTNS
kurran   *pana*
3SG.GO(6).PRSL   RECN

'that frilled neck lizard that runs around'

nhini=ka   *[nanthi*   *the]*   *pungantherrurr*
ANAPH=TOP   **NC:RESID**   **ear**   3PL.PULL(32).NFUT   pull

'they pulled his ears'

Note that the converse does not necessarily hold - even if the body part's possessor has been established, the classifier may still be absent:

(4.3.21)   CS1-002-A_02-Tcheri.43.53-54

bapula   *bapula*   *pangu-re*   *kurran*   *ngawu*
buffalo   buffalo   DIST-PERL   3SG.GO(6).PRSL   Hey!

'there's a buffalo walking along there!'
...

thangku-re   *tham-parl=ya*
what-PERL   2SG.POKE(19).NFUT-shoot/spear-HES
[mikmu]   *ba*   *[lawali]*
side.of.buttocks   Oh!   **thigh**

'"what part are you shooting? the hip, the leg?"'

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> **[*lawali*]**   *parram-parl*
> **thigh**   3PL.POKE(19).NFUT-shoot/spear
>
> 'they shot it in the leg'

We can therefore infer that the presence of the *nanthi* classifier with body parts relates the body part to an established referent. The classifier's inclusion is motivated by discourse, as a means to indicate that the possessor has been established.

Body parts also frequently appear in possessive constructions. In these cases, the classifier is never included. This was confirmed using R, where I extracted instances of nouns in [NC N] constructions and possessive constructions of the form [N Pro] (per Blythe, 2009) throughout the corpus, where the noun is a body part. The *nanthi* classifier and possessive pronouns never occur in the same noun phrase. When all phrases in the corpus which contain a gloss for 'ear', 'eye', 'head', 'nose', 'hand', 'mouth', 'arm', 'finger', 'foot', 'feet', 'leg', 'toe', 'face', 'belly', 'hair', and 'thigh' were extracted, it was found [N Pro] and [NC N] constructions are entirely in complementary distribution. We also saw that this was the case for kinship terms. We can see, then, that noun classifiers do not appear in possessive constructions when the noun is "inalienable".

The following examples show *me* 'foot/leg', with the possessive pronoun, and with the classifier:

(4.3.22)   2011-07-19_CM-DB_2-3.34-35 (Narrative, Video stimulus)

> *jump=warda*   *pama-nu*
> jump=TEMP   3SG.SAY/DO(34).FUT-FUT
> *purdu-warl-nu*
> 3SG.SHOVE.RR(30).FUT-get.down-FUT
>
> 'he will jump now, he will jump down'
>
> **[*me*   *nukunu*]**   *mem-kuruk*
> **foot**   **3SG.M**   3SG.HANDS.RR(10).NFUT-lie.on.one's.side
>
> 'he bends his legs'

(4.3.23)   1974_CS1-4A_03.30/33 (Narrative, Dreaming)

> *wurda-warl*
> 3SG.SHOVE.RR(30).NFUT-get.down

'he jumped in'

...

THARR   *mam=ka*   *[nanthi*   **me=ka]**
BAFF   1SG.HANDS(8).NFUT=TOP   **NC:RESID**   **foot=TOP**
nanthi   *palyirr=warda=wa*
NC:RESID   rock=TEMP=EMPH

'BAFF, his feet hit the rocks'

With *pemarr* 'hair.on.head':

(4.3.24)   2012-06-20_landing_28 (Narrative, Personal History)

ku   *pemarr-wanku*   *[pemarr*   *nukunu]*
NC:ANIM   hair.on.head-COM   **hair.on.head**   **3SG.M**
kanamkek   *ngalla*
rainbow.serpent   big

'the beast with hair, his hair and everything, great Kanamkek'

(4.3.25)   2011-08-16_Phillip-Berida-Keith-Mardigan (Conversation)

[nanthi   *pemarr]*   *ne*
NC:RESID   **hair.on.head**   TAG

'with hair like this'

Finally, we also see this pattern with *mange* 'hand':

(4.3.26)   2011-07-19_CM-DB_3-3.48-50 (Narrative, Video stimulus)

a   *...*   *mesock*   *ini=ka*
Oh   ...   sock   ANAPH=TOP

'and ... that sock...'

ban-urdi   *[mange*   *nukunu]*
3SG.18.NFUT-put.on   **hand**   **3SG.M**

'he puts it on his hand'

[mange   *nukunu]*   *ban-urdi*
hand   **3SG.M**   3SG.18.NFUT-put.on

'he puts it on his hand'

(4.3.27)   2015-07-16_R-B_arg-morphology_01 (Elicitation)

me-nu-ma-purl-lu   *kamarl*   *i*
1SG.HANDS(8).PIMP-RR-APPL-wash-FUT   face   and
[nanthi   **mange**-*de-nu]*
NC:RESID   **hand**-same-FUT
me-nu-ma-purl-lu
1SG.HANDS(8).PIMP-RR-APPL-wash-FUT

'I'll wash my face and I'll wash my hands too'

In the whole corpus, there is only one body part term which occurs in an [NC N Pro] sequence:

(4.3.28)   2015-07-05_D-P_apicals-trisyllable.74 (Elicitation, Phrases)

ku   *nertpi*   *kurri-ki*
NC:ANIM   frilled.neck.lizard   3SG.GO(6).FIRR-3SG.SIT(1).FIRR
pan=gathu   *ngarra*   **[nanthi]**   **[pelpith**
DIST=hither   LOC   **NC:RESID**   **head**
nukunu-*dhangunu=ka]*   *ma-dharlurl=warda*
3SG.M-source=TOP   3SG.HANDS(8).FUT-open=TEMP

'the frill-necked lizard runs along with the thing from his head opened out'

However, it is likely this example consists of two appositional noun phrases - [NC] and [N Pro]. This is because it is not the 'head' which is open, but rather the frill around its neck (specified by the vague pro-form *nanthi* 'NC:RESID'), and because -*dhangunu* 'source' on *pelpith-dhangunu* 'head-source' specifies from where 'the thing' is opened. As such, the only [NC N Pro] sequence, where N is a body part, is not one whole possessive construction.

The distribution of the *nanthi* 'NC:RESID' classifier with body parts is such that it occurs only with identified possessors. In these instances, it functions as a discourse marker to indicate possession. Evidence for this function is seen through the discourse of the texts - as a referent must be identified for it to be included - and also through the distribution of syntactic behaviour, where [NC N] and [N Pro] constructions are entirely non-overlapping. This pattern is unique only to body parts and kinship terms - terms which are cross-linguistically found to be marked in inalienable possessive constructions. Though Murrinhpatha does not otherwise formally distinguish between alienable and inalienable possession (Walsh, 1997), this

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discovery suggests that the presence and absence of noun classifiers is sensitive to a distinction between these types of possession. To my knowledge, this is the first documented finding of a distinction between alienable and inalienable possession in Murrinhpatha.

4.4 The Syntax of Noun Classifiers

The sections above have established the syntactic behaviour of noun classifiers in Murrinhpatha which adhere to the previous noun phrase rules proposed by Mujkic (2013), following from Blythe (2009). Classifiers are optional; can co-occur with any nominal type; and exhibit specific behaviour when occurring in adjacent noun phrases and in possessive constructions with certain sub-categories of nouns. I remind the reader of the noun phrase rules, where every element in the noun phrase is optional and at least one must be present:

(i) NP →
$$\begin{bmatrix} NC \\ PRO \\ N_1 \\ DEM \end{bmatrix}$$

(ii) NP → (NC)
$$\begin{bmatrix} (N) \\ (N\ POSSPRO) \end{bmatrix}$$
 (ADJ)* (DEM) (NUM)

(iii) NP → NP (i) NP

In this section, I discuss noun classifier behaviour which is not captured by the current noun phrase rules and suggests that classifiers may be situated in a dedicated position in the noun phrase. To account for this, I explore the notion that noun classifiers may in fact be functioning as the head of a determiner phrase, rather than the left most element of a noun phrase.

4.4.1 Coordinated Noun Phrases

The presence and absence patterns of noun classifiers in coordinated noun phrases indicate that noun classifiers are in a dedicated position in the noun phrase. Noun phrases can be coordinated either overtly - such as with the coordinator *i* 'and' -

and covertly, via nominal juxtaposition. In same-class coordinated noun phrases, a classifier can be present in both noun phrases in both overt and covert coordination:

(4.4.1) 1980_Murrinh-Ku-thepini.12 (Narrative)

Bere	*pamam-na,*		*"Kumparra*
so	3PL.SAY/DO(34).NFUT-3SG.M.IO		??
thurru	*nhinhi=yu,*	*ku*	*kama*
2SG.GO(6).FUT	2SG=CLS	NC:ANIM	perhaps
da-ngkardu-nu	***ku***	***ngalmungkirr***	*i*
PL/T-see/look-FUT	**NC:ANIM**	**pied.goose**	**and**
ku	***lathparr."***		
NC:ANIM	**black.duck**		

'They said to the captain, "You go first, you might see some geese or ducks."'

(4.4.2) 20110824_JB_video_GYHM100_02 (Conversation)

ku	***thithay***	***ku***	***kikmun***
NC:ANIM	**sugarbag**	**NC:ANIM**	**beeswax**
thardi-murrk-ngime		*da*	*burrk-damatha*
1INCL.BE(4).PIMP-eat-PC.F.NSIB		NC:PL/T	lovely-just/only
kura	*patha-wanku*		
NC:WATER	good-COM		

'we used to eat honey and beeswax, it was great, and (drink) water too'

(4.4.3) 20161028-MP29.8 (Elicitation, Picture stimulus)

kardu	***nugarn***	***kardu***	***palngun***	*ku*
NC:HUMAN	**man**	**NC:HUMAN**	**woman**	NC:ANIM
kanarnturturt	*mam-punku-tha-ngintha*			
crocodile	3SG.HANDS(8).NFUT-3PAUC.DO-chase-DU.F.NSIB			

'the crocodile is chasing the men and women'

The repeated classifier, however, is optional and may be omitted:

(4.4.4) 1980_Murrinh-Ku-thepini.7.1 (Narrative)

Bere	*kardu*	*thipmam*	*wangu=ka*
so	NC:HUMAN	black	DIR=TOP
pamam-pirra,		*"Ya,*	***ku***
3PL.SAY/DO(34).NFUT-3PL.IO		INTJ	**NC:ANIM**

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ngalmungkirr i lathparr
pied.goose and black.duck

nguma-nan-berti-nu   *nguru*
1PL.HANDS(8).FUT-2PL.DO-take.someone-FUT   1PL.GO(6).FUT

Ngarntimeli wangu nhini=ka marda
Ngarntimeli DIR ANAPH=TOP belly

numu-ngan-art?"
2PAUC.TWIST(11).FUT-1PL.DO-get/take

' "Well", responded the Aboriginal men, "How about we take you to Ngarntimeli to shoot some pied geese and black ducks, would you like that?"'

(4.4.5)   2015-07-17_K-D-R_01.139 (Conversation,)

ku lawarnka bapula *damatha*
NC:ANIM wallaby buffalo just/only

kardi-nintha   *da*   *ngalla kanhi*
3SG.BE(4).PIMP-DU.M.NSIB NC:PL/T big PROX

'there was just wallaby and buffalo all around here'

Finally, in both overtly and covertly coordinated noun phrases, if the classifier is absent in the first noun phrase, it will be absent in subsequent noun phrases, too.

(4.4.6)   MP-20120724-RN01.38 (Narrative, Personal history)

pirri-nirel   **ngalantharr i kunuwunu**=*yu*
3PL.SIT(1).PIMP-sing **old.man and old.woman**=CLS

'the old men and old women would sing and dance.'

(4.4.7)   MP-20120724-RN01.68 (Narrative, Personal history)

ini=ka   *murrinh*   *rosary=warda*
ANAPH=TOP NC:LANG rosary=now

pume-ngime-pirrine
3PAUC.SAY/DO(34).PIMP-PC.F.NSIB-3PAUC.SIT(1).PIMP

kunuwunu ngalantharr=*yu*
old.woman old.man=CLS

'The old women and old men would do the rosary.'

There are no examples where a noun classifier is omitted in the first noun phrase but is present in the second. This pattern is not accounted for in the current noun

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phrase rules: it would be possible to have unattested constructions from the corpus, such as *lawrnka i ku bapula* 'wallaby and NC:ANIM buffalo'. The rules will be revised, with this contradiction in mind, in section 4.4.3.

4.4.2 Hierarchical Noun Classifiers

Noun classifiers can occur not only with every other nominal type in the noun phrase, but also can co-occur with other noun classifiers in the same noun phrase. When this happens, the classifiers can have two functions: as a modifier, or as a typical classifier with a hierarchical structure. In a sequence of two successive modifiers, the second classifier can function as a modifier to the first. This can be seen in *kardu kura* 'NC:HUMAN NC:WATER' to mean 'drunk men':

(4.4.8)   2011-09-17_G-C-E_part3

bam-kardu	***kardu***	***kura***
3SG.13.NFUT-see/look	**NC:HUMAN**	**NC:WATER**

'I saw drunken men'

The *kura* 'NC:WATER' classifier here is not behaving like a typical classifier: the referents are not water or water-like, but rather *people*. Here, *kura* 'NC:WATER' is functioning as a modifier to the classifier *kardu*.

Successive noun classifiers can also function in a hierarchical manner, to jointly classify the following elements. This is common with the classifier *da* 'NC:PL/T'. Noun phrases containing a classifier are situated in time and space using the *da* 'NC:PL/T' classifier. Both classifiers are typically present:

(4.4.9)   20110901_JB_video_GYHM100_0

da	***kardu***	***murntak***=*ka*	*kanhirda*	*na*=*wa*
NC:PL/T	**NC:HUMAN**	**old**=TOP	here	TAG=EMPH

pardi-wup-tha
3PL.BE(4).PIMP-stay/sit-PST

'people used to live here back in the old days, eh?'

The noun phrase *kardu murntak* 'NC:HUMAN old' selects *da* 'NC:PL/T' to situate *kardu murntak* 'NC:HUMAN old' in time and space. *Da kardu murntak* may therefore be interpreted as 'the place of people from long ago'.

This hierarchical structure can even stack up to three noun classifiers:

(4.4.10) 1007_1997_Mission-side-chosen

murrinh	*kardu*	*nanthi*	*merrk*	*i*
NC:LANG	NC:HUMAN	NC:RESID	moon	and
kardu	*darrikardu*	*nukunu*		
NC:HUMAN	countryman	3SG.M		

'this is a story about the Moon Man, and his countrymen'

The example neatly demonstrates the hierarchical selection of noun classifiers, whereby a single *murrinh* 'NC:LANG' classifier classifies two separate, coordinated noun phrases: *kardu nanthi merrk* 'NC:HUMAN NC:RESID moon', and *kardu darrikardu nukunu* 'NC:HUMAN countrymen 3SG.M'. The first noun phrase is then itself exemplary of this hierarchy: *merrk* 'moon' selects the *nanthi* 'NC:RESID' classifier to produce *nanthi merrk*; *nanthi merrk* selects *kardu* 'NC:HUMAN' to personify the moon in *kardu nanthi merrk*; and *murrinh* 'NC:LANG' is selected to ascribe a story to *kardu nanthi merrk*. In the second noun phrase, *murrinh* 'NC:LANG' is also applied to *kardu darrikardu nukunu* 'his countrymen', as the story is about the referents of both noun phrases.

Noun classifiers in Murrinhpatha can evidently have a hierarchical relationship with other classifiers. We see, then, that noun classifiers do not behave precisely in keeping with the rules laid out previously. They do co-occur with other nominals, as anticipated, but we have found that they can co-occur with other noun phrases in the *same phrase*, as well. The rules are self-evidently struggling to capture the nuances of noun classifier behaviour as it stands in the corpus.

4.4.3 Determiner Phrase Analysis

With the established hierarchical and coordination behaviour in mind, some elements of the previous rules laid out by Mujkic (2013) following Blythe (2009) must be revised. Specifically, the relationship between the classifier and the rest of the noun phrase. The classifier is clearly delimited from the other nominal types, and this can be explained by placing it in a separate slot, with a determiner phrase analysis. Classifiers adhere fully to the criteria that Louagie (2017b, p. 189-190) uses to identify a structural determiner slot in her typological study of determiners in Australian languages: they have a dedicated position in the noun phrase; occur at

the edge of the noun phrase; and some classifiers indicate specificity (as will be discussed in section 5.3.1). Furthermore, the specificity function is akin to that found in the topic class markers of Wubuy, Marra, and Ngalgkan - which Baker (2008) argues display determiner-like behaviour, most notably in polarity contexts (Baker, 2008, p. 148). With Louagie's (2017b) criteria met, and the similarities with Baker (2008), we can examine how a new rule, centred around a determiner phrase headed by a classifier, could work. I propose the following rules:

$$\text{DP} \rightarrow \quad \text{D} \quad \left\{ \begin{array}{c} \text{(NP)} \\ \text{(DP)} \end{array} \right\}$$

$$\text{NP} \rightarrow \text{(N)(Adj)*(Dem)(Num)(Pro)}$$

$$\text{NP} \rightarrow \text{NP (i) NP}$$

$$\text{DP} \rightarrow \text{DP (i) DP}$$

These ordering are in keeping with Mujkic (2013) and Blythe (2009), except the noun classifier can function as the head of a determiner phrase. As such, the structures which were captured by the previous rules are still applicable, but also allow for the coordination and hierarchical structures outlined above. For example, a phrase such as *ku ngurlmirl terert* 'NC:ANIM fish many' would be a determiner phrase, with the structure in example 4.4.11a. If a phrase contains no classifier, such as *dingki pangu* 'dinghy DIST', then it is a single noun phrase as shown in example 4.4.11b:

(4.4.11) a.

```
              DP
           ／     ＼
          D        NP
          |      ／    ＼
          ku    N       Adj
       NC:ANIM  |        |
            ngurlmirl  terert
               fish    many
```

b.

```
           NP
        ／    ＼
       N      Dem
       |       |
     dingki   pangu
     dinghy   DIST
```
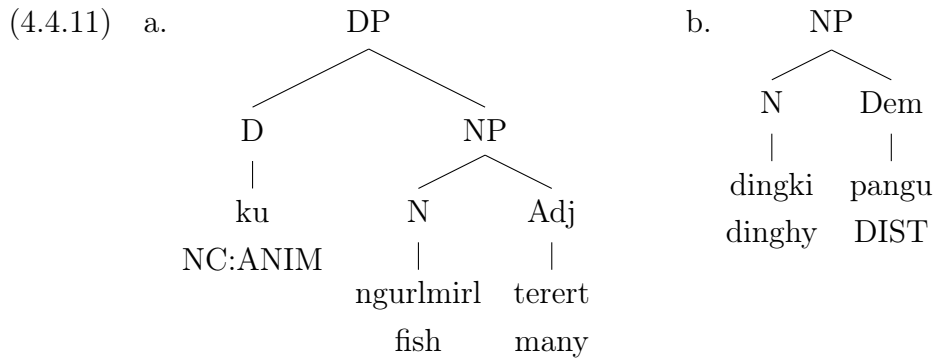
By coordinating both noun phrases and determiner phrases can be coordinated,

we can fully capture the patterns outlined in section 4.4.1. Coordinated noun phrases have no noun classifier, which may be within a determiner phrase (example 4.4.12) or not within one (example 4.4.13).

(4.4.12) a.

```
                    DP
             ┌──────┴──────┐
             D             NP
             │      ┌───────┼───────┐
            ku      NP     CONJ     NP
          NC:ANIM   │       │       │
                    N       i       N
                    │               │
               ngalmungkirr      lathparr
               pied.goose       black.duck
```

b.

```
                    DP
             ┌──────┴──────┐
             D             NP
             │      ┌───────┼───────┐
            ku      NP     CONJ     NP
          NC:ANIM   │       │       │
                    N       ∅       N
                    │               │
                lawarnka          bapula
                wallaby           buffalo
```

(4.4.13) a.

```
                 NP
          ┌──────┼──────┐
          NP    CONJ    NP
          │      │      │
          N      i      N
          │     and     │
     ngalantharr     kunuwunu
     old.man         old.woman
```

b.

```
                 NP
          ┌──────┼──────┐
          NP    CONJ    NP
          │      │      │
          N      ∅      N
          │             │
      kunuwunu      ngalantharr
      old.woman     old.man
```
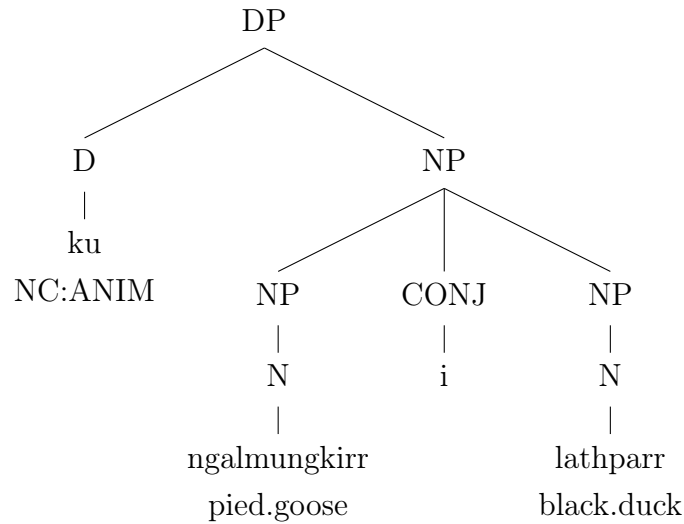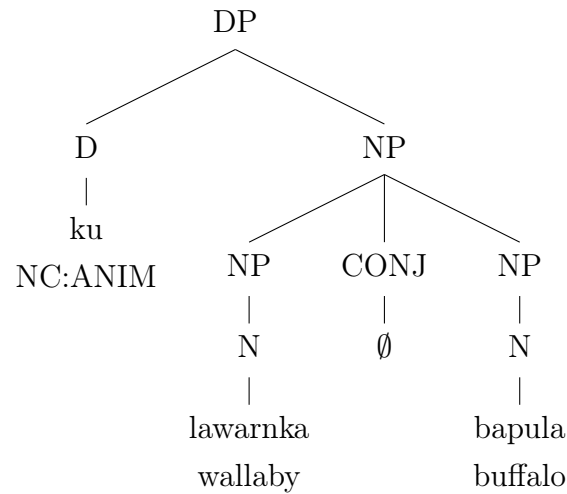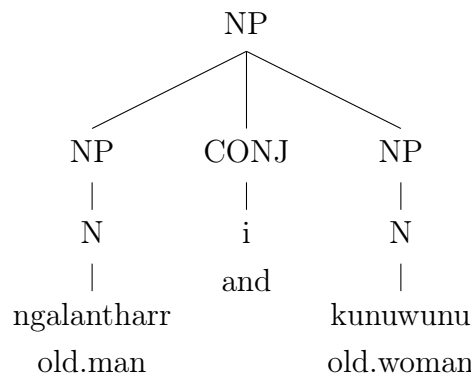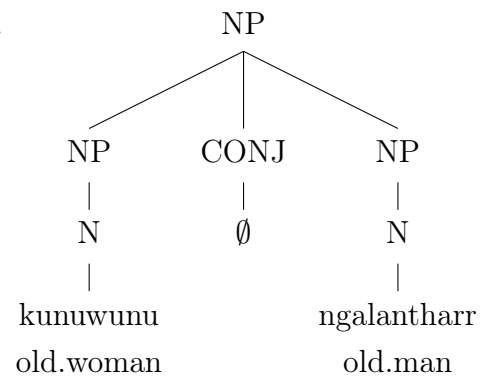
Determiner phrases can also be coordinated, where both noun classifiers are present:

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(4.4.14)

```
                                    DP
             ┌──────────────────────┼──────────────────────┐
            DP                     CONJ                    DP
       ┌─────┴─────┐               │               ┌────────┴────────┐
       D          NP               i               D                NP
       │           │              and              │                 │
       ku          N                               ku                N
    NC:ANIM        │                             NC:ANIM             │
               ngalmungkirr                                       lathparr
                pied.goose                                       black.duck
```

(4.4.15)

```
                                    DP
             ┌──────────────────────┼──────────────────────┐
            DP                     CONJ                    DP
       ┌─────┴─────┐               │               ┌────────┴────────┐
       D          NP               ∅               D                NP
       │           │                               │                 │
       ku          N                               ku                N
    NC:ANIM        │                             NC:ANIM             │
                thithay                                           kikmun
                sugarbag                                         beeswax
```
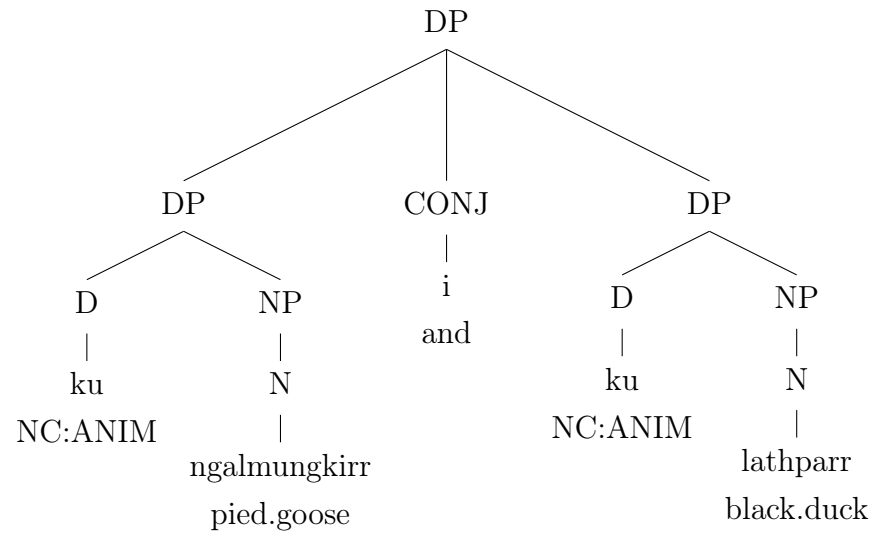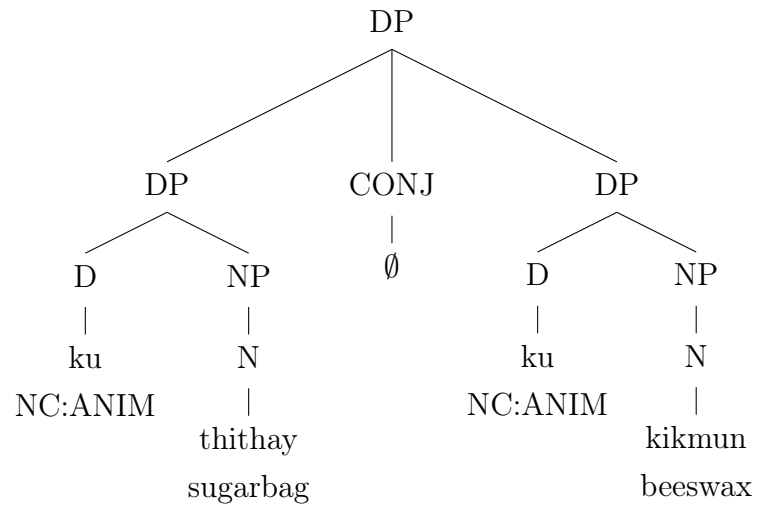
Determiner phrases can also be embedded within each other, which will capture the structures outlined in section 4.4.2. This is exemplified below:

(4.4.16)

```
                              DP
                    ┌─────────┴──────────┐
                    D                    DP
                    │           ┌─────────┴─────────┐
                 murrinh        D                   DP
                 NC:LANG        │          ┌─────────┴─────────┐
                             kardu         D                   NP
                            NC:HUMAN       │                   │
                                        nanthi                 N
                                       NC:RESID                │
                                                             merrk
                                                              moon
```
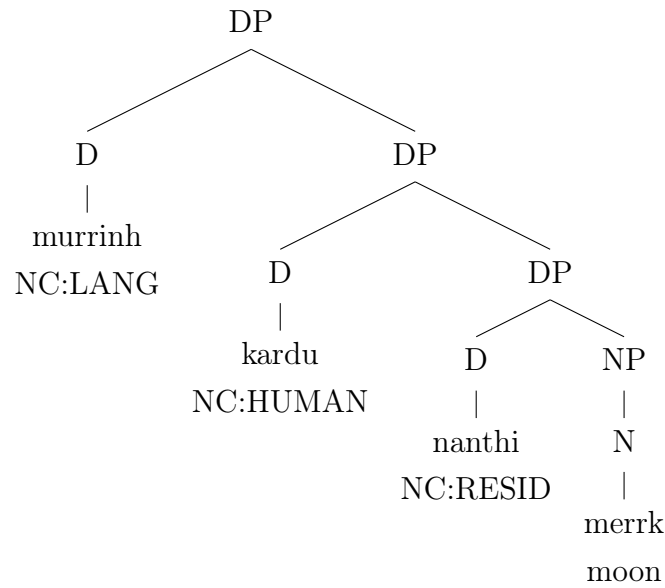
The coordination rule, as proposed in section 4.4.1 above, also explains why *murrinh* 'NC:LANG' applies to *kardu darrikardu nukunu* 'his countrymen' - because *murrinh* 'NC:HUMAN' would take the coordinated DP level as its complement:

(4.4.17)

```
                         DP
              ┌──────────┴────────────────┐
              D                           DP
              │           ┌───────────────┼───────────────┐
           murrinh        DP             CONJ              DP
           NC:LANG    ┌────┴────┐         │          ┌──────┴──────┐
                      D         DP        i          D             NP
                      │      ┌───┴───┐             kardu       ┌────┴────┐
                   kardu     D       NP           NC:HUMAN     N        Pro
                  NC:HUMAN   │       │                         │         │
                          nanthi     N                    darrikardu  nukunu
                          NC:RESID   │                    countrymen    his
                                   merrk
                                    moon
```
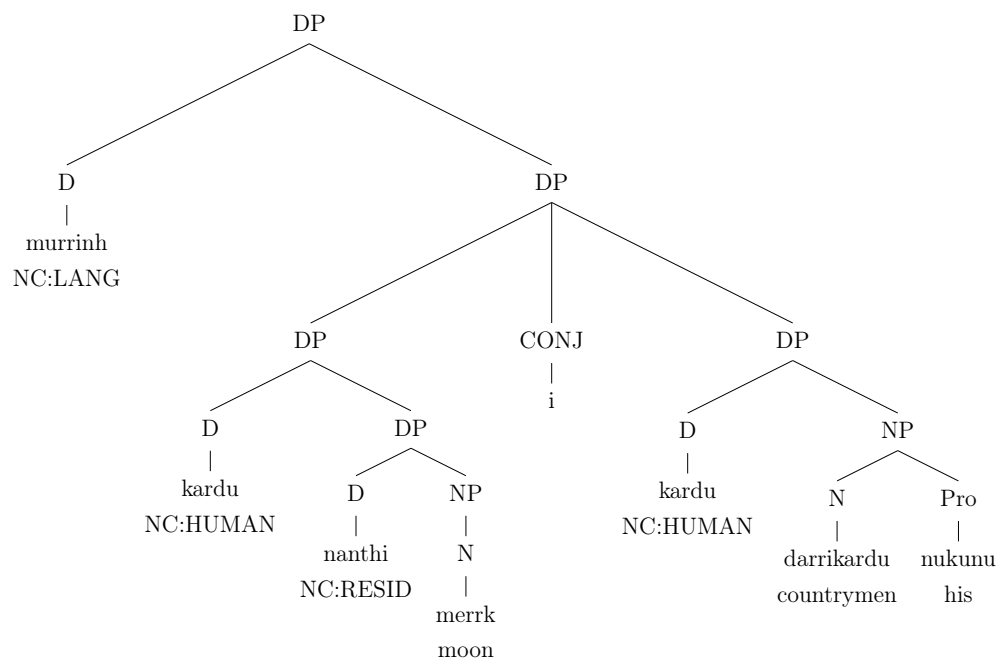
There are still some elements which still require an explanation for a full analysis of a determiner phrase. We have not, for example, discussed why and how other determiner-like parts of speech such as demonstratives can occur to the right of the noun. This point does not necessarily present a problem to the determiner phrase analysis - Louagie (2017b, p. 194) discusses the issue of multiple determiner

slots directly - but this does indicate a non-trivial issue that would require further research. For the present study, however, we see that noun classifiers have promising potential to function as the head of a determiner phrase.

4.5   Summary

This chapter has discussed the syntactic behaviour of noun classifiers in the corpus. Within the noun phrase, noun classifiers may occur alone, co-occur with any nominal type, or be absent from the phrase entirely. Functionally, noun classifiers can either classify the following nominal, function as the general entity, or as a modifier. Across phrase boundaries, noun classifiers are present in adjacent noun phrases with different grammatical relations, and may sometimes be exhibiting some agreement behaviour - where they are present with modifying nominals of the form [NC N][NC Adj]. It was found that noun classifiers have specific behaviour in coordinated noun phrases, and can be hierarchical. This evidence, and following from Louagie (2017b) and Baker (2008), suggests that noun classifiers may be functioning as the head of a determiner phrase. Finally, noun classifiers are consistently absent in possessive constructions with body part and kinship terms, suggesting that noun classifiers are sensitive to alienable and inalienable possession. Research question 1, concerning the syntactic behaviour of noun classifiers, has therefore been addressed in this chapter.

We see that noun classifiers exhibit a range of syntactic behaviours, and may be optional in the noun phrase. This, then, raises the question of what factors drive the classifier's presence or absence. Furthermore, do these factors apply to all noun classifiers in the same manner? The next chapter is dedicated to addressing these questions, and to an analysis of the discourse functions of Murrinhpatha noun classifiers.

Chapter 5

Discourse Considerations

Now that we have discussed the syntactic behaviour of noun classifiers, we can turn our attention to the functions of classifiers in *discourse*: the focus of research question 2. As presented in chapter 2, nominal classification markers are used for more than just classifying nominals, and these functions are typically ascribed either to classifier or to class systems. In this chapter, I show that Murrinhpatha noun classifiers exhibit some functions typically found in other classifier systems cross-linguistically, but also that some functions are only applicable to a subset of them. Though Murrinhpatha noun classifiers may appear to be homogeneous in their syntactic behaviour, their functions in discourse demonstrate they are not. This is discussed in section 5.3 and 5.4, where we find that *ku* 'NC:ANIM' and *mi* 'NC:VEG' do not indicate specificity on the referent's first mention whereas the majority of other classifiers do. The difference in discourse behaviour between classifiers addresses both research questions 2 and 3.

The discovery of this split system further informs our understanding of nominal classification, whereby the assumption that classification markers in a given system should be treated as one cohesive group may not always hold true. Though Marrithiyel (Green, 1997) and Ngan'gityemerri (Reid, 1997) are also found to have a split system, this is due to the differences between class markers' morphosyntactic behaviour. My result, on the other hand, shows that there are differences in function even in the same morphosyntactic system.

5.1 Reference Tracking

We begin our discussion of the functions of Murrinhpatha noun classifiers with one that has received considerable attention in the literature: *reference tracking*. As discussed in section 2.4, reference tracking consists of the two part process of introducing the referent, followed by subsequent mentions of the same referent throughout

discourse. In languages with nominal classification systems, it is common for the sole classification marker to be used for that purpose.[12]

In the literature, the relationship between nominal reference tracking and nominal classification has been more commonly associated with noun class systems: Foley and Van Valin (1986) and Corbett (1991) discuss this in their typologies of noun classes; and it is seen in grammars of particular noun class languages, such as Wubuy in Heath (1983) and Mawng in Singer (2016). Minimal attention has been given, however, to reference tracking in noun classifier systems. Craig (1986a) found that noun classifiers are the only form of anaphoric expressions in Jacaltec, and this is the only language discussed in classifier typologies with reference tracking in Contini-Morava and Kilarski (2013) and Kilarski (2013). Other noun classifier typologies, such as Denny (1986) and Allan (1977) only focus on the semantic functions of classifiers and do not mention reference tracking at all. Sands (1995, p. 248) claims that noun classifiers in Australian languages are primarily used as anaphoric expressions, but provides no examples. This section address this gap in the literature, and shows that nominal reference tracking in Murrinhpatha is indeed achieved by noun classifiers, with crucial support from other aspects of the grammatical system.

5.1.1 Reference Instantiation

The introduction of a referent frequently includes the classifier, as seen in examples 5.1.1 - 5.1.3:

(5.1.1) 2000-11-10_L-K-L-M.4 (Narrative, Dreaming)

i   *murrinh*   ***ku***   ***thiniminh***   *kanhi*
and   NC:LANG   **NC:ANIM**   **small.bat.Sp.**   PROX
ngurdi-nintha-yith-ngi-ni
1SG.SHOVE.RR(30).FUT-DU.M.NSIB-tell-1SG.SIT(1).FUT-FUT

'and the two of us are going to tell the story of the Little Bat'

(5.1.2) 20110824_JB_video_GYHM100_02.196 (Conversation,)

nanthi   ***marluk***   *kama*
NC:RESID   **didgeridoo**   perhaps

---

[12] For the purposes of this thesis, reference tracking here only concerns *nominal reference tracking*. This section does not discuss reference tracking on the verb - except for when this information is required for the disambiguation of overt noun classifiers.

'a didgeridoo maybe'

(5.1.3)   2015-07-21_M-K-M.8-10 (Conversation,)

ku   ***kanamkek*** *kanam*
NC:ANIM **rainbow.serpent** 3SG.BE(4).NFUT

'the Rainbow Serpent is there'

kanamkek   *i* ***ku***   ***thiniminh***
rainbow.serpent and **NC:ANIM** **small.bat.Sp.**

'Rainbow Serpent and the fruit bat'

i ***kardu***   ***mardinhpuy****-nku*
and **NC:HUMAN** **young.girl**-3PAUC.DO

'and the two girls'

The omission of the classifier in the referent's first mention is discussed in section 5.3.1.

5.1.2 Anaphora

In its subsequent mentions, a referent may be expressed solely by the noun classifier, without a noun. In this case, the noun classifier is functioning as an anaphoric expression. In example 5.1.4 below, the referent *shotgun* 'shotgun' is first established with an [NC N] construction *thungku shotgun* 'NC:FIRE shotgun', and its subsequent mention has dropped the nominal 'shotgun' to merely the classifier *thungku* 'NC:FIRE'. This is also the case for example 5.1.5 below, where *ku lathparr* 'NC:ANIM black.duck' is introduced with its classifier and then subsequently referred to only by *ku* 'NC:ANIM':

(5.1.4)   1980_Murrinh-Ku-Thepini.14-15 (Narrative, Family History)

Mere *pidith* *punni-lili-dha,*   *"Ma-mpa*
NEG ?? 3PL.FEET(7).PIMP-walk-PST come.on!-2SG.IO
numam-art=warda   ***thungku*** ***shotgun****=yu".*
2PL.HANDS(8).NFUT-get/take=TEMP **NC:FIRE** **shotgun**=CLS

'They hadn't gone far when they said to each other, "Come on, let's get the shotgun off him."'

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Bere   *M-wa*   *kardu*   ***thungku***
so   M-EMPH   NC:HUMAN   **NC:FIRE**
mangan-art=yu.
1SG.GRAB(9).NFUT-get/take=CLS

'So M grabbed the shotgun.'

(5.1.5)   1980_Murrinh-Ku-Thepini.42-43 (Narrative, Family history)

bere   *parram-pirru*   *mut-nintha*
so   3PL.POKE(19).NFUT-3PAUC.IO   give-DU.M.NSIB
ku   ***lathparr***
NC:ANIM   **black.duck**

ku   *thepini*   *perrkenku=ka*   ***ku**=warda*
NC:ANIM   Japanese two=TOP   **NC:ANIM**=TEMP
yunguni-nintha-purl-dha-dini
3SG.PULL(32).PIMP-DU.M.NSIB-pluck.feathers-PST-3SG.SIT(1).PIMP

'N and L climbed aboard and gave the ducks to the Japanese crew. They were pleased to receive the ducks and at once started to pluck them.'

Anaphoric classifiers can also be used in multiple subsequent mentions of the same referent, such as with *nanthi* 'NC:RESID' below:

(5.1.6)   2014-10-01_S-D_NAATI-Par1-D1.1-3 (Narrative, Translation)

yuwu   ***nanthi***   ***peinting***   *kanhi*
yes   **NC:RESID**   **painting**   PROX
mam-rikerdek=ka
1SG.HANDS(8).NFUT-finish.task=TOP

'Yes, I've finished this painting.'

***nanthi**=warda*   *selim-ngama-nu*   *ku*
NC:RESID=TEMP   sell-1SG.SAY/DO(34).FUT-FUT   NC:ANIM
mani   *damatha-nu*   *ngay*   *marda*
money   just/only-FUT   1SG   belly
mangan-art=yu
1SG.GRAB(9).NFUT-get/take=CLS

'Now I want to sell it. I want to get some money.'

mampa   ***nanthi**=ka*   *kanhi*   *kurran-ngkawuk*
alright   **NC:RESID**=TOP   PROX   3SG.GO(6).PRSL-exist

'okay, the paintings are here'

Same-class coordinated noun phrases can be also be referenced by an anaphoric classifier, such as in the example below with the *mi* 'NC:VEG' classifier:

(5.1.7)   MP-20120724-RN01.91-92 (Narrative, Personal history)

mi	*ngurdawu*	*i*	*mi*	*lawam*		
NC:VEG	**cycad.palm.fruit**	and	**NC:VEG**	**flour**		
mi	*thangku*	*mi*	*pana*	*mi*	*ngarra*	*beg*
NC:VEG	**what**	**NC:VEG**	**RECN**	NC:VEG	LOC	bag
peningime	*kunuwunu*					
3.PAUC.F	old.woman					

'the ngurdawu, the flour, what's another one, food in the old women's bags.'

bere	*mi*
so	**NC:VEG**
nginna-ngathi-ngime-ngarde=ka	
1PAUC.HEAT(27).PIMP-cook-PC.F.NSIB-1PAUC.BE(4).PIMP=TOP	
ngarra	*dara=warda-ngu,*	*manta*
LOC	mangroves=TEMP-way,	close

'So we sat in the mangroves nearby and cooked up all the food.'

The use of *kardu* 'NC:HUMAN' as an anaphor is possible for both male and female referents. Thus, *kardu* 'NC:HUMAN' is interchangeable with both masculine and feminine 3rd person pronouns - *nukunu* '3SG.M' and *nigunu* '3SG.F' - as shown in the following examples:

(5.1.8)   CM-DB_2-3.31/40

wurdam-mardarlart=warda	*ne*	*nukunu*
3SG.SHOVE.RR(30).NFUT-be.angry=now	TAG	**3SG.M**

'he's$_i$ shaking'
[9 clauses removed]

kardu=*warda*	*kurdu-warl-nu*
NC:HUMAN=now	3SG.SHOVE(29).FIRR-jump.down-FUT

'he's$_i$ going to jump down now'

(5.1.9) 2000-11-10_L-K-L-M.246/278 (Narrative, Dreaming)

kardu   *me-watha-dha-mana=wa*
NC:HUMAN 3SG.HANDS(8).PIMP-repair-PST-only=EMPH

'she$_j$ was trying to cure it'

[32 clauses removed]

ngarra **nigunu** *kem-kaykay*   *ngangka*
LOC   **3SG.F**   3SG.SIT(1).PRSL-call.out there

'he's shouting to her$_j$ there'

We have seen noun classifiers can be used as anaphoric expressions in a number of environments, including with coordinated antecedents, in multiple subsequent mentions, and interchangeably with pronouns. To provide a comprehensive description of anaphora, it is important to grasp the dynamic behaviour of anaphoric noun classifiers in use. The following section exemplifies how nominal reference tracking is maintained with multiple same-class referents.

5.1.3 Disambiguating Same-Class Referents: A Case Study

When Murrinhpatha classifiers are used as an anaphoric expression, the question arises as to how they maintain reference management with multiple referents of the same class. The following dream-time story neatly demonstrates how this is achieved, as there are many *ku* category referents that are simultaneously active in this narrative.

Introducing Referents

As expected, the characters are introduced with their classifier:

(5.1.10) CS1-012-A.5-6 (Narrative, Dreaming)

murrinh   *ngurrnguwarl-nukun* *da*   *kanhi-nga*   *murrinh*
NC:LANG   sleep-POSS   NC:PL/T   PROX-still   NC:LANG
puddini-ngarra-yith-tha-pardi   *da*
3PL.SHOVE(29).PIMP-1PL.IO-tell-PST-3PL.BE(4).PIMP   NC:PL/T
murntak=warda
old=TEMP

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'it's a dream-story, this story that they used to tell us'

ku	**durrket**	**ku**	**nertpi**
NC:ANIM	**green frog**	**NC:ANIM**	**frilled neck lizard**
ku	**walumuma**	**ku**	
NC:ANIM	**blue-tongued.lizard**	**NC:ANIM**	
kartpurr	*i*	**ku**	**wak**
pied butcher bird	**and**	**NC:ANIM**	**crow**

'the green frog, the frilled-neck lizard, the blue-tongue lizard, the pied butcher bird and the crow'

In the next line, *ku* 'NC:ANIM' functions as an anaphoric expression to the coordinated same-class noun phrases established above:

(5.1.11)   CS1-012-A.7 (Narrative, Dreaming)

ku	*nhini=ka*	*kardu=warda-nga*
NC:ANIM	ANAPH=TOP	NC:HUMAN=TEMP-still
pardi-dha		
3PL.BE(4).PIMP-PST		

'those creatures were people then'

Then, a new group consisting of the crow and butcher bird is established, in addition to a new *ku* referent that is is introduced as *ku thithay* 'NC:ANIM sugar':

(5.1.12)   CS1-012-A.8 (Narrative, Dreaming)

ku	**wak**	**ku**	**kartpurr**			
NC:ANIM	**crow**	**NC:ANIM**	**butcher bird**			
dim-nintha-mardawith				*ngara*	*palyirr*	**ku**
3SG.SIT(1).NFUT-DU.M.NSIB-ascend				LOC	rock	**NC:ANIM**
thithay-*nu*						
sugarbag-DAT						

'the crow and the butcher bird climbed a hill together to get sugarbag'

(5.1.13)   CS1-012-A.9 (Narrative, Dreaming)

bere	*nukunu=gathu=ka*
so	3SG.M=hither=TOP

'well he...'

(5.1.14) CS1-012-A.10 (Narrative, Dreaming)

ku	*wak*=ka	*bangarn-rdurt*	*ku*
NC:ANIM	**crow**=TOP	3SG.BASH(14).NFUT-find	**NC:ANIM**
thithay	*ngarra*	*thay*	*karnmurrirn*	*pirri-dha*
sugarbag	LOC	tree	woolybutt	3SG.STAND(3).PIMP-PST

'the crow found bees, it was in a woolybutt tree'

The use of *nukunu* in example 5.1.13 above is interesting, as the participant seems to correct themself to fully specify the referent in the following line: *ku wak* 'NC:ANIM crow'. It appears that *nukunu* '3SG.M' here starts as an anaphoric expression, but it alone cannot specify whether its reference is to the crow or the butcher bird. As such, the sentence is restarted and the crow is fully specified.

From this point, all the characters are introduced and all are of the *ku* 'NC:ANIM' class. Reference disambiguation would not be possible through classifiers alone, and now relies on other aspects of the grammar.

One method of disambiguation involves selectional restrictions of the verb. In the following example, selectional restrictions disambiguate the referent for the anaphoric expression *ku*: only bees, and not birds, typically enter the holes of a woolybutt tree.

(5.1.15) CS1-012-A.11 (Narrative, Dreaming)

dini-dha
3SG.SIT(1).PIMP-PST

'it was there'

(5.1.16) CS1-012-A.12 (Narrative, Dreaming)

ku=ka	*dini-ngka-rdurdi-dha*
NC:ANIM=TOP	3SG.SIT(1).PIMP-eye/face-enter-PST

'the bees were going into the hole'

Verbal agreement can also disambiguate referents. For example, example 5.1.12 above has established the two referents *ku wak* 'NC:ANIM crow' and *ku kartpurr* 'NC:ANIM butcher.bird' as one group. The referents of the anaphoric expression *ku* 'NC:ANIM' in example 5.1.17 below are disambiguated through the dual subject

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marking *nintha* 'DU.M.NSIB' on the verb: together, they specify the referents are likely the crow and butcher bird, since these two have been previously established as a pair acting together.

(5.1.17) CS1-012-A.20 (Narrative, Dreaming)

> *i*   ***ku****=warda*
> and   **NC:ANIM**=TEMP
> *pu-**nintha**-*
> 3PL.SLASH.RR(24).PIMP-**DU.M.NSIB**-
> *-ngka-yarrarr-dha=warda-dini*
> -APPL-cut-PST=TEMP-3SG.SIT(1).PIMP
>
> 'and then they chopped a wedge (around the bees' nest)'

This strategy also works for multiple referents in the same utterance, where the two uses of *ku* below refer to different referents. The first *ku* must refer to the crow and butcher bird - because of the dual marking on the verb - and the next *ku* must refer to the green frog, because of the 3SG marking on the verb:

(5.1.18) CS1-012-A.37 (Narrative, Dreaming)

> ***ku***   *dam-nintha-yirrart*   *da*
> **NC:ANIM**   3SG.POKE(19).NFUT-DU.M.NSIB-lie   NC:PL/T
> *pangu=yu*   ***ku***   *mam*   *ku*
> DIST=CLS   **NC:ANIM**   3SG.SAY/DO(34).NFUT   NC:ANIM
> *nukunu*   *nhini*   *durrket*
> 3SG.M   ANAPH   green.frog
> *ka-nganku-ma-rikerdek-nintha*
> 3SG.POKE(19).FIRR-1PAUC.DO-APPL-be.finished-DU.M.NSIB
>
> "'the two of them lied then', he thought, (they must have thought) "the frog might gobble it all up on us"'

Note that the expression *ku nukunu nhini durrket* 'NC:ANIM 3SG.M ANAPH green.frog' above is in reported speech, and is therefore a separate expression from the sole *ku* 'NC:ANIM' classifier before it - despite them referring to the same referent.

World knowledge is also necessary to resolve ambiguity. For example, there appears to be insufficient grammatical information that can assist in disambiguating *ku* below. It is likely to be only through context that we can know the speaker wants honey, and not the other established referents:

(5.1.19)   CS1-012-A.23-24 (Narrative, Dreaming)

mam-pirru-nintha   *perenintha*
3SG.SAY/DO(34).NFUT-3PAUC.IO-DU.M.NSIB   3DU.M.NSIB

'he said to them, "Hey you two!"'

ku=*gathu*   *na-nga-mut-nintha*
NC:ANIM=hither   2PL.POKE(19).FUT-1SG.IO-give-DU.M.NSIB

"'Give me some honey!"'

Additionally, the use of =*gathu* assists in establishing this context. Mansfield (2019, p. 185) suggests that =*gathu* can be used as a request marker, and is therefore typically used for inanimate objects (like food). That is, it is usually used for other things which are likely to be given, not for animate beings - such as the other potential *ku* referents in the story. The clitic =*gathu* on *ku*=*gathu* could be interpreted here as specifying that the referent must be a type of inanimate food.

This section has shown that reference tracking for 3$^{\text{rd}}$ person singular referents can be carried by a single noun classifier: both for non-humans - as described briefly in Walsh (1997, p. 260) - and for humans. Furthermore, interactions exist between noun classifiers and other aspects of Murrinhpatha grammatical systems, including verbal agreement, selectional restrictions on the verb, clitics, and world knowledge. These findings contribute to the existing literature on reference tracking and nominal classifications, such as Singer (2016), Corbett (1991), Foley and Van Valin (1986), and Heath (1983), which all focus on noun class systems. We can see here that reference tracking is not only a key function of noun class systems, but of at least this noun classifier system as well.

5.2   Establishing a New Perspective on the Referent

As discussed in chapter 2, establishing a new perspective on the referent using nominal classification is achieved when a referent is first associated with a one classificatory marker, and then recategorised to another, to indicate a change in perspective on that referent. It is a function found most commonly in classifier systems (Singer, 2016; Allan, 1977; Denny, 1986). This function is also found in the present Murrinhpatha corpus, though infrequently: there is only one text out of 217 in the corpus which definitively displays this pattern, and possibly one other, which is not definitive.[13] In both of these texts, the nouns which are reclassified are initially presented

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[13]   This was verified using R. See chapter 3 for more details.

with the *nanthi* 'NC:RESID' classifier.

The first text that exemplifies this function is centred around the nominal *thay* 'stick'. In this text, the speaker is asked to narrate a silent video where a man is chopping wood, and then uses the wood to start a fire to make some food. The nominal is introduced as *nanthi thay* 'NC:RESID stick', and is then reclassified as *thu thay* 'NC:VIOL stick'. Though it is difficult to know for certain the motivation for reassigning *thay* 'stick' to the violence classifier *thu*, it is possible that the participant sees the stick as a potential weapon - like the 'knife' that is mentioned in the previous clause. When the participant sees the stick is not being used as a weapon, the classifier is omitted:

(5.2.1)   2011-07-19_CM-DB_3-1.4-6 (Narrative, Video stimulus) (Video stimulus)

nanthi **thay**
NC:RESID **tree**
bangarn-tarltarl-kanam   ...
3SG.BASH(14).NFUT-cut.off.with.knife.or.saw-3SG.BE(4).NFUT ...
bangarn-tarltarl-kanam
3SG.BASH(14).NFUT-cut.off.with.knife.or.saw-3SG.BE(4).NFUT

'He cuts the stick'

i *dimku-de*
and 3SG.SIT(1).NFUT.move.quickly-same
mangan-art   *knife*
1SG.GRAB(9).NFUT-get/take knife

'He gets a knife'

thu   **thay** *inda-ngatha* *manganart*
NC:WEAP **tree** ANAPH-COND 1SG.GRAB(9).NFUT.get/take

'He gets the same stick'

bangarntarltarl-dim
3SG.BASH(14).NFUT.cut.off.with.knife.or.saw-3SG.SIT(1).NFUT
thay *inda-ngatha*
tree ANAPH-COND

'he's chopping the same stick'

Later in the text, *nanthi thay* 'NC:RESID stick' is reclassified as *thungku thay* 'NC:FIRE stick' when the sticks are used as firewood:

(5.2.2)   2011-07-19_CM-DB_.11-14 (Video stimulus)

i	***nanthi***	***thay***	*ini=ka*
and	**NC:RESID**	**stick**	ANAPH=TOP

mebaththa-tharra
3SG.HANDS(8).PIMP.bring.PST-moving

'and he carried the sticks'

mebath-tha-tharra
3SG.HANDS(8).PIMP.bring-PST-moving

'he carried them'

ngarra...
LOC

'to...'

palngun-nimi	*dam-nge-mut*			*i*
woman-one	3SG.POKE(19).NFUT-3SG.F.IO-give			and

ban-pakwak	***thungku***	***thay***	*ini=yu*
3SG.17.NFUT-put.down	**NC:FIRE**	**stick**	ANAPH=CLS

'he gives it to one woman and he puts those sticks on the fire'

It is important to note that if a noun is reassigned a classifier in the same discourse text, it does not always entail an establishment of a new perspective on the referent. This is exemplified in the example 5.2.3 below. The noun *karlay* 'fishing net' is introduced as *nanthi karlay* 'NC:RESID fishing net' and is viewed as an inanimate object. Later in the text, *karlay* 'fishing net' co-occurs with a different classifier *kardu* 'NC:HUMAN' but is clearly referring to a different referent - *kardu karlay* refers to the man who throws the net:

(5.2.3)   20171403_AN.46/169 (Narrative, Family history)

bere	***nanthi***	***karlay***	*pirrim*
so	**NC:RESID**	**fishing.net**	3SG.STAND(3).NFUT

nungam-pirra-ku-nime
3SG.FEET(7).NFU-3PL.IO-fish-PC.M.NSIB

'then he was standing and he threw the cast net on all those fish'
[123 clauses removed]

> **kardu**   **karlay**-*dhay=ka*
> **NC:HUMAN**   **fishing.net**-?characteristic=TOP
> *mam-na*   *ngawu*
> 3SG.HANDS(8).NFUT-3SG.M.IO   Hey!
>
> 'he said to the net man, "Hey!"'

This suggests that establishing a new perspective on the referent involves more than just simple class reassignment, otherwise *kardu karlay* 'NC:HUMAN fishing.net' would still refer to the net. As it clearly does not, we can see that this function relies on discourse information that exists beyond only nominal classification.

Deciding whether class reassignment is an establishment of a new perspective on the referent, or selecting a new referent entirely such as in example 5.2.3, is not always straightforward. In the same text as example 5.2.3 above, *karlay* 'fishing net' is also classified with the animate classifier *ku* 'NC:ANIM':

(5.2.4)   20171403_AN.47 (Narrative, Family history)

> **ku**   **karlay**   *nhini=ka*   *ku*
> **NC:ANIM** **fishing.net** ANAPH=TOP   NC:ANIM
> *purrkpurrk*   *damatha*
> small.and.numerous just/only
>
> 'that cast net just caught small fish/those are small netted fish'

There are two possible analyses here. Firstly, *ku karlay* 'NC:ANIM fishing net' could be referring to the net, and it is reclassified to *ku* 'NC:ANIM' to indicate the net is moving like an animate object and therefore establishing a new perspective on the referent. Alternatively, the noun phrase is instead referring to the fish, where *ku karlay* 'NC:ANIM fishing.net' roughly translates to 'netted fish' - a similar description for *kardu karlay* 'NC:HUMAN fishing net'. By this analysis, *karlay* 'fishing net' in both *ku karlay* 'NC:ANIM fishing net' and *kardu karlay* 'NC:HUMAN fishing net' does not refer to the fishing net, but rather ascribes characteristics to another referent, which is selected by the noun classifier. By this view, *ku karlay* would not establish a new perspective on the 'fishing net' referent.

New perspectives on the referent can be achieved through the Murrinhpatha nominal classification system, supporting what has been found in Murrinhpatha by Walsh (1997), and in classifier systems generally per Singer (2016, p. 51) - though there is only one clear example of this in the present corpus.

5.3 Differences Between Classifiers: First Mention

The analysis thus far has largely treated the ten noun classifiers in Murrinhpatha as one cohesive group, with the assumption that there are no differences in their morphosyntactic or discourse behaviour between classifiers. While this approach is necessary to describe the general patterns of noun classifiers, closer analysis of their behaviour in discourse reveals that there are also key differences between them. If we naively assume all ten noun classifiers function in the same way throughout discourse, we would predict that the relative frequency of their presence and absence in a noun phrase to be roughly equal across the corpus. To investigate this hypothesis, and as outlined in chapter 3, I extracted the number of times a noun occurs with (any) classifier and without its typical classifier. The results are presented in table 5.1 below.

Typical Classifier	Noun occurrences with NC	Noun occurrences without NC	Total	% of noun occurrences with NC
da	308	733	1041	29.59
nanthi	316	712	1028	30.74
murrinh	114	242	356	32.02
kardu	494	875	1369	36.08
kura	76	113	189	40.21
thu	106	134	240	44.17
ku	748	422	1170	63.93
mi	123	42	165	74.55
thamul	9	0	9	100
thungku	26	0	26	100

Table 5.1: Table containing the number of nouns throughout the corpus which occur with or without a classifier, grouped by classifier, and the percentage of nouns with a noun classifier.

In table 5.1, we see that nouns associated with *ku* 'NC:ANIM' and *mi* 'NC:VEG' occur with their classifier more frequently than without, and nouns associated with *da* 'NC:PL/T', *kardu* 'NC:HUMAN', *nanthi* 'NC:RESID', *murrinh* 'NC:LANG', *kura* 'NC:WATER' and *thu* 'NC:VIOL' most frequently occur without their classifier. Nouns associated with *thamul* 'NC:SPEAR' and *thungku* 'NC:FIRE' always occur with a classifier, though they may be considered outliers given their infrequency.

The significant disparity in occurrence rate suggests functional differences between the classifier groups. The following two sections explore classifier presence or absence in various environments, and show that there are indeed differences between

them. The differences are rooted in their functions and distributions in discourse, which also influence how likely each is to appear with its noun. Specifically, the presence of some classifiers, such as *nanthi* 'NC:RESID' and *kardu* 'NC:HUMAN', can indicate specificity on first mention, while another group, *ku* 'NC:ANIM' and *mi* 'NC:VEG', have no relationship with same. Additionally, some classifiers are found to be absent in subsequent mention in discourse, whereas other classifiers are more frequently included in subsequent mentions. This result shows that there is a split system is in their functional behaviour: classifiers that indicate specificity are more like a classifier system; and classifiers which are more persistent with their nouns are more class-like.

For the remainder of this chapter, I refer to the classifiers which occur less frequently with their nouns (excluding outliers discussed below) as "specificity classifiers" - that is, *da* 'NC:PL/T', *kardu* 'NC:HUMAN', *nanthi* 'NC:RESID', *murrinh* 'NC:LANG', and *thu* 'NC:VIOL' - for reasons that shall soon become clear. I refer to *ku* 'NC:ANIM' and *mi* 'NC:VEG' as "persistent classifiers", as they are the classifiers whose nouns occur more frequently with their classifier. *Kura* 'NC:WATER', *thamul* 'NC:SPEAR', and *thungku* 'NC:FIRE' do not provide conclusive evidence toward one type of classifier or another, and are discussed in section 5.3.3.

5.3.1 Specificity Classifiers

As mentioned in section 5.1, referents typically co-occur with their noun classifier when first introduced into discourse. However, the specificity classifiers (*da* 'NC:PL/T', *kardu* 'NC:HUMAN', *nanthi* 'NC:RESID', *murrinh* 'NC:LANG', and *thu* 'NC:VIOL') add nuance to this typicality. The presence of a specificity classifier will usually indicate that the referent is a specific and individual entity or set of entities that exists or is unique in the relevant universe - one that is identified by the speaker (Givón, 1978). The absence of a specificity classifier, on the other hand, will consistently indicate non-specific referents, where the noun selects a non-unique or hypothetical referent or set of referents.

In order to investigate this, we must first establish how to determine non-specificity. One way of observing non-specificity is in the context of hypothetical scenarios: the Khoe language Nama, for example, has a nominal suffix that is thought to express non-specificity and is used in hypothetical scenarios (Lyons, 1999, p. 94). The absence of a specificity noun classifier in Murrinhpatha appears to have

a similar function, such as in example 5.3.1 below. In this example, the speaker is talking about an airstrip that is to be built, and how they will cut a path with axes if that scenario occurs. The *thu* 'NC:VIOL' classifier for *lithpurr* 'axe' below is omitted, despite it being the first mention of 'axes':

(5.3.1) CS1-001-B_sm_04.1-2 (Narrative, Personal history)

kanhi-ngu=ka   *ngarra*   *kama*
PROX-DIR=TOP   LOC   perhaps
ngiyema-nu
1PAUC.SAY/DO(34).FUT-FUT

"What are we gonna do with this airstrip?"

aa   **lithpurr=ya**   **lithpurr**
Oh   **axe=INTJ**   **axe**
nguba-ngka-nu-nguru
1PL.BASH(14).FUT-cut.path-FUT-1PL.GO(6).FUT

"Ah, we'll cut a path with axes."

In a different text which is a retelling of a past real-life event, the axes are clearly specific and the *thu* classifier is present:

(5.3.2) 2013-06-22_P-J_02.68 (Conversation,)

pumam-ngarra-nime   ***thu***   ***lithpurr***
3PL.HANDS(8).NFUT-1PL.IO-PC.M.NSIB   **NC:VIOL**   **axe**
thu   *waya*
NC:VIOL   iron.bar

'they tried attacking us with axes and metal rods'

Real-life entities can also be non-specific, and in those cases they, too, omit the classifier. This can be seen in *school* or *kul* 'school' in the following two examples. In example 5.3.3 below, the speaker is talking about a non-specific school. The *murrinh* 'NC:LANG' classifier is omitted:

(5.3.3) 2015-02-05_M-N_NAATI-Extras-4.2 (Narrative, Translation)

ngarra   *Darwin*   *pumpan=ka*   ***school*-nu**   *i*
LOC   Darwin   3PL.GO(6).NFUT=TOP   **school-DAT**   and
wurlk-nu
work-DAT

'when they go to Darwin for school or for work'

But the classifier is included when a different speaker is reminiscing about their specific school in the past:

(5.3.4)   2012-07-11_M-W.47 (Narrative, Family history)

bere	*ngarde-dha-ngime*		*bere-ngatha*	*Purtkit*
so	1PAUC.BE(4).PIMP-PST-PC.F.NSIB		so-COND	Port.Keats

dangatha=ya	**murrinh**	**kul**
always=INTJ	**NC:LANG**	**school**

'then we went to Port Keats, they had the school'

The same analysis accounts for the behaviour of classifiers in the following two examples with the noun *tharntu* 'boat', which typically takes the *nanthi* 'NC:RESID' classifier. Example 5.3.5 below describes a set of generic boats - as it is merely acknowledged that boats were present at the remembered place. There is no classifier, because the referents are non-specific. Note that this also applies to *trekta* 'tractor', which typically takes the *nanthi* classifier too:

(5.3.5)   2012-06-02_P-D-W.163-169 (Narrative, Tradition)

patha	*bush*	*ini=yu*	*ne*
good	bush	ANAPH=CLS	TAG

'that place in the bush is good, eh?'

ngarra=yu
LOC=CLS

'where?'

burrk-matha
lovely-INTNS

'it's great'

marrare-nimin	*ne*
before-INTS	TAG

'I mean back before, eh'

trekta	*burrk-matha*
tractor	lovely-INTNS

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'they had cool tractors'

aa   burrk
Oh   lovely

'it was great'

tharntu-*wunku*   *pirri-dha*
boat-ALSO   3SG.STAND(3).PIMP-PST

'there were boats and everything'

In the next example, however, the *nanthi* classifier is included with *tharntu* 'boat'. This text concerns a dreamtime narrative where the protagonists find a boat, which they fill up with water. This individual boat clearly exists in the given universe, and is therefore specific:

(5.3.6)   1974_CS1-4A_03.12-15 (Narrative, Dreaming)

dini-nintha-dha   *pangu-rda-ngu*   *perrkenku*
3SG.SIT(1).PIMP-DU.M.NSIB-PST   DIST-PL/T-DIR   two
ngarra   *da*
LOC   NC:PL/T

'they were there at their place'

bere   *dini-nintha-dha*
so   3SG.SIT(1).PIMP-DU.M.NSIB-PST

'well they were there'

kura=ka
water=TOP

'the water'

nanthi   **tharntu**-*re=warda*
NC:RESID   **boat**-PERL=TEMP

'they got a boat'

Specificity is also indicated by *kardu* 'NC:HUMAN'. In the following example, the classifier is included in an elicitation session, where the speaker is describing the actions of some men in a picture. The referents are clearly specific:

(5.3.7)   20161028-MP29.24 (Elicitation, Picture stimulus)

> **kardu**   **nugarn**
> **NC:HUMAN**   **man**
>
> *mem-nintha-ngkayway*   *ngarra*
> 3SG.HANDS.RR(10).NFUT-DU.M.NSIB-shield.oneself   LOC
>
> *ku*   *murrurrbe-re*
> NC:ANIM   generic.bird-PERL
>
> 'The men are shielding themselves from the bird'

But in a different text, the use of *ngalantharr* 'old.man' and *kunugunu* 'old.woman' seems to be non-specific. She recounts the situation with a focus on the acts performed, and mentions the performers only secondarily. This happens twice in the text, and the classifier is omitted both times:

(5.3.8)   MP-20120724-RN01.37-38/67-68 (Narrative, Personal history)

> *dhanba*   *ngathayida=ya*   *nanthi*
> ceremonial.tradition   for.a.while=CLS   NC:RESID
> *malgarrin*   *pana*
> ceremonial.tradition   RECN
>
> 'Dhanba for a while, then Malgarrin'
>
> *pirri-nirel*   **ngalantharr**   *i*   **kunugunu**=*yu*
> 3PL.SIT(1).PIMP-sing   **old.man**   and   **old.woman**-?
>
> 'the old men and old women would sing and dance.'
>
> [29 clauses removed]
>
> *bere*   *thipinhi=warda=ka*   *murrinh*   *rosery=warda*
> so   night.time=TEMP=TOP   NC:LANG   rosary=TEMP
>
> 'Then at nighttime, (we'd do the) rosary.'
>
> *ini=ka*   *murrinh*   *rosary=warda*
> ANAPH=TOP   NC:LANG   rosary=now
> *pume-ngime-pirrine*
> 3PAUC.SAY/DO(34).PIMP-PC.F.NSIB-3PAUC.SIT(1).PIMP
> **kunugunu**   **ngalantharr**=*yu*
> **old.woman**   **old.man**=CLS
>
> 'The old women and old men would do the rosary.'

Finally, *da* 'NC:PL/T' appears to signal specificity too. In the following text, the participants are talking about how they would like to go to a non-specified place in the bush. *Bush* 'bush' here does not include the classifier.

(5.3.9)   LAMP_20140321_LD_01.8 (Conversation,)

ngarra   **bush**=*ya*   *purru-ngime*
LOC   **bush**=INTJ   1INCL.GO(6).FUT-PC.F.NSIB

'we should go out bush'

Later in the text, the speakers are discussing where a group of people have been. They realise the group are in a specific place in the bush, and the classifier is included:

(5.3.10)   LAMP_20140321_LD_01.322/324 (Conversation,)

R-mup   *ngarra-ngu*   *thama*
R-people   LOC-DIR   you.know
parde-dha-ngime
3PAUC.BE(4).PIMP-PST-PC.F.NSIB

'R and all them, where do you reckon they've been?'

[1 clause removed]

ngarra **da**   **bush** *da*   *pangu*   *ne*
LOC   **NC:PL/T** **bush** NC:PL/T   DIST   TAG

'in the bush down there eh?'

There is clear evidence that the absence of specificity classifiers on first mention indicates non-specificity. Note, however, that there are some instances where the *presence* of a specificity classifier will not always imply specificity. This is the case for example 5.3.11 below:

(5.3.11)   CS1-017-A_01.16 (Narrative, Personal history)

be-pak-tha-ngini   *bere*   *ku*
1SG.13.PIMP-put.down-PS-1SG.SIT(1).PIMP   so   NC:ANIM
kakpa
juice.from.fruit/animal
ngani-thak-tha-ngardi
1SG.POKE(19).PIMP-dip.into.with.a.stick-PST-1SG.BE(4).PIMP
nanthi   **dhem** *nhina*
NC:RESID **jam**   TAG

'I put it in the tin and was tasting dipping into the syrup, like jam'

Nanthi dhem 'NC:RESID jam' is likely to be referring to the properties of jam, rather than a specific instance of jam. As evidenced above, the presence of a specificity classifier often, but not always, implies a specific referent, while its absence does imply non-specificity.

5.3.2   Persistent Classifiers

We have seen that the omission of the "specificity classifiers" (*da* 'NC:PL/T', *kardu* 'NC:HUMAN', *nanthi* 'NC:RESID', *murrinh* 'NC:LANG', and *thu* 'NC:VIOL') indicates non-specificity on the referent's first mention. The "persistent classifiers" (*ku* 'NC:ANIM' and *mi* 'NC:VEG'), on the other hand, do not exhibit this behaviour and are frequently present with their nouns, even when referents are non-specific. In example 5.3.12 below, the use of *ku ngurlmirl* 'NC:ANIM fish' is non-specific, but the *ku* classifier is still included:

(5.3.12)   20171403_AN.40/79/133 (Narrative, Family history)

kardu	*ngurru-nu*	*kanhi-re*
NC:HUMAN	1SG.GO(6).FUT-FUT	PROX-PERL

ngu	*marda-nu*	*ku*
1SG.SLASH(23).FUT	move.along.the.edge-FUT	NC:ANIM

kama	***ku***	***ngurlmirl***	*ne*
perhaps	**NC:ANIM**	**fish**	TAG

' "I'll go along the bank for fish" '

[79 clauses removed]

ku	***ngurlmirl***=*warda*	*dini-murrk-tha*
NC:ANIM	**fish**=TEMP	3SG.SIT(1).PIMP-eat-PST

'then he ate some fish'

[34 clauses removed]

ku	***ngurlmirl***	*terert*	*ku*	*tharnu*
NC:ANIM	**fish**	many	NC:ANIM	barramundi

'He had lots of fish. Barramundi.'

Nouns which typically take the *mi* 'NC:VEG' classifier also frequently include its classifier. In example 5.3.13, three non-specific nouns are listed, of which one, *lawam* 'flour', takes *mi* 'NC:VEG', and the others, *thuga* 'sugar' and *ti beg* 'tea bag', take the specificity classifier *nanthi* 'NC:RESID'. *Mi* is present with *lawam* 'flour', even as *thuga* 'sugar' and *ti beg* 'tea bag' occur without their classifier to indicate their non-specificity:

(5.3.13) 20171403_AN.20 (Narrative, Family history)

thuga *ti* *beg* **mi** **lawam**
sugar tea bag **NC:VEG** **flour**
mangan-art-ban-pak
3SG.GRAB(9).NFUT-get/take-3SG.17.NFUT-put.down

'he got tea, sugar and flour, he put them in the boat'

When a noun omits its typical *ku* 'NC:ANIM' classifier, it is functioning more like a proper name - as they are characters from dreamtime stories:

(5.3.14) 1958_Stanner-recording.85 (Narrative, Dreaming)

kura *kura* *kura* *thingawulu*
NC:WATER NC:WATER NC:WATER ??
walumuma *nhinhi=ka* *na-durr-dha*
blue-tongued.lizard 2SG=TOP 3SG.FEET.PST-depart-PST
kura
NC:WATER

' 'You have to get water for me' Blue tongue lizard went to get some water.'

(5.3.15) 1958_Stanner-recording.101/141 (Narrative, Dreaming)

mangan-kut *thungku=ya* *bere-ma*
3SG.GRAB(9).NFUT-collect NC:FIRE=INTJ so-APPL
piliyin *nhinhi=ka* *yalngay=ka*
brown.falcon 2SG=TOP my.father=TOP

'he gathered the fire then Piliyin, "my father"'
[40 clauses removed]

piliyin-*thangunu*
brown.falcon-source

> *dam-pirru-mut-ngime*   *kardu*
> 3SG.POKE(19).NFUT-3PAUC.IO-give-PC.F.NSIB   NC:KARDU
> *pangu*   *pirrini-dha-ngime=yu*
> DIST   3PL.SIT(1).PIMP-PST-PC.F.NSIB=CLS

'it was Piliyin who gave it to the those people who lived then'

(5.3.16)   2000-11-10_L-K-L-M.341 (Narrative, Dreaming)

> *mu*   *ngarra=warda*   *yibim-pup*   *nhinda*   *nukunu*
> but   LOC=TEMP   3SG.LIE(2).NFUT-die   ANAPH   3SG.M
> **kanamkek**=*yu*
> **rainbow.serpent**=CLS

'and where did he die, Rainbow Serpent?'

In general, the "persistent classifiers" are typically included in the referent's first mention, even when the referent is non-specific.

5.3.3   The Remaining Classifiers

Kura 'NC:WATER' *thungku* 'NC:FIRE', and *thamul* 'NC:SPEAR' do not provide conclusive evidence toward one classifier type or another.

The omission of *kura* 'NC:WATER' does not appear to indicate specificity. In example 5.3.17 below, *kura* is omitted when the referent appears to be specific. In the example, the speaker is talking about how someone in his dream created rivers at the nearby towns. It is likely that *ngipilinh* 'river' here is referring to a specific set of rivers, as they are unique in the context:

(5.3.17)   2012-06-20_landing_29.28 (Narrative, Personal history)

> *isi-wan-matha*   *pirrim-na*
> ??-one-INTNS   3PL.SIT(1).NFUT-3SG.M.IO
> *ba-purl-nukun*   *kanhi*   *kurru*   *kanhi-ngu*
> 3SG.13.FUT-wash-POSS   PROX   3SG.GO(6).FIRR   PROX-DIR
> *ba-purl-matha-kurru*   *...*   *kanhi-ngu*
> 3SG.13.FUT-wash-INTNS-3SG.GO(6).FIRR   ...   PROX-DIR
> *ba-purl-nukunu*   *wadeye*   *i*   *yelmugam*   ***ngipilinh***
> 3SG.13.FUT-wash-3SG.M   place.name   and   place.name   **river**
> *ngalla*   *mana-ma-nukun*
> big   only-APPL-POSS

'he might have been here, and made this creek by washing away (the soil), he washed everything away right through here at Wadeye and Yelmugam, he made big rivers here'

Kura is still included in specific referents on first mention. In example 5.3.18, the speaker is providing directions, and uses a specific river as a point of reference, the classifier is present:

(5.3.18)   2012-07-19_B-S-R.166 (Conversation,)

i	***kura***	***ngipilinh***	*kanhi-re*
and	**NC:WATER**	**river**	PROX-PERL

wurran-dim
3SG.GO(6).NFUT-3SG.SIT(1).NFUT

'and the river goes past here'

In table 5.1, *kura* has a similar distribution to the specificity classifiers: the majority of *kura* nouns typically do not co-occur with a classifier. This is because they pattern like specificity classifiers in the referent's subsequent mentions, as discussed in section 5.4.1.

There are relatively few instances of nouns typical to the *thungku* 'NC:FIRE' or *thamul* 'NC:SPEAR' classifiers. Without clear examples of non-specific referents, it is difficult to determine whether they are included with non-specific referents on first mention. For example, it is impossible to conclude whether the bullet shells in example 5.3.19 refers to any bullet shells, or a specific referent. This is also the case for the fishing spear in example 5.3.20.

(5.3.19)   20110901_JB_video_GYHM100_01.140 (Conversation,)

yu	***thungku***	*lit*	*shell*
yes	**NC:FIRE**	bullet	shell

'yeah you might find bullet shells'

(5.3.20)   20171403_AN.189 (Narrative, Family history)

bere	*nukunu=ka*	***thamul***	***waya**=warda*
so	3SG.M=TOP	**NC:SPEAR**	**iron.bar**=TEMP

mangan-art
3SG.GRAB(9).NFUT-get/take

'Then he grabbed a wire spear.'

Aside from these three infrequent noun classifiers, there is a clear functional split between the "specificity classifiers" and "persistent classifiers".

5.4 Differences Between Classifiers: Subsequent Mentions

Now that we have established there are differences in function between noun classifiers in the referent's first mention, we can now further investigate the distribution of classifiers in subsequent mentions throughout the corpus. As discussed in section 5.1.2, we see that noun classifiers can function as anaphoric expressions in the absence of other nominal material. When the nominal material is present, however, we see that specificity classifiers are typically omitted in the referent's subsequent mentions and persistent classifiers are typically present in the same environments.

5.4.1 Specificity Classifiers

Specificity classifiers (*da* 'NC:PL/T', *kardu* 'NC:HUMAN', *nanthi* 'NC:RESID', *murrinh* 'NC:LANG', and *thu* 'NC:VIOL'), and *kura* 'NC:WATER', are often omitted in the referent's subsequent mentions, even when the referent is specific. The following example demonstrates this pattern for *nanthi* 'NC:RESID' and *kardu* 'NC:HUMAN'. The text is of story about a boy and a grandfather who think that a motorised dinghy has teeth. The referents that are introduced always contain their classifier on first mention: *kardu mamay* 'NC:HUMAN young child', *nanthi dingki* 'NC:RESID dinghy', and *nanthi dimu* 'NC:RESID teeth'. The inclusion of the classifiers is expected - given the boy and dinghy are clearly specified (as per section 5.3.1):

(5.4.1)   CS1-001-B_sm_06.1-6 (Narrative, Personal history)

murrinh	*kanhi*	*ngurdi-yith-nu=ka*
NC:LANG	PROX	1SG.SHOVE.RR(30).FUT-tell-FUT=TOP

'this story I'm going to tell'

murrinh	*ngay*	***kardu***	***mamay***-*re*
speech	1SG	**NC:HUMAN**	**young.child**-PERL

'a story about me when I was a boy'

kangkurl   *ngay*   *ngay*
grandfaher   1SG   1SG

'my grandfather and me'

ngini-nintha-dha
1SG.SIT(1).PST.FUT-DU.M.NSIB-PST

'we were sitting down'

bim-nintha-yepup-ngem
1SG.16.NFUT-DU.M.NSIB-hear-1SG.SIT(1).NFUT

'and we heard'

nanthi   **dingki**
NC:RESID   **dinghy**

'a **dinghy**'

(5.4.2)   CS1-001-B_sm_06.22(Narrative, Personal history).

nanthi   **dimu**-*wanku*
NC:RESID   **teeth/tooth**-COM

' "It's got teeth." '

Subsequent mentions of *dingki* 'dinghy' and *dimu* 'teeth' do not contain the classifier - though the referents are specific:

(5.4.3)   CS1-001-B_sm_06.7-10/22-23/26-30 (Narrative, Personal history)

dingki   *inthin-wanku*
dinghy   engine-COM

'a **dinghy** with an engine'

nura-dhart=gathu-dini
3SG.FEET(7).PIMP-answer=hither-3SG.SIT(1).PIMP

'it was coming towards us'

ngay=ka   *ngem-pirnturt*
1SG=TOP   1SG.POKE.RR(21).NFUT-lift.up

'I stood up'

dingki   ***dingki***   *ngamam*
dinghy   **dinghy**   1SG.SAY/DO(34).NFUT

'I thought, "It's a **dinghy**" '
[13 clauses removed]

mam   *nanthi*   *pangu=ka*
3SG.SAY/DO(34).NFUT   NC:RESID   DIST=TOP
ba-nhi-lele-nukun
3SG.13.FUT-2SG.DO-bite-POSS

' "No!" he said, "That thing might bite you!" '

nanthi   ***dimu***-*wanku*
NC:RESID   **teeth/tooth**-COM

' "It's got teeth." '[14]

dingki   *pangu=yu*
dinghy   DIST=CLS

' "That dinghy." '
[3 clauses removed]

mere=warda   *nguni-dha*   *ngarra*   ***dingki***=*yu*
NEG=TEMP   1SG.FEET(7).PIRR-PST   LOC   **dinghy**=CLS

'I didn't go to the dinghy'

ngarra-re   ***dimu***=*yu*   *ngarra-re*   ***dimu***=*yu*
LOC-PERL   **tooth**=CLS   LOC-PERL   **tooth**=CLS

' "How are there teeth a dinghy?" '

kangkurl   *mam-na*   *kangkurl*
grandfather   1SG.SAY/DO(8).NFUT-3SG.M.IO   grandfather
ngay=yu
1SG=CLS

'I said to my grandfather.'

kumparra   *panta-matha=ya*
ahead   there-INTNS=INTJ

---

[14] Note that this is the first mention of *nanthi dimu* 'NC:RESID teeth', as shown in example 5.4.2

' "Right there up front!" '

dimu	*dimu*=ka	*nhinta-matha*	*kumparra*
tooth	**tooth**=TOP	ANAPH-INTNS	ahead

' "Those teeth up the front!" '

This behaviour is replicated with *nanthi* 'NC:RESID' in example 5.4.4, *kardu* 'NC:HUMAN' in example 5.4.5, *kura* 'NC:WATER' in example 5.4.6, *murrinh* 'NC:LANG' in example 5.4.7, *da* 'NC:PL/T' in example 5.4.8, and *thu* 'NC:VIOL' in example 5.4.9. Here too the specific referent is introduced with the classifier, which is then omitted in the referent's subsequent mentions.

(5.4.4) 2015-07-21_M-K-M.297-298 (Conversation,)

ya	*nanthi*	*buk*	*pana*=ya	*yuwu*
HES	**NC:RESID**	**book**	RECN=INTJ	yes

'in that book, yeah'

buk	*ana*=ka
book	??=TOP

'you know the book?'

(5.4.5) 2015-01-30_A-M-N_NAATI-ProT3-D2.14/17 (Narrative, Translation)

ngay=ka	*mere*	*the*	*ma*		*bath*
1SG=TOP	NEG	ear	1SG.HANDS(8).FUT		bring
kardu		*kulbuy*	*kanhi*=yu		
NC:HUMAN		**schoolboy**	PROX=CLS		
kardi-yegdhek-tha			*ngarra*	*rut*=yu	
3SG.BE(4).PIMP-play-PST			LOC	road=CLS	

'I didn't know that that little boy was playing on the road'
[2 clauses removed]

nigunu=ka	*mere*	*kirra-bath-tha*		*ngarra*
3SG.F=TOP	NEG	3SG.WATCH(28).FIRR-watch-PST		LOC
kulbuy	*wakal*	*pangu*=ka	*kardi-pinharart-tha*=yu	
schoolboy	small	DIST=TOP	3SG.BE(4).PIMP-run-PST=CLS	

'she wasn't watching when that little boy was running around'

(5.4.6) 2011-09-17_G-C-E_part1.39-40 (Conversation,)

kura　　　　　**ngipilinh**=*ka*　*ngarra-ngu*
NC:WATER　**river**=TOP　　LOC-DIR
mem-ni-watha
3SG.HANDS.RR(10).NFUT-RR-make

'where is the river that made itself?'

ngipilinh=*ka*　*pangu-matha*
river=TOP　　DIST-INTNS

'the river over there'

(5.4.7)　2016-07-11_S-A_B-B.4-7 (Elicitation, Picture stimulus)

kanhi=*ka*　　　**murrinh**　　**skul**=*gathu*
PROX=TOP　　**NC:LANG**　**school**=hither
wurdam-wurl
3SG.SHOVE.RR(30).NFUT-return

'is he coming back from school?'

mu　*nukunu-thu*=*ka*　　　*le*　　*wiye*　*dim*
but　3SG.M=hither=TOP　　happy　bad　　3SG.SIT(1).NFUT

'but this person facing him is unhappy'

mu　*kama*=*ka*　　　*mam-na*　　　　　　　　　　　　　*ma*
but　perhaps=TOP　3SG.SAY/DO(34).NFUT-3SG.M.IO　??
thangku-dha　*nhinhi*　**skul**=*yu*
what-PST　　　2SG　　　**school**=CLS

'or maybe he's saying to him, "why didn't you go to school?"'

(5.4.8)　2012-06-30_L-P-B-P.3-4 (Conversation,)

the　　　　　*thanthin-thunungam-lili-dha*
you.know　2SG.HAVE(22).NFUT-2SG.FEET(7).NFUT-walk-PST
tina　*ba*　　**da**　　　　　**thipinhi**　*pana*
sun　　Oh!　**NC:PL/T**　**dark**　　　RECN

'you know, if you were to go walking in the sun, no, in the darkness there'

thipinhi　*pana*　*thurru*　　　　*lili*
dark　　　RECN　2SG.GO(6).FUT　walk

'you walk in the dark'

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(5.4.9)   1981_CS1-03A_G-M.45/52 (Narrative, Personal history)

i	***thu***	***kuragadha***-*wanku*	*bam-ngkardu*	*patha*
and	**NC:VIOL**	**boomerang**-COM	3SG.13.NFUT-see/look	good

mam	*yu*	*bere*
3SG.SAY/DO(34).NFUT	yes	so

'and he saw that the boomerang was good, "yes okay" he said'

[7 clauses removed]

kuragadha	*mam*	*thangku*	*kura*
boomerang	3SG.SAY/DO(34).NFUT	what	NC:WATER

wine=ka
wine=TOP

'for the bomerang, he said, what drink? wine?'

There are no examples where referents introduced with *thamul* 'NC:SPEAR' or *thungku* 'NC:FIRE' are persistent in discourse.

Specificity classifiers are absent in subsequent mentions of the referent, even when the referent is specific. This shows that the signalling of non-specificity only applies to the first mention of the referent. Once the referent is introduced, and the specificity is established, classifier absence loses its specificity implications.

5.4.2   Persistent Classifiers

Throughout the corpus, the persistent classifiers *ku* 'NC:ANIM' and *mi* 'NC:VEG' are noticeably more obligatorily attached to the noun than the other classifiers. For example, every mention of *ku were* 'NC:ANIM dog' in the following example includes the *ku* classifier:

(5.4.10)   2015-02-02_A-M-N_NAATI-ParSample-D2.2-3/10-11/18/20/24 (Narrative, Translation)

mam-pun-manpi=warda	*ngarra*	***ku***
1SG.HANDS(8).NFUT-3PL.DO-help=TEMP	LOC	**NC:ANIM**

were-*nukuy=ya*
dog-DAT=INTJ

'he's helping people with their dogs'

ku   *vet=ka*   *pirrim-nge-ngerren*
NC:ANIM   vet=TOP   3PL.SIT(1).NFUT-3SG.F.IO-speak
ku   ***were***   *nigunu-nu*
NC:ANIM   **dog**   3SG.F-FUT

'the vet is talking to O about her dogs'

[7 clauses removed]

yuwu   *wakal*   *ngay*   ***ku***   ***were***   *nugunu*   *nginipinh*
yes   small   1SG   **NC:ANIM**   **dog**   3SG.F   similar
inta   *me-bath-tha-kardi*
ANAPH   3SG.HANDS(8).PIMP-bring-PST-3SG.BE(4).PIMP

'yes, my daughter's dog used to have the same thing'

ku   *ngarra*   ***were**-nukuy*   *medithin*
NC:ANIM   LOC   **dog**-DAT   medicine
dam-na-mut
2SG.13.NFUT-3SG.M.IO-give

'she gave her dog medicine'

[7 clauses removed]

ku   ***were***   *kanhi*
NC:ANIM   **dog**   PROX
na-berti-wa-thurru
2SG.HANDS(8).FUT-take.someone-EMPH-2SG.GO(6).FUT

'you should take away this dog here W'

[2 clauses removed]

ku   ***were***   *kanhi=ka*   *thani-part-nu*
NC:ANIM   **dog**   PROX=TOP   2SG.BE(4).FUT-leave-FUT

'leave this dog here, K'

[4 clauses removed]

K=ka   *nangkun*   *ngay-nukuy*   ***ku***   ***were***   *murntak*
K=TOP   husband   1SG-POSS   **NC:ANIM**   **dog**   old

'K is my husband's old dog'

The *mi* 'NC:VEG' classifier is also typically included in subsequent mentions, as seen in the following example:

(5.4.11)   20171403_AN.142/149 (Narrative, Family history)

> **mi**   **peka**   *mam-patha*
> **NC:VEG**   **tobacco**   3SG.HANDS(8).NFUT-make
>
> 'he rolled a cigarette'
>
> [7 clauses removed]
>
> *awu* **mi**   **peka**   *lurruth*   *ngala=wa*
> no   **NC:VEG**   **tobacco**   strength   big=EMPH
> *mam*
> 3SG.SAY/DO(34).NFUT
>
> '"Ah, the tobacco is really strong!" he said.'

In sum, we see that the specificity classifiers (*da* 'NC:PL/T', *kardu* 'NC:HUMAN', *nanthi* 'NC:RESID', *murrinh* 'NC:LANG', and *thu* 'NC:VIOL') are usually omitted for the first mention of a non-specific referent, and are usually included for the first mention of a specific referent. In a referent's subsequent mentions, they are typically omitted, regardless of specificity. Persistent classifiers (*ku* 'NC:ANIM' and *mi* 'NC:VEG'), on the other hand, are typically included with the noun in all mentions and have no relationship with specificity. Following from table 5.1, table 5.2 groups the specificity classifiers in one row, and the persistent classifiers in another row. There is clearly a significant difference between classifier types.

Classifier Type	Noun occurrences with NC	Noun occurrences without NC	Total	% of noun occurrences with NC
Specificity	1338	2696	4034	33.17
Persistent	871	464	1335	65.24

Table 5.2: The number of nouns throughout the corpus which occur with or without a classifier, and the percentage of nouns with a noun classifier, grouped by classifier type.

The analysis from this section shows that there are two possible sets of distinct behaviours for Murrinhpatha noun classifiers: one (specificity) which is more akin to a classifier system, and the other (persistent), more like a noun class system. These behaviour sets draw previously unexpected lines between the two groups of classifiers, prompting a recognition of two distinct "sub-groups". This would yield a split system defined by relatively homogeneous morphosyntax between classifiers, but neatly delineated functions in discourse, with one group more 'classifier-like' and the other 'class-like'.

5.5   Summary

Noun classifiers in Murrinhpatha are used for a variety of discourse functions. They can be used for reference tracking in the form of anaphoric expressions, supported by other aspects of the grammatical system such as verbal agreement. Noun classifiers can also be used to establish a new perspective on the referent, although this function was not commonly found in the corpus. Differences between classifier types were explored: *da* 'NC:PL/T', *nanthi* 'NC:RESID', *kardu* 'NC:HUMAN', *murrinh* 'NC:LANG', and *thu* 'NC:VIOL' can all be used to indicate specificity and are often omitted from subsequent noun phrases. *Ku* 'NC:ANIM' and *mi* 'NC:VEG', on the other hand, do not indicate specificity, and are much more likely to have an obligatory attachment to their nouns. The absence of *kura* 'NC:WATER' appears to not signal non-specificity, but is frequently omitted in the referent's subsequent mentions. Finally, *thungku* 'NC:FIRE' and *thamul* 'NC:SPEAR' provided inconclusive evidence toward one classifier type or another, as there were relatively few tokens. The specificity classifiers, then, function more like a classifier system, and the persistent classifiers function more like a class system.

It is worth noting that Mansfield (2019, p. 174) finds that the monosyllabic noun classifiers *ku* 'NC:ANIM', *mi* 'NC:VEG', and *thu* 'NC:VIOL' prosodify like affixes and disyllabic classifier prosodify as compounds - suggesting that there may be differences at the phonological level, too. However, these differences are not a direct match: *thu* 'NC:VIOL' functions like a specificity classifier despite it being a monosyllabic classifier.

The results from this chapter show that Murrinhpatha behaves more like a split system than previously documented, and therefore situates itself more closely with the other Daly region languages Marrithiyel and Ngan'gityemerri. However, unlike Marrithiyel and Ngan'gitymemerri, this split system is not expressed in the morphosyntactic behaviour, but rather in the classifiers' functions and distributions in discourse.

Chapter 6

Conclusion

This thesis has provided a description of the syntax and discourse functions of noun classifiers in Murrinhpatha; thus contributing to our understanding of both the grammar of this language, and nominal classification generally. In particular, we have seen motivations for their presence and absence, the types of possession to which they are sensitive, a relationship with specificity, a split functional system, and how they are situated in the noun phrase.

With regard to research question 1, on the syntax of noun classifiers, the literature typically found markers of noun classifier systems to be optional in the noun phrase; their presence or absence commonly motivated by discourse factors. This holds true in Murrinhpatha, but this presence or absence is additionally reliant on some notable factors unrelated to discourse. Noun classifiers are consistently present in adjacent noun phrases with different grammatical relations, even overriding discourse functions which would otherwise dictate their absence (i.e. non-specific referents). They are consistently absent from possessive constructions with certain sub-categories of nouns, specifically body parts and kinship terms. As these terms are cross-linguistically treated as inalienable, this pattern indicates the existence of discrete inalienable possessive constructions in Murrinhpatha - realised in the absence of classifiers. This shows that the distribution of noun classifiers can be linked to syntactic considerations as well as - and even ahead of - discourse functions. Certain noun classifier behaviour, such as embedding and coordinated patterns, suggests that the noun classifiers carry a dedicated position in the noun phrase. This finding points towards a determiner phrase analysis, in which noun classifiers are delineated from the other nominal types and function as the head of a determiner phrase.

These findings expand on previous descriptions of Murrinhpatha noun classifiers and noun phrase structure, contributing thereby to our understanding of nominal classification in general. They add much to the relatively limited literature on the relationship between syntax and noun classifier systems, and to typological discus-

sions of these systems cross-linguistically.

Murrinhpatha noun classifiers are found to have a number of functions throughout discourse, which addresses research question 2. Some of these - anaphora and re-presentation of referents - were expected given what has been described in the literature, both in Murrinhpatha and in general. What was unexpected, however, was that not all classifiers behave in the same way. *Kardu* 'NC:HUMAN', *nanthi* 'NC:RESID', *murrinh* 'NC:LANG', *kura* 'NC:WATER' and *thu* 'NC:VIOL' can indicate a referent's specificity on first mention, and are typically absent in subsequent mentions. *Ku* 'NC:ANIM' and *mi* 'NC:VEG' classifiers, on the other hand, do not indicate specificity and are typically present in subsequent mentions. This split in behaviour suggests that the former group functions more like a noun classifier system, and the latter group functions more like a noun class system, and has therefore addressed research question 3. The only other documented languages with split systems are the neighbouring languages Ngan'gityemerri and Marriyithel. The split in these languages, however, is described in terms of the morphosyntax rather than discourse behaviour. To my knowledge, Murrinhpatha is the only documented language which exhibits a split system in the *function* of noun classifiers and not in the morphosyntax - a significant contribution to our overall understanding of nominal classification systems.

Both syntactically and functionally, noun classifiers appear to be exhibiting determiner-like behaviour, as discussed in sections 4.4 and 5.3.1. For future research, both of these areas of inquiry would be a point of fruitful investigation. A full syntactic analysis of the determiner phrase, which draws on the newly discovered status of noun classifiers, is still required. Additionally, further research into the specificity function of noun classifiers would be worthwhile - such as in topic and focus contexts, where Baker (2008) found such properties in Wubuy, Marra, and Ngalakgan.

In keeping with Singer (2010, p. 368) and Contini-Morava and Kilarski (2013, p. 294), I call for more work on nominal classification systems based on context-rich discourse data. Without the generous amount of data I had available to me, I could not have discovered the split functional system exhibited in Murrinhpatha. Future research with more discourse-focussed data may find that nominal classification systems in other languages are more nuanced than previously suggested as well.

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