UNIVERSITÉ DU QUÉBEC À MONTRÉAL

A MORPHO-SYNTACTIC ANALYSIS OF MARSHALLESE DETERMINER PHRASES

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CATHERINE PROVENCHER

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ANALYSE MORPHO-SYNTAXIQUE DES SYNTAGMES DÉTERMINANTS DU MARSHALLAIS

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CATHERINE PROVENCHER

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LIST OF ABBREVIATIONS

1	First person
2	Second person
3	Third person
ABS	Absolute
ADV	Adverb
AGR	Agreement morpheme
ASP	Aspect
CAUS	Causative
CL	Classifier for alienable possessions
COND.	Conditional
DEM	Demonstrative
DET	Determiner
F	Feminine
HUM	Human
INT	Intransitive verb form
M	Masculine
N	Noun
NEG	Negative particle
N-HUM	Non-human
OBJ	Object marker
P	Phrase
PERF	Perfective
PL	Plural
POSS	Possessive suffix
PREP	Preposition
Q	Question particle
SG	Singular
SBJ	Subject
T	Tense
FUT	Future tense
PST	Past tense
PRS	Present tense
TR	Transitive verb form
V	Verb

ABSTRACT

The purpose of this thesis is to examine the determiner phrases of the Marshallese language. More specifically it challenges the idea that Marshallese definite determiners and demonstratives are elements of the category D. Through the analysis of different structures of Marshallese determiner phrases (with or without adjectives; involving possessive constructions) we argue that definite determiners and demonstratives are in fact nominal flexional affixes. Furthermore this also subsumes the idea that the head of the determiner phrase is phonetically empty. This work is in accordance with the precepts of Asymmetry Theory particularly the strict asymmetry of morphology proposed by Di Sciullo (2005a; 2005b). In morphology, the relations between morphemes are purely asymmetrical i.e. the linear order can never be reversed. Affixation is therefore highly constrained and restrictions in the ordering of affixes in conjunction with roots are subject to specific operations of the grammar. Since there are many types of affixes (predicate, modifier, operator-variable) with their own properties, then we expect Marshallese determiners and demonstratives to possess the properties of nominal flexional affixes rather than those of actual determiners.

The results obtained from this analysis are consistent with our hypothesis; not only do the parts of determiners and demonstratives act according to the morphological operations of the grammar proposed by Di Sciullo (2005a; 2005b) for flexional affixes, but every structure of Marshallese determiner phrases that we have analysed suggest that there are no phonetically overt element that can be found in the head of a determiner phrase.

Key words: Asymmetry theory Affixation Determiner phrases Marshallese Language.

RÉSUMÉ

Le but de cette recherche est d'examiner les syntagmes déterminants du Marshallais. Plus spécifiquement, nous tenterons de déterminer si nous avons réellement affaire à des déterminants et à des adjectifs démonstratifs ou bien si ces éléments appartiennent à une autre catégorie lexicale. Pour ce faire nous analyserons plusieurs structures correspondant aux syntagmes déterminant du Marshallais. Nous proposons également que ces éléments grammaticaux soient en fait des affixes flexionnels nominaux et, de plus, nous supposons que la nature affixale de ces éléments grammaticaux découle du fait que la tête du syntagme déterminant est phonétiquement vide en Marshallais. Ce travail se fera dans le cadre de la Théorie de l'asymétrie morphologique telle que proposée par Di Sciullo (2005a ; 2005b). Puisqu'en morphologie les relations entre morphème sont purement asymétriques c.-à-d. que l'ordre linéaire ne peut être changé, l'affixation est sujette à des contraintes et à des opérations spécifiques de la grammaire. Il y a plusieurs types d'affixes : affixe de prédicat, affixe modifieur, et affixe opérateur-variable. Puisque chaque affixe possède des propriétés propres, on s'attend à ce que les déterminants et adjectifs démonstratifs du Marshallais correspondent aux propriétés des affixes flexionnels nominaux plutôt qu'à celles des déterminants.

Les résultats de cette analyse s'accordent avec notre hypothèse de départ ; non seulement les morphèmes qui composent les déterminants et adjectifs démonstratifs du Marshallais agissent en fonction des caractéristiques propres aux affixes flexionnels mais en plus, chaque structure des syntagmes déterminants du Marshallais que nous avons analysées semblent indiquer qu'on ne retrouve jamais d'éléments grammaticaux prononcés dans la position tête des syntagmes déterminants du Marshallais.

'Mots-clés : Théorie de l'asymétrie, affixation, syntagmes déterminants, le Marshallais'.

INTRODUCTION

The aim of this thesis is to look at a peculiarity found in the Marshallese language and to find a possible explanation for the abnormal data. Marshallese is a head initial language meaning that the head of a phrase is located at the left. However determiner phrases are head final so the determiner is not in the expected position. The literature concerning this problem is very scarce indeed; only one person has attempted to resolve this enigma (see Willson 2003a) and she does this from a syntactic perspective. Unlike Willson, we will focus on the morphological properties of Marshallese determiners and demonstratives that appear to be located in the final positions of their phrases. We will use for our analysis a system devised by Di Sciullo (2005a; 2005b) that classifies the many types of affixes and the way to combine them with roots. This system is encompassed within Asymmetry Theory and operates according to the strict asymmetry of morphology.

This thesis is divided into six parts: the first part gives an overview of the Marshallese language and its grammatical properties; the second part is concerned with the structures of Marshallese determiner phrases; the third part is dedicated to explain more thoroughly Asymmetry Theory and describe the foundation of the system we will use to make our analysis; the fourth and fifth parts are centered around determiner phrases involving adjectives; and finally the last part proposes an analysis of Marshallese possessive constructions.

CHAPTER I

THE MARSHALLESE LANGUAGE

In this introductory chapter we will first sketch an overview of the Marshallese language; we will start by describing the speakers, the geography, and the language family to which Marshallese belongs. Secondly we will describe briefly the many aspects that characterize Marshallese; its morphology, syntax, and also a brief note on the phonology. Finally we will introduce previous works done on this language.

1.1 Geography, speakers, and Micronesian family

The Marshall Islands are located in the western part of the Pacific Ocean, about 2500 miles (4023 km) southwest of Honolulu, Hawaii. The Republic of the Marshall Islands (RMI) consists of twenty-nine atolls and five islands divided into two chains: the western Ralik (or Sunset) chain and the eastern Ratak (or Sunrise) chain (Zewen 1977). Two dialects, each belonging to a chain, are spoken and both speakers of respective dialects can easily understand each other (Willson 2008). According to Zewen (1977) the main differences are phonological in nature and also a few vocabulary items. Nevertheless, there is no significant difference in the grammar. There are 62 000 native speakers of Marshallese, some of them located in the United States. The RMI is part of the U.S. Trust territory since 1947 and the contact with English speakers is shown by a considerable amount of English loan words (Zewen 1977). Yet these borrowings have been 'Marshallized' (*sic*) to correspond with the actual phonology of the language (Rudiak-Gould 2004).

The Micronesian family of language, to which Marshallese belongs, is itself a subset of the Austronesian family. From the twenty Micronesian languages a reconstruction of a proto-language has been proposed by Bender et al. (2003) with some additional data by Hale (2007). Most Micronesian languages have fewer than 10 000 speakers except for

Marshallese, 62,000; Pohnpeian, 34,400; and Chuukese 53,000 (Willson, 2008). Figure 1.1 is a map of Micronesia and Figure 1.2 shows the Micronesian family tree:

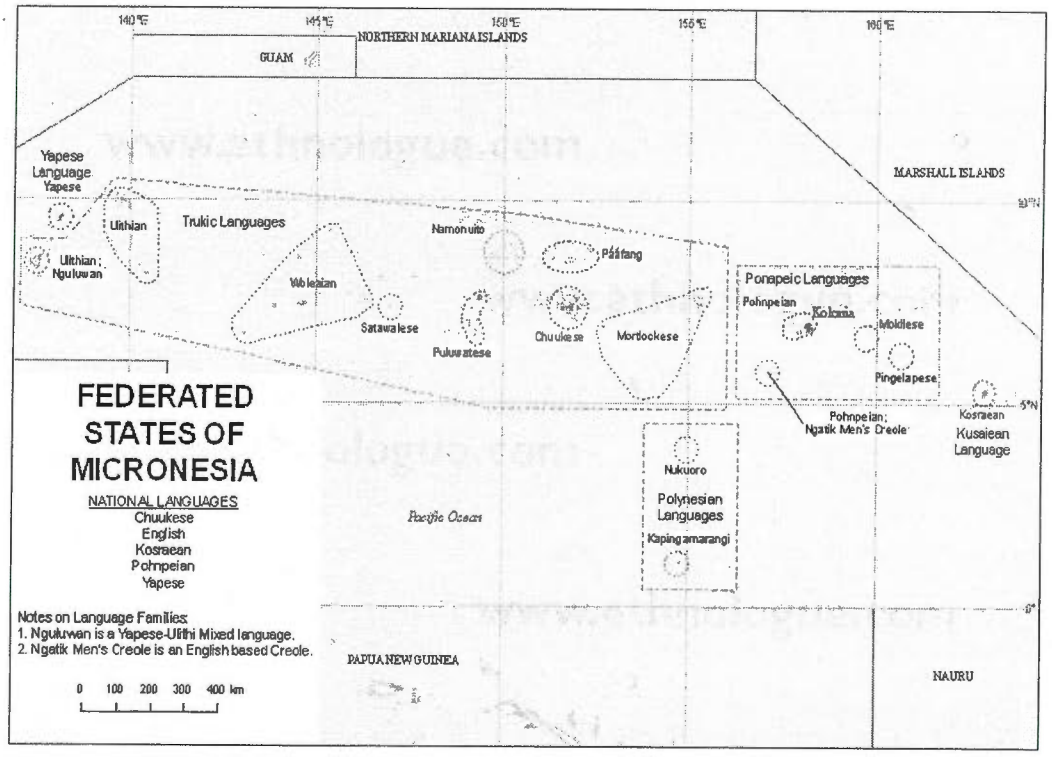


Figure 1.1 Map of Micronesia (from Lewis, M. Paul (ed.), 2009. Ethnologue: Languages of the World, Sixteenth edition. Dallas, Tex.: SIL International. Online version: **http://www.ethnologue.com/**.)

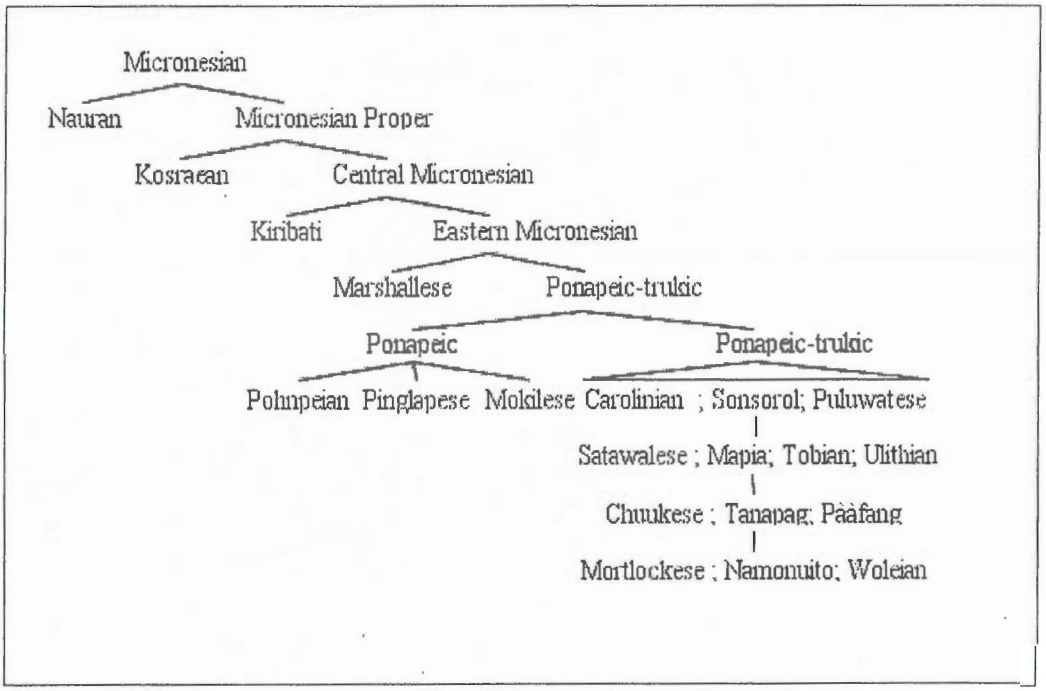


Figure 1.2 Micronesian branch of Oceanic Languages (adapted from Wilson, 2008).

1.2 Language Typology

Languages of the world are traditionally classified in categories according to their morpho-syntactic properties. Morphological typology concentrates on the number of morphemes per words and the number of semantic features carried by each morpheme. Syntactic typology refers to word order; where are located subjects and objects in relation with the verb. In this section we will survey both morphological and syntactic properties of Marshallese. Additionally a brief overview of the phonology will be given since most work on Marshallese has been done regarding this aspect of the language.

1.2.1 Morphological properties

Morphological typology is concerned with the properties of the word; whether it can be subdivided into many morphemes or not. Although the separation is not always neat the traditional view divides languages along the continuum showed in figure 1.3 which represents the number of morphemes per word:

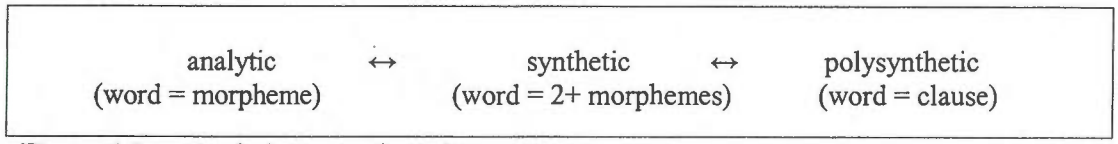


Figure 1.3 Analytic vs. synthetic languages

Polysynthetic languages are part of the synthetic category; the only difference lies in the fact that an entire clause can be expressed within a single word in polysynthetic languages[1]. Examples (1) to (3) are examples of analytic (Mandarin Chinese), synthetic (Turkish) and polysynthetic (Yup'ik) sentences respectively:

(1) Ni xiang chi sheme?
you want eat what
'What do you want to eat?' (Carnie, 2001:320)

(2) Müdür mektub-u imzala-di
director letter-DO sign-PST
'The director signed the letter' (Comrie, 1985:323)

(3) Tuqu-riikatap-puq
die-long.ago-3SG.IND
'He died long ago' (Mithun, 1999:28)

The categories displayed in figure 1.3 may be further divided into three other types: isolating, fusional, and agglutinative. Isolating basically means a lack of inflection and derivation; Mandarin Chinese is a good example of this subtype of language (as seen in (1)). Fusional and agglutinative languages on the other hand apply both these processes. The difference between the last two types is the number of features expressed in one morpheme: agglutinative languages have one meaning per morpheme whereas fusional languages may have more. Each morpheme in the Turkish example in (2) express one feature (whether case or time) as opposed to the Yup'ik example in (3) in which a morpheme may express both person and mood features.

[1] For more details on polysynthetic languages see Baker (1996).

Marshallese words may contain more than one morpheme; the root may be combined with an inflectional affix or a derivational affix. For example Marshallese has a set of numeral affixes that may be attached to pronominal forms as shown in Table 1.1

Table 1.1 The set of numeral affixes

Dual	-ro
Three	-jil
Four	-eaŋ
Five or more	-uij

(from Bender, 1968: 5)

An example of a sentence containing this type of inflectional affix is displayed in (4):

(4) Kom-ro e-j etal ŋan ia?
2PL.SBJ.-dual 3SG-PRS go to where
'Where are you (two) going?' (Bender, 1968:3)

Example (4) also shows that some morphemes express more than one semantic feature; person, number, and case are expressed in the pronoun *kom*. Some affixes can also carry this type of information in Marshallese (cf. chapter 5); those are inflectional affixes. One can also find derivational affixes generally in the form of a reduplicant (cf. chapter 4). Because there may be more than one morpheme in a Marshallese word, and because some of these morphemes carry many different semantic features, we may classify Marshallese as being fusional and synthetic.

1.2.2 Syntactic properties

Syntactic typology is concerned with the basic word-order of a typical sentence of a given language. This word-order parameter characterizes the relative order of the basic constituents; subject (S), verb (V), and object (O), (Greenberg 1966). Marshallese is primarily an SVO language although VOS order is also possible (Willson 2007), as shown in examples (5)-(6) below:

(5) Leddik ro re-ḳar dāpij kuuj eo.
girl DET.PL.HUM. 3PL.AGR-PST hold cat DET.SG.N-HUM.
'The girls held the cat' (Willson 2007:2)

(6) Re-kar dāpij kuuj eo leddik ro.
3PL.AGR-PST hold cat DET.SG.N-HUM girl DET.PL.HUM.
'The girls held the cat' (Willson 2007:2)

As opposed to the sentences with transitive verbs in (5)-(6), sentences with intransitive verbs allow the subject to be in a post-verbal position as well[2]:

(7) Re- naaj etetal irooj ro ñan kweilok eo.
3PL.AGR.-FUT walk chief DET.PL.HUM. to meeting DET.SG.N-HUM
'The chiefs will walk to the meeting.' (Willson 2007: 3)

(8) Re-naaj ettor irooj ro.
3PL.AGR.-FUT. run chief DET.PL.HUM.
'The chiefs will run.' (Willson, 2008: 107)

The last fact may be of importance in the typological characterization of Marshallese because another type of distinction is possible: nominative vs. ergative. To describe the difference between these types, we will use the terminology proposed by (Dixon 1979) in which subjects are referred to according to the type of verb they are used with. This is illustrated in Table 1.2:

Table 1.2 Dixon's classification of arguments

Subject of transitive	A[3]
Subject of intransitive	S
Object of transitive	O

(from Dixon, 1979: 61)

[2] Post-verbal is different than sentence-final because the former may be followed by a prepositional phrase (PP) and/or adverbial phrase (AdvP) as opposed to the latter.

[3] 'A' stands for agent. The agent is the argument of a predicate that 'is the doer of the action (under some definition must be capable of volition)' (Carnie 2002: 177).

Nominative refers to languages in which both A and S have the same position in a prototypical sentence i.e. external of the verb phrase (henceforth VP). Ergative languages on the other hand refer to languages in which S and O have the same position i.e. VP internal. When one looks closely at examples (7) and (8), one might assume that the subject of those sentences would be labelled S in Dixon's terms and not A like subjects of examples (5)-(6)[4]. The categorization of Marshallese syntactic typology along the nominative-ergative continuum is not as neat as one would suppose and certainly calls for further research.

One final point to address is the word-order inside the constituents. In syntactic theory a phrase is always headed by the element that projects its category; for example the head of a noun phrase (NP) is a noun. Some languages are head-initial (i.e. the head precedes its complement), and some languages are head-final. Marshallese is special because for most type of phrases it is head-initial yet some determiner phrases (DP) are head-final as shown by (9) in which each constituent has been bracketed for more clarity.

(9) $[_{DP}[_{N}$ Leddik $_{D}$ ro] $_{TP}[_{T}$ re-kar $_{VP}[_{V}$ dapij $_{DP}[_{N}$ kuuj $_{D}$ eo]]]].
girl DET.PL.HUM. 3PL.AGR-PST hold cat DET.SG.N-HUM.
'The girls held the cat' (Willson 2007:2)

We can see that inside a DP the determiner follows the noun even though we would expect the opposite. This question will be addressed more thoroughly in the next chapter.

It is perhaps more difficult to fit Marshallese syntax in a precise slot within a typological perspective, as opposed to its morphological type. In this section we have looked at three different kinds of categorization and for all of them something was not quite right according to the theory. It is not clear whether we are in the presence of a SVO or VOS type of language, nor if it is nominative or ergative. And, to top all this, there are exceptions to the basic intra-constituent word order. Those are interesting issues and some of them will be addressed in later parts of this thesis.

[4] This peculiarity was noticed by Willson (2008). She suggests that post-verbal subjects are neutral and that the other positions are merely the result of topicalization.

1.2.3 Phonological properties

There are three primary sites of articulation for Marshallese consonants: bilabial, coronal and velar. Furthermore there are also three secondary articulations so the consonants can either be palatalized, velarized, or rounded (Choi, 1992)[5]. Not every consonant has a second site of articulation; velars cannot be further velarized and bilabials cannot be rounded. Only the coronals can carry all three secondary sites of articulations[6]. We may also notice that velars cannot be palatalized: according to Choi (1992) this is due to the fact that the features [palatal] and [velar] represent the contrast between an anterior and a posterior site of constriction. Thus it is physiologically impossible for both features to occur at the same time. Figure 1.3 displays the set of Marshallese consonants[7]:

		Bilabials	Coronals	Velars
Stops	palatalized	p^j	t^j	
	velarized	p^y	t^y	k
	rounded			k^w
Nasals	palatalized	m^j	n^j	
	velarized	m^y	n^y	ŋ
	rounded		n^w	$ŋ^w$
Liquids	palatalized		l^j r^j	
	velarized		l^y r^y	
	rounded		l^w r^w	
Glides	palatalized		j	
	velarized			@
	rounded	w		

Figure 1.4 Marshallese consonant inventory (adapted from Willson 2003b).

[5] Bender (1969b) refers to these as light, heavy, or round.
[6] There is an exception with [t]; a rounded form of this consonant is not attested.
[7] Diacritics are used to express secondary sites of articulation: j is used for palatal; y is used for velar; and w for rounding.

Secondary articulations have an effect on the following vowels; it is said to 'color' it. Bender (1968) proposed that Marshallese set of vowels contain four (and possibly three) basic vowels specified solely according to height and that backness and roundness was provided by surrounding consonants. Hale (2000) further added that these vowels were also specified for the ATR (advanced tongue root) feature. Therefore these phonemes correspond to the following sets of features: [+hi, +ATR]; [+hi, -ATR]; [-hi, +ATR]; and [-hi,-ATR]. When we add backness and roundness into the equation we get twelve output forms as shown in Table 1.3:

Table 1.3 Marshallese vowel inventory

Features	Front	Central	Back
[+hi, +ATR]	i	ɯ	u
[+hi, -ATR]	ɪ	ɤ	ʊ
[-hi, +ATR]	e	ʌ	o
[-hi,-ATR]	ɛ	a	ɔ

(from Willson, 2003b: 3)

Several aspects regarding the interaction between consonants and vowels remain opaque; it is perhaps the key to understand some of the phonological processes present in the language and have yet to be explained. For example vowel dissimilation which implies that the nucleus of a reduplicant loses its ATR feature Other phenomena such as consonant sequence assimilation that only applies in certain conditions and not others, and the lack of agreement concerning the syllable structure of Marshallese . All of these seem to be related to the relationship between nuclei and consonants. Although it is not our purpose to discuss the phonology of Marshallese, we need to list the orthographic symbols related to a specific sound. Many orthographies are being used depending on the source: Bender (1969b); Hale (2000); Rudiak-Gould (2004); and Abo et al. (1976). However we will use a very simplified orthography in which one consonant symbol may express more than one secondary articulation and one vowel symbol will be used for all possible place of articulation provided

by the surrounding consonants. The list of phonetic symbol that will be used in this thesis is displayed in Table 1.4.

Table 1.4 The set of orthographic symbols

orthography	IPA of all Marshallese sounds
a	[æ] or [ɐ]
b	[$p^{ʸ}$]
d	[ɻ]
e	[e] or [ɛ]
i	[i] or [ɪ]
j	[$t^{ʲ}$]
k	[k]or [$k^{ʷ}$]
l	[l] or[$l^{ʷ}$] or [$l^{ʸ}$]
m	[$m^{ʲ}$] or [$m^{ʸ}$]
n	[$n^{ʷ}$] or [$n^{ʲ}$] or [$n^{ʸ}$]
ŋ	[ŋ] or [$ŋ^{ʷ}$]
o	[o] or [ɔ] or [ɤ]
p	[$p^{ʲ}$]
r	[$r^{ʷ}$] or [$r^{ʸ}$]
t	[$t^{ʸ}$]
u	[u] or [ɯ]
w	[w]
y	[j]

1.3 Previous works on Marshallese

As mentioned in the last section, Marshallese phonology has been extensively studied by Bender (1968, 1969b, 1973); Hale (2000, 2007); and (Choi 1992). Their research focused primarily on establishing the set of Marshallese phonemes, especially the basic forms of the

vowels and the relationship between those and the surrounding consonants. Some other topics like vowel dissimilation have also been addressed (Bender 1969a). Works on consonant constraints (McClintock 1999); consonant geminates (Suh 1997); and reduplication (Kennedy 2003); (Harrison 1973) have been proposed as well. Syntactic analyses were mostly proposed by Willson (2003a; 2008; to appear). A paper on diachronic syntax (Hale 1998) and another one on causativization (Pagotto 1992) were also published. There are a few grammar on Marshallese (Bender 1969b); (Rudiak-Gould 2004); and a comprehensive study of many aspects of the language by Zewen (1977).

1.4 Conclusion

We have seen in this chapter that Marshallese is a language with SVO syntax although VOS is also possible in special circumstances. On the phrasal level, the head always precedes its complement in all types of phrase excluding the DP. Morphologically speaking, Marshallese may have many morphemes per words and each morpheme can carry more than one semantic feature. Therefore we may classify the language as being synthetic and fusional. Although we have introduced some facts about the phonology of Marshallese, this thesis will focus primarily on the syntactic and morphological aspects of the language and the relationship between the two. In doing so we will attempt to satisfactorily explain some of the peculiarities encountered in this introductory chapter namely the ones pertaining to linear word-order within the DP.

CHAPTER II

THE DETERMINER PHRASE

This chapter is concerned with the description of the Marshallese determiner phrase. In the first section we will outline the basic word-order with a special emphasis on determiners, quantifiers, adjectives, and also demonstratives. The second part will focus on a previous analysis proposed for the position of definite determiners and demonstratives and the problems related to this hypothesis. Finally we will suggest a different hypothesis that will be the basis for the proposed analysis.

2.1 Word-order of Marshallese DPs

In this section we will look at the elements that may compose a DP in Marshallese. The word-order of these elements is fixed and it is illustrated in figure 2.1.

Indefinite determiners/ Numerals/ Quantifiers	>	Nouns	>	Adjectives	>	Definite Determiners/ Demonstratives

Figure 2.1 Word-order of Marshallese DPs.

As we can observe definite determiners and demonstratives always follow the NP as opposed to indefinite determiners, numerals and quantifiers. Furthermore adjectives always follow the noun.

2.1.1 Indefinite determiners and quantifiers

The singular form of the indefinite determiner in Marshallese is the same word used to express the number one; *juon*. The plural indefinite determiner is covert in that it is expressed with a bare noun as illustrated in (1a-b).

(1) a. Kuuj eo e-j jebjeb kijdik.
Cat DET.SG.N-HUM. 3SG.AGR.-PRS. catch.INT. rat
'The cat is catching rats.'

b. Leddik re-j ettōn nan laddik ro.
girl 3PL.AGR.-PRS. smile at boy DET.PL.HUM.
'Girls are smiling at the boys.' (Willson, 2008: 58)

There is a small set of quantifiers in Marshallese (see table 2.1) and they all precede the noun:

(2) Aolep armej re-konaan aij kudiim.
every person 3PL.AGR.-want ice cream
'Everyone wants ice cream.' (Willson, 2008: 58)

(3) Ejjelok iaan bok ko
none of book DET.PL.N-HUM.
'None of the books' (Rudiak-Gould, 2004: 117)

The only exception concerns the quantifier *jet* which means *some* when preceding the noun and *other* when it follows it:

(4) Lima ro jet r-ar kakamanmwin
woman DET.PL.HUM. other 3PL.AGR.-PST. decorate [themselves]
'The other women were decorating themselves' (Zewen, 1977: 114)

Table 2.1 Marshallese quantifiers

Ejjelok	none
Jet	Some, other
Enanin	almost all, most
Aolep	all, every, both
Jidikin	a little bit of

(from Rudiak-Gould 2004)

2.1.2 Adjectives

In Marshallese, lexical categories are not as easily identifiable as in English. According to Harrisson (1973: 407) there is 'no evidence of any sort to support the existence of a lexical category adjective that is distinct from the category verb'. This is true for all Micronesian languages such as Marshallese. Nevertheless we will describe in this section how adjectival properties are expressed in the context of a DP. According to Willson (2003a), the adjective always follows the noun and precedes the definite determiner:

(5) Wa kileplep eo
boat big.SG. DET.SG.N-HUM.
'the big boat' (Rudiak-Gould 2004: 201)

Furthermore there may be more than one adjective:

(6) Wa buroro kileplep eo
boat red.SG big.SG DET.SG.N-HUM.
'the big red boat' (Willson, 2003a: 5)

This last assertion is not so certain because 'it is unclear as to whether Marshallese speakers spontaneously produce structures with two adnominal adjectives or if they were produced because of the elicitation by the linguist' (Willson, 2003:13). Furthermore other ways are available to state adjectival properties in Marshallese (cf. chapter 4). One important point to stress is that to insert an adjective between the noun and the definite determiner is 'actually only possible for certain adjectives [and when it] is used in this way, it often changes forms' (Rudiak-Gould 2004: 201). In examples (5)-(6) we can observe that the last syllable of the adjectives are reduplicated; the base forms of such adjectives are not. Clearly something needs to be further explained here and the matter will be addressed in later sections.

2.1.3 Definite determiners and demonstratives

Marshallese has a set of definite determiners and demonstratives that inflect for gender and number features; with the particularity that the gender feature is [± human]. Furthermore only the plural forms are marked for gender. Table 2.2 represents the set of Marshallese determiners and these are further illustrated in examples (7) and (8).

Table 2.2 Determiners and demonstratives

	Location	SG	PL.HUM.	PL.N-HUM.
Determiner	unknown, not visible	eo	r-o	k-o
Demonstratives	near the speaker	e	r-a	k-a
	near the speaker and listener	in	r-ein	k-ein
	near the listener	ne	r-ane	k-an
	away from both speaker and listener	en	r-an	
	distant but visible	uweo	r-oro	k-oko

(from Willson, 2003a:3)

(7) a. Ewi pinjel eo
where.is pencil DET.SG.N-HUM.
'Where is the pencil?'

b. Erki pinjel ko
where.are pencil DET.PL.N-HUM.
'Where are the pencils?'

c. Erri laddik ro
where.are boy DET.PL.HUM.
'Where are the boys?' (Willson 2008: 16)

(8) a. Bok in
book. DEM.SG.near the speaker and listener
'This book'

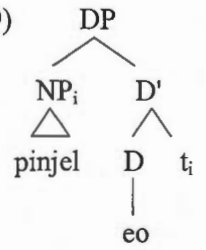
b. Bok kein
book DE.PL.near the speaker and listener
'These books' (Rudiak-Gould 2004: 123)

Determiners and demonstratives are always placed after the noun and/or adjective if there is one. We asserted (cf. 1.2.2) that Marshallese is a head-initial language therefore we would expect the determiners to be preceding any other elements in the phrase. The actual order of words is a peculiarity that needs to be investigated. Willson (2003a) has proposed that movement of the NP accounts for the linear order within Marshallese DPs.

2.2 The syntactic movement hypothesis

According to Willson (2003a) the reordering of the elements of the DP, resulting in the final position for definite determiners and demonstratives, is due to a syntactic movement of the noun phrase (NP) to the specifier position of DP. Therefore a simple DP such as *pinjel* (pencil) *eo* (the) is the result of a movement inside the DP as shown in (9):

(9)



However there are facts left unexplained with this analysis as discussed below.

2.2.1. Elements of the category D

In her analysis of the Marshallese DPs, Willson (2003a) argued for the movement of the NP only in the cases where we find definite determiners and demonstratives. Other members of the category D are left aside. This includes indefinite determiners, quantifiers, and numerals. These elements always precede the NP in Marshallese; movement seems to be optional in those cases. Strong quantifiers[1] may take a whole DP as a complement and thus there is still room for the NP to move in Spec DP with the expected word-order as a result. However weak quantifiers including numerals and indefinite determiners cannot take a whole DP as a complement and thus the movement seems to be forbidden because these elements

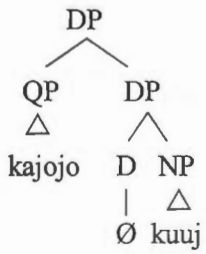
[1] The quantifiers that can precede the whole DP are the strong quantifiers in the sense of Milsark (1977) as opposed to the weak quantifiers such as numerals, indefinite determiners, and a few others. The difference between the two types can be seen in existential sentences: weak quantifiers can be used in such construction while strong quantifiers cannot because they can be raised in the position in which the expletive is generated. Strong quantifiers can also rise in a DP: *all the cats* (strong) vs. *the many cats* (weak). Marshallese also has a set of weak quantifiers that can be lumped together with numerals and indefinite determiners.

always occupy the head position[2]. Consider the following example involving a strong quantifier:

(10) Kajojo kuuj kilmeej r-ar etal i maan kaar eo.
All cat black 3PL.AGR-PRS. go on front car DET.SG.N-HUM.
'All black cats went on the front of the car' (Willson 2008: 59)

In example (10) the quantifier precedes the noun. The absence of an overt determiner represents a plural indefinite DP. We assume that strong quantifiers such as those in (2) and (3) take the whole DP as a complement as illustrated in (11):

(11)



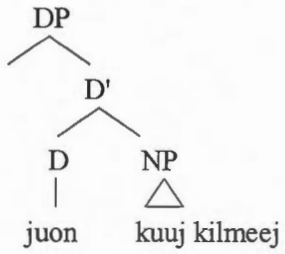
In the presence of a weak quantifier such as a numeral we may not assert that the quantifier takes a whole DP as a complement. In example (12) we have the word *juon* which can be interpreted as either an overt indefinite determiner or a numeral.

(12) Juon kuuj kilmeej e-j cross a-o ial
a cat black 3 SG.-PRS. cross CL.-1POSS path
'A black cat is crossing my path' (Willson 2008: 59)

Since it precedes the noun we must assume that there is no movement of the NP involved. This is illustrated in (13).

[2] Willson (2003a) considers that there is a covert indefinite determiner and thus the movement is still possible. Although there is no plural indefinite determiner the singular indefinite determiner *juon* always precede the NP.

(13)



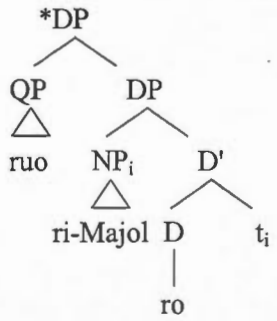
However, in example (14) we have two instances of a DP with both a numeral or indefinite determiner preceding the noun and also a definite determiner following it:

(14) E-wor ruo ri-Majol ro im re-naaj bok
3SG.-exist two one.from-Marshalls DET.PL.HUM. and 3 PL.AGR-PRS receive
jerammon jen juon special scholarship eo…
benefit from a special scholarship DET.SG.N-HUM.

'There are two Marshallese that will receive the benefits from a special scholarship. (Willson 2008: 61)

If the numeral or the indefinite determiner occupies the head position (as illustrated in (13)), it remains to specify the position of the definite determiner. Recall that weak quantifiers cannot take a whole DP as a complement so the structure in (9) cannot be the complement of a numeral as illustrated in (15):

(15)



Furthermore the main clause of example (14) is an existential construction; on a semantic ground there is a restriction on the appearance of a definite object with this type of construction (see Milsark 1977). However numerals such as *ruo* (two) are perfectly acceptable as the head of a DP involved in an existential construction. Following this we may

assert that the head of the DP in (14) is *ruo* (two) and not *ro* (the). This of course calls into question the actual status of definite determiners.

Willson (2003a) does not propose any specific structure involving a numeral or a quantifier let alone a structure involving both a numeral and a definite determiner. At this point, one would also wonder the exact reason of having both definite and indefinite determiners in the same DP if we assume that *juon* is an indefinite determiner. A DP can either be definite or indefinite Regardless of the interpretation of *juon* it still occupies the head position of a DP along with numerals and weak quantifiers. As a consequence the movement of the NP in Spec DP to explain the position of definite determiners is blocked by the presence of another element (whether numeral or indefinite determiner) in examples such as (14). These problems are not taken into account in the movement hypothesis proposed by Willson (2003a). Furthermore this movement must be motivated and Willson (2003a) proposes that feature checking is responsible for the realignment of lexical elements within a DP.

2.2.2 Feature checking

Willson (2003a) supposes that the movement of the NP is conditioned by the checking of features. The actual nature of the features is vague; she says it cannot be the number feature 'due to the fact that Marshallese nouns do not have singular or plural features' (2003a: 10). She also adds that it cannot be the [± human] feature because singular definite determiners lack this feature i.e. they are not morphologically marked for the feature. This late assertion does not stand because in a language like French, plural determiners do not show gender; the D head has nevertheless an uninterpretable [gender] feature to check with interpretable [gender] feature of the noun. Besides, the Marshallese nouns do not have apparent gender marking either. It is thus very difficult to dismiss this feature on such grounds.

Willson concludes therefore that only an EPP[3] feature accounts for the movement; thus Marshallese D has a strong EPP feature that attracts a noun in its specifier position. If this is the case, how do we fit DPs such as those found in examples (12) and (14) where there is no movement of the noun in the specifier position? In these examples the indefinite determiner and numerals precede the noun suggesting that no movement occurred at all. Perhaps only definite determiners have an EPP feature? Then how can we account for the example (14) in which both a definite and indefinite determiners occur simultaneously? If movement had happened then both the indefinite and definite determiners would follow the noun. The fact that it is not the case shows that no movement occurred and therefore the derivation should crash because the EPP feature cannot be checked. Besides there is no clear reason as to why a DP would have both determiners occurring together; the DP can either be definite or not but both these options are not available at the same time. These problems must be resolved for the movement hypothesis to be explanatorily adequate.

2.3 The proposal

In this thesis, we will argue contra Willson that the linearization is not the consequence of a syntactic movement but rather is the outcome of an operation *M-Flip* (Di Sciullo 2005a; 2005b) which has the effect of deriving a mirror image of a morphological object. Our main hypothesis is that the definite determiners (and demonstratives) of Marshallese are in fact inflectional affixes rather than syntactic objects belonging to the category D. According to Di Sciullo (2005a) determiners have an internal bipartite structure; the first part is an operator and the second part is a variable. We will argue that the variable must be combined morphologically to a lexical element other than the operator since this one is phonetically unavailable. However there is still a featural relation between the covert operator and the overt variable at the syntactic level; this relation is instantiated by agreement between the two parts.[4]

---

[3] The Extended Projection Principle originally proposed by Chomsky (1981; 1982), states that every clause must have a subject in a specific position. Willson (2003a) is not explicit on her choice of the EPP feature and why Marshallese DPs should have this specific feature (as opposed to languages in which there is no movement of the NP).

[4] In syntax, functional categories such as verb (V); tense (T); determiner (D), etc. have uninterpretable features such as the set of φ-features (person, number, gender). These uninterpretable features must be

In the following chapter we will introduce the Asymmetry Theory of morphology as proposed by Di Sciullo (2005a; 2005b). We will also present in greater details the Op(erator)-Shell Hypothesis of Di Sciullo (2005a). We will then analyze the morphological properties of Marshallese definite determiners, demonstratives, and wh-words within this framework. Subsequent chapters will be dedicated to the analysis of other types of syntactic constructions that might provide more evidence to our proposal.

---

checked and eliminated by interpretable features carried by syntactic elements such as nouns, adjectives, verbs, etc. If this is not properly done then the derivation will crash. According to Chomsky (1993; 1995; 2000) the operation Agree erases the set of uninterpretable features of an object when this object is in relation with the interpretable features of another object.

CHAPTER III

A THEORY OF MORPHOLOGY

This chapter is dedicated to the theory we will use to analyse the Marshallese data: Asymmetry Theory. We will first briefly summarize the tenants of this theory and then we will concentrate on its application on morphological relations. We will further explicate the Op-Shell hypothesis of Di Sciullo (2005a) and distinguish the latter from the operation Agree. The last part of this chapter will be dedicated to apply the principles of Asymmetry Theory on the Marshallese determiners and demonstratives.

3.1 Asymmetry Theory

According to Di Sciullo (2005a:21 and references therein) asymmetry 'is a property of the relations of the language faculty'. Asymmetry can be described as a unidirectional ordering of a pair of elements; morphemes, phonemes, or syntactic objects must be ordered in a specific way for interpretation to be possible. The absence of ordering gives rise to nonsense.

Asymmetry Theory parallels the Derivation by Phase Model (Chomsky 2001) in that each derivation must be complete before being transferred to another plane of the computational space[1]. For example a word constituted of separate morphemes must be derived entirely in the same plane (in this case D_M) before being sent to PF (phonetic form) for phonetic interpretation and LF (lexical form) for semantic interpretation. The architecture of morphemes (either roots or affixes) and morphologically derived objects is therefore

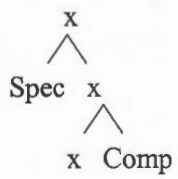
[1] There are four components in the grammar, each of which corresponds to a specific plane of derivation (D): morphological objects are derived in D_M, syntactic objects in D_S, phonological objects in D_Φ, and semantic objects in D_Σ.

identical to syntactically derived objects and takes the shape of a tree that Di Sciullo (2005a, 2005b) calls a minimal tree.

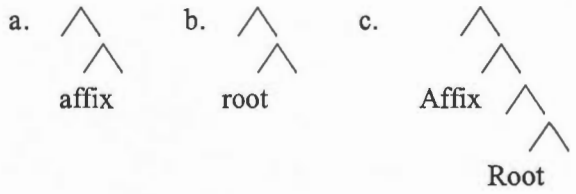
3.2 Morphological phases

Di Sciullo (2005a; 2005b) proposes that roots and affixes are combined together by the operation M-Shift and that the newly formed lexical element constitute a morphological phase. Each combined element has the structure of a minimal tree as in (1) and together they form a bigger structure as in (2c) forming a layered structure or shell:

(1)



(2)



3.2.1 The operation M-Link

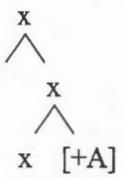
Morphological phases also result from the operation M-Link which is concerned with 'creating a featural relation' between two elements of the created tree. The basic idea is that affixes have uninterpretable features and they select roots with the matching interpretable features. In this way uninterpretable features will be valued or erased 'rendering the feature unusable for later cycles' (Di Sciullo, 2005a:13). For example, there are two types of predicate affixes; some will give primary predicates (nouns, verbs) and others will yield secondary predicates (adjectives, adverbs) when combined with a root. Roots are arguments and thus have a [+A] feature and, depending on the position of the argument in the minimal tree (whether the specifier or complement position), they might be chosen (or not) by certain.

affixes. Predicate affixes have a [+P] feature; while primary predicate affixes have a negative [-A] feature, secondary predicate affixes have a positive value for this feature. Arguments however can only have a negative value for the [P] feature. These features are responsible for the possibility (or not) to combine certain roots with certain affixes: a negative value of a [P] feature must be checked by a positive value of the same feature. Therefore a [+A, -P] root can only be combined with a [+P] affix so that the uninterpretable feature may be erased. Consider the following example from Di Sciullo (2005b: 12):

(3) a. This book is read-able.
b. *This bed is sleep-able.

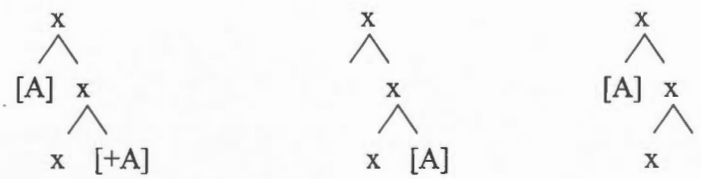
The affix *–able* can only be combined with a root whose argument structure is the following:

(4)



The verb *to read* can have a complement because it is transitive but the verb *to sleep* cannot because it is unergative; yielding the ungrammaticality of (3b). Just like there are three types of verbs according to the number and position of the arguments (transitive, unaccusative and unergative) there are three possible structures for argument minimal trees[2]:

(5) a. transitive b. unaccusative c. unergative



[2] These structures will be of particular importance for the morphological analysis of Marshallese verbal forms in Chapter IV.

3.2.2 The operation M-Flip

The morphological phase represented graphically in (2c) shows that it is the affix that selects its complement. However in (3a) the affix follows the root and not the other way around. Because there can be both prefixes (affixes preceding the root) and suffixes (affixes following the root), the ordering of the elements in a phase must be the result of a process triggered by some characteristics pertaining to the affix.

M-Flip is an operation that derives a mirror-image of a tree and thus affects the affix-root ordering (2005a; Di Sciullo 2005b). This operation is constrained by the presence of PF-legible feature in the specifier position of the morphological phase i.e. only empty specifiers can trigger this operation. The presence or absence of a feature depends on the type of affix and the position it occupies in its minimal tree as seen in Table 3.1 below.

Table 3.1 Affixes and their respective positions

Affix type	Function	Position
Predicate-affix	Determines semantic type and argument structure	Head
Modifier-affix	Determines aspectual modification	Specifier
Operator-affix	Determines operator-variable relation	
• Internal-bound	Links a variable in D_M	Specifier
• External-bound	Links a variable in D_S	Head

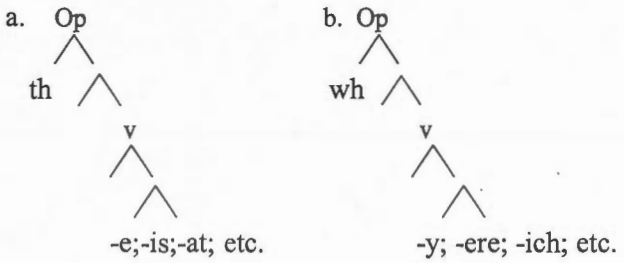
(from Di Sciullo, 2005b:28)

3.2.3 The Op-Shell Hypothesis

The structure formed by the combination of an operator affix minimal tree and a variable minimal tree is an Op-Shell. The root is the operator that binds a variable and the affix is the variable that is bound. Internal-bound operator affixes link a variable in the morphological plane (henceforth D_M) and thus the variable is directly attached to the root. Because this type of affix occupies the specifier position of its minimal tree, M-Flip does not

apply. Determiners and demonstratives, as well as wh-words, are operator affixes that bind a variable in D_M as illustrated in (6a-b).

(6)



As proposed by Di Sciullo (2005a) there is a structural regularity in the composition of internal-bound operator affixes; the relation between the consonantal root and the vocalic variable is constant. Table 3.2 below further illustrates the bipartite composition of determiners; it represents the set of operator variable that constitute determiners and demonstratives in both English and French. The operator is represented by the root and the set of variables each represent a φ-feature and a semantic feature related to the distance (proximity) of the speaker in relation to the object.

Table 3.2 Variables of operator affixes in English and French

Language	Operator	Variable		Gender	Number	Distance
English	th-	-e		not specified	SG.-PL.	not specified
		-is			SG.	+proximate
		-at			SG.	-proximate
		-ese			PL.	+proximate
		-ose			PL.	-proximate
French	c(e)-	-lui	-ci	M	SG.	+proximate
			-là			-proximate
		-elle	-ci	F	SG.	+proximate
			-là			-proximate
		-eux	-ci	M	PL.	+proximate
			-là			-proximate
		-elles	-ci	F	PL.	+proximate
			-là			-proximate

The principal characteristic of these determiners is that the variables are combined with a special root that is the same for any possible variable (unless there is a phonological process involved as in French). As evidenced in the English and French data below, functional words such as determiners are composed of many parts.

Di Sciullo (2005a:100) states that 'the first component is a constant morpheme, the *th-* or *wh*-morpheme, and the second component varies throughout the paradigm'. The derivation is said to take place in the morphology because it follows the strict asymmetry of morphology:

(7) *The Strict asymmetry of Morphology*
Morphology combines and manipulates asymmetric relations only
(Di Sciullo, 2005a:13)

This property relates to the fact that syntax may have points of symmetry that can be broken by movement (Moro 2000). Morphology on the other hand does not have this property; reordering of the components gives rise to morphological gibberish (Di Sciullo 2005a). According to Di Sciullo (2005a), functional words cross-linguistically all share the same form; we would thus predict that Marshallese determiners should have the same property of being internally bound. However we will see below (3.4) that it is not quite what we find and this raises questions about the actual status of Marshallese definite determiners and demonstratives and their internal structures. Before proceeding to the analysis of the Marshallese data however, we must distinguish morphological operator-variable relations from syntactic agreement relations.

3.3 The operation Agree

In Asymmetry Theory, the operation Agree relates to the 'proper inclusion between two sets of features' (Di Sciullo 2005b:13). When two minimal trees are joined by the operation M-Link the dominating node must include the features of the node that it sister-contains. Therefore the checkee must contain a subset of the features of the checker (Di Sciullo 2005a). For example a predicate affix with the features [+P; -A] must be in relation

with a root that has a [+A] feature. Thus the relationship between the two nodes is asymmetric. This is different from Chomsky's (1993; 1995; 2000) Syntactic Agree which is about feature identity. In this case features of the D head must match the features on the noun in order to delete them. Undeleted uninterpretable features make the derivation crash. For example the DP 'these cats' contains a determiner and a noun. The determiner has an uninterpretable number feature that must be erased by an interpretable number feature; in this case the affix '-s' of 'cats'. Sometimes the head position of a DP remains phonetically empty: 'Cats are cute animals'. However we are still in the presence of a functional projection with uninterpretable features that must be erased hence the affix –s of 'cats'. Syntactic Agree and Asymmetric Agree differ because the former involves the matching of all features while the latter involves a proper subset of features between the root and affix.

3.4 Morphological analysis of Marshallese determiners and demonstratives

Marshallese has a set of determiners and demonstratives that inflect for gender and number features; the gender feature being [± human][3]. Only the plural forms are marked for gender as shown in Table 3.3 below.

Table 3.3 Marshallese determiners and demonstratives

	Location	SG.	PL.HUM.	PL.N-HUM.
DET	unknown, not visible	eo	r-o	k-o
DEM	near the speaker	e	r-a	k-a
	near the speaker and listener	in	r-ein	k-ein
	near the listener	ne	r-ane	k-ane
	away from both speaker and listener	en	r-an	r-an
	distant but visible	uweo	r-oro	k-oko

From (Willson, 2003a:3)

[3] It was pointed to us that the feature [± human] was not a gender feature. However, to remain constant with the current theory of syntax in which the head D of a DP has uninterpretable number and gender features to erase, we will assume that the [± human] feature of Marshallese erases the uninterpretable gender feature of the head.

In Table 3.2 we saw that French and English determiners are bipartite in that there is always a constant root which can bind with many possible variables, each of which representing a different semantic feature. The root itself has a different semantic interpretation: according to Di Sciullo (2005a) determiners have a [+D] feature and the question words (or wh- words) a [+Q] feature (more on that in section 3.5). When we analyze the data in Table 3.3 we observe that each morpheme represents a semantic feature that is either a φ-feature or a proximity feature[4]. The constant roots in the PL columns (*r*- and *k*-) represent the features [+human] and [-human] respectively. None of which has a [+D] or [+Q] feature that is characteristic of determiners, demonstratives, and wh- words operator roots. We will suggest at this point that the operator is simply not overt. However we need a reason to justify this assertion; the unavailability of a phonetically overt operator root must follow from a characteristic pertaining to the Marshallese language. We will thus propose that Marshallese has neither overt definite determiners nor overt demonstratives[5]. This subsumes the idea that the semantic features expressed by the variables bound word–internally in a determiner are actually bound word-externally.

On a syntactic level we may interpret the D head as being phonetically empty yet still possessing a set of uninterpretable features. Moreover we may assert that the set of so-called Marshallese determiners are affixes with interpretable features that may erase the set of uninterpretable features of the functional D projection under Syntactic Agree. Therefore the absence of an overt root operator not only constrains the morphological binding between a root and an affix but it also has an impact on the way the syntactic agreement is expressed between D and the nominal inflection. Because we cannot say that the variables are bound word-internally in D_M we will adopt the other option proposed by Di Sciullo (2005a; 2005b) that the variables are bound in D_S (syntax) and thus are external-bound affixes. If this is so

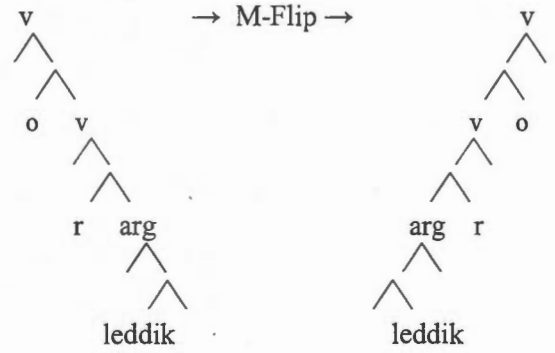
[4] The differences we find between the forms in the SG column and the second morphological parts in the PL columns are purely phonological. Thus the SG determiner *eo* is the same as the *–o* PL affix.
[5] This is like English plural indefinites which are expressed by a sole plural affix on the noun because there is no English indefinite plural determiner.

then they may be found in nouns, adjectives or verbs[6]. In example (8) we can observe that the elements glossed as determiners i.e. DET always follow a noun:

(8) Leddik ro re-kar dāpij kuuj eo.
girl DET.PL.HUM. 3PL.AGR-PST hold cat DET.SG.N-HUM.
'The girls held the cat' (Willson, to appear, p.2)

In table 3.1 it is specified that external-bound operator affixes occupy the head position of their minimal tree so M-Flip must be applied as depicted in (9) below.

(9)



According to this the post-nominal position of Marshallese so-called determiners and demonstratives is a consequence of the operation M-Flip and they must be considered inflectional affixes rather than elements of the category D. We may also add that indefinite determiners are either numerals or an empty D head (cf. 2.1.1) within which there is no identifiable operator root that may bind a variable word-internally. It seems therefore that determiners are not expressed phonetically and that the head of a Marshallese DP is phonetically empty[7] as well.

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[6] The interpretable features morphologically attached to the noun, adjective, or verb, will nevertheless erase the uninterpretable features of the functional (syntactic) D element.

[7] Numerals are weak quantifiers and must not necessarily be in the D position. In the example: *the two girls* the D head is already occupied and thus the noun is in the complement position of the QP that is itself the complement of D (see Radford 1997 and references therein for more details).

3.5 Marshallese wh-words

Wh-words are also functional words. According to Di Sciullo (2005a) wh-words, like determiners, may be broken down into two parts; the root which is a constant morpheme throughout the set of wh-words and, the affix which expresses a semantic feature. Moreover the root has a [+Q] feature if it is a question word and, the affix has a [+wh] feature. Some question words like *if* cannot select a [+wh] affix since it does not belong to the set of wh-words. The same applies to determiners except that the functional root has a [+D] feature and the affix a [+th] feature[8]. The set of [+th] features comprises [± locative] and [± proximate], and also number and gender features (depending on the language specifics). The set of [+wh] features comprises [±human]; [+manner]; [±time]; and [+place]. It is sometimes the case that different restrictor features select the same affix: *what* [-human] vs. *that* [- proximate]. A feature that is restricted to [+wh] words in Di Sciullo's analysis is also present in [+th] words in Marshallese i.e. [±human].

Given that Marshallese determiners are inflectional affixes we may expect that the set of variables that Marshallese *wh*-words bind corresponds (at least partially) to the set of Marshallese determiners since they share at least one feature: [±human]. This is in part true although there are restrictions on the occurrence of inflectional affixes depending on the position of the *wh*-word within the sentence. We might also expect that Marshallese *wh*-words share the property of Marshallese *th*-words of not having a constant morpheme acting as the operator. This is also true since Marshallese *wh*-words do not have a constant morpheme; each word has a different phonetic form (see Table 3.4 below).

[8] Those features are selected according to a restrictor (RE) head in the morphological derivation. See Di Sciullo (2005a) for more details.

Table 3.4 Marshallese wh- words

	Marshallese	English
Class 1	won	who
	ta	what
	ia	where
	naat	when
Class 2	etke	why
	ewi	where is
	erri	where are (people)
	erki	where are (things)

Adapted from (Willson 2008)

When internally merged to the specifier of a complementizer phrase[9] (henceforth CP), class 1 *wh*-words must be followed by one of the definite determiners as illustrated in (10a).

(10) a. Won eo kw-ar mwijbar-e?
who DET.SG.N-HUM. 2SG.AGR-PST cut.hair.TR.-OBJ.
'Whose hair did you cut?' (lit. 'Who did you haircut?')

b. Kw-ar mwijbar-e won?
2SG.AGR-PST cut.hair.TR.-OBJ. who
'Whose hair did you cut?' (lit. 'Who did you haircut?') (Willson 2008: 78)

However we can see in (10b) that when the *wh*-word remains in situ it is not followed by a determiner. In fact it is not grammatical to include the determiner in those cases as shown in example (11).

(11) *Kw-ar mwijbar-e won eo?
2SG.AGR-PST cut.hair.TR.OBJ. who DET.SG.N-HUM.
'Whose hair did you cut?' (lit. 'Who did you haircut?') (Willson 2008: 80)

[9] Willson (2002) assumes that the *wh*-word occupies the specifier position and that the determiner occupies the head position C^0. The syntactic analysis of interrogative sentences is beyond the scope of the present thesis yet we will assume the sentence initial *wh*-word to be in the specifier position of a complementizer phrase.

The examples in (10) show that when movement is overt then affixation on the *wh*-word is permitted. When the movement is covert then there is no possible affixation. Although the syntactic analysis of Marshallese interrogative sentences is beyond the scope of this thesis, one might suppose that in overt movement C attracts the *wh*-word in its specifier position to delete its set of uninterpretable features. In this case Agree needs interpretable features to perform this task. When the movement is covert on the other hand the features need not be overt phonetically for Agree to apply. Further research should be undertaken to resolve this matter.

According to Willson (2008) while *won* ('who') and *ta* ('what') can take the plural forms of determiners, it is not possible for *ia* ('where') and *naat* ('when') to do so. However when one looks at the Class 2 *wh*-words one finds that there is another word for *ia* (where) and this one expresses gender and number features; whether *r* for [+human] and *k* for [-human][10]. However, as all class 2 *wh*-words they cannot take any other affix that corresponds to the definite determiners. Moreover, Class 2 *wh*-words cannot remain in situ, they must move to Spec CP as shown in (12).

(12) a. Etke kwo-j komman bade?
why 2SG.AGR-PRS make party
'Why are you throwing a party?'

b. *Kwo-j komman bade etke?
2SG.AGR-PRS make party why
'Why are you throwing a party?'

c. *Etke eo kwo-j komman bade?
why DET.SG.N-HUM.. 2SG.AGR-PRS make party
'Why are you throwing a party?' (Willson 2008: 82)

The affix added to the functional word always agrees with what the expected answer is: if the speaker uses the plural determiner he expects the answer to be plural. Furthermore the agreement morpheme always agrees in number with the determiner if the *wh*-word is the subject of the predicate. When the *wh*-word is used in conjunction with a noun then *ta*

[10] The forms corresponding to class 2 *where* are special in that they are not used with an overt verb hence the translation '*where are*'.

('what') has the meaning 'which' and there is also a word *rot* that has the meaning 'what kind'. These must obligatorily be used with a definite determiner[11] as seen in (13).

(13) a. Baluun ta ko r-ar jok tok?
plane which DET.PL.N-HUM. 3 PL.AGR.-PST. land toward.speaker
'Which planes landed?

b. Mor rot eo ri-eonod ro re-j
bait what.kind DET.SG.N-HUM. one.who-fish DET.PL.HUM. 3PL.AGR.-PRS.
iiok-e?
mix.TR.-OBJ.
'What kind of bait is the fisherman mixing?' (Willson 2008: 83)

The main difference between the two classes of *wh*-words is that one set can remain in situ and if moved must take the determiner (class 1) and the set belonging to the other class can only be found in Spec CP position without the addition of any affixes.

In some languages like English or French an interrogative sentence calls for the movement of the *wh*-word from the complement position of the V to the specifier position of CP. In Marshallese the raising of the *wh*-words triggers the need for a definite determiner and, since we consider these determiners affixes, then we might stipulate that when a CP (with an uninterpretable [-Q] feature to erase) is projected, the *wh*-word acquires the capacity to select a [+wh] affix. This is perhaps straightforward considering that a [-Q] feature can only be erased with a *wh*-word which is considered to possess an interpretable [+Q] feature that will erase the uninterpretable [-Q] feature. However when there is no raising then this capacity is not acquired. The [+Q] feature still remains though because it is still an interrogative proposition when the *wh*-word is in situ. According to Zewen (1977) when the *wh*-word is sentence final, there is a raise in intonation that is similar to that of the question particle *ke*. Therefore, at the PF level, the [+Q] feature is present.

[11] Notice that the wh-words in (13) follow the noun and not the other way around. This is to be expected if one assumes that the D head is always phonetically empty. The actual status of these question words will not be addressed here yet the topic would be of great value for further research.

Although further research on Marshallese *wh*-words would be necessary, one can at least make some general observations about their behaviour and internal structure. Since they do not follow the expected bipartite morphology with a constant root that can select different affixes, these question words may be compared to determiners. We have stipulated that Marshallese determiners are in fact phonetically null and there is no operator in the form of a constant morpheme that may bind a variable word-internally. This is consistent with *wh*-words as well although they are phonetically present[12]. The difference lies in that a variable is allowed to bind to the question operator word-internally as opposed to the determiner; this is probably the result of the lack of phonetic form of determiners and demonstratives. Nevertheless, the presence of the definite determiners in conjunction with the *wh*-words shows that Marshallese definite determiners are not elements of the category D on their own but rather inflectional affixes.

3.6 Conclusion

In this chapter we saw that the morphological analysis of Operator-variable affixes proposed by Di Sciullo (2005a; 2005b) can accurately assay Marshallese determiners and demonstratives and, to some extent, demonstrate how they are different than what we can find in English and French. The behaviour exhibited by Marshallese determiners and demonstratives and their internal structure point toward another type of affixation i.e. one in which variables are not directly attached to an operator. Considering this, it is a plausible hypothesis to assume that the set of definite determiners and demonstratives of Marshallese are in fact inflectional affixes rather than syntactic objects belonging to the category D[13].

[12] Wh- phrases are assumed to be DPs and thus a somewhat similar behaviour is to be expected.

[13] Although we consider that Marshallese definite determiners and demonstratives are inflectional affixes, we will nevertheless refer to them as determiners either in the text or in the glosses. We will do so to remain consistent with the works we reference.

CHAPTER IV

ADJECTIVAL PROPERTIES

An inflectional affix is always attached directly to the root or stem it must inflect; it is never the case that the affix can be separated from either its root or its stem and still be considered an intrinsic part of it[1]. We saw in the previous chapter that Marshallese definite determiners and demonstratives may be thought of as nominal inflectional affixes. However it is sometimes the case that an adjective may be inserted between the noun and the definite determiner of a Marshallese DP. When this is the case, then the noun is not inflected anymore but rather the adjective is. However it is not easy to define which words are adjectives and which are not because verbs and adjectives are hard to differentiate in Marshallese. Therefore the goal of this chapter is to analyse these forms and disambiguate their lexical properties and functions since this analysis is needed to further our investigation on the linear order of DPs involving adjectives.

4.1 Two types of adjectives

We saw (cf. 2.1.2) that adjectives inserted between a noun and a definite determiner have a special form; they involve reduplication of the CVC# part of the basic form. The basic form is actually a stative verb 'that expresses a quality or a state of being' (Zewen, 1977: 52). One would assume that the reduplicated form is the actual adjectival form. However, according to Harrisson (1973), rightward reduplication is a derivational process which creates stative or denotative verbs. Zewen (1977) calls these qualitative verbs; while Bender (1969) calls them adjective-like verbs[2]. It seems thus that there is a consensus among researchers

[1] According to Di Sciullo and Williams (1987) it is impossible to insert a lexical element inside a morphological object. The status of Marshallese determiners as nominal inflectional affixes must thus conform to this rule.

[2] From now on, we will use Bender's terminology and refer to the reduplicated verb forms as adjective-like words to distinguish them from the basic verb form.

that what looks like an adjective for us is not necessarily part of the same grammatical category in Marshallese and related languages.

The reduplication of stative verbs is a productive process in Marshallese and a small set of examples is displayed in Table 4.1. Basic forms and adjective-like words cannot be used in the same environment and/or construction. Therefore we will describe briefly in which environment/construction we may find each of these forms.

Table 4.1 Stative verbs and adjective-like words

Basic form	Adjective-like words	English
Lap	laplap	'great, large'
Dik	dikdik	'lowly, small'
Kilep	kileplep	'big, fat'
Jidik	jidikdik	'small'
Mijel	mijeljel	'thick'
Mani	manini	'thin'
Kadu	kadudu	'short'

(adapted from Willson, 2008: 25)

4.1.1 The basic form of Marshallese stative verbs

According to Zewen (1977:52) many English action verbs may have a stative reading in Marshallese 'especially the verbs which are connected with the expression of one's will and most verbs which describe natural phenomena'. These verbs (like weather verbs for example) and the qualitative verbs that may be reduplicated can only be translated in English as involving a copula (to be). The basic verbs may be used with different affixes to create new words. Following are a few examples of such constructions.

The basic form can be used with a pronominal as illustrated in (1) and the noun can either precede (a) or follow (b) the verb[3]:

[3] According to Willson (2008), pronouns and agreement clitics are to be differentiated; the agreement clitic (or morpheme) is a syntactic object always attached to TAM (tense-aspect-modality) markers which are not present in constructions such as (31a;b). However Zewen (1977) considers that the stative aspect of a verb is expressed by the lack of TAM markers such that even action verbs may be 'stativized' (*sic*) when occurring without verbal particles. We will consider that both pronominals and

(1) a. Nick e-marro
Nick 3SG.-be.thirsty
'Nick is thirsty'

b. E-maro Nick
3SG-be.thirsty Nick
'Nick is thirsty' (Rudiak-Gould 2004: 16)

There is a causative affix *ka-* (or *ko-*) that can be prefixed to the basic form that has the meaning 'to cause to' or 'to make':

(2) a. dipen 'be strong'
ka-dipen 'strengthen s.t.'

b. bat 'be slow'
ko-bate 'make s.t. slow'

c. bwebwe 'be stupid'
ka-bwebwe 'fool s.o.' (Pagotto 1992: 254)

There is an affix *ri-* which functions as a nominalizer and has the meaning 'person who is':

(3) a. ri-nana
person who is-bad
'criminal, outcast, delinquent'

b. ri- utiej
person who is- high
'honored person' (Rudiak-Gould 2004: 107)

In all three set of examples (1), (2), and (3) we can observe that the basic form of stative verbs can only be prefixed. In section 4.2 we will go over the list of prefixes and determine what kind of affix they are and what function they serve. We may further notice that we are dealing with copular verbs although there is no overt copula present in the phrase.

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agreement morphemes are the same entity and will provide a further analysis of this particle in section 4.2.3.

In fact Marshallese lacks a copular verb and thus only the basic form of adjective is used in those instances.

4.1.2 The reduplicated forms

The reduplicated forms of Table 4.1 which we call adjective-like words cannot be combined with the prefixes of examples (1)-(2) and (3). Adjective-like words can only be inserted between a noun and a definite determiner in a DP[4]:

(4) a. wa kileplep eo
boat big.SG DET.SG.N-HUM.
'the big boat' (Rudiak-Gould 2004: 201)

b. cup jidikdik eo
cup small.SG DET.SG.N-HUM.
'the small cup' (Willson 2003a: 5)

This is problematic for our hypothesis considering that we proposed that determiners are nominal inflectional affixes. Before we propose a hypothesis that would account for the adjunction of inflectional affixes onto the adjective-like words as opposed to the noun; we need to clarify the status of the prefixes encountered in section 4.1 and, most of all, we need to give an explanation as to why only the reduplicated forms can occupy the post-nominal position. To do so, we need to describe the verbal morphology of Marshallese more thoroughly.

4.2 Marshallese verbal system and morphology

Pagotto (1992) states that there are three types of verbs in Marshallese: (i) root intransitives to which a transitive suffix may be added; (ii) root transitive verbs with unpredictable derived intransitive counterparts; and (iii) suppletive pairs of transitive and intransitive forms. We can also add that there are intransitive verbs that have no transitive

[4] The CVC# reduplicant is present in singular adjectives whereas consonant doubling is used in the case of plural adjectives: 'kilep' → 'killep'; 'jidik' → 'jiddik' (Rudiak-Gould, 2004). We will not include further examples of consonant doubling for the remaining of the thesis; we will consider it on a par with CVC# reduplication.

counterpart and transitive verbs that have no intransitive counterparts (Willson 2008). To derive a transitive verb from an underlying intransitive, a suffix (*-uk* or *-ik*)[5] must be added as shown in (5):

(5) a. Leddik ro r-ar wia.
girl DET.PL.HUM. 3PL.AGR.-PST buy
'The girls did some buying.'

b. Leddik ro r-ar wia-ik mona ko.
girl DET.PL.HUM. 3PL.AGR.-PST buy-TR. food DET.PL.N-HUM.
'The girls bought the food.' (Willson, 2008: 42)

To derive an intransitive verb from a transitive one, reduplication may be used. Sometimes the whole CVC# is reduplicated, and sometimes the final part of the syllable is lost through the process[6]:

(6) a. Emmaan eo e-ar mwijit piik eo.
man DET.SG.N-HUM. 3SG.AGR.-PAST. cut.TR. pig DET.SG.N-HUM.
'The man cut the pig.'

b. Emmaan eo e-ar mwijmwij.
Man DET.SG.N-HUM 3SG.AGR.-PAST cut.INTR.
'The man did some cutting.' (Willson, 2008: 43)

There is also a category of verbs whose transitive and intransitive forms are exactly the same. In those cases an object marker may be added to the transitive verb and it is inflected according to the object of the verb: *-e* is used with singular and plural DP objects; *-i* is only used with plural non-human objects (Willson, 2008). The object marker is not to be treated on a par with the transitive suffix; both can be added to the same verbal root as displayed in Table 4.2. Suppletive forms are what constitute the third type of verb (see Table 4.3 below).

[5] These are phonologically determined.

[6] In the cases where deletion of final sounds is involved, Bender (1973) considers that it is the intransitive form that is built from the transitive one. However Abo et al (1976) consider it is the opposite. We will adopt here the former hypothesis because the latter hypothesis would involve a process of un-reduplication which is not attested otherwise.

Table 4.2 Transitive suffixes with object markers

Intransitive	Transitive	English
Eo	Eo-uk-(i)	'tattoo'
Umma	Umma-ik-(i)	'kiss'
Wia	Wia-ik-(i)	'buy'

(from Willson, 2008:42)

Table 4.3 Suppletive verb forms

Intransitive	Transitive	English
mona	kan	'eat'
idaak	limi	'drink'

(from Willson 2008: 41)

So far we saw that in order to change the number of arguments of a Marshallese verb, one must add a suffix. According to Di Sciullo (2005a; 2005b) predicate affixes have this property of changing the argument structure of a predicate. We have also seen (cf. Table 3.1) that a predicate affix occupies the head position of its minimal tree and therefore is subject to M-Flip. Marshallese transitive affixes changes the argument structure because they add an argument in the complement position. Reduplication is also a type of affixation and consequently Marshallese reduplicated verb forms indicate a change in the argument structure; an argument is eliminated to produce an intransitive reading. In the case of a N→V conversion (as in (7) below) the reduplication indicates that the noun will be placed in the complement position of a predicate structure. Therefore these lexically converted elements have the expected intransitive reading. At this point it is perhaps essential to further investigate reduplication in Marshallese.

4.2.1 Reduplication

The use of reduplication in Marshallese is motivated by many morphosemantic reasons (all examples are from Willson (2002)):

(7) To derive verbs from nouns:

Hat	'hat'	hathat	'wear a hat'
Kal	'loincloth'	kalkal	'wear a loincloth'
Wah	'canoe'	wahwah	'go by canoe'
Bahat	'smoke'	bahathat	'to smoke'
Jehet	'shirt'	jehethet	'to wear a shirt'
Jeqen	'walking stick'	jeqenqen	'to use walking stick'
Jeweb	'soap'	jewebweb	'to be soapy'
Jiwij	'shoes'	jiwijwij	'to wear shoes'
Kawaj	'blanket'	kawajwej	'to use a blanket'

(8) The formation of distributive words:

Bar	'rocks along the shore'	barbar	'full of rocks along the shore'
Bat	'hill'	batbat	'full of hills'
Beq	'sand'	beqbeq	'full of sand'
Det	'sunshine'	detdet	'full of sunshine'
Diy	'bone'	diydiy	'boney'
Tel	'mountain'	teltel	'full of mountains'
Haddimej	'feeble'	haddimejmej	'very feeble'

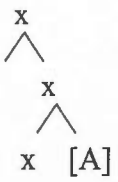
(9) Stative-Postpositional forms:

Deyaw	'be pretty'	deyawyew	'pretty'
Kawat	'be a thief'	kawatwet	'be a thief'
Kileb	'be big/corpulent'	kilebleb	'big/corpulent'
Mayan	'be smart'	mayanyan	'smart'
Mekaj	'be fast'	mekajkej	'fast'

One may notice that the base forms (whether nouns or verbs) in (7), (8), and (9) all end up being predicates when reduplicated[7]. The resulting predicates have an unaccusative argument structure i.e. it only has one argument located in the complement position as illustrated in (10).

[7] Willson (2002) also states that some transitive verbs may become intransitive with reduplication. However the glosses provided are somewhat confusing and thus we did not mention those examples.

(10)



The stative post-positional forms listed in (9) refer to those reduplicated base-forms used in DPs and positioned between the noun and the determiner. If the base-form of these stative verbs is a verb used in a copular sentence then there should not be any change in the argument structure due to the reduplication because copular verbs also have the structure in (10). However it might be an indication that the original primary predicate was turned into a secondary predicate i.e. an adjective. Because there is no copula in Marshallese, the form of the predicate (whether basic or reduplicated) seems to provide this information. So far we have examined the properties of verbal suffixes, let us now turn to prefixes.

4.2.2 The causative affix

Affixes that are subject to the operation M-Flip include the set of predicate affixes and also internal-bound operator affixes. We have covered both of these in previous sections. Some affixes however are not subject to this operation and therefore are usually described as being prefixes because they precede the word they attach to. One of these affix that concerns us specifically is the affix *ka-* (or *ko-*)[8] which is analysed as being a causative (Willson 2008; Zewen 1977; Pagotto 1992). To describe what this affix does to a verbal form we will use a verbal paradigm taken from Abo et al. (1976) with the word *dan* as its basis. Each form will be given according to the structures provided in (3.2.1). Notice that we have added the causative structure to the set of possible argument structures. Table 4.4 displays the possible morphological forms of the verb.

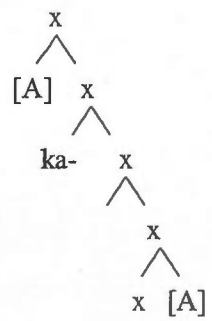
[8] The form is phonologically conditioned.

Table 4.4 Some verbal forms and their argument structures

Verbal form	Meaning	Structure
Dan	'to water'	unergative
Dan-e Dan-ik	'to water something'	transitive
Dandan	'to be watery'	unaccusative
*Dandan-ik		
Ko-dandan-(e)	'cause something to be watery'	causative (see 11)
*Ko-dan-(e)		

We can see with those examples that the basic form can take a predicate affix which makes it a transitive verb with two arguments or, it can be reduplicated and thus the argument structure change for an unaccusative structure. It is interesting to note that the stative reduplicated forms cannot take a transitive suffix. This is perhaps due to the fact that the complement position of the structure is already occupied by the single argument. If we turn now to the causative affix, we can see that it can be used with the stative reduplicated form, with a transitive suffix or not. The causative structure displayed in (11) shows that no argument is allowed in the specifier of the root[9]; only the complement position is available.

(11)



Following are some further examples from the dictionary of Abo et al (1976):

[9] The argument provided by the causative affix may be identified with the external argument of the root. For example *I cause the ice to melt* (to be in a melted state) vs. *I melted the ice.* In Marshallese the second structure seems to be unavailable with a reduplicated form.

(12) Ko-dandan-e juub ne
cause-to.be.watery -TR. soup DEM.SG.near the listener
'Dilute this soup' (Abo et al. 1976)

(13) E-ka-llulu jipij eo a-n
3SG.-CAUS-be.angry speech DET.SG.N-HUM. CL.-3POSS.
'His speech was provocative' (Abo et al. 1976)

The position of the affix in relation with the root it selects indicates that we are not dealing with a predicate affix per se. So we must look at some other consequences brought by this affix. Pagotto (1992: 256) notes that some verbs may not take the causative affix: these are root transitive i.e. inherently transitive. She notes however that some of these root transitive may have the causative affix iff the affix is used with the 'morphologically intransitive form'. The intransitive forms do not always show an instance of reduplication yet they are always glossed as being used with a copular verb (be...) indicating that they have only one argument located in the complement position and thus have an unaccusative argument structure. These forms are labelled stative verbs even though they are not inherently stative in their base form. The fact that the causative affix can only be used with a stative verb form might indicate that it changes more than the argument structure; perhaps it also influences the aspectual properties of the verb.

Di Sciullo (2005a; 2005b) discusses a type of affix which interacts with aspectual properties of the verb; the modifier affix.[10] These affixes occupy the head of their minimal tree they do not undergo M-Flip. We know that only verbs with stative readings can be selected by the affix *ka-*. This reading is one of the four possible aspectual reading to which a verb can belong (Vendler 1957)[11]. Stative aspect refers to an ongoing state (or perhaps event) with no precise endpoint and, as Vendler points out, this is true for all qualities. Now when a causative suffix has been added, this changes because the state has a precise endpoint. If we

[10] There are other types of modifier affix that do not concern aspectual properties. However we will not discuss these here because Marshallese has only one type of verbal prefix and it is the affix *ka-*.

[11] According to Vendler (1957) the four aspects are: state, activity, accomplishment, achievement. They can be subdivided into two subfields, whether they are composed of a series of mini-events of the same nature (activity, accomplishment) and whether they have an endpoint (accomplishment, achievement). Di Sciullo (2005a) proposes that a feature [±S] accounts for the subintervals (or mini-events), and a feature [±T] for the terminus (or endpoint).

go back to the examples in Table 4.2, only the reduplicated form refers to a quality or a state of being. When *ko-* is added to this form, we get an accomplishment reading because the process of making something (or someone) change state is over when the final state is reached. Thus the difference between *dandan* (be watery) and *ko-dandan-(e)* (cause something to be watery) lies in the aspectual property of the verb. This explains why only intransitive (with an unaccusative argument structure) counterparts of transitive roots can be selected by the causative affix. Willson (2008) further states that sentences with stative causatives cannot contain an object:

(14) *Jipij eo a-n e-ka-llulu eo
Speech DET.SG.N-HUM. CL.-3POSS 3SG.CAUS.-be.angry 1SG.OBJ.
'His speech angered me' (Willson 2008:28)

One might think it is due to the already present argument in the complement position of the predicate. A causative affix cannot add a new argument in the structure; a transitive verb cannot be turned into a ditransitive verb with the addition of a causative prefix. The function of the affix *ka-* is therefore to change the aspectual properties of the root it selects; turning a state into an accomplishment i.e. adding an endpoint to the event.

4.2.3 The agreement morpheme

We saw that the basic form of a verb can be attached to what has been termed an agreement morpheme as shown in the following examples:

(15) a. Nick e-marro
Nick 3SG.-be.thirsty
'Nick is thirsty'

b. E-maro Nick
3SG.-be.thirsty Nick
'Nick is thirsty' (Rudiak-Gould 2004: 16)

This appellation is due to the property of this affix to agree in semantic features with the noun it refers[12]. The pertinent question to ask is if this morpheme is an affix or not. Regardless of the fact that it seems to be directly attached to the verb, the function of this affix is not evident considering that it does not seem to change the argument structure of a predicate or change its aspectual properties in the way that a modifier affix does. The examples containing the agreement morpheme given so far may constitute an entire proposition and thus it is not clear whether we are dealing with morphology or syntax. The agreement morpheme has been widely described on a syntactic level (Hale 1998; Willson 2003a, 2008; among others). We will thus give a brief overview of the properties of this morpheme before proposing some further analysis.

The forms of the agreement morpheme are identical to some of the pronominal forms of Marshallese. There are three different forms for pronouns in Marshallese; they may be absolute/emphatic, subject or object:

Table 4.5 Marshallese pronouns

Person	ABS	SBJ	OBJ
SG			
1	ŋa	i	io
2	kwe	kwo	yok
3	e	e	e
PL1			
1 inclusive	kij	je	kij
1 exclusive	kim	kimi	kim
2	kom	komi	kom
3	ir	re	ir

(from Bender 1968: 5)

[12] It is not always the case however; in unaccusative sentences the agreement morpheme does not always agree. See Hale (1998) and Willson (2008) for discussion on this topic.

Interestingly, what corresponds to the agreement morpheme is the set of pronouns that refer to subjects. In propositions these agreement clitics always precede TAM (tense, aspect, and mood) markers. We should be cautious here about our assertion that all subject forms may act as agreement clitics; when in the presence of a full DP, only 3rd person clitics may be used. But when there is no DP then all other persons are available. It is obvious that DPs are always 3rd person but the question is whether or not the other person's forms can be considered agreement morphemes at all[13].

We know that there is no verb *be* in Marshallese; therefore one might propose that the agreement morpheme act as the copula. It is not the case however:

(16) Armij ri-jerawiwi
man one.who-sin
'man (is) a sinner' (Zewen, 1977: 82)

(17) Ir-ro alap
3PL.ABS.-two head.of.a.clan
'They two (are) heads of a clan' (Zewen, 1977: 83)

In those examples, we do not find any instance of the subject form of the pronouns. Even in (17) the pronominal used is the absolutive/emphatic form yet both sentences can only be translated as having a copular verb. Thus it is not the agreement morpheme that is responsible for this reading. However when these sentences are negated then one must add a tense marker to the proposition before inserting the negation marker:

(18) Armij e-j jab ri-jerawiwi
man 3SG.AGR.-PRS NEG one.who-sin
'man, he (is) not a sinner' (Willson, 2008: 69)

(19) Ir-ro re-j jab alap
3PL.ABS.-two 3PL.AGR.-PRS NEG head.of.a.clan
'They two, they (are) not heads of a clan' (Willson, 2008: 69)

[13] This yields the question as to whether Marshallese is a pro-drop language or not. In the current state of literature there is no answer to this question.

Any tense, aspect, modality markers and also adverbs may be added only in the presence of a subject pronoun. Whether the subject pronouns are suffixes or separate words is a question still debated. Nevertheless more than one TAM marker may appear in the same proposition and it is always the tense marker (if present) that precedes any other marker and/or adverb. Also, the tense marker never occurs without a subject pronoun suggesting that Marshallese is not a pro-drop language[14].

The status of these agreement morphemes seems to be more syntactic than morphological after all. The orthographic tradition presupposes these forms as being clitics to the TAM markers. However some other languages like Boumaa Fijian (which also have stative verbs like Marshallese) do not have the same analysis yet the word order is quite the same:

(20) e loaloa a ?olii ya
3SG be.black DET dog this
'This dog is black.' (Ross, 2004: 505)

Therefore, in our morphological analysis of Marshallese verbal system, these agreement morphemes cannot be taken into consideration because they do not change the argument structure of the predicate. Besides, the placement of these is hard to explain; because they always precede the predicate they should be considered as modifiers. Yet there is no evidence to suggest that it is actually the case. Thus we will assume that these have no consequence whatsoever in our analysis of verb-like adjectives argument structure.

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[14] In his typological study of Oceanic languages, Ross (2004) says that in most canonic languages the TAM markers are always adjacent to the subject pronoun. Furthermore, most of these languages have what he calls 'disjunctive pronouns' and 'the occurrence of a disjunctive pronoun co referential with either a subject or object marker in canonic languages is often described in the literature as "optional" (500). This is consistent with Marshallese absolute forms which can co-occur with a subject pronoun form although it is not obligatory.

4.3 Conclusion

This chapter was dedicated the various forms displayed by different types of predicates. We saw that morphological processes such as reduplication and simple affixation changed the properties of such predicates; whether their argument structures or aspectual reading. In doing so, we were mostly interested in those forms that may occur between a noun and a determiner in a Marshallese DP. What we have found is that these forms undergo a process of reduplication (or consonant doubling in the case of plurality) that turns a primary predicate into a secondary predicate i.e. an adjective. We have also discovered that such forms may be used with a modifier affix that changes the aspectual properties of the predicate it is attached to. Because the result of this affixation is to add an endpoint to the aspectual reading, it can only select a form with no such endpoint and the stative forms which comprise the reduplicated forms can be selected by the causative affix. Therefore to express adjectival properties inside of a DP (as opposed to a proposition that which is expressed with the agreement morpheme), the reduplicated stative form is the only possible choice. The question is therefore how we account for the fact that these adjectives can be inserted between a noun and a determiner if this one is in fact a nominal inflection. This is the topic addressed in the next chapter.

CHAPTER V

POST-NOMINAL ADJECTIVES

The problem of the placement of adjectives will be the focal point of this chapter because we need to give a reason as to why they can precede the inflectional affix that we would otherwise expect to follow the noun. We will propose that noun-adjective sequences are compounds and, as such, they may be followed by an inflectional affix as any other noun. Our task will be to describe the possible attested compounds of Marshallese and analyse them from the perspective of Asymmetry Theory.

5.1 The compound hypothesis

According to Di Sciullo (2005c; 2009) the parts of a compound are asymmetrically connected by a functional projection. Furthermore, the head of this projection might not always be phonetically realized. The functional projection that is included in all compounds has the configuration of an F- tree showed in (1):

(1)

Compounds may be classified as root (modification relation), deverbal (predicate-argument relation), or dvandvas (pair). The linearity of the components in a compound depends on the specific plane of the computational space favoured for the derivation; whether it takes place in the morphological or syntactic plane. For example French compounds 'have the internal structure of syntactic phrases, whereas this is not the case for English

compounds' (Di Sciullo 2005c:19). French compounds are derived in D_S and English compounds are derived in D_M. We must therefore find in which plane of the computational space are Marshallese compounds derived and if noun-adjective sequences share the same characteristics associated with Marshallese compounds.

5.1.1 The construct particle

Compounds have not been extensively described in Marshallese; to our knowledge only one example is available in the literature and we will cover it in the next section. We will start by analysing some type of construction involving a functional head and see if it fits the pattern of compounding. According to Bender (1969b:27) the construct particle *in* 'joins the word that precedes it and the one that follows it into a construction'. This particle can be translated in many different ways depending on the lexical categories of the joined elements:

(2) a. mmahan in Jepahan
man PART Japan
'man from Japan (Japanese man)' (Bender, 1969b: 27)

b. dan in idaak
water PART to drink
'drinking water' (Bender, 1969b: 27)

This particle always functions as a preposition and, apart from being used in compounds, they can also 'be used in agent phrases of passive constructions' (Willson 2008:97) as exemplified in (3):

(3) a. Wa ko r-ar karreo in leo.
car DET.PL.N-HUM. 3PL.-PST clean PART man.SG.H
'The cars were cleaned by the man.' (Willson 2008: 204)

b. Jaki ko re-kar lemlem in ajri ro.
mat DET.PL.N-HUM. 3PL.-PST fold.INTR. PART child DET.PL.H.
'The mats were folded by the children.' (Willson 2008: 197)

Willson (2003:6) further states that: 'it can be translated as ''X has the quality of Y''. In both examples in (2) the functional head is present and the order of the parts can never be reversed which is in accord to the asymmetry theory. Also, the object which is referred to always precedes its modifier: *Japan* specifies the type of man we are talking about and the verb *to drink* the type of water. In these compounds there is a modification relation thus we are dealing with root compounds. The position of the modifiers (adjuncts) in Marshallese is the same as in French and thus Marshallese root compounds are 'derived in D_S and transferred in D_M' (Di Sciullo 2005c:19). The fact that Marshallese compounds may include a phrasal constituent (a PP in examples (2a-b)) is another evidence of the derivation in D_S.

It is interesting to note that the construct particle is generally fused to the head noun triggering some phonological changes:

(4) a. em + in = mon → house of
b. manit + in = mantin → culture of
c. iar + in = arin → lagoon of (Rudiak-Gould, 2004; 51)

These forms are very productive in Marshallese:

(5) a. mon ar
house of to pray
'church'

b. mon wia
house of to buy
'store' (Rudiak-Gould, 2004; 51)

(6) a. mantin majel
culture of Marshall
'Marshallese culture'

b. mantin palle
culture of America
'American culture' (Rudiak-Gould, 2004; 51)

The definite determiners always follow these constructions; they can never be inserted between the elements of the compounds indicating that we are dealing with actual compounds:

(7) Kojro etal nan mon mona en a-n Kulara.
1PL.INCL.-two go to house.of.to.eat DEM CL.-3SG.POSS. Clara
'Let's go to Clara's restaurant' (Abo et al., 1976)

One point to notice in example (7) is that the demonstrative follows a verb directly. If we assume that definite determiners are nominal inflectional affixes, it would be unlikely to find them attached to verbs unless the latter have changed category somehow. Zewen (1977) argues that verbs and modal words can be carried into the class of noun when followed by what he calls a demonstrative pronoun (i.e. a demonstrative):

(8) a. mij → mij eo
die die DET.SG.N-HUM.
'to die' 'death'

b. Ilju → ilju eo
tomorrow tomorrow DET.SG.N-HUM
'tomorrow' 'the future' (Zewen 1977: 57)

Zewen (1977:109) further states that 'derived nouns' can be obtained in this way: noun + IN + attribute which is a nominalized verb. We may consider that what Zewen refers to are root compounds; compounds involving a verb are usually deverbal compounds and not root compounds. According to Di Sciullo (2005c) deverbal compounds have an impact on the argument structure of the verbal constituent of the compound. However it is not the case in the examples provided here because it is the noun that is modified. Consequently these are root compounds.

Marshallese compounds with an overt functional head are derived in D_S since the modifier adjunct follows the functional head on the one hand, and a phrasal constituent may

be part of a compound on the other. In the next section we will examine some attested compounds with no overt functional heads.

5.1.2 Compounds with no overt functional heads

Bender (1969b:205) in his grammar of Marshallese mentions only one type of compound words 'of which the first part behaves like a verb, taking subject prefixes, and the last part behaves like a noun, taking possessive suffixes'. He gives only one example:

(9) Itok-limo
come -interest
'arouse interest' (Bender, 1969b:205)

What he calls subject prefixes are actually either an agreement morpheme or a causative affix or both[1]:

(10) E-ka-[itok-limo]-i
3SG-CAUS.-[arouse interest]-1POSS
'It causes interest to me' (Bender, 1969b:205)

One must also consider that the verbal constituent of the compound can be reduplicated:

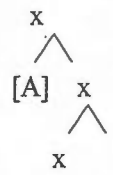
(11) E-ka- [itoktok-limo]
3SG-CAUS.- [arouse-interest INTR]
'It causes interest' (Bender, 1969b:205)

We saw in the section on reduplication (cf. 4.2.2) that this process yielded a stative verb form; so perhaps a more precise translation of (11) would be *it causes to be interested* or *it causes an arousing in interest*. Nevertheless the compound has a verbal head followed by a complement. In root compounds the modifier follows the head because of the operation S-Flip. However one might ask if we are still in the presence of a root compound with (9). The

[1] It is interesting to note that Bender considers that the suffix *–i* is not an object marker but rather a possessive suffix. The next chapter is dedicated to Marshallese possessive constructions but for the moment being let us assume that a possible translation of the form in (10) would be *it causes my arousing interest.*

noun *limo* does not seem to modify the verb but rather its argument structure; the verb *itok* 'to come' is an unergative verb with the argument structure shown in (12):

(12)



However, the addition of a complement (therefore another argument) changes the argument structure of the verb because it can actually bear an additional argument in the complement position. Moreover, when both constituents are joined together it is not a verb anymore but a noun (Abo et al. 1976). Therefore we may positively suppose that we are in the presence of a deverbal compound. We will assume that Marshallese deverbal compounds should be derived in D_S like root compounds based on the ordering of the constituents which reflects the linearity of syntactic phrases of Marshallese. Once a compound is derived in D_S it is transferred in D_M where morphological derivations like affixation and reduplication can occur. Let us turn to the topic of noun-adjective sequences and see if they follow the same pattern as typical Marshallese compounds.

5.1.3 Noun + adjective compounds

Now that we have asserted in which computational plane Marshallese compounds are derived in we may return to the topic of noun-adjective sequences and see if they follow the same pattern as Marshallese compounds.

(13) a. wa kileplep eo
boat big.SG DET.SG.N-HUM.
'the big boat' (Rudiak-Gould 2004: 201)

b. cup jidikdik eo
cup small.SG DET.SG.N-HUM.
'the small cup' (Willson 2003a: 5)

The reduplicated form is a secondary predicate that we may assume is the equivalent of an adjective in languages which have this lexical category. The noun that precedes it is modified by the adjective. As we saw (cf. 5.1.1) compounds with the construction particle *in* can be translated as 'X has the quality of Y' and the part of the compound which expresses the modification follows the noun it modifies; this is exactly what we find in (13) even though there is no overt functional head. The linearization of the constituents is the outcome of the operation S-Flip because Marshallese compounds are derived in D_S. The definite determiner that follows the compound may thus be a nominal inflection attached to the newly-formed noun.

Compounds cannot be broken once they are sent to D_M because 'their internal structure is no longer accessible to the operations of D_S' (Di Sciullo 2005c: 20). Therefore we can make the prediction that Marshallese N-A compounds cannot be internally modified. The way Marshallese speakers use multiple adjectives in a proposition is perhaps evidence that we are dealing with compounds. Although Willson (2003a) considers that Marshallese speakers may use adjective stacking, she also states that 'it is unclear as to weather Marshallese speakers spontaneously produce structures with two adnominal adjectives of if they were produced because of the elicitation by the linguist' (Willson, 2003a:13). That being said the preferred method is to 'use reduced relative clause when there is more than one adjective' (Willson, 2003a: 6):

(14) a. wa emmonmon eo e -buroro[2]
car good.SG DET.SG.N-HUM. 3SG-be.red
'the good car, it is red'

b. juon cup emmonmon e-roulul
one cup good 3SG.-be round
'one good cup, it is round' (Willson 2003a: 5)

[2] Although *buroro* display a reduplicated CVC# this word does not have an unreduplicated counterpart (Willson 2008). Since it is attached to a pronominal we consider that it is the basic verb form and not the adjective; example (63b) also has a basic verb form attached to a pronominal and it is not reduplicated.

Example (14b) is interesting since it has a numeral (that acts as singular indefinite determiner) in the DP head position so the compound is not inflected otherwise. Still, only one secondary predicate is allowed to follow the noun; the second one must be the basic verb form attached to a pronominal. If one were to express more than one quality related to a particular object then the object is singled out and both predicates appear in their basic form with a pronominal:

(15) cup eo e-roulul im buroro
cup DET.SG.N-HUM 3SG.-be.round and be.red
'the cup (it is) round and red' (Willson, 2003a:12)

A conjunction could not be used after a noun and before a determiner: *the round and red cup* is not a possible construction in Marshallese. Therefore the only possibilities for more than one predicate to modify the same noun are *the cup is round and red* (15) or *a good cup is round* (14b). The restriction against inserting a second predicate within an N-A sequence might indicate that we are in the presence of a compound that cannot be further modified except by inflection i.e. the definite determiner.

5.2 Conclusion

Marshallese compounds whether they have an overt functional head or not are derived in D_S. This is true for both root compounds and deverbal compounds. The noun-adjective sequences that are followed by a definite determiner share the same characteristics as root compounds; the modifier follows the noun it modifies and, the linearity of the components is analogous to syntactic structures. Moreover, the unreduplicated form of the verb cannot be inserted between the noun and the definite determiner; if the determiner is in fact a nominal inflection then it cannot be used with a verbal form. The restriction imposed on the form of the predicate that may follow a noun and modifies it and the impossibility of using two secondary predicates with a noun is perhaps additional evidence that the definite determiners and demonstratives are in fact inflectional affixes that can only be bound to nominal forms.

CHAPTER VI

POSSESSIVE CONSTRUCTIONS

So far we have analyzed the behaviour of definite determiners in simple DP structures. However there are other types of structures which could give us more evidence on the properties of determiners and their function within the DP: possessive constructions. An closer examination of the properties of possessive suffixes might extend our understanding on the behaviour of Marshallese inflectional affixes. This chapter will thus focus on possessive constructions; the linearity of the components within these structures might bring more evidence to the effect that definite determiners are nominal inflectional affixes rather than elements of the category D.

6.1 Two types of possessive constructions

There are two ways to mark possession in Marshallese: (i) a possessive marker is added directly on the possessed noun; (ii) the possessive marker is added to a possessive classifier. With inalienable possessions, such as body parts and kinship nouns, we use (i); with alienable possessions we use the construction in (ii) (Willson, 2008).

6.1.1 Inalienable possessions

In possessive constructions involving an inalienable possession, the latter is attached to what is conventionally called a possessive suffix. The list of these is shown in Table 6.1:

Table 6.1 Possessive Suffixes

SG	PL
1—i,o,a,u (phonologically determined)	1EXCL -m
2 -m	1INCL -d
3 -n	2 -mi
	3 -er,-ir (phonologically determined)

(from Willson 2003a: 8)

It is not clear whether the possessive suffix reflects the features of the possessor or those of the possessee/possession:

(1) Jine-n ajri eo e-ar ba nan e bwe
mother-3SG.POSS. child DET.SG.N-HUM. 3SG.AGR.-PST say to 3SG.ABS. that
e-n ukkure inabwōj.
3SG.AGR.-COND. play outside
'The child's mother said to her that she should play outside'
(Willson, 2008:63)

(2) Jine-n ajri ro e-ar ba nan er bwe
mother-3SG.POSS child DET.PL.HUM. 3SG.AGR.-PST say to 3PL.ABS. that
re-n ukkure inabwōj.
3PL.AGR.-COND. play outside
'The children's mother said to them that they should play outside'
(Willson, 2008:63)

(3) Jine-ir e-ar ba nan er bwe re-n
mother-3PL.POSS. 3SG.AGR.-PST say to 3PL.ABS that 3PL.AGR.-COND.
ukkure inabwōj.
play outside
'Their mother said to them that they should play outside'
(Willson, 2008:63)

In examples (1) and (2) the presence of the possessor(s) is overt while in example (3) it is not. We can see the difference in the possessive suffix used; when the possessor is overt,

the suffix is inflected according to the features of the possessee. When the possessor is not present, then the suffix inflects for the possessor. Furthermore 'the third person plural suffix is never used with overt third person plural DP possessors' (Willson 2008:63). This is what we have in (2) and according to this we may positively assert that the possessive suffix of inalienable possession never in fact reflects the features of the possessor when this one is overt.

Another point of interest is the function of Marshallese determiners within possessive constructions. In possessive constructions with inalienable possession the determiner is not the head of the subject DP but rather one part of it; this is shown by the lack of agreement between the determiner and the agreement morpheme:

(4) Re-metak nei-n leddik eo˙
3PL.-be.hurt leg-3SG.POSS girl DET.SG.N-HUM.
'The girl's legs hurt' (Willson, 2008:64)

The subject in example (4) i.e. *the legs* is definitely plural because the agreement morpheme on the verb is. However, there is no overt plural mark on the subject DP; the definite article is singular (as is the owner of the legs) and the inalienable possession is not marked for plural either but rather have the possessive suffix inflected for the possessor attached to it. But as we saw in (2) even if the owner of the legs in (4) would have been plural, the possessive suffix would still be singular. Therefore saying that the inalienable possession is inflected for the possessor is inaccurate. The plurality of the DP is expressed on the verb and the definite determiner qualifies only the possessor. Therefore to say that it is the actual determiner of the whole DP is erroneous. Given that we suppose Marshallese DP head position is always empty, we expect the lack of an overt determiner in possessive constructions. Following this we may assume the definite determiner in (4) is an inflectional affix especially since the features of this affix corresponds to the features of the noun preceding it (which is singular) and not to the whole DP (which is plural).

6.1.2 Alienable possessions

The possessive suffix cannot be attached directly on the possession in possessive constructions involving an alienable possession; it is rather suffixed to a possessive classifier. A partial list of classifiers is displayed in Table 6.2 below.

Table 6.2 Marshallese possessive classifiers

Category	CL.
Cherished person/thing, such as child, pet musical instrument, appliance, toy	neja-
Drink	lime-, nime-
Dwelling place	imo-
Food	kija-
General	a-
Vehicle, boat	wa-
Adornments	maro-
Bait	mora-
Eating implements, kitchen ustensils	niu-
Mat	kinio-
Personal possession	mweio-
Plants	kotka-
Prey	kwona-

(from Willson 2008: 65)

The interesting fact about these constructions is that the classifier refers to the possession but it is inflected for the possessor:

(5) E-nno kola eo nime-m
3SG-be.delicious cola DET.SGN-HUM. drink.CL-2SG.POSS.
'Your cola is delicious' (Willson 2008:65)

(6) Balun eo wa-n
airplane DET.SGN-HUM. vehicleCL-3SG.POSS.
'his/her airplane' (Willson 2003:7)

In examples (5) and (6), the possessor is covert and the affix represents the features of the possessor. This is not unlike inalienable constructions in which the possessor is absent (see (3)). In possessive constructions involving an alienable possession the word-order is fixed: '*PossessedNoun DefiniteDeterminer PossessiveClassifier-PossessiveSuffix (Possessor)*' (Willson 2008: 65). The possessive classifier can never precede the possessed noun when this one is used with a determiner:

(7) a. Juon kora e-ar kwalkol nuknuk ko a-n Lucy
a woman 3SG.AGR.-PST wash.TR dress DET.PL.N-HUM. CL-3SG.POSS. Lucy
'A woman washed Lucy's dresses' (Willson 2008:65)

b. *Juon kora e-ar kwalkol a-n Lucy nuknuk ko
a woman 3SG.AGR.-PST wash.TR CL-3SG.POSS. Lucy dress DET.PL.N-HUM.
'A woman washed Lucy's dresses' (Willson 2008:66)

In examples (7) the direct object of the sentence is *the dresses* and not *Lucy's dresses*; the restricted word-order points toward the direction of *the dresses of Lucy* with the possessive operator following the possessed noun and not the other way around. We may propose at this point that Lucy is not part of the object DP but rather the head of a complement PP. This would perhaps explain the restriction against moving the possessor in a position higher than the definite determiner. However this restriction does not apply when the possessed noun is indefinite and plural: in this particular instance the classifier + suffix unit can precede the possession:

(8) a. E-wor kije-n John jikka im lime-n Mary pia
3SG.-exist CL.-3SG.POSS John cigarettes and CL.-3SG.POSS. Mary beer
'It exists, John's cigarettes and Mary's beer' (Willson 2008:66)

b. Bolen i-naaj wia a-n Mary juuj bajjek
Maybe 1SG.AGR.-FUT. buy CL.-3SG.POSS.Mary shoes for.no.important.reason
'Maybe I am going to buy Mary some shoes for no important reason'
(Willson 2008:67)

Considering this, it is not just a restriction imposed on the placement of the possessive operator that is responsible for the word-order of Marshallese possessive constructions. Something else must be responsible for this linearization. A closer examination of the structure of possessive constructions of another Micronesian language might provide insight into this specific issue. Furthermore we need to assert the status of possessive suffixes used in conjunction with the possessor; when the possessor is covert the suffix is inflected for the possessor but when the possessor is overt then we always have the 3rd person singular suffix regardless of the features of the possessor. These issues will be addressed in the next section.

6.2 Analysis of possessive constructions

The restrictions in word-order in possessive constructions of Marshallese regarding the placement of the definite determiner and the absence of correlation between the features of an overt possessor and the possessive suffix are issues of importance in the analysis of Marshallese possessive structures. The first part of this section is dedicated to restrictions in word-order and the second part will be concerned with the features of the possessive suffixes and their status as operators.

6.2.1 Possessive vs. benefactive reading

Song (1997) in his analysis of Micronesian possessive classifiers proposes that in fact these classifiers act as benefactive markers. Kusaiean (also known as Kosraean) is a close relative of Marshallese, especially regarding the position of definite determiners; the two languages have their determiners follow the noun. Besides that, the word order of both languages is pretty similar:

(9) nga mole-lah rais ah la-I Sohn
1SG buy-ASP rice DET CL-3SG:POSS John
'I bought the rice for John.' (Song, 1997: 33)

This example shows clearly that the direct object is followed by the determiner and then we have the classifier + possessive suffix. However, we do not have a possessive reading but rather a benefactive; *John* is not part of the same phrase as the direct object but is rather inside a PP. If one had wanted to express that the rice was being the possession of John then the word order would be different:

(10) nga mole-lah rais la-I Sohn ah
1SG buy-ASP rice CL-3SG:POSS John DET
'I have bought John's rice.' (Song, 1997: 33)

The determiner is not in the same position in (9) as in (10); it follows the possessor and not the possession. Therefore to include *John* in the object, the determiner must be the final element of the DP. Only in this way can we get a possessive reading. This construction is not available in Marshallese due to the restriction of moving a possessor over a possession. One could extrapolate and suggest that the same benefactive reading applies for Marshallese. Therefore sentence (7a) would be a benefactive one and the classifier + possessive suffix unit would serve this function. A more accurate translation would thus be: *a woman is washing the dresses for Lucy.*

Despite the fact that a construction such as (10) is not available in Marshallese, the examples in (8) might suggest that movement is blocked because of formal restrictions not because of semantic restrictions since movement is allowed when no overt determiner is present. The movement of the possession over the possessor in alienable construction is constrained because the actual possessive reading (as in Kosraean) with a determiner following the whole object DP is unavailable. Therefore only the benefactive reading might be applicable such that (8a) could be translated as: *There are cigarettes for John and beer for Mary* and (8b) could be: *Maybe I am going to buy some shoes for Mary for no important reason.* Or perhaps the reason this movement is not available is because we are not dealing with a determiner but rather an affix and this affix may only be attached to a noun and not an

entire possessive construction as in Kosraean. The actual status of determiners might be the difference between Marshallese and Kosraean that is responsible for the different types of constructions allowed in each language. Kosraean allows the determiner to be final in possessive constructions because it *is* a determiner. In Marshallese it is not a determiner but rather an inflectional affix so it cannot be the head of the whole DP. So the possessive reading is not available because there is no available way to include the possessor inside the object DP. Other languages of the Micronesian family also have a benefactive reading in application with the possessive classifier system (see Song 1997 for more details).

In his paper, Song (1997) suggests that there are three types of benefactive marking in Micronesian languages; Kosraean belonging to the P-Type (P standing for possessive). However Marshallese is considered to belong to the V-Type (V for verb) because the preposition *nan* which can be used for benefactive reading is assumed to descend from a verbal form (Pagotto 1987). This preposition does not take possessive affixes but rather object pronoun inflections (cf. 4.2.1). Yet the structure of possessive constructions of Marshallese is strangely similar to the P-Type constructions of Kosraean (compare (7a) and (9)). There is still a third type of benefactive marking to which only one language belongs: the N-type (N for noun) displayed in Gilbertese:

(11) te mm'aane e a tiani katea te auti
DET man 3SG.SBJ. PERF build DET house
i buki-n te aine
PREP PREP-3SG.POSS. DET woman
'The man built a house for the woman.' (Song, 1997: 39)

Gilbertese benefactive marker *i-buki* combines with possessive suffix *–n* to express a benefactive reading. The fact that the 3rd singular possessive suffix of Gilbertese is similar to the Marshallese one may be a coincidence, or not. The word it is attached to is a noun; *buki* refers to a body part (buttocks). Marshallese classifiers to whom the affix attaches to are also nouns referring to specific types of objects. This similarity might not be fortuitous; when the possessor is present in the Marshallese construction, only *–n* is a possible affix. However when the possessor is not present the whole range of affixes are available and, furthermore,

they must reflect the φ-features of the covert possessor. From this we may suggest that when the possessor is present we are actually dealing with a benefactive sentence and when it is not, then and only then, do we have an actual possessive construction. The impossibility of having a possessor preceding a possession with a definite determiner is also an indication that a possessive reading is forbidden with the presence of a possessor; if the possessor precede the determiner then we might get a possessive reading as in Kosraean (cf. (10)).

6.2.2 The possessive affix *–n*

The 3rd person singular possessive affix *–n* is the default when the possessor is present in the construction, regardless of the actual features of the possessor. We saw (cf. 6.2.1) that N-Type benefactive marking in Gilbertese is expressed by *–n* suffixed to a noun. In Marshallese, the same suffix is added to a possessed noun or a classifier when the possessor is overt. We therefore need to assert the status and function of this affix to clarify the properties of Marshallese possessive constructions[1].

We know that when we are dealing with a suffix it is either a predicate affix or an internal bound operator affix. The fact that this affix does not always reflect the φ-features of the possessor as in (2) might indicate that it is not a variable to an operator. Perhaps one would assume it agrees with the verb (the agreement morpheme) yet this is contradicted by (3). Let us therefore look more closely at the other possibility; that we are actually in the presence of a predicate affix. This subsumes that the structure of the predicate is somehow changed, which is not completely erroneous because we add another participant in the event i.e. the possessee and/or possession.

The possessive suffixes can be used not only in possessive constructions but also with an inalienable noun whose function is to add another participant:

(12) ippa-mi
with-2SG.POSS.
'with you (pl)' (Willson, 2003: 8)

[1] Willson (2003a) says that Bender (1969) mentions a construct particle *–n* that is different from the possessive suffix. We have not been able to find this particular reference as of now.

Although the noun *ippa* is usually translated 'with', especially when combined with 3rd person singular or plural possessive suffixes, it is not considered a preposition.

Also, when the possessor is not overt, then and only then, do we have the possessive suffix inflected for the alleged possessor. One might assume that this reflects the addition of another participant by giving precisions as to its φ-features. Although it is not so clear how an additional participant in a possessive construction may be expressed on the predicate, when it is used with the noun *ipp-* it is more apparent:

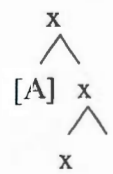
(13) Bill e-muri ippa-n Isaac
Bill 3SG-owe (INTR) with-3SG.POSS. Isaac
'Bill owes Isaac' (Willson, 2008: 30)

(14) Bill e-muri-ik juon wa ippa-n Isaac
Bill 3SG-owe (INTR)-TR a car with-3SG.POSS. Isaac
'Bill owes Isaac a car' (Willson, 2008: 30)

(15) Isaac e-j ka-muri-ik Bill wa eo wa-n
Isaac 3SG.AGR.-PRS. CAUS.-owe-TR Bill car DET.SG.N-HUM. CL.-3SG.POSS.
'Isaac is lending Bill his car' (Willson, 2008: 30)

In (13) the verb is intransitive and thus has the following structure:

(16)



The function of the noun *ipp-* combined with a possessive suffix is equivalent to a preposition; this is certainly why it is always translated as such. But being a noun, it should be understood as a direct object when placed in the position it has in (13); yet it cannot be because the verb itself does not allow an internal argument. Only when it is combined with the suffix can the interpretation be changed. We should also point that the verb form in (13) and (14) is in fact a verb-like adjective so perhaps the translation provided with the data is

incorrect and should be something like: '*Bill is indebted*' or '*Bill is liable*'[2]. It is necessary to specify at this juncture that no prepositions of Marshallese can be combined with the possessive suffixes; in fact, some of them may have a resumptive suffix *–e* which corresponds to the 3rd singular pronominal form:

(17) Juon kora e-ar lo-lok emmaan eo me
a woman 3SG.AGR.-PST visit-away man DET.SG.N-HUM.. that
Konio e-ar le-lok juon bok nan-e..
Konio 3SG.AGR.-PST. give-away a book to-3SG.OBJ.
'A woman visited the man that Konio gave a book to' (Willson, 2008: 60)

This resumptive suffix is absent when the preposition is followed by an overt DP. In light of this, if *ipp-* was a preposition then it should take the resumptive suffix rather than any possessive endings. Continuing our investigation on argument structure, example (14) has the same verbal form as (13) to which a transitive suffix has been added. However, the proposition has also been augmented with one argument which is the direct object (as specified by its position). Therefore the structure shown in (16) must also include an internal argument. According to this, there is no available position for a third argument and thus we need to add the construction *ipp* + possessive suffix.

Example (15) is different and quite intriguing; to begin with it has a possessive construction involving an alienable possession. These constructions are somewhat different from those with inalienable possessions: they must obligatorily imply a possessive classifier. Secondly, there is no trace of *ipp-* in the sentence but rather the possessive suffix is added directly to the classifier. The verbal form of (15) involves a modifier affix *ka-* which turns the stative reading of the root into an accomplishment (cf. 4.2.3). It is perhaps not a coincidence that the possessive suffix is attached to *ipp-* with inalienable constructions but attach to the possessive classifier when there is an alienable object implied. It seems that the function of the suffix is the same in both instances.

[2] In the online dictionary of Abo et al. (2009) all three interpretations are listed for this word.

Thus the function of the affix *–n* is to add another participant in the proposition albeit indirect; it is what prepositions do. Looking back at the data from Gilbertese (see (78)) this is exactly what we find: the affix *–n* attaches to a preposition and this bipartite structure gives the actual benefactive reading to the sentence.

Although *–n* can be used either with or without the presence of the possessor in a possessive construction, when the possessor is overt we have a benefactive reading, and when the possessor is not overt then we have a possessive reading. Table 6.3 might make this clearer but in order to illustrate properly what the table entries mean we need to assert the following. Just bear in mind that possessive constructions are composed of two different units each comprising many elements: the possessed noun unit which may contain a definite determiner or not and the classifier unit which contains the possessive suffix as well and may also contain the possessor or not. Each unit will be represented within brackets. Furthermore when only the *–n* affix is available in a position then it will be indicated as such. Otherwise only 'suffix' will be mentioned indicating that the whole range of possessive suffixes is available in that position.

Table 6.3 Possessive structures and their reading

	Possessed Noun unit	Classifier Unit	Reading	Example
A	[Possession –Det]	[Classifier-Suffix]	possessive	(6)
B	[Possession –Det]	[Classifier –n + Possessor]	benefactive	(7a)
C	*[Classifier –n + Possessor	[Possession –Det]		(7b)
D	[Classifier –n + Possessor]	[Possession]	benefactive	(8a-b)
E	*[possession]	[Classifier –n + Possessor]+ Det	possessive	(10)

Examples A and B are instances in which the Classifier Unit follows the Possessed Noun Unit. The movement of the Classifier Unit over the Possessed Noun Unit is not available in Marshallese (as in C) unless there is no definite determiner in the Possessed Noun Unit as shown in (D). Example E shows the structure of a Kosraean Possessive Structure; notice that the determiner is not part of the Possessed Noun Unit anymore but is

now in the Classifier Unit. Two things can be deduced from this. The first one is that a definite determiner cannot be separated from a possessed noun in Marshallese. The second one follows from the first; the determiner can never be at the end of the whole possessive construction as in Kosraean. According to our hypothesis that definite determiners of Marshallese are nominal inflectional affixes, we could in fact predict the impossibility of separating the possessed noun from its affix and attach the same affix to a classifier or a proper noun (such as a possessor) instead.

Furthermore the possessive structure of Kosraean in E is not available in Marshallese because Marshallese is a head initial language and this is also true for DPs; the D head is phonetically null and could not be moved at the end of the possessive construction as in Kosraean to produce the same possessive construction. Therefore only the benefactive reading of B and D are available for Marshallese when the possessor is overt. This is instantiated by the benefactive structure of the Kosraean construction that is similar to B.

We may also notice in Table 6.3 that the presence of the possessor (and therefore the *–n* affix) corresponds to a benefactive reading. In our discussion on the affix *–n* we have proposed that this affix introduces an additional argument in the proposition that is indirect. This affix attaches only to nouns (not prepositions as in Gilbertese) and yet serves the same purpose as prepositions do in many other languages including French or English. The additional argument is the possessor and this is why both the possessor and the affix *–n* can only appear in conjunction. The only possessive reading available in Marshallese is therefore when the possessor is not overt; in such cases the whole range of possessive suffixes may be used and the suffix chosen must reflect the features of the possessor as in A.

The structure in A displays a variable in the form of a possessive suffix. This variable needs an operator to bind with yet none seems to be available. Consider the following example:

(18) Leddik eo e-ar koot-e buruo-o
girl DET.SG.HUM 3SG.AGR.-PST. steal-TR heart-1SG.POSS.
'The girl stole my heart' (Willson 2008:63)

The possessive suffix is attached to the direct object and there is no determiner, definite or indefinite, in the object DP. However the features of the possessor are expressed with the possessive suffix. We have already supposed that Marshallese does not have an overt D head yet the quantificational operator is still present in the D position albeit covert. This phonetically null operator is believed to bind a variable externally when we are in the presence of definite determiners since we consider those inflectional affixes. We thus suggest that the possessive operator functions in the same manner i.e. it is covert but can still bind a variable externally. This operator is localized in the D head and unlike French or English which use bipartite structures to express possession (English: *h-er*, *h-is*; French: *m-on*, *m-a*, *m-es*), Marshallese uses only the overt variable and this one is suffixed to the possessed noun because of the lack of overt operator.

6.3 Conclusion

The type of affix we are dealing with in possessive constructions is indeed very ambiguous: when it displays the φ-features of the possessor it seems we are dealing with an operator affix. However when it does not display any features associated with a possessor, then we are in the presence of an affix whose function is to mark the vicinity of an additional argument not otherwise specified in the predicate argument structure. Going back to the idea that possessive suffixes are operator affixes, it is clear that such an affix is very much alike the definite determiners in that it does not bind a variable internally but rather externally; the variable is bound not on a specific morpheme whose category is defined as a determiner but to a member of the nominal category. Many languages like English and French have roots expressing possession to which a precise inflection will be added according to the features of the possessor (as in English) or possession (as in French). No such roots are available in Marshallese and thus the variable must be suffixed to a nominal in D_M but still binds its operator in D_S. We may further assume at this point that, within a language, variables are always bound in the same computational space. If this is so then, just like possessive suffixes are inflectional affixes in Marshallese, so are the so-called definite determiners and demonstratives.

CONCLUSION

In this thesis we have proposed that Marshallese definite determiners and demonstratives are nominal inflectional affixes rather than elements of the category D. The starting point for this hypothesis was that these determiners are in a final position within a DP although Marshallese is a head-initial language. To account for this peculiarity we have used the theory of morphology proposed by Di Sciullo (2005a; 2005b) that is based on the premise that morphological relations are purely asymmetric. According to this theory determiners are bipartite operator-variable affixes composed of a root operator which binds a variable word-internally. However, the examination of the different parts of Marshallese determiners and their fixed ordering suggests that the operator is in fact covert and, as a consequence, the variable must be bound in syntax. This entails that the variable is suffixed to a noun rather than a root with a [D] feature. The absence of such root suggests that Marshallese also lacks an overt D head.

The primary complication to this hypothesis was that we could find an adjective between a noun and a determiner in Marshallese. However we have proposed in Chapter 5 that noun-adjective sequences of Marshallese were actually compounds. Based on Di Sciullo (2005c; 2009) who considers that parts of compounds are asymmetrically connected by a functional projection, we have analyzed Marshallese root and deverbal compounds and found that they were in fact derived in syntax since the modifier adjuncts in both instances followed the head; noun-adjective sequences follow the same pattern. Our hypothesis was also corroborated by the impossibility for two or more adjectives to be consecutive within a DP. Thus we concluded that noun-adjective sequences are compounds bearing the lexical category noun; a determiner following this unit is therefore a nominal inflectional affix.

We have also discussed possessive constructions and found that, unlike previous analyses have suggested, Marshallese has both benefactive and possessive constructions. The

former are characterized by the presence of the possessor which is actually a benefactor and the latter, with no overt possessor are the actual true possessive constructions. We have concluded that since Marshallese has no overt D head then possession can only be expressed with a suffixed possessed noun rather than with an overt operator binding a variable (expressing the features of the possessor) word-internally like French or English.

The conclusion of this thesis is that Marshallese lacks overt D heads and, as a consequence, variables can only be bound word-externally; in this case to a noun. The post-nominal position of Marshallese determiners and demonstratives is thus a direct outcome of the operation M-Flip since they are only inflectional affixes and not elements of the category D.

This property of Marshallese is well attested in other Micronesian languages i.e. that determiners may follow the nouns although the language is head initial. The Kosraean and Gilbertese languages mentioned briefly in chapter 6 are good examples. As we proposed in the last chapter different readings are available depending on the possible structures encountered in each language. Furthermore the nature of the determiners, whether they are actual determiners or inflectional affixes, is responsible for the various possibilities of interpretation. Therefore further investigation of this phenomenon should be undertaken as a mean of understanding the parameters that are responsible for language variation.

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