

University of Adelaide Press

Chapter Title: nouns and noun classes

Book Title: Worrorra

Book Subtitle: a language of the north-west Kimberley coast

Book Author(s): Mark Clendon

Published by: University of Adelaide Press

Stable URL: <https://www.jstor.org/stable/10.20851/j.ctt1sq5wtw.10>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at <https://about.jstor.org/terms>



This content is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License (CC BY-NC-ND 4.0). To view a copy of this license, visit <https://creativecommons.org/licenses/by-nc-nd/4.0/>.



University of Adelaide Press is collaborating with JSTOR to digitize, preserve and extend access to *Worrorra*

JSTOR

Four: nouns and noun classes

This chapter is concerned with nouns as word-forms that refer to *types* of things, while Chapter Six deals with nominal expressions as denoting *instances* of those types (cf Langacker 1991:51). Worrorra referring expressions may be described by reference to at least three independent parameters with formal consequences:

| | |
|-----------------|---|
| Classificatory: | by way of a five-way gender partition |
| Lexical: | by way of a four-way morpholexical division |
| Animacy: | by way of a two-way split, pluralizable vs non-pluralizable |

Classificatory

Worrorra nouns occur as members of one of five classes or genders. These are a *masculine* class, a *feminine* class, a *celestial* class, a *terrestrial* class, and a minor class of *collective* nouns containing probably about a dozen members. Although some genders may be neutralized in some situations (see especially Chapter Nine), genders and noun classes do not constitute separate categories in Worrorra, as they do in some languages such as Mayali (Evans 2003), so that the terms ‘gender’ and ‘noun class’ may be used here synonymously. The two non-human genders referred to here and in Clendon (1999) as *celestial* and *terrestrial*, are referred to by Love (1934) as the *wuna* and *mana* classes respectively. Love named these genders after the definite articles used with their members (*wunu* and *mana* in my experience) (see Chapter Seven). Gender-marking is exhaustive and unique; the gender of the head of a noun phrase controls agreement on adjectives, inalienable nouns, pronouns and verbs and is essentially invariable with respect to each noun. Gender in Worrorra is described in §4.1.

Lexical

Simple nouns are fully lexicalized, meaning that they do not require additional bound morphemes in order to become utterable words. They may or may not display gender-signalling morphemes as part of their formal construction. The second and third nominal categories (below) constitute examples of external possession, as described in the volume edited by Payne & Barshi (1999).

The second lexical category comprises nouns that refer to parts of some whole which, when viewed from the perspective of traditional Worrorra culture, are deemed to be inalienable, or, as Chappell & McGregor (1996) put it, fall within the ‘personal sphere’ of some ‘owner’ or some whole of which the denotatum is a part. The ‘whole’ entity is indexed on nouns of this category by way of a set of inflexional person, number and gender-marking prefixes, with the result that inalienable nouns exhibit double agreement-class marking. Most inalienable nouns refer to parts of the body, but some refer to parts of the person such as =*ngumbu wunu* ‘name,’ =*yula inja* ‘anger’ and =*ngaanja inja* ‘shadow; soul, spirit.’

The third category contains nouns that refer to kinfolk, or kinship nouns. These are derived from underlying root (vocative) morphemes by way of a set of derivational suffixes that index the agreement-class of the propositus (the ‘possessor’) on the head noun.

The fourth subcategory is derived from underlying root morphemes by way of a set of person, number and gender-marking affixes. These forms refer underlyingly to states rather than to entities, and are here termed adjectives.

Lexical subcategories may be summarized as follows:

- (i) *simple nouns*: have inherent gender,
- (ii) *inalienable nouns*: composite, inflexional, display double agreement-class marking,
- (iii) *kinship nouns*: composite, derivational, have natural gender,
- (iv) *adjectives*: composite, derivational, gender agreement with head.

Simple nouns are discussed in this chapter. Inalienable nouns and adjectives are described in Chapter Six. Kinship nouns are discussed in Chapter 13, and an inventory of kinship nouns is provided in Chapter 18.

Animacy

Human nouns and nouns that refer to important animals and to foods may be pluralized. Nearly all pluralizable nouns are either masculine or feminine; I know of only two that are not; *wunu marruku* ‘flower’ is promoted to the set of pluralizable nouns when flowers are being considered as food for some animals such as possums or echidnas, and *mana rambarr* ‘avoidance-category kin.’ This last appears to be a *Wandernwort* in the Kimberley, denoting in Worrorra a superordinate or category term covering a number of kinship designations whose referents stand in restricted or prohibited relationships to the speaker. There is, therefore, an abstract dimension to its meaning, which is something like ‘polar opposite’ or ‘antithesis.’ The same word in Ungarinyin means ‘barrier’ or ‘screen’,³³ and so it is probably safe to assume that in Worrorra this word’s primary or underlying meaning has to do with the semantics of separation rather than with the denotation of human beings. Not all masculine and feminine nouns by any means are able to be pluralized; rather the subset of masculine and feminine nouns that can be pluralized may be characterized as being highly placed on a scale of animacy (or notional topicality, or cultural importance). As it happens, highly animate nouns are just the sort that make good candidates for inclusion in either masculine or feminine genders. Plurality in Worrorra is described in §4.2.

4.1 Agreement classes

Most of this chapter is concerned with the systematics of the five agreement classes that encode gender in the language. Gender represents one kind of nominal classification system found in Australia, the other being represented by systems of noun classification. Both types of system operate by partitioning the nouns of a language into distinct categories or partition classes (Silverstein 1986). Noun classifiers are lexicalizations of the intensional properties of their partition classes, that also function as heads of the phrases in which they occur. Gender systems are able to be described in similar terms, but without the requirements of lexicalization and headedness. Gender in Worrorra is a lexical property of the noun which bears it, and the articles listed in (4.4) below, that overtly signal gender, are frequently absent from noun phrases.

Referring expressions in Worrorra are partitioned into ten agreement classes, signalled morphologically on adjectives, pronouns, inalienable nouns, kinship nouns and possessive phrases, and on verbs in intransitive subject, transitive object, agent and non-subcategorized object positions. The parameters that define agreement class are of two types: person and number are higher-level parameters employed in the definition of all classes, while participation (that is, whether or not an addressee is included in the reference) and gender are lower-level parameters operating on only a subset of classes defined by the higher-level parameters. There are analytical disparities in agreement-class membership: five of the agreement classes contain only one high-frequency member each (first and second persons) while the other five contain thousands of members (third persons). Emically, however, there are no significant grounds for distinguishing between agreement classes on the basis of

³³ Alan Rumsey, pers comm.

person; all agreement classes have equal (and equally obligatory) access to each agreement locus. Although gender is not signalled on morphemes marking agents and non-subcategorized objects on verbs, there are no other morphological cues to indicate that the category ‘third person singular’ constitutes a subset of agreement classes defined by gender.

Table 4.1: nominal agreement-classes

| CLASS LABEL | ABBREVIATION | DERIVATIONAL PREFIX |
|-----------------------------------|--------------|------------------------|
| first person singular | 1 | nga- |
| second person singular | 2 | ngun- |
| third person singular masculine | 3a | i-, a- |
| third person singular feminine | 3f | nyi(N)- |
| third person singular celestial | 3w | ØN-, ^h wuN- |
| third person singular terrestrial | 3m | ma- |
| first person plural inclusive | 1pin | ngarr- |
| first person plural exclusive | 1px | arr- |
| second person plural | 2p | nyirr- |
| third person plural | 3p | arr- |

Grammatical person does not operate independently of other agreement-class parameters as it does in other gendered languages such as French or Arabic. To illustrate the way in which inflected person, number, participation and gender categories constitute a single morphosyntactic parameter in Worrorra, it may be helpful to consider the noun *nyinjorinya* ‘widow.’ Although semantically a prototypical human noun, it is nevertheless morphologically derived, and is underlyingly adjectival in terms of the analysis offered here. Its meaning is in part derived by morphemes signalling agreement class; the morphological processes that it undergoes are the same as those undergone by all other agreement targets. *Nyinjorinya* is marked for feminine gender; a widower is *iyoru*, and is marked for masculine gender. If you were to keep two red-winged parrots (*wunu marrirri*) in a cage, and one of them were to die, the remaining parrot could be referred to as *wunjoru* ‘it (who has) lost its mate.’ If two red-tailed black cockatoos (*mana darraanma*) were kept in a cage and if one were to die, the survivor could be referred to as *mayorama* ‘it (who has) lost its mate.’ If I were to lose my spouse, I would refer to myself as *ngayoru* ‘I (who am) a widow(er);’ and similarly with other agreement-class categories: *ngunjoru* ‘you singular (who are) a widow(er),’ *ngajoyoru* ‘we inclusive (who are) widow(er)s,’ *ajoyoru* ‘we exclusive (who are) widow(er)s,’ *nyijoyoru* ‘you plural (who are) widow(er)s’ and *ajorayoru* ‘widow(er)s.’ In this paradigm, grammatical person is not manifested in a separate form-class from that of gender; the first person singular shape, for instance, cannot bear gender-marking affixes as adjectives do in French: *je suis content* ‘I am happy (male referent)’ vs *je suis contente* ‘I am happy (female referent).’

There are, then, no *formal* grounds for separating the category ‘gender’ from other agreement-class meanings in Worrorra; in all agreement paradigms, person, gender, number and participation together constitute a single morphological parameter. Syntactic and semantic criteria are required to define the category ‘gender’ in Worrorra.

Gender partitions the third person singular category only. However there is a small class of collective nouns (about a dozen) whose agreement forms are homophonous with those of the third person plural agreement class. Collective nouns constitute an ambiguous category; they are formally identical to the third person plural agreement class, but morphosyntactically analogous to members of the set of third person singular agreement classes defined by gender. It should be borne in mind that there are at least two competing ways to account for collective nouns in Worrorra: one is to constitute collective nouns as an eleventh (homophonous) agreement class, and the other is to describe the third person plural agreement class as containing both plural and collective nouns. Neither approach seems to offer any clear analytical advantage over the other.

Worrorra nouns frequently co-occur with members of a set of determiners that serve as definite articles. These are *inja* (masculine), *nyina* (feminine), *wunu* (celestial) and *mana* (terrestrial); and they will be used to identify the gender of nouns occurring in this text. The following sentence exemplifies their use as definite articles:

(4.1)

Wankaleeninjaa, jurlwun inja, warinyinaa,
wankaleena-inja-aa jurlwun inja-aa, warinya-nyina-aa
k'roo.sp-3aDEF-and k'roo.sp 3aDEF-and k'roo.sp-3fDEF-and

karroninyinaa buju kubarrwunanangka.
karroninya-nyina-aa buju kuN-^bwarr=wu-na-nangka
k'roo.sp-3fDEF-and finish VCOMP-3p=hit-PAST-DAT

They killed the male plains kangaroos, the male grey kangaroos, the female grey kangaroos and the female plains kangaroos.

The haplological contraction of noun and article seen here is discussed in §4.1.2. In (4.1) the types of kangaroo listed (*wankaleena*, *jurlwun*, *warinya*, *karroninya*) are followed by articles of appropriate gender, with the final vowel lengthened by the encliticized conjunction *aa* 'and.' These determiners may function deictically, and may also be used anaphorically to refer to members of the classes they signal, with quite precise meanings: in prototypical usage the human class markers *inja* and *nyina* refer to 'he, him' and 'she, her' respectively, and *mana* is used to mean 'here:'

(4.2) Mana aja banu
 Sit here

Wunu is used as a determiner with subjunctive verbs (*nganngunjineerri* in 4.3a) and to mark the definite status of whole clauses, as in (4.3b):

(4.3a) Waawa nguru banyankangurrun, [wunu nganngunjineerri]?
 How come you don't listen to me, [when I speak to you]?

(b) Baanjamurlomurlonyeerri [wunu]!
 ([You know that]) *you should have been looking after them!*

In (4.3a) the definite (backgrounded) status of the subordinate clause is marked by the use of the article of the appropriate class (*wunu*). In (4.3b) the propositional content of the utterance is rhetorically marked as being already known to the listener, and so receives definite marking by way of the celestial article.

Nouns typically denote concrete things in space, while the events depicted by verbs occur typically in time. Hence the meanings of the deictic functions of Worrorra determiners in prototypical usage are as follows:

| (4.4) | ARTICLE | CORE DENOTATUM | 'MEANING' |
|-------|---------|----------------|-----------|
| | inja | male | he |
| | nyina | female | she |
| | wunu | time | when |
| | mana | place | here |

The following overview is based on a survey of some 600 nouns. While the sample is too small to convey meaningful statistics, the following tendencies may be noted. Where percentages are stated they are usually rounded, and should be recognized as being intended to convey tendencies and relative proportions only.

The class with the most membership is the masculine class. Over one third of all nouns belong to this class. Masculine is the most unmarked class, and typically genderless anaphors like *anguja* 'what?', *angujakana* 'something' and *angujakane* 'all kinds of things' take masculine agreement markers, so in this sense the masculine class is semantically also the most neutral or residual class:

(4.5)

| | | | | |
|-------|-------|------------|-------------|-----------------|
| Awa | inja | angujakana | baa | kamurrkarla |
| awa | inja | angujakana | baa | ka-Ø=murrka-rla |
| 3aNAR | 3aDEF | something | rise/appear | 3a-3=go.to-PAST |

Something came up towards him

The feminine, celestial and terrestrial classes each contain about one fifth of all nouns in the sample. This rather even spread of nouns among the three non-masculine classes may suggest that allocation to gender may to some extent be arbitrary. However in real terms the feminine class is certainly the smallest of the genders (the collective gender excluded) when nouns that refer to females are discounted.

Inalienable nouns display significant differences from other nouns in the way they are distributed among genders. Of the seventy or so inalienable nouns recorded, three quarters of them are shared equally between the celestial and terrestrial classes. The remaining quarter is shared between the masculine and feminine classes; less than one fifth of the total sample being masculine and only five being feminine (see §4.1.3 (ii) and §4.1.6 (i)).

This discussion excludes from consideration derived nouns such as *nyinjorinya* (|nyiN=yoru-nya| [3f=widowed-3f]) ‘widow,’ referred to above. These word-forms are derived productively from underlying root morphemes by way of derivational affixes that code for all ten agreement classes, and are isomorphic with semantic adjectives such as *nyiniyanya* (|nyiN=niya-nya| [3f=good-3f]) ‘good (feminine).’ The root morphemes in question constitute a lexical category devoid of inherent gender.

4.1.1 Gender and culture

Worrorra genders constitute bounded sets whose core references are, as we shall see, complex, covert and opaque to analysis.³⁴

Since Dixon (1982:178 ff) first described the semantic basis of the allocation of nouns to noun classes in Dyirbal, it has become apparent that some kind of organizational principles with respect to gender allocation may apply to other languages where nouns appear at first sight to be distributed among genders in a more or less random or arbitrary manner. As Lakoff & Johnson (1980) and Silverstein (1986) have pointed out, languages map classification onto experience by reference to a culturally specific set of symbolic structures. This is to say that language plays an integral part in the way that cultures structure the symbols by which societies create their own realities, and in the way that they manipulate those symbolic structures. This being the case, it would be a conceit to imagine that we could fully understand the organizational principles behind gender allocation in Worrorra without being in a position to comprehend much better than we do, the symbolic structures upon which such allocation is based. The result of this situation is that there must inevitably be a degree of analytic opacity or arbitrariness entering into an account of gender in Worrorra without our being in a position to determine to what extent such perceived randomness is real or merely apparent.

To illustrate this point it may be useful to look at some instances where culture determines gender independently of linguistic considerations. In these instances we are in a position to appreciate the cultural factors involved, but as our understanding of traditional Worrorra society is partial at best, a great deal of this sort of information is unavailable. In instances of this sort the question must inevitably arise as to whether gender is determined by some extra-linguistic cultural (usually narrative) mandate, or whether gender previously allocated thereby makes some entity felicitously available for a cultural role that requires a participant of that gender. In each of these examples it will be seen that the former is the case; in these examples at least, culture determines gender.

The moon has a recognizable physiognomy, and despite (or perhaps because of) periodic changes is recognizable as a single entity. The sun however has no physiognomy and was seen in traditional Worrorra culture as a multiplicity of entities. The operation of the sun was envisaged as follows: there

³⁴ As is the case with most gender, as opposed to classifier, systems, Worrorra gender semantics are generally beyond the ‘limits of awareness’ (Silverstein 1981) of native speakers.

is a mother sun who stays behind the world giving birth to daughter suns, each of whom in turn travels through the sky and dies at the end of each day. This story, *Iwarnbarnngarri nyangkaningkarla marangunya* ('The snake that bit the sun') is recounted in Utemorra 2000:31-36. Because the parent sun, *nyina marangunya*, must in this cosmology be a mother in order to reproduce, it is female and allocated with other female things to the feminine gender.

Over much of the world and including North-Western Australia, snakes are phallic symbols and we could expect them to be allocated to masculine genders. However in Worrorra the black-headed python, *mawunkunya* is feminine. It has another name, *nyimrimaaingarrinya*, also feminine. *Nyimrimaaingarrinya* is a compound noun derived from the root =*mri* 'head' and the preverb *maai* '(a woman) shaves and blackens her head in mourning.' Its morphology is as follows: |nyiN=mri-maaingarra-nya| [fem=head-{shave-&-blacken-in-mourning}-relativizer-fem] 'her-head-is-shaved-and-blackened-in-mourning.' This name refers to the funerary requirement of a woman to shave her head and blacken it with soot as a sign of mourning for a specified period after the death of some relatives, most importantly her husband. In Worrorra culture the black-headed python is taken to be the aetiological prototype of this custom. Because only women perform this funerary duty the black-headed python is considered to be a woman and is allocated to the feminine gender.

In traditional Worrorra society the manufacture of stone spear-heads was an important and time-consuming activity and the best of the results were highly prized. There are a number of nouns referring to stone spear-heads and I am not sure of the connotations of all of them. However two types of spear-head are of interest here. The normal, all-purpose, functional spear-point is referred to by the noun *jimara*. *Jimara* is a masculine noun for reasons that will be discussed below. Another type of spear-head was essentially non-functional, at least in the way that spear-heads typically function. This type was made of shiny or semi-translucent stone such as jasper or agate, and of bottle-glass after European contact. They were beautifully crafted and often so thin as to be impractical for use in hunting. Their closest comparison is with the Solutrean leaf-shaped points of the European Upper Palaeolithic, and they are often referred to as 'Kimberley points.' These points were not made for hunting but for their aesthetic value and for the magic and curative powers they derived from that value. They were prized trade items and were traded as far away as the Western Desert where they were referred to as *jinala* (from Worrorra *jinalya* 'spear'). The commonest general term for this type of spear-head is *jimbeerlanya*, and is feminine. The special properties of *jimbeerlanya* and the role they played in Worrorra society meant that they were not only culturally highly significant items but were also shiny and dangerous by virtue of their magical properties. As such they were allocated to the semantically marked gender which in Worrorra is feminine. The construction of markedness in Worrorra and its manifestation in gender-marking is discussed in §4.1.6 (i). If this piece of cultural information were not available, it might be assumed that *jimara* and *jimbeerlanya* were allocated to different genders more or less capriciously, and that gender allocation was at least in this instance arbitrary.

A comparable situation is seen in the two nouns that mean 'buttocks.' *Wumbarranu* is a celestial noun and =*malab* is terrestrial. I know of no reason why these two apparent synonyms should be allocated to different genders, but that ignorance does not mean that such allocations are necessarily arbitrary. Again, *wunu ngubunu*, *mana ngujalama* and *nyina wiyarrinya* (feminine) are all species of stingray. Examination of the animals themselves and of information about them may reveal some kind of pattern to their distribution among genders but as things stand, no such pattern is apparent.

Associations made by one culture are not necessarily those made by another. To put it another way, any given thing in the world will empirically exhibit a number of attributes, from among which different cultures will select those which are for them significant from those which are not, with respect to the ways in which such things are categorized. For example in Worrorra *manjuma* 'wind' is terrestrial, and we would expect that *jalawuna* 'whirlwind, willy-willy' would be in the same category as 'wind,' whereas in fact it is masculine. The reason for this is that Worrorra culture personifies the whirlwind as something like a large, sulky and bad-mannered adolescent, and when one is immanent older Worrorra people will loudly exhort it to go around them or away from them and leave them alone. And so *jalawuna* is masculine, along with other human figures. Likewise most bright, reflective things are celestial, and we would expect *nyungumanja* 'reflection' to be in that gender too; the semantic core of the word 'reflection' has to do with light. However the semantic core of *nyungumanja* is the

image of a human being (seen in still water), and so the word is masculine, again with other human figures. The surface of the sea may appear bright on still, hot days, but the semantics of *wondum* ‘sea, salt water’ has to do with the opacity and palatability of the water itself; *wondum* is applied to salty, unpalatable water generally, and is terrestrial.

4.1.2 Gender and phonology

With reference to the sample of Worrorra nouns mentioned above, nearly three quarters (73%) display a phonological segment that pertains to their class membership. Gender is lexically inherent in Worrorra nouns, that is to say that gender is part of a noun’s lexical construction, whether or not it is overtly signalled on the noun itself. Phonological segments do not signal class membership uniquely, and, with one case exception, members of a given class do not display one segment exclusively. However the above figure gives evidence that there are strong tendencies for certain phonological segments to be associated with particular genders. Phonology may serve to indicate or signal class membership, but it does not determine it. Once class membership has been assigned (and I will argue that this is accomplished by reference to criteria that are primarily semantic), then membership may (or may not) be signalled phonologically. A rather nice illustration of this sequence is provided by Love (1934:20):

The Worrorra word for vegetable-fibre string is *irkalja*, a masculine noun, represented by the pronoun *indja*. Sisal hemp was grown and used for string making. When asked the gender of hemp the men replied “*indja*”; but one man asked the English name of the leaf. He was told “Hemp”. The men repeated “’emp, ’emp, mana”. At first they designated the hemp plant *indja*, probably thinking “*Irkalja*”; but, on hearing the sound of the English word, ending in *p*, they declared that the word is *mana*.

In this account we can see that sisal was at first assigned gender by reference to semantic criteria until its phonological shape as an English word was ascertained, which was then taken to signal a predetermined or pre-existing gender.

The forms in question are suffixes or rarely prefixes, essentially the same as those used to derive adjectives and pronouns, and are displayed in Table 4.2.

Table 4.2: gender morphemes

| | <i>word-initial</i> | <i>word-final</i> |
|-------------|---------------------|-------------------|
| masculine | i- | -ya or -i |
| feminine | ny- | -nya |
| celestial | wu- /u- /oo- | -u |
| terrestrial | ma- | -m(a) or -b(a) |
| collective | | -ya or -i |

Collective gender-signalling suffixes have the same shape as suffixes used on plural nouns (§4.2.2).

Gender-signalling morphemes are, as a general rule, not productive on nouns; they are for the most part lexicalized components of their hosts. The exceptions to this are nouns of the feminine and terrestrial classes. In these classes, the gender suffixes *-nya* and *-m(a)* may be detached from their host lexemes under certain (mainly phonological) conditions. For instance when a feminine noun is followed by a determiner or appropriate postposition, the noun’s gender-signalling suffix is usually deleted under haplology (4.6a & b) or distant haplology (4.6c) in normal fast speech:

(4.6a) Balangkarr**nya** nyangke —> balangkarra nyangke *A storm-wave*

(b) Wangay**inya** nyina —> wangayi nyina *The woman*

(c) Karranangkanya -^kwunya → karranangkawunya For his mother

Note as well the haplogogically reduced forms *warinyinaa* ‘the female grey kangaroo’ and *karroninyinaa* ‘the female plains kangaroo’ already seen in (4.1). The feminine noun *ngeenya* ‘honey’ exchanges its feminine marker (-*nya*) for a plural one (-*ya*) in a form *ngeeya* that refers to a mass of honey or lots of honey.

Adverbial suffixes are usually interposed between the root lexeme and the gender-marking suffix of a terrestrial noun, as in (4.7a); otherwise the gender morpheme may be lost altogether, as in (4.7b):

(4.7a) dambee-ma-nyini → dambee-nyini-ma → dambeeninim
 place-3m-ENDPOINT place-ENDPOINT-3m
 To/at home, homeward

(b) dambee-ma-^kwunya → dambeewunya
 place-3m-PURP
 Homeward

Another example of this phenomenon is to be seen in (4.18). Nouns such as *kulum mana* ‘hot (baking) sand’ lose gender-marking suffixes when used as preverbal elements in complex predicates, eg *kulu =ma* ‘burn, scorch with hot sand.’

It will be helpful now to look at each gender in turn to see the ways in which, and the extent to which gender is signalled phonologically.

The feminine gender is the one exception referred to above, in which all the nouns in this class (in my sample) display one underlying segment (|-*nya*|) exclusively. This makes feminine the most phonologically marked gender in the language. Feminine nouns end in *-nya*, *-(r)lja*, *-j* or *-Vja*. In these words, however, *-ja* is underlying |-*nya*|. |*ny*| hardens to /*j*/ after laterals and /*rr*/ (rule 11), such that the sequence |*rr-ny*| always finds surface expression as /*j*/ (rule 15). Take, for example, the masculine words *kanangkurri* ‘dog,’ *kalakalaarri* ‘sea-turtles on-shore to mate or lay eggs’ and *karnamarri* ‘large shark.’ These have feminine equivalents *kanangkuja* ‘bitch,’ *kalakalaja* ‘female sea-turtles on-shore to lay eggs’ and *karnamaja* ‘large female shark,’ and are underlyingly |*kanangkurr+nya*, *kalakalaarr+nya*| and |*karnamarr+nya*|. So it may be assumed that feminine words such as *balkuja* ‘dugong,’ *banaja* ‘bustard’ and *kuyyoja* ‘great-billed heron’ end in underlying |... *rr-nya*| sequences as well. The feminine words *mamangkalja* ‘woman friend, female relation,’ *ngorlja* ‘large green frog sp.’ and *yarnkalja* ‘spear thrower’ show the segment |-*nya*| hardening after lateral consonants. Three feminine nouns in my sample end in *-j*: *jimbirrij* ‘giant groper,’ *jalaj* ‘axe handle’ and *karruj* ‘silver gull.’ As no noun of any other gender ends in this segment, it may be assumed that *-j* in this situation is a reduced form of *-ja* and is therefore underlyingly |-*nya*| as well.

Of the four feminine endings listed above, *-nya*, *-(r)lja*, *-j* and *-Vja*, only the ending *-Vja* does not signal feminine gender exclusively on common nouns. This is because the phonological hardening process referred to above applies as well to glides, such that the masculine segment |-*ya*| also hardens after the trill /*rr*/, and it may be that the underlying sequence |... *rr-ya*| finds surface expression as *-ja* in such masculine words as *mmamaja* ‘bigamist.’ Regardless of the difficulty of sorting out words that just happen to end in *-ja* from those whose endings are derived from underlying |*rr*-(*n*)*ya*| sequences, the ending *-Vja* is found on both masculine and feminine nouns, as well as on one celestial noun; *ngaja* ‘custom, precedent.’ Over nine tenths (91%) of the feminine nouns in my sample end in one of the three endings that signal feminine gender on common nouns exclusively.

While all feminine nouns may thus be seen to end in |-*nya*|, not every noun that ends in *-nya* is feminine. There are a number of place names that end in *-nya* that belong to other classes: *Karnmanya* ‘Kunmunya Mission’ (terrestrial), *Mangadanya* ‘place name’ (terrestrial), *Mingkunya* ‘Port George IV’ (terrestrial) and *Ngayangkarnanya* ‘Mount Trafalgar’ (celestial). Some of these are diachronic compounds containing the relational morpheme *-manya* ‘LOCATIVE,’ eg |*mangarr-rnanya*| [pouch-LOC] → *Mangadanya* ‘In the pouch,’ and another may be compounded with the morpheme *-^kwunya* ‘GOAL.’ These grammatical morphemes impart a superficially feminine appearance to these names.

The one masculine word in the sample that ends in *-nya*, *aalkunya* ‘young man, initiate,’ is almost certainly such a compound.

Four fifths of all terrestrial nouns in the sample end in /-B(a)/, where B stands for a bilabial nasal or stop. In this score I have included a few nouns on which *-ma* or *-ba* appear to be epenthetic:

| | |
|-------------------------------|--------------------------------|
| karnmern <i>or</i> karnmernma | <i>cave</i> |
| rambarr <i>or</i> rambarrba | <i>avoidance relation</i> |
| dalorr <i>or</i> dalorrba | <i>well, sink-hole</i> |
| kulnmerr <i>or</i> kulnmerrba | <i>tail</i> |
| bundurl <i>or</i> bundurlba | <i>countryside; ‘the bush’</i> |
| Yarloon <i>or</i> Yarloonma | <i>Cone Bay</i> |
| jerr <i>or</i> jerrba | <i>shade</i> |

The longer epenthesized forms are citation forms, while the occurrence of the truncated forms is environmentally conditioned. In the last example, the monosyllabic form *jerr* is very restricted in terms of the phonological environments within which it may occur. In the following example, the epenthetic morpheme is deleted under haplology with the first syllable of the following adjective:

(4.8) Jerr maniyam mana
The deep shadow

Despite the high proportion of terrestrial words ending in /-B(a)/, this ending is not exclusive to that class, as the following masculine nouns demonstrate: *karimba* ‘golden bandicoot,’ *burlkumba* ‘Northern brush-tailed possum,’ *joomba* ‘bone in forearm,’ *joonba* ‘ceremony,’ *wundukuwundukum* ‘nocturnal gecko sp,’ *maaba* ‘old man’ and *kurruma* ‘wife’s mother’s brother or father.’ The celestial noun =*ngumba*/=*ngumbu* ‘name’ is also of interest in this respect.

Over one half of all celestial nouns in the sample end in the segment *-u*. Included in this score are a few nouns for which that segment appears to be epenthetic, insofar as alternative forms exist without it, or it is elided in the presence of grammatical suffixes:

| | |
|------------------------------|----------------------------|
| angkuban <i>or</i> angkubanu | <i>cloud</i> |
| jeerr <i>or</i> jeerru | <i>eyebrows</i> |
| braarr <i>or</i> braarru | <i>first light at dawn</i> |
| wungkurr <i>or</i> wungkurru | <i>sacred pool</i> |
| kayuk <i>or</i> kayuku | <i>rock</i> |
| mangarr <i>or</i> mangarru | <i>(kangaroo’s) pouch</i> |

| | | | |
|----------|-----------------|-------------|-----------------------|
| anjolu | <i>sky</i> | anjoldanya | <i>in heaven</i> |
| nguwanu | <i>tree</i> | nguwarnanya | <i>in the tree</i> |
| wiyanu | <i>fire</i> | wiyarnanya | <i>in/by the fire</i> |
| aambulu | <i>his eyes</i> | aambuldanya | <i>in his eyes</i> |
| mangarru | <i>pouch</i> | mangadanya | <i>in the pouch</i> |

As word-final *-u* does not behave in this manner when it is found on nouns of other classes, it appears that this ending serves a double function as well, namely that of epenthesis and of signalling class membership. A number of nouns ending in *-u* are not celestial; the following are all masculine: *karnmangku* ‘yam (generic),’ *korru* ‘jaw,’ *murlku* ‘boil, sore,’ *rangku* ‘heart,’ *waraku* ‘father’s sister’s son,’ *broolku* ‘cicatrice,’ *irnarruku* ‘blanket’ and *jeembu* ‘kangaroo-bone pressure-flaking tool.’ And three belong to the terrestrial class: =*reenu* ‘body,’ *dungundu* ‘side, of eg a building or a hill, and *kanaalu* ‘(spatially) opposite side or place.’

A little over one third of the masculine nouns in the sample end in the segment |-ya| and a little over one fifth end in the segment *-i*. Altogether, over one half of all masculine nouns in the sample end in a segment that may be said to signal gender. As indicated above, |-ya| may find realization in a

fairly wide range of surface-level phonemes, hence the segments *-Vja*, *(r)nja*, *-ya* and *-lya* may all signal masculine gender. There are two pieces of evidence that suggest that *|-ya|* is a gender-signalling segment. The first is that *-ya* occurs in complementary distribution to the feminine segment *-nya* as a suffix to some nouns that refer to male things and have masculine gender. Masculine kinship nouns in their first person singular propositus or citation shapes contrast with feminine kinship nouns in this respect (see below). The suffixes *-waaya* (masculine) and *-waanya* (feminine) derive nouns with human reference from the names of some patriclan countries, and nouns that refer to introduced things and roles, such as goats and nurses, may also display alternations between the *-nya* and *-ya* suffixes to represent female and male roles and animals respectively. At least one non-introduced role, that of ‘friend, countryman, relation’ also shows this alternation. The pro-form *burn-* takes class and number suffixes in agreement with its denotatum in any given context. And finally at least one preverb can be seen transparently to employ *-ya* to derive a masculine human noun (the usual way of doing this is by the use of the relativizing suffix *-ngarri* ‘associated with, characterized by or pertaining to (something)’). In three of the pairs in the following list, the segment *-ya* is hardened to *-ja* after a nasal consonant:

| FEMININE | | MASCULINE | |
|------------------|---------------------|-----------------|------------------------|
| babaanya | <i>Mo Fa sister</i> | babaaya | <i>mother's father</i> |
| barnmarnya | <i>nurse</i> | barnmarnja | <i>doctor</i> |
| naningkunya | <i>nanny goat</i> | naningkunja | <i>billy goat</i> |
| mamangkalja | <i>woman friend</i> | mamangkalya | <i>friend</i> |
| burnya | <i>pro-noun</i> | burnja | <i>pro-noun</i> |
| jikarl (preverb) | <i>lie</i> | jikarlya | <i>liar</i> |
| Wurnbangkuwaanya | <i>CLAN NAME</i> | Wurnbangkuwaaya | <i>CLAN NAME</i> |

The second line of evidence referred to above is that this suffix is almost entirely restricted to the masculine class. The segment *|-ya|* occurs on the end of only three non-masculine nouns, once the occurrence of *-ja* on feminine nouns (where it is a reflex of *|-nya|*) is discounted. Two of these are celestial: *barndaya* ‘mainland’ and *murndaaleya* ‘plateau, platform,’ and one is terrestrial: *Grarhya* ‘clan country name,’ which has alternate forms *Grarl* and *Meegrarlba*. Two other celestial nouns, *ngaja* ‘custom, precedent’ and *oomanja* ‘round bone at the base of the big toe’ end in a segment that may be a hardened reflex of *|-ya|*, but these are the only two that do so, and no terrestrial noun ends in this segment. This amounts to a possible total of five (or three) non-masculine nouns, as opposed to over 70 masculine nouns displaying the ending *|-ya|*.

A significant number of masculine nouns that display phonological signalling of their class membership end in the segment */-lya/*, and this ending is almost exclusive to masculine nouns. Rather than propose */-lya/* as a gender-signalling suffix in addition to *-ya* and its hardened form *-ja*, I take it to represent an underlying *|-L-ya|* sequence. The occurrence of such a sequence in the morphophonology is supported by comparing the nouns *mamangkalya* and *jikarlya* in the above list with the words with which they are paired.

The ending *-(r)nja* is almost exclusive to masculine nouns because *|-ya|* hardens to *-ja* after a nasal consonant (rule 10), whereas nasals do not harden after other nasal consonants, so that underlying *|\dots N+nya|* sequences find surface expression as *-(r)nja*. The only non-masculine noun ending in *-(r)nja* is *wunu oomanja*, referred to above.

The proportion of masculine nouns ending in *-i* is so small (one fifth) that it is tempting not to recognize this segment as one signalling gender. Nevertheless, on adjectives and pronouns *-i* (like *|-ya|*) does function as a morpheme deriving masculine gender, and it does occur on more masculine nouns than on those of any other gender. In pairs of words like *kanangkurri* ‘dog’ and *kanangkuja* ‘bitch,’ referred to above, *-i* appears to alternate with *|-nya|* to produce masculine and feminine pairs (*|kanangkurr-i, kanangkurr-nya|*). A number of celestial nouns also end in *-i*: *wijali* ‘burnt grass,’ *jalaani* ‘deep water,’ *marlinji* ‘oyster,’ *marrirri* ‘red-winged parrot,’ *=mri* ‘head,’ *namandi* ‘canoe,’ *ngarli* ‘paperbark,’ *=rnorri* ‘hand, fingers,’ *wanawi* ‘egg’ and *warnangkali* ‘cliff.’ One terrestrial noun ends in *-i*: *aajaajirri* ‘rainy season.’

The endings that signal masculine gender are homophonous with those that signal plural number (§4.2.1). The shapes of plural masculine nouns may be homophonous with their singular

counterparts, or they may employ stem reduplication as well as suffixation to mark plural number. Be that as it may, the endings that signal masculine gender in Worrorra do not signal gender uniquely; the suffixes concerned are systematically shared with plural number. There is thus no unique gender-marking for masculine, not even if statistical criteria are used. So in this sense the masculine gender is essentially unmarked phonologically in Worrorra.

Of the nine collective nouns in the sample, eight end in *-i* or *|-ya|*. This sample is too small to be useful for purposes of comparison with other noun classes, and moreover the segments in question are primarily plural number-marking morphemes (§4.2.2).

Table 4.3: distribution of gender-signalling suffixes

| SEGMENT | SIGNAL | FEMININE | TERRESTRIAL | CELESTIAL | MASCULINE |
|---------|-------------|-----------|-------------|-----------|-----------|
| -Vja | masc, fem | 10 | | 1 | 11 |
| -nya | fem | 93 | | | 1 |
| -(r)lja | fem | 3 | | | |
| -j | fem | 3 | | | |
| -ya | masc | | | 3 | 21 |
| -(r)lya | masc | | | | 21 |
| -(r)nja | masc | | | 1 | 18 |
| -i | masc | | 1 | 10 | 45 |
| -B(a) | terrestrial | | 119 | 1 | 7 |
| -u | celestial | | 3 | 70 | 8 |
| | N / % | 109 / 100 | 119 / 79 | 70 / 57 | 116 / 57 |

Gender in Worrorra is signalled phonologically, but not in any straightforward way. The distribution of gender-signalling suffixes is summarized in Table 4.3. Proper nouns (including anomalous place names) are not included in this summary. Place names present some difficulties with respect to gender and will be discussed in §4.1.4 (i). In the table the number of nouns from the sample displaying each gender-signalling segment is listed for each agreement class. Below this are listed the number of gender-marked nouns in each class (N), and then that number expressed as a percentage of the total number of nouns in each class.

Less than 12% of nouns in the sample display initial segments that could be said to correspond to their gender. In Table 4.4 the numbers of nouns displaying initial segments corresponding to (some) gender are listed for each agreement-class.

Table 4.4: Distribution of gender-signalling prefixes

| SEGMENT | MASCULINE | FEMININE | CELESTIAL | TERRESTRIAL |
|-------------|-----------|----------|-----------|-------------|
| i- | 19 | 2 | 3 | 2 |
| ny- | 1 | 8 | | |
| wu- /u- /oo | 4 | 2 | 18 | 5 |
| ma- | 11 | 10 | 8 | 23 |

Among those 20% or so of nouns that display one or another of the initial segments in question, it is clear that there is a tendency for the shape of segments to correlate with the gender of the nouns on which they appear. That is to say that while the correlation between initial segment and gender is very far from being absolute, neither is it entirely random. The existence of a pair of nouns minimally distinguished by gender-marking segments demonstrates that initial segments can be involved in signalling gender, at least in a minor way: *rlarlangkarram mana* ‘the sea’ and *irlarlangkarrainja* ‘salt-water crocodile.’ Only 13 such nouns (2%) bear ‘correct’ initial segments without also bearing gender-signalling segments word-finally. The proportions of initial and final gender-signalling segments are as follows:

| | |
|--|-----|
| gender signalling by final segment only | 62% |
| gender signalling by both initial and final segments | 9% |
| gender signalling by initial segment only | 2% |

Although almost three quarters of Worrorra nouns in the sample display phonological signalling of class membership, this figure is not uniform for all classes. The number of nouns that signal gender phonologically falls away from the feminine class, in which all nouns can be seen to display gender-signalling, to the terrestrial (four fifths), and to the celestial and masculine classes (with roughly three fifths each). This trend is interesting in that it defines a scale of phonological markedness which is at least partly correlated with semantic markedness, and which will be discussed further in §4.1.6 (i) below.

4.1.3 Semantic assignment

While it is possible that the large and phonologically largely unmarked masculine gender contains a subset of residually classified nouns, that is to say of nouns whose allocation to gender is by default rather than by reference to semantic criteria, the systematics underlying the gender partition are nevertheless so pervasive as to afford us some insight into the interplay between Worrorra culture and language. Nouns are partitioned by reference to a semantic structure that acts as an organizing principle with respect to the denotata to which they refer. This structure is outlined in Figure 4.1 in §4.1.5, in terms of what I will refer to as a system of *meta-intensions*. In order to understand the basis of such a meta-intensional structure, it is necessary to investigate the lower-level semantic domains and the integrational principles of which the system as a whole is comprised.

In attempting to describe the operation of the semantic structure responsible for setting up partition-classes in Worrorra, it may be helpful to engage the geometric analogy of a multi-dimensional semantic space. A number of dimensions or parameters may be imagined within such a space, each describable, as in geometry, by reference to a set of coordinates. As far as I am aware, such a semantic space in Worrorra is defined in at least four parameters (dimensions), but there could be more of which I am unaware. The coordinates describing these four parameters are in the form of polar oppositions, to one or other of which any given noun is attracted with respect to each parameter. A more precise geometry might describe two semantic spaces, or two regions within semantic space: one region defined by parameters the coordinates of which are drawn from observations of human shape and experience, and the other drawing from experience of the world external to the human body. These two regions are mutually exclusive, that is to say there is no overlap between them, and they constitute two superordinate partitioning structures that will be referred to as macrogenders (§4.1.6). The parameters of this semantic space and their coordinates are shown in Table 4.5:

Table 4.5: gender intensions

| Parameter | Coordinates | |
|-----------------------|---------------------|--------------|
| human macrogender | MASCULINE | FEMININE |
| sex | male | female |
| shape | extended | rounded |
| non-human macrogender | CELESTIAL | TERRESTRIAL |
| dimension | time | place |
| luminosity | bright, translucent | dark, opaque |

The term ‘human’ as a macrogender label applied to the formal marking of the partition is used here to capture those characteristics of denotata that acquire meaning and significance for gender allocation by analogy with meaningful and significant properties and characteristics of human beings. Semantic markedness constitutes another pervasive coordinate-set defined by the dynamics of bipolarity; markedness however is a macrogender parameter and is discussed in §4.1.6 (i).

Some of the parameters of semantic space exhibit more clearly than others core–fadeout properties as category properties in natural language. Prototypical members of a luminous category, for example, such as fire and water, become associated by analogy with things that exhibit luminous properties less unambiguously, along a core–fadeout continuum. For example the most culturally important or ‘visible’ stones were those capable of producing a sharp cutting edge, such as quartz or agate, and these happen to be shiny, especially after being flaked. Further along the continuum other reflective or pale-coloured stones are included, then dark reflective stones, then any stones, rocks and rocky hills. The point is that core–fadeout properties in categorization do not make the categories in which they appear less significant for nominal partition than categories with relatively straightforward distinctions. Core–fadeout categories may indeed produce secondary semantic parameters, such as that labelled ‘topography’ in §4.1.3 (v). In reality many if not most nouns must ‘appear’ in more than one parameter, but only the result or outcome of competing polarities can be evident lexically, in terms of the gender ultimately assigned to nouns. When a number of denotational attributes make a noun eligible for membership of more than one formal class, then the selection of criteria that determine allocation proceeds in ways that are not etically predictable. Although the structural parameters discussed below are clearly observable, they constitute a far from complete account of gender semantics in Worrorra, as the many exceptions to these parameters, which represent generalizations or tendencies only, demonstrate.

The outline displayed in Table 4.5 represents a kind of superstructure, around and within which cluster other semantic fields that may be related to the superstructure to a greater or lesser extent, or which may not be related to it at all. Categories are defined by core–fadeout properties, added to which are historical considerations: gender semantics are liable to change over time (Corbett 1991:248), although gender itself, as a lexically inherent property of a given noun, may be retained to become an exception to synchronic trends, ie an archaism. The result of this kind of process would be to have preserved islands of residual or archaic gender assignment in a sea of more general semantic tendencies, and this is more or less what we find in Worrorra.

4.1.3 (i) sex differentiation

All humans and a good many higher animals are allocated gender on the basis of biological sex, that is to say that they are sex-differentiable. Terms referring to lower-order animals are not sex-differentiated. The gender to which males are allocated is here termed masculine and that to which females are allocated is termed feminine. Male–female pairs usually show phonological correspondence or equivalence, but such correspondence is not necessary, as the following list of male and female pairs indicates. Kinship pairs of this sort are usually related affinally.

| | MALES | | FEMALES | |
|------------------|----------|-------------------------|-------------|-------------------------|
| person | eeja | <i>man</i> | wangayinya | <i>woman</i> |
| child | awanja | <i>boy</i> | nyangkanya | <i>girl</i> |
| adolescent | weerla | | mrnangkanya | |
| demon | akurla | | jilinya | |
| spirit-bird | kaakaaja | | meemeenya | |
| parent | irraaya | <i>father</i> | karraanya | <i>mother</i> |
| spouse | kulaaya | <i>husband</i> | mangkaanya | <i>wife</i> |
| in-laws | ibaaya | <i>husband's father</i> | jalinjaanya | <i>husband's mother</i> |
| | waaya | <i>wife's father</i> | kurrumaanya | <i>wife's mother</i> |
| father's parents | ngawaaya | <i>father's father</i> | mangkaanya | <i>father's mother</i> |
| mother's parents | jamaaya | <i>mother's father</i> | kajaanya | <i>mother's mother</i> |

Some kinship pairs of this sort, however, are consanguineal; most notably those that are closest to you – your parents and their opposite-sex siblings, and your children, reckoned patrilineally:

| | | | | |
|---------------|---------|-------------------------|------------|------------------------|
| patrilateral | irraaya | <i>father</i> | bamaraanya | <i>father's sister</i> |
| matrilateral | kakaaya | <i>mother's brother</i> | karraanya | <i>mother</i> |
| children | irraaya | <i>son</i> | bamaraanya | <i>daughter</i> |
| wife's family | waaya | <i>wife's brother</i> | mangkaanya | <i>wife</i> |

Usually however the male and female forms of words show phonological correspondence. Most kinship nouns are of this sort: pairs of kinship nouns exhibiting phonological correspondence are always consanguineal, not affinal kin.

| | | | | |
|---------------------------|-------------|-----------------------|---------------|---------------------------|
| offspring | kawurla | <i>'son'</i> | kawurlanya | <i>'daughter'</i> |
| husband's family | kulaaya | <i>'husband'</i> | kulaanya | <i>'husband's sister'</i> |
| wife's family | kurruma | <i>'wife's uncle'</i> | kurrumaanya | <i>'wife's mother'</i> |
| matrilateral cross-cousin | jamaaya | | jamaanya | |
| patrilateral cross-cousin | waraku | | warakunya | |
| matrilineal descendants | ibaaya | <i>'son'</i> | ibaanya | <i>'daughter'</i> |
| elder sibling | ngawaaya | (<i>abiya</i>) | ngawaanya | (<i>abeenya</i>) |
| younger sibling | ngawmaleya | | ngawmalenya | |
| old person | maaba | | maabanya | |
| child | warrala | <i>'boy'</i> | warralinya | <i>'girl'</i> |
| | wangalang | <i>'child'</i> | wangalangunya | <i>'girl child'</i> |
| European | aalmarā | | aalmarinya | |
| friend, relation | mamangkalya | | mamangkalja | |

That the correspondences exemplified in the above list represent the most productive way of deriving male and female forms of any type, is shown by recent innovations:

| | | | | |
|----------------------|-------------|-----------------|-------------|----------------|
| medical practitioner | barnmarnja | <i>'doctor'</i> | barnmarnya | <i>'nurse'</i> |
| goat | naningkunja | | naningkunya | |

In its traditional sense the noun *barnmarnja inja* meant 'sorcerer' and that role was the exclusive domain of men: as Patsy Lulpunda told me, '*eejamaanja barnmarnja* – only men are sorcerers.' Recently however this noun has extended its reference to include Western-style doctors and has productively acquired a feminine ending to refer to nurses and women doctors.

Important animals are sex-differentiated. When the sex of some animal is unknown or is not contextually pertinent, the masculine term is always used to refer to a member of that species:

| | MALES | FEMALES |
|----------------------|------------------------|---------------------------|
| grey kangaroo | arr'ra ~ jurlwun | warinya |
| plains kangaroo | wankaleena | karroninya ~ balngkoninya |
| salt-water crocodile | koyoya ~ irlarlangarra | meerrinya |
| perentie (goanna) | kariyali | irroninya |
| green sea-turtle | juluwarra | rlanonya |
| dog | kanangkurri | kanangkuja |
| dingo | arroli | arrolinya |
| large shark | karnamarri | karnamaja |

4.1.3 (ii) shape

Most animals are allocated to the masculine and feminine genders, with the majority being masculine. Squat or rounded animals, however, are almost all feminine: *balkuja* or *warlinya* 'dugong' is a ponderous and bulky animal, and is contrasted with sea turtles, which are masculine: *warli* 'sea-turtle (generic),' *manurnkareenja* 'large sea turtle,' *mungurdi/mungurldi* 'loggerhead turtle,' and *nawarralya* 'hawksbill turtle.'

Other large and ponderous sea animals are *murnumbanya* ‘whale,’ *jimbirrij* ‘giant groper/rock cod’ and *nyalikanya* ‘baler shell (*Melo amphora*)’ which are also feminine. Animals may become rounded by curling themselves into balls; *mirimiringarrinya* ‘echidna,’ *joonya* ‘mouse, antechinus’ and *rlangkumanya* ‘sugar glider’ are feminine. Pigeons are plump and bulbous birds and are mostly feminine: *kumbalawaja* ‘crested pigeon,’ *wawarranya* ‘rock pigeon’ and *barnbarrngunya* ‘bronzewing pigeon.’ The rounded or bulbous shape of ankles may be the reason that the words =*rlawarndinya* ‘ankle’ and =*yahngkanya* ‘ankle’ are feminine.

Extended and/or rigid things are masculine, especially in the field of made goods and chattels or artefacts. These include *jinalya* ‘spear’ and associated *jimara* ‘spear blade,’ *jandoorri* ‘staff,’ *karli* ‘boomerang’ (an introduced term for an introduced item) and *kalambarna* ‘wooden paddle for raft.’ Extended flexible things are also masculine: *irrkalya* and *mamurlanja* ‘spun vegetable-fibre string or rope,’ *banjaya* ‘string spun from eucalypt bark’ and *kulijarri* ‘steel wire.’ Bones and bony or bone-like body parts are masculine: =*rnaarri* ‘bones, skeleton,’ *dingkalya* ‘bone in lower leg,’ *joomba* ‘bone in forearm,’ =*yoowa* ‘elbow’ (although words for the corresponding body part ‘knee,’ =*rlungkum* and =*yoorkum*, are terrestrial), =*rnangalya* ‘wrist’ (although words for ‘ankle,’ =*rlawarndinya* and =*yahngkanya*, are feminine), *korru* ‘jaw,’ *kurleerla* ‘shoulder blades’ and *keyingka* ‘finger nails.’ Bone tools are masculine; *jeembu* ‘kangaroo-bone pressure-flaking tool’ contrasts with *mana karrinjalba* ‘wooden pressure-flaking tool’ and *wunu keembu* ‘stone pressure-flaking tool.’ Stone things are typically celestial, as is *durrku* ‘mortuary cairn.’ However the large erect stone monuments called *jarndulya* are masculine, as are termite mounds of comparable shape, *irrulya*.

4.1.3 (iii) dimension

Just as the masculine and feminine genders have ‘maleness’ and ‘femaleness’ as their core denotational prototypes, so ‘place’ is the corresponding denotatum for the terrestrial class. Any adjective or pronoun marked for terrestrial agreement without a stated head noun is taken to refer to ‘place’ by default. In the following sentence examples the adjective =*yakarri* ‘other’ is marked for terrestrial agreement as *mayakarrima*, and is not co-referential with any noun in the preceding discourses. In this situation the reference is always to ‘place.’

- (4.9a) Ke **mayakarrima** bariy maarrburrkarla
Then they got up and went on to another place
- (b) Waa **mayakarrima** berringenya
We didn't go to other places
- (c) Mangkanangkanya marno nyimnyenga **mayakarrimarnanya**, nyinjorinya nyingke
His wife, the widow, would move away to another place

The terrestrial class is in some respects a locative gender as nominals marked for terrestrial need not (and very often do not) take locative or allative suffixes when used in these functions. Example (4.9b) shows this use of terrestrial marking with the verb =*ya* ‘go.’ Example (4.9c) shows =*ya* ‘go’ used with an adjective marked for terrestrial class and inflected with the locative suffix *-rnanya*. The following sentences are further examples of noun phrases with terrestrial heads used in locative and allative senses without local postpositional (‘case’) inflection. This usage is rather more common than that *with* local case inflection, and in §4.1.4 (i) we will see that locative inflection may actually induce derivational terrestrial class marking.

- (4.10a) Aja nganunerri ngayanangkama mayaram.
aja nga=nu-na-eerri ngayu-nangka-ma mayaram
sit 1=be-PAST-PROG I-DAT-3m house
I stayed home at my place.

- (b) Kaarringoorri molnganem mana.
 kaarr=i-nga-oorri molnganem mana
 3p=go-TNS-U/AUG river 3mDEF
She went with them to the river.

The superordinate lexeme for the terrestrial class is *dambeem* ‘place.’ Nearly all nouns that refer to locations or to topography are terrestrial, with the exception of a subset of nouns that refer to high, rocky or steep places. Nevertheless the generic term for hills, *werrim*, is terrestrial, as are:

- (a) Low, flat places: *marayuma* ‘plain,’ *waawima* ‘flat, open ground,’ *wondum* ‘the sea’ and *rlarlangkarram* ‘the sea’
 (b) Grasses that grow in flat areas: *majalba* ‘grass,’ *ngalarrama* ‘long grass’ and *wurkalam* ‘grass’
 (c) Ground effected by fire: *bimbalba* ‘ashes,’ *kulum* ‘hot sand’ (used for baking vegetables) and *maalkarram* ‘grass fire’
 (d) Soil types: *mangubam* ‘mud,’ *jirrkalima* ‘sand,’ *mirijim* ‘river sand,’ *anmolba* ‘white clay,’ *kumbarruma* ‘yellow ochre,’ *joornim* ‘dust’ and the generic type *kabalba* ‘ground, earth’
 (e) Some edible root species: *inkalba*, ‘edible root sp,’ *wangkarlum* ‘edible root sp’ and *wungunimbim* ‘edible root sp;’ although the generic term *karnmangkun* ‘yam’ is masculine
 (f) Rivers, which for most of the year are dry sandy beds dotted with pools: *marolalem* ‘river’ and *molnganem* ‘river’
 (g) Dark, concave places: *karnmern* ‘cave,’ *barnjam* ‘cave,’ *dalorr* ‘sink hole, well,’ *rdakulama* ‘pit, deep hole,’ *rlaard* ‘fissure, gap, crack,’ *maarnduwalba* ‘tunnel,’ *maarn dabrlam* ‘gap, gorge’ and *balaayuma* ‘rock shelter’
 (h) Places created by people for their use: *yandalba* ‘bark shelter,’ *mayaram* ‘house,’ *yarram* ‘hut,’ *karlumba* ‘path’ and *karndirrim* ‘mortuary platform’
 (i) Unoccupied places: *bundurlba* ‘the bush’
 (j) Spatial abstracts: *dungundu* ‘side (of eg. a hill),’ *kanaalu* ‘opposite side’ and *kangurram* ‘non-visible or hidden side’
 (k) Some trees: *jungurim* ‘boab’ (but see §4.7.1), *bunjuma* ‘fig,’ *jinkarnma* ‘tree sp.’ and *kerooma* ‘white cypress pine.’

Other things acquire terrestrial marking by analogy with these imageries of place. Large concave artefacts are terrestrial: *namarrkama* ‘large wooden bowl’ and *angkam* ‘wooden bowl,’ although the more general term *karraki* ‘container’ is masculine and is applied to modern hand-bags and briefcases.

Reference to events involves the indexation of temporal, as opposed to spatial coordinates. As Alan Rumsey has noted with respect to Ungarinyin (1982:40): ‘If -m- is the gender of ‘place,’ w₂ is the gender of time.’ If an adjective in Worrorra is marked for celestial agreement without being co-referential with any noun in the surrounding discourse, its reference is interpreted as one of time:

- (4.11) Jakarri wunu
 ØN=yakarri wunu
 3w=other 3wDEF
The next day
- (b) Jarrungu wunu ...
 ØN=yarrungu wunu
 3w=QUANT 3wDEF
One day

- (c) Wungunenali
^kwuN=ngu<ne>nali
 3w=new<AUG>
These days/nowadays

This interpretation is as guaranteed for celestial forms as the interpretation of the corresponding terrestrial forms is with respect to place: compare with the forms in (4.11) *mayakarrima* ‘another place,’ *mayarrunguma* ‘one place’ and *mangunalima* ‘a new place.’

Verba dicendi in Worrorra constitute a formal/functional subcategory of transitive verbs which obligatorily index complement clauses in object position. The celestial class-marking morpheme *kuN-* and its allomorphs ^k*wuN-* and *ØN-* are used to index complement clauses on these verbs. In effect, *verba dicendi* index sentential objects just as other transitive verbs index noun objects, and the class marker used in this function is that of the celestial class. Furthermore, complex predicates may consist of a preverb placed under the scope of an inflecting verb. Such arrangements constitute examples of nuclear-core subordinate nexus in clause linkage typology (Foley & Van Valin 1984:249). In these types of predicates the preverb is indexed on the inflecting verb (the verb classifier) in object position as a celestial morpheme (glossed ‘VCOMP’ – see sentence example (4.1), where *buju* ‘finish’ is a preverb). Nor does this phenomenon result merely from the use of an empty, default or residual neuter category: as has been seen, the default category in Worrorra is masculine. There is, moreover, a small set of preverbs that control *terrestrial* VCOMP marking on verb classifiers: *murn* ‘look, gaze’ is one such:

- (4.12) Murn maarrwuna.
 murn ma-^bwarr=^bwu-na
 gaze VCOMP-3p=hit-PAST
They gazed all around.

But verbal nouns or preverbs and abstract nouns that refer to actions or events normally belong to the celestial class: *budurrwu* ‘snoring,’ *buju* ‘finish,’ *mungurr* ‘argument,’ *wurrkunu* ‘trouble,’ *ngarlangerla* ‘speech,’ *ngarlangerlu* ‘the sound of people talking,’ *yarrorl* ‘the sound of voices,’ *kuyyoya* ‘whisper,’ *ngaja* ‘custom, precedent,’ *wurnarn* ‘(ritual) sharing,’ *wurloo* ‘purification,’ *wurdoo* ‘blessing,’ *lalai* ‘the dreamtime,’ *wunurr* ‘begging,’ *kulunu* ‘sleep’ *kurdu* ‘chase, follow’ and many other preverbs employed as verbal nouns. In (4.13) the verbal noun *kulunu* ‘sleep’ is qualified by the adjective =*n-ngal* ‘these several’ (ie several ‘sleeps’). Note that gender agreement is with the celestial class (glossed as ‘3w’):

- (4.13) Ke kulunu wunnengalu bariy kanunaal
 ke kulunu ^kwuN=n-nge-ngal-u bariy ka=nu-na-aal
 and sleep 3w=DEF-AUG-several-3w rise 3a=be=PAST-hither
And after sleeping for a few days he got up

However, rough or violent events are terrestrial: *barurruma* ‘feud,’ *malanim* ‘battle,’ *manjuma* ‘wind’ and *warrambam* ‘flood waters.’ Verbal nouns that refer to places or country are usually terrestrial as well: *rdarlurn* ‘looming’ (with reference to eg a bluff or cliff that ‘looks like it’s looking down on you’), and *murn* ‘gazing’ (typically out over an expanse of country, see example 4.12).

Subjunctive verbs are employed in subordinate and some other clause types. In relativizing constructions, subjunctive predicates may occur with markers signalling agreement with the gender of the nominal head of the phrase in which they occur (§15.6.3). However in adverbial subordinate function the only gender-markers they may occur with are celestial, such as the determiner *wunnu*, as seen in §15.6.1, and as illustrated in (4.3a) and (4.14):

(4.14)

Kaarringoorri molnganem mana, ke [woo nyangkawanangurru] wunu, aakumarnanya mana, jarnda ngenu kenga aaku ke, mara nyimbeena; nyungumanja aaya mara kona.

She went with them to the river, and [when she bent down] over the water intending to scoop some up, she saw herself; she saw her reflection.

In (4.14) the subjunctive predicate (in square brackets) falls within the scope of the following determiner *wunu*. That this determiner is part of the verb phrase and not the following noun phrase (*aakumarnanya mana* '(over) the water'), is indicated by a pause, marked in transcription by the comma after *wunu*.

When any verb-form accepts gender agreement, that agreement is always with the celestial class, with exceptions as exemplified in (4.12). And as has been seen in (4.3b), there are a variety of sentence types that may be topicalized, or made definite by the use of the definite article *wunu*, which in these constructions has scope over the entire sentence. Example (4.15a) shows another definite sentence construction, and (4.15b & c) show how events of all sorts may receive celestial marking:

(4.15a) Ngani bungenjeerri wunu!
 ngani ba-kuN-nga=yi-n-yeerri wunu
 what CFT-VCOMP-1=do-NON.P-PROG 3wDEF
I'm not doing anything! (as I've already told you)

(b) Ke binjiyeerri.
 ke ba-kuN-nja=yi-eerri
 3wREF CFT-VCOMP-2=do-PROG
Don't do that.

(c) Aaya anguja, burnu kunjeeng?
 aaya anguja burn-u kuN-nja=yi-ng
 3aREF what PRO-3w VCOMP-2=do-PAST
What was that, did you fart?

Example (4.15a) is another rhetorical form, used when the speaker believes that the listener already knows the propositional content of an utterance. The determiner here refers to the entire utterance. Example (4.15b) shows an extra-linguistic event referred to by the contextual/topicalizing deictic pronoun =^k*waya* marked for celestial agreement as *ke*. Example (4.15c) shows the same pronoun inflected for masculine agreement (as *aaya*) with the interrogative anaphor *anguja* 'what?' The event itself, however, is referred to euphemistically by way of the pro-form *burn-* inflected for celestial agreement.

4.1.3 (iv) luminosity

The celestial–terrestrial dichotomy encompasses what might be referred to as an abstract–concrete distinction. The prototypically most concrete thing is the earth, and the notion of place is derived directly from it. Just as solid, heavy, dark things tend to be terrestrial, so abstract and bright things are celestial. Bright, translucent things or things with reflective surfaces belong to the celestial class:

- (a) Atmospheric/celestial/meteorological phenomena: *anjolu* 'the sky,' *angkubanu* 'clouds,' *braarr* 'illumination,' *lewarra* 'daylight,' *mamangkunu* 'dawn,' and *wungoru* 'air'
- (b) Liquids are typically bright and reflective: *aaku* 'fresh water,' *wunjuku* 'continuous or sheet rain,' *wungkur* 'sacred pool,' *bijurlu* 'shallow water' and *jalaani* 'deep water,' although atmospheric or 'dispersed' water is masculine; *aaja* 'rain' and *wilmi* 'mist'
- (c) Bodily fluids: *kurloo* 'blood,' *bongkul* 'urine,' *ngamuku* 'milk' and *jelu* 'saliva'
- (d) Soft, bright, liquid things: =^k*wambulu* 'eyes' and *marlinji* 'oyster'
- (e) Hard bright things: *wanawi* 'egg,' =*mlarru* 'forehead,' *kayuku* 'rock, stone,' *karrku* 'rock, stone' and =^b*wiyaku* 'teeth'

- (f) Fire and associated things: *wiyanu* ‘fire, firewood,’ *welkunke* ‘torch,’ *yorlu* ‘torch,’ *wulurrku* ‘coals, charcoal,’ *bijaku* ‘smoke,’ *br’nalu* ‘ashes,’ *wijali* ‘burnt grass,’ *bululuku* ‘tinder, kindling’ and *leerruku* ‘fire spindle’
- (g) Brightly coloured living things: *marrirri* ‘red-winged parrot’ (associated with fire in myth) and *marruku* ‘flower’
- (h) Bright or shiny parts of living things: *ilulu* ‘feather,’ *marnda* ‘tree gum’ and *idmangkanu* ‘leaf’
- (i) Grease: *wunjarra* ‘grease off meat’ and *wrrngeena* ‘bone marrow.’

The field of bodily fluids is extended to include bodily extracts such as *ngoku* ‘faeces.’

Just as the celestial class can be seen to be composed of luminous things along some kind of core–fadeout continuum, so the terrestrial class is composed of dark, opaque things. We have already noted some dark, concave places in the list of topographies in the preceding section, and the sea, also in that section. Fresh water (*aaku wunu*) and sea water (*wondum mana*) are opposed in Worrorra symbolism; fresh water is essential to humans while sea water is unpalatable. Water may be specified as being fresh as opposed to salty by being referred to as *aaku rdeenu* ‘real water;’ sea water is, by implication, not ‘real’ water, in the sense that one of the defining characteristics of water is that it is something people drink. The sea around the Kimberley coast is characteristically dark, cloudy and opaque when compared to fresh water. Other dark or opaque things in the terrestrial class are:

- (a) Atmospheric/celestial phenomena: *karlumarlum* ‘evening, dusk,’ *karlakarlem* ‘evening, dusk,’ *wundukum* ‘night,’ *warlorluma* ‘night,’ and *jerrba* ‘shade,’ although interestingly *marram* ‘light’ and *yankardama* ‘star’ are also terrestrial.
- (b) Dark-coloured or nocturnal birds: *darraanma* ‘red-tailed black cockatoo,’ *barrom* ‘tawny frogmouth’ and *booboom* ‘coucal pheasant;’ crows, however, (*wangkuranya*) are feminine.

4.1.3 (v) topography

The parameters of dimension and luminosity produce another and secondary opposition, that of relative topographic position or height. We have already seen that low, flat places are terrestrial, and that rocks and firewood are celestial. This gender distinction comes about naturally as a result of the terrestrial class’s coordinate position on the dimension parameter as ‘place,’ and the celestial class’s coordinate position on the luminosity parameter as ‘luminous.’ This dynamic now produces a topographic contrast between low, flat areas on the one hand, and high or raised things on the other, and is expressed by way of an opposition between the earth/place and low, flat areas as terrestrial, and tree/hill/height as celestial.

The sea is low and flat as well as being dark and opaque, and things associated with it are terrestrial: *wondum* ‘the sea, salt water,’ *rlarlangkarram* ‘the sea,’ *kalaarra* ‘sandy beach,’ *kalam* ‘double raft’ and *jindim* ‘mangrove.’ However landforms defined in terms of their contradistinction to the sea, that is in terms of their raised position above the sea, are celestial: *ungujonu* ‘island,’ *murdu* ‘island,’ *barlurlu* ‘coastline, sea-shore’ and *barndaya* ‘the mainland.’

Trees as well are characteristically raised above the land upon which they grow. The generic term *nguwanu* ‘tree’ is celestial and most trees belong to this class. Possible primary reasons for this are that firstly the trees most characteristic of Worrorra country (apart from boabs) are eucalypts with shiny white bark; and secondly the most common use of these and indeed of most trees is as firewood (*wiyanu wunu*). Things obviously cut out of trees are also celestial: *namandi* ‘canoe’ (an introduced item), *barrawara* ‘canoe’ and *jinyinu* ‘shield.’

Rocks present hard reflective surfaces and rocks and stony things are celestial:

- (a) Rocks: *karrku* ‘rock, stone,’ *kayuku* ‘rock, stone,’ *murndaaleya* ‘plateau, platform, flat rock’ and *durrku* ‘mortuary cairn.’
- (b) Steep, high and/or rocky hills: *kurrandu* ‘hill,’ *rdarlambanu* ‘high and/or steep hill,’ *kenjanu* ‘high and/or steep hill,’ *kurraarrandu* ‘line of hills’ and *warnangkali* ‘cliff, mountain.’

The two most prominent peaks in Worrorra country are *Ngayangkarnanya* ‘Mount Trafalgar’ and *Nubungarri* ‘Mount Waterloo,’ two large and spectacular mesas on the Northern shore of

Ngarlangkarnanya (The St. George's Basin) at the mouth of the Prince Regent River. They have high quartzite or sandstone cliffs that glow red and gold at sunrise and sunset.

The distinction between low, flat things and superior rocky or wooden things discussed here in terms of a semantics of 'topography' is represented iconically in the genders assigned to *barlarlonma* 'mortar/grinding stone' (terrestrial) and its complementary artefact *moku* 'pestle' (celestial).

4.1.4 Functional properties

The clearest manifestation of a category's intension is the derivational function of that category's tokens within a system of reference. The intensions of Worrorra gender categories are made explicit by virtue of the derivational functions of gender marking.

It has been suggested to me that gender systems in northern Australia may be of two types.³⁵ In one type of system, gender is correlated with 'semantic field' or 'lexical domain,' and all members of a particular semantic field are allocated to the same gender. In this system it would appear that the oppositional dynamic that characteristically structures gender systematics is relaxed or absent with respect to the way in which relations between particular semantic fields are conceived emically (eg Gaagudju (Harvey 1992), Ngalakan (Merlan 1983), Ngandi (Heath 1978), Ngan'gityemerri (Reid 1991) etc). In the other type, gender is used to make distinctions between denotata within semantic fields, and the oppositional dynamic appears to function systematically at every level of gender reference. We may characterize this difference as one between gender systems that function to create lexical domain categories, and others that function to signal lexical differentiation between similar or comparable denotata. Worrorra for the most part exhibits the second type of system: but the first type is also found, as described below in §4.1.4 (ii).

4.1.4 (i) lexical differentiation

We have already observed the derivation of male–female pairs of nouns in §4.1.3 (i), and locational derivation in §4.1.3 (iii), showing that 'male,' 'female' and 'place' at least are intensional properties of the masculine, feminine and terrestrial classes.

A change of gender may signal a change in sense (eg such as recorded by Heath 1984:188). The masculine noun *jungura* means 'boab tree,' while the terrestrial noun *jungurim* means 'shade of the boab tree.' Indeed large old boab trees have status as places rather than as trees only, and their wide trunks do provide shade in a rather open and unshaded landscape. Kangaroos are precisely named. The term used specifically for the female grey kangaroo, *warinya*, has masculine shape *wara* 'kangaroo (generic)' used not for the male animal (*jurlvun* and *arr'ra* are used for that), but as a superordinate noun covering all kangaroos regardless of species or sex. The inflexional inalienable noun =^k*wambulbu* 'eye' is celestial. When this noun exhibits terrestrial marking it undergoes a change in sense: *maambulba mana* '(tidal) whirlpool.' The gender-marking in this case is coreferential with *rlarlangkarram mana* 'the sea.' Literally this word means 'its eye.' When *aaku* 'water' is thought of as a substance, ie as that which people drink, it is celestial. When water is referred to as a body of water (that is as a place) and marked with a locative postposition, it takes derivational terrestrial class-marking:

| | | | | |
|---------|---------------------------------|------------|-------|----------------|
| (4.16a) | Juward | kanuna | mana | aakumarnanya |
| | juward | ka=nu=na | mana | aaku-ma-rnanya |
| | jump | 3a=be-PAST | 3mDEF | water-3m-LOC |
| | <i>He jumped into the water</i> | | | |

The terrestrial class functions as a locative gender in what probably amounts to a large proportion of its occurrences. When used in this locational sense, *aaku* usually acquires locative (terrestrial) gender derivation (marked by the morpheme *-ma*) as well as locative case inflection. Note that this gender derivation is not simply a matter of a lexeme-specific case allomorph *-marnanya*. In this usage, as in

³⁵ I am grateful to Jeffrey Heath for pointing this out to me.

example (4.16a), *aaku* exhibits a derived or outer gender that controls anaphor agreement on the article *mana*. The locative-marked phrase in this sentence is derived as indicated:

(4.16b) [_{TERR}mana [_{CEL}aaku_{CEL}] ma + rnanya_{TERR}]

This phrase is composed of an inner inherent gender (celestial) overlain by an outer derived gender (terrestrial). In this instance the language employs derivational gender affixation to make a sense distinction between water as substance, and a body of water as place or location. Other nouns may also occur in derived terrestrial form, with or without the gender affix *-ma*. When *-ma* is not attached, the derived status of such a noun is indicated by the shape of the article (*mana*). For example the masculine noun *jardiinja* ‘spinifex’ may occur as *jardirmanya mana* ‘in (a wad of) spinifex,’ and *karrku wunu* ‘rock, hill’ may occur as *mana karrkurmanya* ‘on the rocks.’

Conversely, some terrestrial nouns may take derived celestial marking when their aspectual or *aktionsart* properties are brought to the fore; *wundukum mana* ‘night’ is one such:

(4.17)

Ke **wundukumarnanya wunu** anja wangalaalunguyu kubajunganangkorri, ‘Yarrorl birriyeerri, meemeenya binyinmaa, yoowa ke kaakaaja kurde.’

And **at night** they told their children, ‘Don’t make too much noise, or the meemeenya bird might get you, or the boobook owl, or the kaakaaja bird.’

In this derivation *wundukum* ‘night’ is denoted as an interval of time with internal structure, and acquires celestial marking to signal this typically verbal (aspectual) characteristic. Here gender-marking is used to signal aspectual properties of nouns. This phenomenon is not uncommon in languages; in French, *jour* (masculine) ‘day’ and *soir* (masculine) ‘evening’ become *journée* and *soirée* (both feminine) under the same circumstances. The same also occurs in Arabic, eg. *lail* (masculine) ‘night’ and *laila* (feminine) ‘night (aspectual),’ although in Arabic the distinction may also be lexicalized: *nabaar* ‘day’ and *yaum* ‘day (aspectual).’ Another Worrorra noun that behaves in this way is *karlumarlum mana* ‘evening.’ Derivational process may be signalled by apparent dis-agreement, or ‘wrong’ gender-marking morphemes appearing elsewhere in the clause in which the derived noun occurs, as in (4.18). The suffix *-nyini* ‘until, then’ usually comes between the root morpheme of a terrestrial noun to which it is suffixed and the gender-marking morpheme *-ma* or *-m* (see example 4.7a):

(4.18)

| | | |
|-----------------------|--|--------------------|
| Yarriba | nyimnyawanangurreerri, | karlumarlunyininim |
| yariy- ^{bwa} | nyiN-mnya= ^{bwa} -na-ngurru-eerri | karlumarlu-nyini-m |
| descend-PROG | 3f-DD=fall-TNS-away-PROG | evening-until-3m |

| | | |
|-----------------------------|-------|--------|
| kumnyanuna | karle | imaya. |
| kuN-mnya= ^{nu} -na | karle | imaya |
| 3w-DD= ^{be} -PAST | then | cool |

[The sun] went down and then evening came on and it got cool.

Even though occurring in a construction which picks out, as it were, the gender-marking suffix *-m*, the noun *karlumarlum* here receives celestial subject indexation on the following verb (*kumnyanuna* ‘it (celestial) was (inchoative)’), as indicated by the intransitive subject prefix morpheme *kuN-*. The semantic properties of nouns such as *wundukum* and *karlumarlum*, which acquire gender from one part of their denotation (darkness), but which also denote intervals of time, render them inherently liable to this type of derivation.

A few other instances of a change in sense resulting from a change in gender arise when singular or plural noun-forms are homophonous with collective nouns: *wari* ‘kangaroos’ (plural) vs ‘kangaroo meat’ (collective); *burnnarri* ‘animals’ or ‘birds’ (plural) vs ‘meat’ (collective) and *barnmarnja* ‘sorcerer’ (singular) vs ‘sorcery’ (collective).

There are only a few instances that I am aware of in which gender changes induce changes in meaning. One of these is *rlarlangkarram mana* ‘the sea’ and *irlarlangkarrainja* ‘estuarine crocodile’ (ie ‘the salt-water one’ or ‘salty’). The other example is *warliinja* ‘sea-turtle (generic)’ and *warlinya nyina* ‘dugong.’ This pair shows an interesting and unusual phonological correspondence that treats members of two zoological classes of large, highly-prized marine vertebrates anthropomorphically, ie as if the distinction were a sex-differentiable one. The plural shape *warli* refers to turtles and dugongs collectively, just as for example the plural shape *arrol* refers to both dingo dogs and bitches. This special treatment is almost certainly related to the highly prized status of turtle and dugong meat in Worrorra culture. And a third example is seen in the pair *wungkurru wunu* ‘sacred pool,’ and *wungkuja nyina* ‘rock python’ (underlyingly |wungkurr-nya| with feminine suffix *-nya*). This pair consists of nominalizations of the adjective *wungkurr* ‘sacred,’ with celestial derivation to produce ‘sacred water,’ and feminine to produce ‘sacred python.’

Other instances of gender change do not result in changes of meaning. Love (1934:19-20) describes how the noun *karlumba* ‘path’ which is terrestrial, changed gender to become masculine when it referred to the road built under missionary supervision between Port George IV (Mingkunya) and Kunmunya. At present *karlumba* is terrestrial, but a synonym *juwaha* ‘path’ is masculine.

Animals may change gender when they are personified as humans. Most animals are members of the masculine or feminine genders, and when they appear in myths they are personified as men or women depending upon their gender. However there is one example of a mythically important bird in the non-human macrogender, *marrirri wunu* ‘red-winged parrot,’ which is personified as a woman and which may take feminine gender agreement in mythic contexts:

(4.19)

Marrirri **wunu** murn mona: ‘inja wiyanu ngarraangkowa kumalangaayerri?’ kunjunganangka; wululu nyimbanaalnyale **nyangka**.

The red-winged parrot looked around: ‘Why is he taking the fire away?’ it/she asked; then she flew down towards him.

In this sentence *marrirri* at first controls celestial agreement on the article (*wunu*) but subsequently triggers feminine agreement shapes at the opposite end of the sentence in the NP index *nyim-* and by the pronoun *nyangka* ‘she.’

A final area of gender fluidity in Worrorra appears to involve place names. I have had some difficulty in ascertaining gender for many place names as nearly all place names appear to be able to control terrestrial agreement, especially in citation contexts. In some instances however terrestrial marking may be taken to be an outer gender assignment. In these circumstances place names are able to control agreement for other genders as well, and such ‘inner’ genders appear to be allocated according to the topographic type of the referent, as described in §4.1.3 (v). For instance *Ngayangkarnanya* ‘Mount Trafalgar’ may be referred to as *Ngayangkarnanya mana* ‘(the place) Ngayangkarnanya’ or as *Ngayangkarnanya wunu* ‘(the mountain) Ngayangkarnanya.’ Mountains (*warnangkali wunu*, *rdarlambanu wunu*) appear to have an inner celestial class: *Ngayangkarnanya wunu* ‘Mount Trafalgar,’ *Nubungarri wunu* ‘Mount Waterloo,’ *Majerrin wunu* ‘Mount Hann’ and *Wundamarro wunu* ‘MOUNTAIN NAME.’ Some islands (*ungujonu wunu*, *murdu wunu*) appear to be of the same class: *Wurrurliku wunu* ‘Augustus Island,’ *Karlinji wunu* ‘ISLAND NAME’ and *Jinbeenu wunu* ‘ISLAND NAME,’ while others are terrestrial: *Numen mana* ‘ISLAND NAME,’ and *Yawijaba mana* ‘The Montgomery Islands.’ Other place names are also celestial: *Dulooku wunu* ‘land of the dead,’ located out over the Western Ocean, probably acquires gender by analogy with *barndaya wunu* ‘mainland,’ as may also be the case for *Wurnbangku wunu* ‘patrician country name,’ located on the coast around the St. George’s Basin, although it is possible that this term may acquire gender by virtue of its initial and final segments as well. An example of the way in which this kind of dual gender allocation functions in practice is seen in a description of the activities of a dreamtime crocodile who left his liver behind in the form of a large liver-shaped rock:

- (4.20) Warndi kumnyona wunu Yuwulam mana.
 warndi kuN-Ø-mnya=^bwu-na wunu yuwulam mana
 make 3w-3-DD=hit-PAST 3wDEF 'Liver' 3mDEF
He made (the rock called) 'The Liver.'

The place name *Yuwulama* 'The Liver' is derived from the terrestrial noun =^kwulama 'liver,' and occurs here with the articles of both the celestial and terrestrial classes. We may thus infer outer terrestrial and inner celestial assignments for *Yuwulam*. At the same time a celestial undergoer is indexed on the verb *warndi* =^bwu 'make.' From context, and from the undergoer-gender indexed on the verb, *karrku wunu* 'rock' or *kayuku wunu* 'rock' is automatically inferred as the verb's object. This is an example of the way in which gender-marking morphology functions indexically by restricting the range of possible referents. Another rather lovely example of the dual nature of gender allocation with respect to place names is found in a story told by the late Daisy Utemorrhah (Utemorrhah 2000:13-20); in this story two boys are gazing out to sea at the island called *Karlinji*. As they look at it they sing:

- (4.21) Karlinji bawarra, mawe wurno, mawe wurno.
Karlinji Island so far away, there it is away over there.

In this song the island is referred to by two anaphors: =^kwu 'presentational' and =^rmo 'that (distal).' The first is inflected for terrestrial agreement (*mawe*) while the second bears celestial inflection (*wurno*). *Ngarlangkarnya* 'The St George's Basin' appears to have an inner gender which is feminine, probably because of the shape of its final segment *-nya*, although of course it may also accept terrestrial agreement. And some place names are clauses, such as *Imalala Jujurr Ingkaarrbanga* 'Where they carried the handsome man,' and *Jilinya Jaarr Nyangkawana* 'Where the spirit-woman travelled upstream.'³⁶

4.1.4 (ii) lexical domains

Despite what is described above, and in order to set it in perspective, it will be useful to observe how semantic fields are dealt with in the Worrorra gender system. Correlations between gender and semantic field are scanty and not particularly consistent. Most minor semantic fields are unipolar; ie they do not display the coordinate polarities exhibited by the semantics of the gender superstructure displayed in Table 4.5.

Sexuality provides powerful metaphors by which nouns may be classified according to the imagery of masculinity and femininity. Snakes are usually phallic and tend to be masculine, but several are feminine; Heath (1984:181) plausibly suggests that the imagery of swallowing may be sexual, and associated with femaleness. In Worrorra pythons are feminine (*mawunkunya/nyimrimaaingarrinya* 'black-headed python' and *wungkuja* 'rock python') as well as some other snakes: *kawaanya* 'black snake' and *rlongkungunya* 'sea snake *sp*'. Spears (*jinahya*) are masculine, and spear-throwers (*yamarlbanya* and *yarnkalja*) are feminine. Gender is assigned to spear-throwers by reference to the iconic imagery of how a spear fits into the slightly concave spear-thrower when it is about to be released.

As noted above, body parts are mostly celestial or terrestrial. Body parts are only semantically 'visible' when distinguished apart from the whole beings to which they are attached. Body parts are prototypically parts of human beings, and human beings belong to the human or highly animate genders masculine and feminine. Gender semantics again employs an oppositional dynamic in order clearly to distinguish body parts from their human 'owners' by classifying them in the non-human macrogender. Another way of putting this is to say that body parts only come into existence when reified apart from their human 'owners,' and their categorization in the non-human macrogender serves the function of grammaticizing the reification. Body parts belonging to the human macrogender are of fairly clear types. Bones and bony or bone-like parts are masculine, as noted. The 'heart,' *rangku* is masculine, as are two words for 'thigh,' *wanjarra* and =^kwuda. Non-material emanations from the body are masculine as well; =ⁿgaanja 'shadow, spirit' and =^yula 'anger.' Feminine body parts are *mangjanya* 'sweat,' *jurhwaanya* 'sinew,' *nyaarnkanya* 'Achilles tendon' and =^rlawarndinya

³⁶ See §15.6.6.

and =*yalngkanya*, both meaning ‘ankle.’ The significance of the relationship between the shape of ankles and their gender has already been suggested, and the gender of sinews and tendons is discussed in §4.1.6 (i).

Bodily ornaments are masculine; these include women’s pubic aprons (woven from hair-string or kangaroo fur) *warlbirri*, *yawurna* and *kuduwaanja*, as well as *jangkunja* ‘hair-string belt,’ *brookku* and *bankulaja* ‘cicatrices,’ *boordi* ‘mans long hair bun, wrapped in paperbark’ and the introduced ornament *dress*. Interestingly however, *wanala* and *wudbeenu* ‘woven hair string’ (ie before being made up into some artefact or ornament) are celestial.

Major food classes (vegetables, meat, etc.) are all in the collective gender. Such items include ‘vegetable food,’ *mangarri* and *maya*; ‘meat,’ *burnarri*; and ‘kangaroo meat,’ *wari* (see §4.2.2).

The following tendencies may be briefly noted about the way that other semantic fields cluster with respect to gender.

- (a) Animals (including insects and birds) are mostly either masculine or feminine, with the majority being masculine. Larger birds and some insects tend to be feminine, as discussed in §4.1.6 (i).
- (b) Topography is mostly terrestrial or celestial, with the majority of terms being terrestrial.
- (c) Plants are mostly terrestrial or celestial.
- (d) Collocation is a pervasive factor in gender allocation, for instance *kambananya* ‘shovel, scoop, poker’ is used mainly by women to manipulate food in a fire, and is feminine.
- (e) Most semantic fields are not correlated with gender categories. Artefacts are an example, and marine invertebrates also appear to disport themselves heedlessly across genders.

4.1.5 *Meta-intensional references of gender categories*

In order to capture the underlying denotational properties of gender as the system operates in Worrorra, it is necessary to distinguish between levels of intensional reference. The semantic coordinates of a gender system (see Table 4.5) represent discrete clusters of intensions of the sort to which such systems make reference. Meta-intensions, as the term is used here, are essentially image schemata that, by referring to the embodied nature of our experience, motivate the coherence of such intension-clusters. Image schemata are

structures that organize our mental representations at a level more general and abstract than that at which we form particular mental images (Johnson 1987:23-24) ... recurring dynamic pattern[s] of our perceptual interactions and motor programs that give coherence and structure to our experience (idem: xiv).

An embodied schema is one that refers to the body’s physical location in, and operation as a part of the world. Meta-intensions are essentially the symbols to which partition-classes make differential reference at an underlying level.

The male-female opposition encoded by the human macrogender is clear enough to speakers of a language such as English that employs this dichotomy as a gender distinction. What is perhaps less immediately clear is the incorporation of the parameter of shape within this semantics, with its phallic imagery with respect to males and with its imagery of pregnancy with respect to females. Nevertheless it should be clear that the underlying or meta-intensional references of these categories of sex and shape are to the embodied image schemata of human beings, ie to *man* and *woman* respectively.

What is less clear, perhaps, is the opposition between notions of [place/dark/concrete] on the one hand and [time/luminous/abstract] on the other. I will argue that like the opposition in the human macrogender, the non-human macrogender opposition involves embodied image schemata, in Johnson’s (1987) terms.

The dynamic of polar opposition constitutes the main structural principle involved in the partitioning of lexical categories generally, and this is particularly evident in the structure of the Worrorra partition. As has been suggested, the prototypically most concrete thing is the earth, and it should be apparent that reference to the earth is an important part of the intension of the terrestrial class. We should also expect that whatever the underlying intension, or meta-intension of that class

may be, it will exhibit an oppositional dynamic with respect to that of the celestial class. So far we have observed a series of systematic oppositions in the non-human macrogender between time and place, luminous and non-luminous, and between abstract and concrete. We have also noted an opposition between the sea and low places on the one hand, and hills and high places on the other. Now it appears that all the intensional properties of the two categories constituting the non-human macrogender may be captured by reference to an oppositional dynamic between *earth* and *sky*. The earth is the intension of the notion of place. The earth also provides dark, concave places (caves, burrows etc) away from the light. Time is the creation of celestial phenomena: the passage of the sun, moon and stars across the sky, and the variations in colour and luminosity exhibited by the sky create our understanding of time. Furthermore, the sky is luminous; even at night the moon and stars define the sky as the abode of brightness. The sky is also an essentially abstract phenomenon: it can be apprehended only visually; no other sensory mode is able to detect it. Central to an understanding of the semantics of this dynamic is the notion of relative height. The celestial class refers to things that are in general high, while the terrestrial class refers to things that are in general low. The structure of the Worrorra gender system is displayed in Figure 4.1, together with the forms of the definite article required by each lexical category:

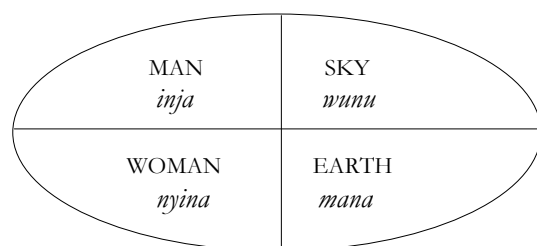


Figure 4.1: Worrorra gender categories

The oppositional dynamic between earth and sky is quite consistent with our understanding of embodied image schemata: it is an all-pervasive feature of our existence as physical beings in the world. Earth and sky are the objective or externalized manifestations of our embodied experience of UP and DOWN. The UP–DOWN schema, in external manifestation, is available and suitable for grammaticization because it is *bounded*, by the sky above and the earth below. Other (eg horizontal) dimensions are unbounded. Furthermore, the bounded, external manifestation of the UP–DOWN schema is all-pervasive in the lives of people who live entirely out-of-doors. It is entirely natural that a gender system should make use of such a schema as an underlying structural principle in the oppositional dynamic of which such systems are constituted. Earth and sky, then, are meta-intensional principles that underly other denotational functions of gender in Worrorra. Worrorra society is structured at a very basic and important level according to the parameters described here. Apart from the biological gender distinction, the two patrimoieties, *Adbalarriya* and *Arrwunarriya*, refer underlyingly to the UP–DOWN schema – see §6.2.4 for discussion.

The system outlined here is inherently covert: its core denotata are overlain by other intensional references whose relationship to their category’s meta-intension is not immediately apparent. The extent of the system’s opacity implies that the system itself is an ancient one. Its survival is due to its status as an embodied image schema; that is to say, as a primary semantic structure in memory and cognition; ie, in the apparatus of mental representation.

4.1.6 Macrogender

The four overt genders described above may be grouped together along orthogonal axes to produce two covert macrogender pairs. The masculine and feminine genders together constitute a human macrogender, and the terrestrial or celestial classes together constitute a non-human macrogender. Similarly, the feminine and terrestrial classes constitute a macrogender whose members are

characterized by phonological markedness, and which typically display features characteristic of some kind of semantic markedness. The masculine and celestial classes constitute a macrogender of typically unmarked nouns.

Table 4.6: macrogenders as defined by the semantics of animacy and markedness

| | | |
|--------|-------------|-----------|
| | +MARKED | –MARKED |
| +HUMAN | feminine | masculine |
| –HUMAN | terrestrial | celestial |

These four macrogenders are covert, that is to say that they lack consistent overt morphosyntactic marking. However the morphology of one set of referring expressions, that of the independent interrogative substitutes meaning ‘who?’ or ‘what?’, clearly displays the operation of parameters that define macrogender. The paradigm of the anaphor |ang(k)uYa| ‘who/what?’ does not pattern like that of other derived nominals that refer to third persons. This anaphor accepts gender-marking affixes, but only with reference to members of the marked macrogender, that is to say, it accepts gender-marking in agreement with feminine and terrestrial nouns only. The morphologically unmarked forms constitute default categories that trigger either masculine or celestial agreement on verbs:

- (4.22a) Anguja **kanjamurrkerri?** *What are you looking for?*
 (b) Anguja worr **kanungu ngeenya kajirn?** *What’s that that smells like honey?*
 (c) Angkuyu **kardangoo?** *Whom can we ask to go and get it?*
 (d) Anguja nee **kanjaangurreerri?** *What are you thinking about?*

In each of these examples the prefix *ka-* on the verb signals masculine agreement with *anguja* ‘what?’ or *angkuyu* ‘who?’ In other situations, however, *anguja* controls celestial agreement. The verb *kuN[]=yi* ‘do’ only accepts objects marked for celestial class: for an example of this phenomenon see example (4.15b) in §4.1.3 (iii). In that example the textual deictic object *ke* ‘that referred to previously, or already known to the addressee’ is the celestial form required by the verb. This verb may also employ *anguja* in object role (although the VP anaphor *ngani* ‘what?’ is more common in this situation):

- (4.23) Anguja kunjiyeerri?
 anguja kuN-nja=yi-eerri
 what VCOMP-2=do-PROG
What are you doing?

A functional paradigm of this anaphor gives a clearer indication of its semantics:

- (4.24) |ang(k)uYa|
 HUMAN: *who?* angkuyu
 specifically plural angkuyangkuya
 specifically feminine angkunya
 NON-HUMAN: *what?* anguja
 specifically terrestrial angujama

The parameters operating here produce a human—non-human split, and give evidence of another split corresponding to phonological markedness:

- | | | |
|--------|----------|---------|
| (4.25) | +MARKED | –MARKED |
| +HUMAN | angkunya | angkuyu |
| –HUMAN | angujama | anguja |

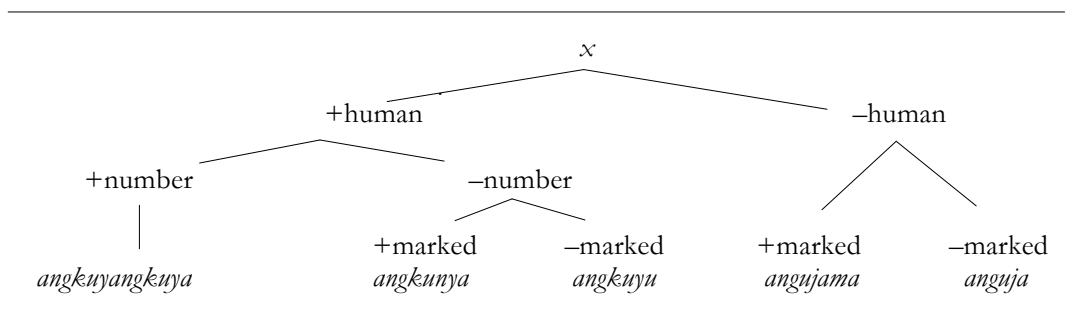
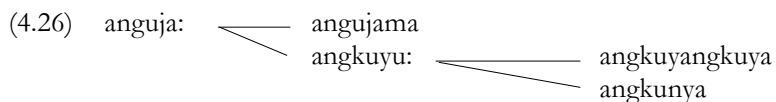


Figure 4.2: features of interrogative anaphors

Independent interrogative substitutes refer by definition to things the identities of which are unknown. In order to operate the anaphor system, a speaker must make decisions about the identity status of any given denotatum, and such decisions draw the denotatum from an unknown to a (partially) known state in a systematic and graded way (Figure 4.2). At each decision-node a choice of ‘unknown (decision failed)/not pertinent (decision refused)’ automatically yields a default category. Below the feature [human] decisions to register ‘known’ information yield marked categories. In each case, a feature bearing a negative value means that with respect to that feature, information has either failed or been refused registration, ie information is either not available or is not contextually pertinent. So for instance for the anaphor *angkuyu*, the specification [+human, –number, –marked] indicates that the denotatum is human, but that its number and gender properties are either unknown or not pertinent to the context of the utterance in which it occurs. The properties of each output-category may be more clearly stated as follows:

- (a) *anguja* is used when any of the following apply: (1) the referent’s animacy-status is unknown, (2) a non-human referent’s gender is unknown or is not contextually pertinent, (3) a non-human referent’s gender is known to be masculine, feminine or celestial.
- (b) *angujama* is used when: (1) a non-human referent’s gender is known to be terrestrial and (2) its gender is contextually pertinent.
- (c) *angkuyu* is used when either of the following apply: (1) a human referent’s sex is unknown or is not contextually pertinent, (2) a human referent is known to be male.
- (d) *angkuyangkuya* is used when: (1) a human referent’s number is plural and (2) its number is contextually pertinent.
- (e) *angkunya* is used when: (1) a human referent is known to be female and (2) her sex is contextually pertinent.

From this account it is clear that relations between the members of the set of independent interrogative substitutes are structured with respect to each other, that is to say that some operate as superordinate lexemes with respect to others:



Those that are not superordinate are either marked for number or marked in terms of the semantics of gender.

The features that conjointly define covert macrogender categories operate in parallel to the four overt genders. Moreover, there seems to be no requirement that the semantics of macrogender should be mapped precisely onto the morphosyntax of overt gender. The marked macrogender is partitioned by the feature [human] and the resulting covert categories [+marked, +human] and [+marked, -human] correspond closely to the overt feminine and terrestrial classes respectively, although *rambarr mana* ‘avoidance category kin’ is a member of the [+human, +marked] category that is not feminine. However the partitioning of the unmarked macrogender does not correspond closely

to that of the overt masculine and celestial classes: note that both *angkuyu* and *anguja* require masculine agreement. The gender specifications of *anguja* are not stated in terms of an overt category; its primary gender specifications are acquired from its macrogender membership only, as [-marked, -human]. Nevertheless, overt gender concord is obligatory in Worrorra and *anguja* selects promiscuously and pragmatically from the two overt genders encompassed by the unmarked macrogender. When *anguja* substitutes for some noun it selects the least marked or default overt gender category, which is masculine; and when it substitutes for a VP it selects the gender appropriate to VP, which is celestial. *Anguja* is able to behave in this way because it is unspecified for overt gender membership.

4.1.6 (i) markedness

Possessive phrases in Worrorra show agreement with both head and dependent nouns. Head noun agreement is accomplished by suffixation upon a possessive pronoun, $-\emptyset$ for agreement with masculine and celestial heads, *-nya* for feminine and *-ma* for terrestrial heads; that is to say that head agreement is covert for members of the unmarked macrogender, but overt for members of the marked macrogender. The following examples employ the possessive pronoun *ngayanangka* ‘my:’

- (4.27a) *inja karraki ngayanangka* *my bag*
 (b) *wunu kayuku ngayanangka* *my money (stones)*
 (c) *nyina yamarlbanya ngayanangkanya* *my spear-thrower*
 (d) *mana angkam ngayanangkama* *my bowl*

While both overt gender members of the marked macrogender show phonological markedness, it would appear that only the feminine gender is used systematically to signal semantic markedness. Only one semantic domain displaying characteristically ‘marked’ criteria occurs in the celestial class (see below). Semantic markedness is therefore not a major feature of this class. It is possible to further differentiate the celestial and masculine genders on the basis that the celestial class is associated with a set of gender-signalling inflections that are unique to itself, whereas the masculine gender shares some of its gender inflections with the plural/collective/mass agreement class (see Table 4.2); that is to say that its gender-marking phonology is not unique. The masculine gender is therefore the least marked category of the unmarked macrogender. This situation gives evidence of a hierarchy of markedness types, as shown in Table 4.7.

Table 4.7: markedness types

| GENDER | MARKEDNESS TYPE |
|-------------|--------------------------|
| feminine | +phonological, +semantic |
| terrestrial | +phonological, ~semantic |
| celestial | ~phonological, –semantic |
| masculine | –phonological, –semantic |

Semantically marked categories are those whose denotata exhibit a culturally perceived asymmetry when compared to other things of the same or similar general type (Lakoff 1987:59). Such a semantic asymmetry usually involves some kind of desirability or conversely repulsion (ie ‘anti-desirability’), although it may involve other things as well. Within the food domain there is a marked subcategory easily characterized as ‘delicacies:’ *ngeenya* ‘honey’ and *jubakunya* ‘tobacco,’ both feminine. Also feminine are a number of dangerous things that need to be treated with respect or avoided altogether. The semantics of one of these, *jimbeerlanya* ‘spear blade,’ has been discussed in §4.1.1. Other members of this category are *balangkarranya* ‘storm wave’ and *malngeerrinya* ‘lightning.’ The vulnerability felt during a tropical lightning storm by people living out in the open can be well imagined. The Worrorra double-raft (*kalam*) is reputed to have been unsinkable and was used for quite long-range sea journeys around the coast and to offshore islands. Riders on *kalam* were apparently vulnerable to only one natural phenomenon, and that was storms at sea; storm waves could sweep people off their rafts and leave them in the water to drown. Biting arthropods cause pain or irritation, and are feminine: *maanya* ‘centipede,’ *bijileenya* ‘mosquito,’ *nyinyinya* ‘sandfly,’ *kungkuunya* ‘march fly’ and *kubadeenya* ‘meat ant.’

Also feminine is *rdarrkenya* ‘grasshopper,’ although this large and fearsome-looking insect is quite harmless.

A specific type of danger is allocated to the terrestrial class. Violent things and things associated with interpersonal violence belong here: *malanim* ‘battle, fight,’ *barurruma* ‘feud,’ and the only specifically offensive weapon, *rdiyama* ‘fighting club’ (compare this implement with the masculine *rdiya inja* ‘club used to deliver the *coup de grace* to wounded kangaroos’). Also naturally-occurring violent phenomena belong in this class: *manjuma* ‘wind’ and *warrambam* ‘flood waters.’

Most raptors are masculine: *baardmarra* ‘white-breasted sea eagle,’ *dindivalya* ‘black kite,’ *jarroo* ‘brahminy kite’ and *jindival* ‘peregrine falcon.’ The largest and most spectacular raptor, however, is feminine: *warraananya* and *arndangarrinya* ‘wedge-tailed eagle.’ Birds that are special by being large and terrestrial or largely terrestrial, and esteemed sources of meat are also feminine: *jebarranya* ‘emu,’ *kurrongkalinya* ‘brolga,’ *kuyoja* ‘great-billed heron’ and *banaja* ‘bustard.’ Fresh-water turtles were highly-esteemed sources of meat and two of the three terms in the sample for fresh-water turtles are feminine: *kanjorrinya* ‘fresh-water turtle sp’ and *wurlumaranya* ‘northern snake-necked turtle,’ while *dijakurri* ‘northern snapping turtle’ is masculine.

While woven vegetable-fibre string is masculine (*irrkalya*, *banjaya* and *mamurlanja*) and hair-string is celestial (*wanala* and *wudbeenu*), string taken from animals (and therefore present in, if not taken from humans) is feminine: *jurhwaanya* ‘sinew’ and *nyaarnkanya* ‘Achilles tendon.’

4.2 Plurality

Worrorra exhibits two kinds of grammatical number-marking category: a class of overt forms, described in Chapter Nine, and a covert category. The covert category consists of two numbers, singular and plural. Singular nouns occur as unmarked citation forms, such as are discussed in §4.1. Formally plural nouns may be distributed among three functionally-motivated types: those exhibiting non-singular (plural) number, mass plural nouns and collective nouns.

4.2.1 Plural nouns

A subset of nouns in the human macrogender may exhibit plural forms (two pluralizable nouns in the non-human macrogender are mentioned at the beginning of this chapter). Nouns that have plural forms are typically human nouns or nouns that refer to important animals, foods or artefacts. An exception to this is *jalwaya* ‘skinks.’ Pluralizable artefacts are *jimareya* ‘spearheads’ and *ardarruku* ‘blankets.’ Love (1934:25) records a plural form for ‘spears’ but modern Worrorra people reject this.

All genders collapse into a single plural-agreement form-class, ie gender is not realized in plural number. The plural definite article is *anja* ‘the, these.’ Plural number is signalled on the noun morphologically and by agreement patterns registered on all possible agreement targets. Plural-marking morphology is not straightforward and varies in accordance with both phonological and semantic considerations. The simplest plural shapes are homonymous with their singular forms. Nouns of this sort are bisyllabic, with the first vowel long, and the second back, low and short:

| | SINGULAR | PLURAL |
|-----------------------|----------|--------|
| <i>man</i> | eeja | eeja |
| <i>fish</i> | jaaya | jaaya |
| <i>adolescent boy</i> | weerla | weerla |

The next most simple shapes involve only the addition of the plural suffix *-ya*; social roles (orator, initiate, sorcerer, demon) take this type of plural marking, as well as lower-order animates such as skinks and plants:

| | | |
|----------------------------|------------|--------------|
| <i>orator</i> | jorlbarda | jorlbardaya |
| <i>initiate</i> | mamaa | mamaaya |
| <i>sorcerer</i> | barnmarnja | barnmarnjiya |
| <i>demon</i> | akurla | akurlaya |
| <i>bandicoot</i> | karimba | karimbaya |
| <i>brush-tailed possum</i> | burlkumba | burlkumbaya |
| <i>skink</i> | jalwa | jalwaya |
| <i>yam (generic)</i> | karnmangku | karnmangkuya |
| <i>flower</i> | marruku | marrukuya |

A variant of this type of plural-marking puts /e/ in front of the plural suffix:

| | | |
|-------------------|---------|------------|
| <i>spear-head</i> | jimara | jimareya |
| <i>bullock</i> | buluman | bulumaneya |

Feminine nouns lose their final segment *-nya* and replace it with *-ya*:

| | | |
|-------------------------------|--------------|-------------|
| <i>woman</i> | wangayinya | wangaya |
| <i>emu</i> | jebarranya | jebarreya |
| <i>snake-knecked turtle</i> | wurlumaranya | wurlumareya |
| <i>female plains kangaroo</i> | karroninya | karroniya |

After a stem ending in a nasal consonant, the suffix *-ji* may occur:

| | | |
|----------------------|---------|-----------|
| <i>grey kangaroo</i> | jurlwun | jurlwunji |
|----------------------|---------|-----------|

After /rr/ the plural ending /-i/ occurs:

| | | |
|---------------|----------|------------|
| <i>animal</i> | burnarra | burnarri |
| <i>sheep</i> | kukunja | kukunjarri |

The plural NP index prefix *arr-* (§6.1) may occasionally be used, sometimes with epenthetic *-nya-* (rule 26):

| | | |
|-----------------------------|-------------|----------------|
| <i>blanket</i> | irnarruku | ardarruku |
| <i>young adolescent boy</i> | angkanabija | arrangkanabiji |
| <i>person</i> | aarrinja | arrkarrinjiya |

When masculine and feminine forms share a common plural shape, the plural form may resemble, or be homonymous with the masculine shape:

| | MASCULINE | FEMININE | PLURAL |
|---------------------------|-------------|-------------|---------------|
| <i>friend</i> | mamangkalya | mamangkalja | mamangkalya |
| <i>white person</i> | aalmarā | aalmarinya | aalmareya |
| <i>dingo</i> | arrolī | arrolinya | arrolī |
| <i>large shark</i> | karnamarri | karnamaja | karnamarri |
| <i>goat</i> | naningkunja | naningkunya | naningkunjiya |
| <i>kangaroo (generic)</i> | wara | warinya | wari |
| <i>turtle/ dugong</i> | warli | warlinya | warli |

Stem extension or reduplication is used with humans and dogs only; nearly all kinship nouns are of this type. Reduplicated plurals usually employ the suffix *-ya* as well. The phonological process

concerned is a Type 3 extension as described in §6.2.6 (ii), and further discussed in §13.1.1; it is exemplified below:

| | | | | |
|-------------------------|--------------|-----------------------------|--------------------|-----------------|
| ka- n angkurri | <i>dog</i> | ka- naa-n angkurri | kanaanangkurri | <i>dogs</i> |
| wanga- l angu | <i>child</i> | wanga- laa-l angu-ya | wangalaalunguyu | <i>children</i> |
| | | SINGULAR | PLURAL | |
| <i>girl</i> | | nyangkanya | nyangkaangkaya | |
| <i>adolescent girl</i> | | mrnangkanya | mrnaarnangkaya | |
| <i>young man</i> | | aalkunya | aalkalkunyeya | |
| <i>sibling</i> | | ankurnda | ankaankurndeya | |
| <i>boy</i> | | awanja | awaawanja | |
| <i>father</i> | | irraaya | irraarreja | |
| <i>mother</i> | | karraanya | karraarreja | |
| <i>mother's brother</i> | | kakaaya | kakaakaya | |
| <i>father's sister</i> | | bamaraanya | bamaamareya | |
| <i>elder brother</i> | | abiya | abaabiya | |
| <i>elder sister</i> | | abeenya | abaabiyeya | |
| <i>mother of many</i> | | karrernbarrinya | karraarrernbarriya | |
| | | MASCULINE | FEMININE | PLURAL |
| <i>old person</i> | | maaba | maabanya | maabaabaya |
| <i>boy, girl</i> | | warrala | warralinya | warraarraleyaya |
| <i>child</i> | | wangalang | wangalangunya | wangalaalunguyu |
| <i>dog</i> | | kanangkurri | kanangkuja | kanaanangkurri |

One noun at least inflects as if it were an adjective, with both prefixing and stem-reduplication:

young woman nyimbarijinya arrwaawarija

There are two nouns in the sample that have plural shapes with plural reference, but which may control only singular agreement:

cake, ball imarulya inja imarumarulya inja
hill kurrandu wunu kurraarrandu wunu

The reduplicated shapes of these nouns refer to 'a pile (collectivity) of cakes' and 'a line of hills' respectively.

Worrorra nouns may overtly signal dual, unit augmented and collective number, but these morphologies also appear on adjectives, pronouns and verbs, and so are treated separately in Chapter Nine. Number- (eg dual-) marking morphemes attach to the *plural* shapes of nouns:

| | | | |
|--------------|-------------|-----------------|--|
| | SINGULAR | PLURAL | DUAL |
| <i>girl</i> | nyangkanya | nyangkaangkaya | nyangkaangkaardinya |
| <i>dog</i> | kanangkurri | kanaanangkurri | kanaanangkurrkarndu |
| <i>child</i> | wangalang | wangalaalunguyu | wangalangaarndu <i>or</i> wangalaalangaarndu |

Most non-human, non-edible nouns do not have plural forms, and do not trigger plural agreement. Paucal adjectives meaning 'several *x*' or 'a number of *x*' may be used with these nouns if clarification or emphasis call for their use (§6.2.6 (i), §7.3.4), otherwise number may be signalled contextually. More often however the language does not require an overt number choice to be made.

4.2.2 Collective and mass plural nouns

Some nouns can only control plural agreement, that is to say that they have no singular agreement forms. These are collective nouns which constitute a fifth noun-class in Worrorra. There are three types of collective noun:

- (a) Classes of food/consumables: *mangarri* ‘vegetable food,’ *maya* ‘vegetable food,’ *burnarri* ‘meat,’ *jubakuya* ‘tobacco,’ *wari* ‘kangaroo meat’ and *aarlngarra* ‘food cooked in an earth oven’
- (b) Dangerous things: *barnmarnja* ‘magic, sorcery, medicine’
- (c) Collective items: *wurlarnbirri* ‘personal effects or belongings,’ *inwaanurleya* ‘teenage boys’

The first type refers to classes of food such as meat or vegetables, not to particular items of food. Another type refers to things that are too dangerous to be spoken about directly, but which prefer indirect reference, such as things to do with death or magic. And the third type refers to collective groups of things.

Although there are a wealth of words denoting age grades and stages of growth (*angkanabija* ‘young teenage boy’ and *weerla* ‘teenage boy’ are two examples); and although the singular nouns *kavurla* ‘son’ and *kavurlanya* ‘daughter’ have a shared plural shape *kawaawurleya*, the collective noun *inwaanurleya* ‘teenage boys’ has no singular shape that I know of.

The collective nouns *burnarri* ‘meat’ and *wari* ‘kangaroo meat’ have homophonous (plural) shapes meaning ‘animals’ and ‘kangaroos’ respectively; that is to say that the homonyms display differences in denotational sense. In these meanings these words do have semantically corresponding singular shapes (ie ‘animal’ and ‘kangaroo’), but there are no singular shapes for these forms when used with collective meaning; that is to say that there are lexically-motivated paradigmatic gaps:

| | SINGULAR | PLURAL/COLLECTIVE |
|----------------------|----------|-------------------|
| <i>animal</i> | burnarra | burnarri |
| <i>meat</i> | — | burnarri |
| <i>kangaroo</i> | wara | wari |
| <i>kangaroo meat</i> | — | wari |

A similar gap, though of a different type, occurs with *barnmarnja* ‘sorcerer’ and *barnmarnja* ‘sorcery’:

| | | |
|-----------------|------------|--------------|
| <i>sorcerer</i> | barnmarnja | barnmarnjiya |
| <i>sorcery</i> | — | barnmarnja |

Some plural shapes signal not multiple instantiations of some item, but rather a relatively large amount of that item. This type marks amount rather than number, and is homophonous with plural morphology. Most mass plural nouns refer to valuable commodities:

| | SINGULAR | MASS |
|------------------------|-------------|-----------------------|
| <i>honey</i> | ngeenya | ngeeya |
| <i>tobacco</i> | jubakunya | jubakuya |
| <i>grease</i> | wunjawarra | ajawarre |
| <i>piece of meat</i> | iwileerri | arrwileerri |
| <i>brideprice</i> | embarri | arrembarri, ajembarri |
| <i>group of people</i> | belangkarra | belangkarraya |

Although the feminine form *jubakunya* is known to modern Worrorra speakers, *jubakuya* is now used exclusively, and this lexeme has become in effect a collective noun.