# Ngujari

A Grammar and Lexicon

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# Contents

# III Lexicon

# Grammar

# 1. Phonology

## 1.1 Phonetic Inventory

### 1.1.1 Consonants

In terms of phonology, Ngujari has a rich consonantal inventory featuring a large series of coronal consonants (both laminal and apical) and multiple rhotics. The following table shows the consonants and their orthographic representation in italics (if different from the IPA).

| | **bilabial** | **alveolar** | **post-alveolar** | **retroflex** | **palatal** | **velar** |
|---|---|---|---|---|---|---|
| **plosive** | p | t̪ *(t)* | | ʈ *(rt)* | | k, g |
| **nasal** | m | n̪ *(n)* | n̪ *(nn)* | ɳ *(rn)* | | ŋ *(ng)* |
| **tap** | | ɾ̪ *(rr)* | | | | |
| **fricative** | | | ʒ *(j)* | | | |
| **approximant** | w | | | ɻ *(r)* | j *(y)* | |
| **lateral approximant** | | l̪ *(l)* | | ɭ *(rl)* | | |

Table 1.1: Consonantal Inventory

### 1.1.2 Vowels

The vowel palette is very restricted, limited to just a, i, and u, as well as their lengthened versions. The long vowels are contrastive in all locations. These phonemes are found in the following table.

| | **front** | **back** |
|---|---|---|
| **high** | i, iː | u, uː |
| **low** | a, aː | |

Table 1.2: Vowel Inventory

Orthographically, the short vowels are expressed according to their IPA representation. Long vowels are simply the short vowel doubled.

The front vowels (i and a) are phonetically tense. Both have a nasalised allophone.

The back vowel u is divided allophonetically into two sounds: the default u, and the somewhat centralised ü which tends towards the ʊ sound and is accordingly more lax than the default.

## 1.2 Phonotactics

### 1.2.1 Syllables and Morae

The structure of Ngujari words is simple, with syllables taking the form CV: one consonant is followed by one vowel. A root word is usually between two and four syllables long, plus any affixes which tend to be single-syllable. In addition, words can be broken into *morae*. A syllable containing a short vowel is worth one mora, but those containing long vowels are worth two. This distinction becomes important when dealing with prosody in section 1.3.

### 1.2.2 Vowels

The *u* phoneme becomes centralised following some bilabial consonants p, m, and w.

$$\text{u} \rightarrow \text{ü} \;/\; \begin{cases} \text{p}\_ \\ \text{m}\_ \\ \text{w}\_ \end{cases}$$

The i and a phonemes are nasalised before alveolar and post-alveolar nasals.

$$\text{i} \rightarrow \tilde{\text{i}} \;/\; \begin{cases} \_\underset{\sqcup}{\text{n}} \\ \_\underset{\sqcup}{\text{ɳ}} \end{cases} \qquad\qquad \text{a} \rightarrow \tilde{\text{a}} \;/\; \begin{cases} \_\underset{\sqcup}{\text{n}} \\ \_\underset{\sqcup}{\text{ɳ}} \end{cases}$$

### 1.2.3 Consonants

#### Rhotics

The retroflex approximant ɻ disappears between identical regular vowels, forming one lengthened vowel.

$$\text{ɻ} \rightarrow \text{ø} \;/\; \begin{cases} \text{a}\_\text{a} \\ \text{u}\_\text{u} \\ \text{i}\_\text{i} \end{cases}$$

#### Voicing

The voicing process is relatively new to the language, and accordingly not much variation is present. Generally, plosives are becoming initially voiced. However, in practice the voiced plosive g is the only new voiced consonant sufficiently formed to be included as an individual phoneme; the rest are in the process of undergoing the differentiation. In the case of the $\underset{\sqcup}{\text{t}}$ phoneme, only the alveolar form undergoes voicing, as the retroflex cannot begin a word.

$$\text{k} \rightarrow \text{g} \;/\; \hat{}\_ \qquad\qquad \text{p} \rightarrow \underset{\sim}{\text{p}} \;/\; \hat{}\_ \qquad\qquad \underset{\sqcup}{\text{t}} \rightarrow \underset{\frown}{\text{p}} \;/\; \hat{}\_^{1}$$

### 1.2.4 Historical Sound Changes

Ngujari differs phonologically from Proto-Pama-Nyungan only slightly. The following is a list of sound changes that have occured:

- Apicalised post-alveolar plosive ($\underset{\sqcup}{\text{t}}$) becomes voiced post-alveolar fricative (ʒ).
- Apicalised alveolar trill ($\underset{\sqcup}{\text{r}}$) becomes apicalised alveolar tap ($\underset{\sqcup}{\text{ɾ}}$).
- Retroflex approximant (ɻ) disappears between identical regular vowels, forming one lengthened vowel.

[1] The phoneme remains apical, but this cannot be expressed in IPA.

- Apicalised alveolar lateral approximant (l̪) disappears from the end of words.

A major difference occurs in the case of lengthened vowels, which can differentiate words in all positions, rather than just the first syllable as in the protolanguage.

## 1.3 Prosody

Ngujari has a rich prosodic system incorporating stress, intonation, and tempo. Stress is dealt with here, but intonation and tempo are left to Part 2 in the discussion on pragmatics.

### 1.3.1 Stress

Stress follows a simple process. The primary stress is placed on the second mora of the word. If that mora is part of the first syllable (i.e. the first syllable has a long vowel rendering it bimoraic), the first syllable is stressed. Secondary stress is then placed on morae at even intervals, on the 4th, 6th, etc. However, if the secondary stress would fall on the second mora of a bimoraic syllable, it is skipped.

# 2. Morphology

## 2.1 Nouns

### 2.1.1 Gender

Ngujari has four genders: child, adult, elder (grouped together as animate), and inanimate. Gender is assigned semantically and changes the morphosyntactic alignment of the sentence as well as posessives.

The animate gender is given to people, animals, and Dreamtime figures. For example, *Yawirra*, the concept of the Land, is considered animate. The inanimate gender applies to all other nouns.

Within the animate there are three genders, each representing a different stage in life. This distinction is important in areas such as pronouns, but not in others, like verbal inflection. An animate noun is assigned to a stage based on their social position. Those who are yet to undergo the adulthood ceremony (those under roughly 14 in the case of females and 16 in the case of males) are assigned the child gender, while those who have become elders receive the elder gender. All other ages are grouped into the adult gender.

### 2.1.2 Cases

Ngujari has eight nominal cases, with three indicating the morphosyntactic alignment and five others. Cases are indicated by single-syllable suffixes, as indicated in the following table.

| case | abbreviation | suffix |
|---|---|---|
| ergative | ERG | - |
| nominative | NOM | -wa |
| accusative | ABS | -rru |
| instrumental | INS | -ma |
| comitative | COM | -yii |
| orientative | ORI | -rni |
| revertive | REV | -nga |
| locative | LOC | -ru |

Table 2.1: Case Suffixes

For more details on the three alignment cases, see **??** (pg. **??**). The remaining five cases operate as follows:

**instrumental** The instrumental case is used when discussing a *means*, roughly equivalent to the English "by means of". For example, when speaking of killing a fish using a spear, a Ngujari speaker will place "spear" in the INS case.

**comitative** The comitative case is equivalent to "in the presence of", or "with", and specifies that the noun was present at the moment spoken of.

**orientative** The orientative case is used to specify that something is facing towards the noun. It is often used with the meaning of "heading towards".
aux 2s-ERG camp-ORI togo-an-2nd.
You are heading towards the camp.

**revertive** The revertive case is used to specify that something is oriented away from the noun. It can be used with the meaning of "heading away from".
aux 3pl-an-NOM 3s-an-REV togo-an-3rd.
They are heading away from her.
It can also be used in asserting falsehood.
aux-remote 3s-an-ERG knowledge-NOM valence1->2 tolook-an-3rd.
He used to look away from knowledge / he used to be incorrect.

**locative** The locative case is used to specify a location, and can take the place of a preposition such as "in" or "at". This means that "she is at the house" is equivalent to "she is [house] (LOC)". The locative suffix *-ru* becomes a long u if placed after a word ending in a short u.

An example of the use of these cases is found in the following table, which shows the declensions of the noun *naju*, or "rock".

| **case** | **word** | **meaning** |
|---|---|---|
| ergative | naju | - |
| nominative | najuwa | - |
| accusative | najurru | - |
| instrumental | najuma | "using the rock" |
| comitative | najuyii | "in the presence of the rock" |
| orientative | najurni | "oriented towards the rock" |
| revertive | najunga | "orientated away from the rock" |
| locative | najuu | "at the rock" |

Table 2.2: Examples of Nominal Case Declensions

## 2.2 Plurality

Plurals are formed through reduplication, with the declined noun repeated twice. For example, *najurru* ("rock", in the absolutive case), would be pluralised as *najurru-najurru*.

There are two forms of plural, which differentiate dual and non-dual plurality. The default case is non-dual, but the clitic *ka* following the reduplicated noun indicates the dual form.

## 2.3 Verbs

Verbs in Ngujari are found in three classes, each with a specified stem ending and auxiliary form. Verb roots lack a final consonant, meaning they must be conjugated in order to appear in speech. Class does not have any semantic impact; it changes only the morphology of the verb.

The three classes are:

To conjugate a verb, both it and its auxiliary must be declined. The verb itself is conjugated in agreement, with the gender and person of the subject indicated as affixes. The auxiliary is declined to indicate tense and mood.

| class | ending | auxiliary | negative particle |
|---|---|---|---|
| **first** | -rr | kuurl | tu |
| **second** | -j | ngiy | ti |
| **third** | -nn | wann | wuu |

Table 2.3: Verb Classes

### 2.3.1 Tense and Mood

There are four tenses: remote past, past, present, and future. There is no distinction drawn between the perfective and imperfective aspects, meaning contextual clues are vital for understanding.

Present is considered the default tense, and is accordingly unmarked for first and second class verbs (but not third). It usually indicates those events which are happening in the moment of utterance, but it can also be used as a rudimentary form of a near-past tense, applying to actions that were completed the same day as the utterance.

Past and remote past are marked for all verb classes and indicate an event that was completed in the past. Choice between the two can be somewhat arbitrary, but in general remote past is used when recounting handed-down stories or the events of ancestral times, whereas basic past refers to events in the time period of the speaker. If the event has not yet finished, the present tense is used.

Future is again marked for all classes. All events which are yet to take place are assigned the future tense.

There are five moods that a verb can optionally be conjugated for:

- subjunctive
- weak imperative
- strong imperative
- gnomic
- dubitative

**subjunctive** The subjunctive mood is an irrealis mood which broadly signifies abstractness and is used in a number of ways:

1. Speculation
2. Conditional
3. Desires
4. Purposive

**imperative** The imperative mood is used for suggestions and commands. The weak form raises an idea without indicated an order, similar to the English “let’s go”, whereas the strong form signifies a command, such as “Leave!”.

**gnomic** The gnomic mood states unequivocal facts or ideas. The statement must be truly uncontentious to fit into the gnomic mood, such as “fire is real”.

**dubitative** The dubitative mood indicates situational possibility, in that the speaker acknowledges the possibility of an action but is unsure as to whether it occurs, as in English “might”.

### 2.3.2 Verbal Conjugation Tables

| class | child | adult | elder | inanimate |
|---|---|---|---|---|
| first | uu | u | iiwa | a |
| second | awuu | awu | iwu | a |
| third | arruu | u | iwu | aa |

Table 2.4: Gender of Subject

| class | 1st | 2nd | 3rd |
|---|---|---|---|
| first, second | - | ku | nni |
| third | - | ku | ni |

Table 2.5: Person of Subject

| class | remote past | past | present | future |
|---|---|---|---|---|
| first | arlu | a | — | aa |
| second | arlu | a | — | aju |
| third | una | uma | uu | uuki |

Table 2.6: Tense

### 2.3.3 Auxiliary Conjugation Tables

### 2.3.4 Valence Modification

The verbal system of Ngujari allows for many different valences through derivations of base verbs. Each verb root has its own *default valence*, between avalent (0 arguments) to quadrivalent (4 arguments). Furthermore, each verb has a *minimum valence* and *maximum valence*, i.e. the extent that valency can be modified while still modifying the verb's meaning, rather than imparting additional information. The maximum valence is never above 4.

For example, the verb *wurr* has a default valence of 0, in which case it means "it is electrically storming". However, modifying its valence to 1 allows it to mean "to be struck by lightning", and a valence of 2 allows it to mean "to strike". Therefore, it has a minimum valence of 0 and maximum valence of 2.

Valence modification occurs through special particles, which are found in the following table:

The prime function of derived valences is to change the meaning of the verb. In this case, the new meaning must be learned, as well as the noun cases it accepts.

## 2.4 Adjectives and Adverbs

Adjectives are inflected into two categories: attribute and predicate. The attributive form is unmarked, and can be used directly in noun phrases to describe the noun. The predicate form can only be used in predicative phrases, and is declined according to the gender of the noun it applies to.

To decline a predicate adjective, the final vowel is dropped and the same gender declension as followed by class one verbs is applied.

Adverbs are not declined, but are divided semantically into the classes manner (hastily, carefully) and temporal (last week, yesterday). The class of an adverb loosely determines its position in a phrase. See **??** for more information.

| **class** | **subjunctive** | **weak imperative** | **strong imperative** | **gnomic** | **dubious** |
|---|---|---|---|---|---|
| first | tiru | yii | ju | nga | tila |
| second | tirlu | yii | yuu | nga | ti |
| third | tirlu | yii | aru | nga | ti |

Table 2.7: Mood

| | | **target** | | | | |
|---|---|---|---|---|---|---|
| | | 0 | 1 | 2 | 3 | 4 |
| | 0 | — | wi | ji | murnu | yurnu |
| | 1 | wi | — | naa | naki | mu |
| **default** | 2 | waa | ka | — | naa | naki |
| | 3 | wangu | waa | ka | — | naa |
| | 4 | wirru | wangu | waa | ka | — |

Table 2.8: Valence Modification Particles

# 3. Derivation

## 3.1 Verbs

As verb roots are a closed class, derivation is the only way to form new verbs. This method is known as **compounding**.

### 3.1.1 Compounding

There are two forms of compounding: verb-verb and adverb-verb. Both form a new verb which is treated as a whole in syntactic structures.

In verb-verb compounding, the compound is not commutative, meaning that the order of the verbs matters. Typically, the most relevant verb occurs last. The two verbs are simply concatenated, except for the special case in which the concatenation would form an illegal consonant cluster. If this occurs, the repair strategy of inserting the dummy vowel *a* is used.

| | |
|---|---|
| to sit *ngurr-* | to travel *nuunn-* |
| to swim *junn-* | to exchange *murr-* |
| ⇒ to canoe *ngurrjunn-* | ⇒ to trade (with another mob) *nuunnamurr-* |

Verbs formed through verb-verb compounding in most cases assume the transitivity properties of the second, or primary, verb.

Adverb-verb compounding simply requires an adverb to appear before the verb in all positions. For example, it would remain in front of the verb during relativization (see 5.4) while regular adverbs would not.

| | |
|---|---|
| to run *yaj-* | to drink *ngann-* |
| quickly *garrna* | impatiently *karlpii* |
| ⇒ to sprint *garrna yaj-* | ⇒ to guzzle *karlpii ngann-* |

In the case of adverb-verb compounding, the auxiliary of the verb may change so that it does not match the verb class' standard form. If the adverb ends in a lengthened vowel, the first vowel of the

auxiliary becomes lengthened if it is not already. For example, the auxiliary for *karlpii ngann* ("to guzzle") changes from the standard *wann* to *waann*.

## 3.2 Nouns

There are many noun derivational operations.

### 3.2.1 Compounding

Nominal compounds are bidirectional, meaning that the order of constituent nouns does not change the meaning of the compound. In practical use, both orders are used, with preference depending on the phonetics of the noun. If the compounding would create an illegal consonant cluster, the other order must be used.

mountain *gaypa*
stream *munna*
⇒ mountain stream *gaypamunna*

the Land *Yawirra*
ground *nnalu*
⇒ sacred place *Yawirrannalu*

### 3.2.2 Collection

Partial reduplication can be used to derive the collection of a noun. To derive the collection, the first syllable is isolated, its coda removed, and added to the front of the noun.

coconut *wurna*
⇒ coconut tree *wuwurna*

bone *parrna*
⇒ corpse *paparrna*

### 3.2.3 Container

The container of a noun can be derived through the affix *rna*.

arrow *yungi*
⇒ quiver *yungirna*

fruit *yirli*
⇒ basket *yirlinga*

# 4. Pronouns

## 4.1 Personal

Personal pronouns differ in three dimensions: person, plural, and gender. All decline in the same way as regular nouns to indicate case. The following tables list the pronouns:

| | **singular** | **dual** | **plural** |
|---|---|---|---|
| **1st person** | jana | janna | juu |
| **2nd person** | kurru | kunii | kurlu |
| **3rd person** | nnarta | nnaja | nni |

Table 4.1: Child Personal Pronouns

| | **singular** | **dual** | **plural** |
|---|---|---|---|
| **1st person** | wa | ja | waya |
| **2nd person** | ku | kuna | kuu |
| **3rd person** | nna | nnara | nnaa |

Table 4.2: Adult Personal Pronouns

| | **singular** | **dual** | **plural** |
|---|---|---|---|
| **3rd person** | nnu | nnuka | nnunnu |

Table 4.3: Inanimate Personal Pronouns

When speaking of a mob's elders, a personal pronoun is never used. The elder is always referred to by their honorific title.

## 4.2 Possessive

Possessive pronouns are formed through a suffix placed on the relevant personal pronoun, but only for the child and adult genders. For possession by elders, see **??**. Inanimate objects cannot be

possessive. For a child, the suffix is *ra* in first and second person and *raa* in third person. For an adult, the suffix is *lu* for all persons.

## 4.3 Interrogative

The interrogative pronouns are strongly affected by case, particularly in the case of location and time. The basic pronouns are detailed in the following table:

| **meaning** | **word** |
|---|---|
| where | kiru |
| when | tuu |
| who, what | pii |
| how | piima |
| why | wiirtak |
| how many | kirta |

Table 4.4: Interrogative Pronouns

It is interesting to note that "how" is the same as "what" placed in the instrumental case. The orientative and revertive cases can be applied to *kiru* ("where"), forming *kirurni* ("whither/to where") and *kirunga* ("whence/from where"), as well as to *tuu* ("when"), forming *tuurni* ("to when") and *tuunga* ("from when").

## 4.4 Demonstrative

One set of demonstrative pronouns covers both proximal and distal objects. Distinctions can be made in some cases between both gender and number. The pronouns are found in the following table:

| **meaning** | **singular** | **dual** | **plural** |
|---|---|---|---|
| there | naarla | naarla | naarla |
| then | yaji | yaji | yaji |
| that (animate) | yanna | yannara | yannaa |
| that (inanimate) | yannu | yannuka | yannunnu |

Table 4.5: Demonstrative Pronouns

Again, the pronouns *naarla* and *yaji* can assume the orientative and revertive cases.

## 4.5 Indefinite

The regular indefinite pronouns are formed through modifying the interrogative pronouns by appending the correct word, representing number. These words are listed in the following table:

| **number** | **word** |
|---|---|
| none | nnayi |
| singular | junga |
| dual | marri |
| plural | munaa |
| all | nnaya |

Table 4.6: Indefinite Pronouns

For example, "everyone" would be expressed as *pii-nnaya* and "some two locations" as *kiru-marri*.

# 5. Syntax

## 5.1 Alignment

The alignment of Ngujari depends on whether the noun in question is an animate pronoun or not. For clauses with exclusively animate pronouns, the alignment is nominative-accusative, but otherwise it is ergative-nominative (i.e. the transitive patient and intransitive object are marked nominative and the transitive agent is marked ergative). This system applies only to intransitive and transitive verbs. For higher valencies, formed through **??**, the extra arguments are assigned cases semantically.

## 5.2 Verb Phrases

**Definition 5.2.1 — Verb Phrase.**
VP = AUX [NEG] NP(S) [ADV(S)] [VAL] V

Verb phrases can be as simple as a single avalent verb, such as in "it's raining", or as complex as a tetravalent causative.

In the prototypical verb clause, the following rules govern word order:

1. The verb's auxiliary appears at the beginning.
2. The verb itself appears at the end.
3. Valence modifiers appear immediately before the verb.

The following examples illustrate basic verb phrases:

> **Kuurl wa-wa kurru-rru ji wurr-u-ø.**
> AUX 1S-NOM 2S-ACC 0.VAL.2 electrically.storm-AN-1ST
> *I strike you*
>
> **Wann-uma maaju maaju-wa ka jinn-u-ni.**
> AUX-PST kangaroo-PL-NOM 2.VAL.1 eat-AN-3RD
> *The kangaroos ate/were eating.*

Noun phrases tend to appear in order of importance to the statement as judged by the speaker.

## 5.3 Noun Phrases

**Definition 5.3.1 — Verb Phrase.**
NP = [ADJ(S)-ATTR] N [REL(S)]

A noun phrase consists of one noun, declined by case, and any number of adjectives and relative clauses. The noun tends to be placed first, followed by adjectives, although this can be inverted or even mixed according to pragmatic considerations. However, relative clauses always succeed the noun and adjectives.

> **birru-ø birruku miinna**
> sea-ERG blue big
> *vast blue sea*
>
> **kanaama yirlirna-wa gu**
> woven basket-NOM small
> *small woven basket*

## 5.4 Relative Clauses

**Definition 5.4.1 — Relative Clause.**
VP = AUX [NEG] NP(S) [ADV(S)] [VAL] V
⇒ RC = AUX [NEG] V [VAL] [ADV(S)] NP(S)

Relative clauses are *adjoined* to the noun phrase. The clause undergoes a transformation from the standard verb phrase by moving the verb to the position immediately following the auxiliary. The valency modifier is free to be placed anywhere among the remaining noun phrases and adverbs, but typically follows the verb.

If the head noun is a patient of the relative clause, the verb of the relative clause has its valence reduced by one.

> **gungi-ø kuurl-a pirr-u-ø ka wawa**
> man-ERG AUX-PST see-AN-1ST 2.VAL.1 1S-NOM
> *the man that I saw*

If the head noun is the agent, a pronoun is used inside the relative clause to refer back to it.

> **ngiy-a Wuurna-ø wann-aju-ti yann-u-ni nna-wa jurlu-rru**
> AUX-PST Wuurna-ERG AUX-FUT-DUB catch-AN-3RD 3S-NOM turtle-ACC
>
> **wa-wa ka naj-u-ni**
> 1S-NOM 3.VAL.2 say-AN-3RD
> *Wuurna, who might catch a turtle, spoke to me.*

### 5.4.1 Adverbial Phrases

Temporal adverbs, which specify the time an action takes place, tend to appear following the noun.

> **nuuj-a jana-ø jari-ru wiirr-uu-ø yuurli-nga ma**
> go.AUX-PST 1S.CH-ERG beach-LOC go-CH-1ST day-REV one
> *Yesterday, I [a child] went to the beach.*

Manner adverbs, which specify the manner in which the action was conducted, usually appear directly before the noun.

aux(topickup)-weakimp 1pl-ERG clothes(pl)-NOM quickly pickup-an-3rd.

We should pick up the clothes quickly.

However, both can occupy different positions inside the verb phrase if the speaker desires it.

## 5.5 Predicates

There are three cases for predicates: adjectival, nominal, and locational.

In an adjectival predicative phrase a verb is not normally required. The noun is assigned the same tense as it would be were it the argument to an intransitive verb, while the adjective assumes its predicative inflection.

sky-NOM blue-PRED.

the sky is blue.

In a nominal predicative phrase, the verb "to be" is used. The predicate noun is declined as verb's object.

aux(tobe) 1s-ERG teacher-NOM tobe-an-1st.

I am a teacher.

In a locational predicative phrase, the verb "to be" is still used, but the predicate location is declined in the locative case.

aux(tobe) village-ERG somewhere-LOC tobe-inan-3rd.

The village is somewhere.

## 5.6 Possession

### 5.6.1 Alienable

To indicate alienable possession (possession that is not permanent or subject to change), the locative case is used in conjunction with the verb "to be". The possessed noun appears in the locative case as the subject of the transitive form of "to be", with the possessor appearing as the object in the usual case.

aux deadfish-pl(dual)-locative woman-NOM is-inanimate-3rd.

The woman has two dead fish.

### 5.6.2 Inalienable

Inalienable possession (possession that is unequivocal) is indicated simply through the use of the verb "to have".

aux-fut-gnomic mob-nom homeland-acc valence3->2 have-an-1st.

Our mob will always have a homeland.

### 5.6.3 Pronominal

A noun phrase can be indicated as possessed through the use of a possessive pronoun as an adjective.

aux-past 3pl-an-ERG face-NOM beautiful his admire-an-3rd

they admired his beautiful face

In Ngujari culture, an object can be owned by a mob as a whole. Only inanimate objects may be possessed by a mob (with the exception of areas of land). Possession is indicated by the particle *tuu*, which appears before the noun. To specify the possessing mob, the mob's name is placed immediately after the particle. The regular name is used by members of the possessing mob, but the honorific name is used for possessions of others. For example, the particle for something owned by the Wujanga mob would be *tuu-Wujanga* for a member or *tuu-Wujarra* for an outsider.

aux-strongimp 1pl-ERG tuu-Wujanga precious land-NOM spirit-INST valence2->3 protect-an-1st

we must protect our (the Wujanga mob's) precious land with vigour

## 5.7 Verbal Constructions

### 5.7.1 Interrogative

#### Polar Questions

Polar questions are syntactically the same as a factual statement, except they are expressed with a rising tone at the beginning of the question.

rise aux-future bird-pl-ERG mountain-pl-LOC fly-an-3rd.

Will the birds fly to the mountains?

#### Non-Polar Questions

One way of forming a non-polar question is using an interrogative pronoun as a verb's argument, with no syntactic change taking place.

aux1 path-NOM aux2 2leadto-in-3rd 3s-inan-ERG village-NOM kiru 1tobe-in-3rd.

the path that leads to the village is where

Where is the path to the village?

To question a certain word in a statement, the particle *yuu* can be placed before the word.

aux-future yuu-3dual-ERG food-NOM fire-LOC bring-an-3rd?

Will *those two* bring the food to the fire?

aux 3s-ERG yuu-fresh kangaroomeat-NOM eat-an-3rd?

Is he eating *fresh* kangaroo meat?

### 5.7.2 Comparative

Ngujari contains locational-type comparatives. This means that the *standard* noun, or the noun to be judged against, is marked in the revertive case. Comparatives do not use a verb, and are always positive (i.e. more adjective than the standard). The adjective is in the predicative inflection.

3an-s-NOM 1s-REV tall-PRED

He is taller than me.

For comparatives in relative clauses, the adjective is fronted and is followed by the arguments.

aux-past dingo-ERG [fast-PRED 3an-s-ERG boy-REV] race-NOM valence1->2 race-an-3rd

The dingo, who is faster than the boy, won the race.

### 5.7.3 Conditional

There are two types of conditionals: implicative and predictive. The protasis (condition) and apodosis (outcome) are modified in different ways.

**implicative** The conditional is a universal truth. Whenever the condition is true, the outcome is also true.

**predictive** The conditional is a prediction. If the condition occurs, the outcome will occur.

To form both conditionals, the condition verb phrase appears first, followed immediately by the outcome verb phrase. There is no morpheme with equivalent meaning to "if". However, the outcome is always placed in the subjunctive mood and the present tense.

In an implicative conditional, the condition is given the gnomic mood. The statement must therefore follow the usual rules of the gnomic, in that it must state an undisputable truth. The condition is always in the present tense.

aux-gnomic 2dual-ERG water-LOC valence1->2 fall-an-2nd, aux-subj 2dual valence2->1 towet-an-2nd.

If you two fall in the water, you will both get wet.

In a predictive conditional, the condition is usually not given a mood. However, if the phrase is counterfactual, in that the condition is not seen as likely, the conditon occurs in the dubitative mood. Usually, the condition will be in the future tense.

aux-fut branch-NOM valence2->1 break-in-3rd, aux yannu(sing inan demon)-ERG 3s-an-NOM valence0->2 toelectricallystorm-in-3rd

If that branch breaks, it will strike him.

aux-dub-fut 3s-an-ERG kangaroo-NOM successfullyhunt-an-3rd, aux-SUBJ food-pl-LOC lots 1pl-NOM tobe-in-3rd.

If he were to successfully hunt the kangaroo (unlikely), we would have plenty of food.

### 5.7.4 Negative

There are two types of negation: clausal, where the entire clause is negated, and constituent, where one noun is negated.

The formation of the clausal negative requires the negative particle that corresponds to the class of the clause's verb. In a standard negative clause, the particle follows the verb's auxiliary. However, in imperative clauses it precedes the auxiliary. Qualifiers such as "never" are used following the sentence, as stand-alone utterances.

aux-past neg 3-an-s there togo-an-3rd.

He didn't go there.

neg aux-strongimperative 2s valence3->1 steal-an-2nd. Never.

you must never steal.

The consituent negative is applicable to clauses using the verb "to have". It is formed using the special argument *tunna* in the comitative slot of the verb.

aux tree-ERG leaf-pl-NOM tunna have-inan-3rd.

the tree doesn't have any leaves.

### 5.7.5 Reflexive/Reciprocal

In reflexive clauses, the personal pronoun of the subject simply occupies the object position in the usual case. However, the valence of the verb must be decreased by one.

aux Paya-ERG 3s-an-NOM valence2->1 carefor-an-3rd.

Paya cares for himself.

If the clause is reciprocal, which applies only to plural subjects, the personal pronoun is still used except it takes the comitative case. The valence is also still decreased by one.

aux-remote 2pl-NOM 2pl-COM valence2->1 see-an-2nd.

You(pl) used to see each other.

## 5.8 Causatives

There are two forms of the causative. The first occurs when a single noun is responsible for causing a verb phrase to occur. In this case, the comitative causative is used. However, if an entire verb phrase is responsible, the subjunctive purposive is used.

### 5.8.1 Comitative Causative

In the comitative causative, an extra argument is added to the verb phrase without modifying the valence. The argument is the causer, and takes the former subject's form (be it nominative or ergative). The causee, or the argument which was formerly the subject, then takes the comitative case instead. The verb remains in agreement with the former subject.

aux-past canoe-NOM capsize-in-3rd.

The canoe capsized.

aux-past canoe-COM 3s-an-NOM capsize-in-3rd. He caused the canoe to capsize.

aux-past 1s-ERG axe-NOM my drop-an-1st.

I dropped my axe.

aux past 1s-COM axe-NOM wind-ERG drop-an-1st.

The wind caused me to drop my axe.

### 5.8.2 Subjunctive Purposive

The subjunctive purposive is formed through the use of the verb "to effect". The verb takes two verb phrases as arguments. The verb phrase causing the other assumes its usual tense and mood, but the caused action becomes present and subjunctive.

aux(to effect) aux(to go)-PAST 3s-an-ERG there-LOC togo-an-3rd aux(follow)-SUBJ 1s-NOM 3s-an-ACC follow-an-1st.

He went there so I followed him.

## 5.9 Subjunctive

### 5.9.1 Desires

To express desires, a "wanting" verb is used, such as "to dream", along with a verb phrase in the subjunctive expressing the desired action. The action can be in any tense.

aux(towish) 1s-NOM aux(becomehurt) neg 3s-an-NOM becomehurt-an-3rd wish-an-1st.

I wish that he hadn't hurt himself.

### 5.9.2 Speculation

If the speaker is speaking hypothetically about a situation, the subjunctive can be used. In this case, the verb "to be" would be used with a predicate adjective rather than the verbless construction.

aux(tobe)-SUBJ-FUT hunt-ERG dangerous-PRED valence2->1 tobe-inan-3rd.

(speaking about a prospective hunt) The hunt would be very dangerous.

# 6. In-text Elements

## 6.1 Theorems

This is an example of theorems.

### 6.1.1 Several equations

This is a theorem consisting of several equations.

**Theorem 6.1.1 — Name of the theorem.** In $E = \mathbb{R}^n$ all norms are equivalent. It has the properties:

$$\big|||\mathbf{x}|| - ||\mathbf{y}|\big| \leq ||\mathbf{x} - \mathbf{y}|| \tag{6.1}$$

$$||\sum_{i=1}^{n} \mathbf{x}_i|| \leq \sum_{i=1}^{n} ||\mathbf{x}_i|| \quad \text{where } n \text{ is a finite integer} \tag{6.2}$$

### 6.1.2 Single Line

This is a theorem consisting of just one line.

**Theorem 6.1.2** A set $\mathcal{D}(G)$ in dense in $L^2(G)$, $|\cdot|_0$.

## 6.2 Definitions

This is an example of a definition. A definition could be mathematical or it could define a concept.

**Definition 6.2.1 — Definition name.** Given a vector space $E$, a norm on $E$ is an application, denoted $||\cdot||$, $E$ in $\mathbb{R}^+ = [0, +\infty[$ such that:

$$||\mathbf{x}|| = 0 \;\Rightarrow\; \mathbf{x} = \mathbf{0} \tag{6.3}$$

$$||\lambda \mathbf{x}|| = |\lambda| \cdot ||\mathbf{x}|| \tag{6.4}$$

$$||\mathbf{x} + \mathbf{y}|| \leq ||\mathbf{x}|| + ||\mathbf{y}|| \tag{6.5}$$

## 6.3 Notations

**Notation 6.1.** *Given an open subset $G$ of $\mathbb{R}^n$, the set of functions $\varphi$ are:*

1. *Bounded support $G$;*
2. *Infinitely differentiable;*

*a vector space is denoted by $\mathcal{D}(G)$.*

## 6.4 Remarks

This is an example of a remark.

R The concepts presented here are now in conventional employment in mathematics. Vector spaces are taken over the field $\mathbb{K} = \mathbb{R}$, however, established properties are easily extended to $\mathbb{K} = \mathbb{C}$.

## 6.5 Corollaries

This is an example of a corollary.

**Corollary 6.5.1 — Corollary name.** The concepts presented here are now in conventional employment in mathematics. Vector spaces are taken over the field $\mathbb{K} = \mathbb{R}$, however, established properties are easily extended to $\mathbb{K} = \mathbb{C}$.

## 6.6 Propositions

This is an example of propositions.

### 6.6.1 Several equations

**Proposition 6.6.1 — Proposition name.** It has the properties:

$$\big|||\mathbf{x}|| - ||\mathbf{y}|||\big| \leq ||\mathbf{x} - \mathbf{y}|| \tag{6.6}$$

$$||\sum_{i=1}^{n} \mathbf{x}_i|| \leq \sum_{i=1}^{n} ||\mathbf{x}_i|| \quad \text{where } n \text{ is a finite integer} \tag{6.7}$$

### 6.6.2 Single Line

**Proposition 6.6.2** Let $f, g \in L^2(G)$; if $\forall \varphi \in \mathcal{D}(G)$, $(f, \varphi)_0 = (g, \varphi)_0$ then $f = g$.

## 6.7 Examples

This is an example of examples.

### 6.7.1 Equation and Text

■ **Example 6.1** Let $G = \{x \in \mathbb{R}^2 : |x| < 3\}$ and denoted by: $x^0 = (1, 1)$; consider the function:

$$f(x) = \begin{cases} \mathrm{e}^{|x|} & \text{si } |x - x^0| \leq 1/2 \\ 0 & \text{si } |x - x^0| > 1/2 \end{cases} \tag{6.8}$$

The function $f$ has bounded support, we can take $A = \{x \in \mathbb{R}^2 : |x - x^0| \leq 1/2 + \epsilon\}$ for all $\epsilon \in ]0\,; 5/2 - \sqrt{2}[$. ■

### 6.7.2 Paragraph of Text

■ **Example 6.2 — Example name.** Nam dui ligula, fringilla a, euismod sodales, sollicitudin vel, wisi. Morbi auctor lorem non justo. Nam lacus libero, pretium at, lobortis vitae, ultricies et, tellus. Donec aliquet, tortor sed accumsan bibendum, erat ligula aliquet magna, vitae ornare odio metus a mi. Morbi ac orci et nisl hendrerit mollis. Suspendisse ut massa. Cras nec ante. Pellentesque a nulla. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Aliquam tincidunt urna. Nulla ullamcorper vestibulum turpis. Pellentesque cursus luctus mauris.

■

## 6.8 Exercises

This is an example of an exercise.

**Exercise 6.1** This is a good place to ask a question to test learning progress or further cement ideas into students' minds. ■

## 6.9 Problems

**Problem 6.1** What is the average airspeed velocity of an unladen swallow?

## 6.10 Vocabulary

Define a word to improve a students' vocabulary.

**Vocabulary 6.1 — Word.** Definition of word.

# II Meaning

# 7. Presenting Information

## 7.1 Table

| Treatments | Response 1 | Response 2 |
|---|---|---|
| Treatment 1 | 0.0003262 | 0.562 |
| Treatment 2 | 0.0015681 | 0.910 |
| Treatment 3 | 0.0009271 | 0.296 |

Table 7.1: Table caption

## 7.2 Figure

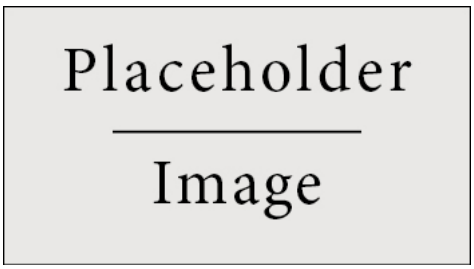


Figure 7.1: Figure caption

# III

# Lexicon

## A

**kujari** [kuʒaɻi] *na* Southern Cassowary; *(fig)* a person prone to listlessness

R The Southern Cassowary is seen as untamable and always in control. However, it seems to have no definite plans and spends its time wandering aimlessly. This sentiment can be applied to people.

**wurr** [wuɾ̪] *v* (**0**) it is electrically storming, there is lightning; (1) to be struck by lightning; (2) to strike

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# Index

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