



The Search for a Title

A Profound Subtitle

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1. Phonology

1.1 Phonetic Inventory

In terms of phonology, Ngujari has a rich consonantal inventory featuring a series of coronal consonants (both laminal and apical), as well as 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)		t̠(rt)		k, g
nasal	m	n̪(n)	ɳ(nn)	ɳ̠(m)		ŋ(ng)
trill		r̪(rr)				
tap		r̪̥(rr)				
fricative			ʃ(j)			
approximant	w			ɻ(r)	j(y)	
lateral approximant		l̪(l)		l̠(rl)		

Table 1.1: Consonantal Inventory

The vowel palette is very restricted, limited to just a, i, and u, as well as their lengthened versions, represented orthographically by repeating the letter.

	front	back
high	i, i:	u, u:
low	a, a:	

Table 1.2: Vowel Inventory

1.2 Phonotactics

Some phonotactic rules apply:

- Syllables take the form C₁V₁ (C₂).

- A word is usually 2–4 syllables plus one or more single-syllable suffixes.
- Words may not begin with a liquid or retroflex consonant.
- Stress always falls on the first syllable of each word.

1.2.1 Historical Sound Changes

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

- Apicalised post-alveolar plosive (t̪) becomes voiced post-alveolar fricative (ʒ).
- Apicalised alveolar trill (r̪) becomes apicalised alveolar tap (ɾ) immediately following regular vowels.
- Unvoiced velar plosive (k) voices to g following u or u: .
- Retroflex approximant (ɻ) disappears between identical regular vowels, forming one lengthened vowel.
- 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.

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 possessives.

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.

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.

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

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 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:

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

Table 2.3: Verb Classes

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.

2.2.1 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”.

2.2.2 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

2.2.3 Auxiliary Conjugation Tables

2.2.4 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 aivalent (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.

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

Table 2.8: Valence Modification Particles

3. In-text Elements

3.1 Theorems

This is an example of theorems.

3.1.1 Several equations

This is a theorem consisting of several equations.

Theorem 3.1.1 — Name of the theorem. In $E = \mathbb{R}^n$ all norms are equivalent. It has the properties:

$$||\mathbf{x}|| - ||\mathbf{y}|| \leq ||\mathbf{x} - \mathbf{y}|| \quad (3.1)$$

$$||\sum_{i=1}^n \mathbf{x}_i|| \leq \sum_{i=1}^n ||\mathbf{x}_i|| \quad \text{where } n \text{ is a finite integer} \quad (3.2)$$

3.1.2 Single Line

This is a theorem consisting of just one line.

Theorem 3.1.2 A set $\mathcal{D}(G)$ is dense in $L^2(G)$, $|\cdot|_0$.

3.2 Definitions

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

Definition 3.2.1 — Definition name. Given a vector space E , a norm on E is an application, denoted $||\cdot||$, E in $\mathbb{R}^+ = [0, +\infty[$ such that:

$$||\mathbf{x}|| = 0 \Rightarrow \mathbf{x} = \mathbf{0} \quad (3.3)$$

$$||\lambda \mathbf{x}|| = |\lambda| \cdot ||\mathbf{x}|| \quad (3.4)$$

$$||\mathbf{x} + \mathbf{y}|| \leq ||\mathbf{x}|| + ||\mathbf{y}|| \quad (3.5)$$

3.3 Notations

Notation 3.1. Given an open subset G of \mathbb{R}^n , the set of functions φ are:

1. Bounded support G ;
2. Infinitely differentiable;

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

3.4 Remarks

This is an example of a remark.



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 $\mathbb{K} = \mathbb{C}$.

3.5 Corollaries

This is an example of a corollary.

Corollary 3.5.1 — 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 $\mathbb{K} = \mathbb{C}$.

3.6 Propositions

This is an example of propositions.

3.6.1 Several equations

Proposition 3.6.1 — Proposition name. It has the properties:

$$||\mathbf{x}|| - ||\mathbf{y}|| \leq ||\mathbf{x} - \mathbf{y}|| \quad (3.6)$$

$$||\sum_{i=1}^n \mathbf{x}_i|| \leq \sum_{i=1}^n ||\mathbf{x}_i|| \quad \text{where } n \text{ is a finite integer} \quad (3.7)$$

3.6.2 Single Line

Proposition 3.6.2 Let $f, g \in L^2(G)$; if $\forall \varphi \in \mathcal{D}(G)$, $(f, \varphi)_0 = (g, \varphi)_0$ then $f = g$.

3.7 Examples

This is an example of examples.

3.7.1 Equation and Text

■ **Example 3.1** Let $G = \{x \in \mathbb{R}^2 : |x| < 3\}$ and denoted by: $x^0 = (1, 1)$; consider the function:

$$f(x) = \begin{cases} e^{|x|} & \text{si } |x - x^0| \leq 1/2 \\ 0 & \text{si } |x - x^0| > 1/2 \end{cases} \quad (3.8)$$

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

3.7.2 Paragraph of Text

■ **Example 3.2 — 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.

■

3.8 Exercises

This is an example of an exercise.

Exercise 3.1 This is a good place to ask a question to test learning progress or further cement ideas into students' minds.

■

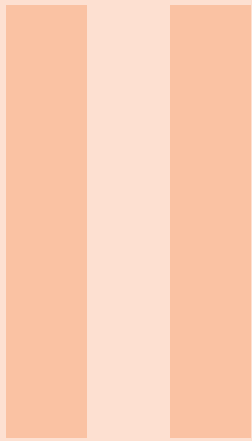
3.9 Problems

Problem 3.1 What is the average airspeed velocity of an unladen swallow?

3.10 Vocabulary

Define a word to improve a students' vocabulary.

Vocabulary 3.1 — Word. Definition of word.



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4. Presenting Information

4.1 Table

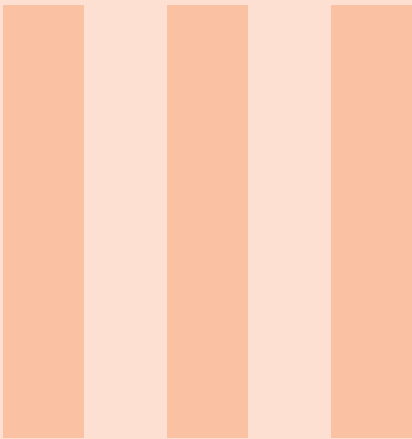
Treatments	Response 1	Response 2
Treatment 1	0.0003262	0.562
Treatment 2	0.0015681	0.910
Treatment 3	0.0009271	0.296

Table 4.1: Table caption

4.2 Figure



Figure 4.1: Figure caption



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