



On English loanwords in Pitjantjatjara

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ABSTRACT

The language borrowing process is characterized by the adoption and adaptation of lexical items from one language into another, a widespread practice resulting from various forms of linguistic contact such as trade, migration, colonization, and cultural exchange. This process, termed loanword adaptation, involves incorporating foreign words into the lexicon of the borrowing language, often guided towards factors of prestige or necessity (Campbell:2004). The adaptation of loanwords involves phonetic, phonological, morphological, and semantic changes, facilitated by the substitution of foreign sounds with phonetically equivalent ones in the recipient language. This investigation contributes to the linguistic knowledge and reinforces the intention to strengthen the understanding of the Pitjantjatjara Aboriginal language and to studies on the revitalization and expansion of Australian Aboriginal languages; therefore, it establishes basis for further investigations on Autochthonous indigenous languages.

In this study, we analyze mainly phonological and also some of the morphological adaptations of English loanwords in Pitjantjatjara, an Australian Aboriginal language. Despite differences in phonetic inventories between English and Pitjantjatjara, the recipient language demonstrates noteworthy adaptability in loanwords pronunciation. Through this qualitative analysis, we aim to deepen our understanding of the mechanisms involved in the adaptation of loanwords and shed light on the linguistic dynamics between English and Pitjantjatjara. By exploring how loanwords are assimilated into the phonological and morphological structures of the recipient language, this study contributes to the broader discourse on language contact and evolution.

Keywords: language contact, contrastive linguistics, loanwords, loanword adaptation, code-switching, Pitjantjatjara.

CONTENTS

List of figures	5
INTRODUCTION	6
1. PROBLEM STATEMENT	8
2. RESEARCH JUSTIFICATION	9
3. OBJECTIVES	11
General Objective	11
Specific Objectives	11
4. LITERATURE REVIEW	12
4.1 Australian English	12
4.1.1 Vowels	13
4.1.2 Diphthongs	14
4.1.3 Consonants	16
4.1.4 Consonant clusters	17
4.1.5 Morphology	18
4.2 Pitjantjatjara	21
4.2.1 Vowels	24
4.2.2 Diphthongs	24
4.2.3 Consonants	25
4.2.4 Consonant clusters	26
4.2.5 Morphology	27
4.3 Borrowed words	31
4.4 Loanword adaptation	32
4.5 Previous Pitjantjatjara studies	33
5. THEORETICAL FRAMEWORK	35
5.1 Language borrowing	35
5.2 Code-switching and LOLIs	36
5.3 Phonological processes	37
5.4 Morphological processes	38
5.5 Perceptual Cues	39
6. METHOD	42
7. RESULTS	46
7.1 Substitution	46

	4
7.1.1 Consonants	46
7.1.2 Consonant clusters	55
7.1.3 Vowels	56
7.1.4 Diphthongs	58
7.2 Insertion	59
7.2.1 Epenthesis	59
7.2.2 Paragoge	60
7.3 Suppression	61
7.3.1 Apheresis	61
7.3.2 Syncope	61
7.4 Morphological changes	62
CONCLUSION	63
BIBLIOGRAPHY	65
APPENDIX	69

List of figures

Figure 1: Vowels in Australian English. (Cox & Palethorpe 2007).....	13
Figure 2: List of vowel's examples. (Cox & Palethorpe 2007).....	14
Figure 3: Australian English consonants. (Cox & Palethorpe 2007)	16
Figure 4: Map of Indigenous Australian languages. (Gutman & Avanzati 2013)	22
Figure 5: Pitjantjatjara vowels. (Tabain & Butcher, 2014)	24
Figure 6: Pitjantjatjara consonants. (Tabain & Butcher 2014).....	25
Figure 7 Case-marking system of Areyonga Teenage Pitjantjatjara for common nouns (Langlois 2004).....	28
Figure 8 Case-marking system of Areyonga Teenage Pitjantjatjara for proper nouns (Langlois 2004).....	29
Figure 9: Conjugational classes (Goddard 1993)	30
Figure 10: General overview of database in Toolbox.	44
Figure 11: Record entry.....	45

INTRODUCTION

Throughout the years, the interaction between languages has led to the common practice of borrowing words. This linguistic contact often occurs as a result of trading, migration, colonization, or cultural exchange, influencing vocabulary, grammar, and pronunciation. Language contact can result in language borrowing, code-switching, and the development of new linguistic varieties.

According to Campbell (2004), a loanword is:

[...] a lexical item (a word) which has been 'borrowed' from another language, a word which originally was not part of the vocabulary of the recipient language, but was adopted from some other language and made part of the borrowing language's vocabulary (p. 58).

A process in which a lexical form is adopted and incorporated into the lexicon of the borrowing language is known as *loanword adaptation*. Campbell also claims that borrowing words happens for two reasons, *prestige* or *need*. In first place, the reason of *Prestige* is due to the fact that the foreign term is well-known, adopted and highly esteemed; these are better known as 'luxury loans'. And secondly, they are *needed*, because, as Holmes (2001) states, 'people may also borrow words from another language to express a concept or describe an object for which there is no obvious word available in the language they are using' (p.42). In the borrowing process, it is common that the word suffers some linguistic changes, such as phonetic, phonological, morphological, and semantic modifications. Tsujimura (1996) states that 'when a word is borrowed into another language, the pronunciation of the word is inevitably altered. This is because the sounds making up the word may not all exist in the language that borrows it'(p. 98). The concept of *borrowing* is defined by Payne (2006) as 'when speakers of a language treat a

word, morpheme, or construction from another language as a lexical item in their own language' (p. 323).

Borrowing typically involves the substitution of the closest equivalent phoneme of the borrowing language. This has been called 'adaptation' by Campbell (2004, p. 61). A foreign sound in borrowed words which does not exist in the receiving language will be replaced by the nearest phonetic equivalent.

In order to understand the loanwords analyzed in this investigation, we must bear in mind that the variety of English that the words are taken is from the Standard Australian English (SAusE), which emerged as a process of mixing British dialects during British settling in Australia as Gorjón (2023) stated, so that the pronunciation of Pitjantjatjara, the target language, is directly influenced by it.

The purpose of this research is to analyze mostly the phonological and some of the morphological aspects of adaptations of English loanwords in Pitjantjatjara.

1. PROBLEM STATEMENT

Linguistics, the scientific discipline dedicated to the study of aspects related to languages, has different fields of investigation: phonetics, morphology, syntax, semantics, etc. It has evolved due to innovative methods of investigation of language, which have allowed researchers to explore languages from different perspectives. A practice-oriented approach of this discipline is *contrastive linguistics*. Its purpose is to compare the differences and similarities of linguistic and socio-cultural data across different languages. This study fits into this type of linguistics because it seeks to accomplish the objectives of contrasting the phonological and morphological systems of English and Pitjantjatjara, which contributes to the comprehension of diverse processes such as the adoption and adaption processes of the source language.

Pitjantjatjara is an Aboriginal language belonging to the Pama-Nyungan language group. It is currently spoken within the Anangu community, geographically located in the Western Desert of central Australia. According to the 2021 census conducted by the Australian Bureau of Statistics, Pitjantjatjara has a population of 3,399 native speakers, the majority of which falls within the age range of 25 to 44 years old (ABS,2021)

Due to the scarcely studies conducted on linguistic borrowings of this language, this research contributes to the understanding of phonological and morphological adaptation and adoption processes during the transition from English to Pitjantjatjara. Moreover, the investigation was intended to be focused on the use of English loanwords in Pitjantjatjara, contributing to the revitalization, preservation, and expansion of knowledge on Australian Aboriginal Languages.

2. RESEARCH JUSTIFICATION

Awareness regarding the preservation of Australian aboriginal culture and languages has been growing in recent years. Australian indigenous languages have a rich cultural heritage that dates back tens of thousands of years, making them one of the oldest continuous cultures on Earth, keeping thousands of years of history alive. Over an extended period, these languages relied only on storytelling to transmit ancestral knowledge. A great part of this knowledge has had the misfortune of disappearing due to varied factors such as colonization, migration, land dispossession and also the death of native speakers, resulting in the loss of intergenerational transmission of knowledge.

For this reason, through the support of UNESCO since 2018, the measure *Protecting, Preserving and Celebrating Indigenous Languages and Arts of Australian Aboriginal and Torres Strait Islander Peoples* was established. This organization recognizes languages and arts as indispensable elements for the prosperity and wellness of the communities; in addition, the Australian government recognizes the worth of the Aboriginal culture for its people and for the whole nation. With this purpose in mind, resources have been allocated and activities implemented that promote the sustainability of cultural heritage.

Among these languages mentioned stands out Pitjantjatjara, an Aboriginal group that presents an opportunity for investigation of the different aspects of its people and language. This research is going to focus on the use of English loanwords in Pitjantjatjara, which can enhance our comprehension of the factors of adaptation of the language, thereby informing preservation and revitalization endeavors. Additionally, understanding the use of these loanwords can also have practical implications for communication and educational purposes.

This paper aims to facilitate the understanding of the incorporation of English loanwords into the Pitjantjatjara language through the analysis of specific examples, which will be used by Pitjantjatjara speakers who are learning English better understand English loanwords that are constantly used in everyday speech.

3. OBJECTIVES

General Objective

To identify the phonological and some of the morphological changes and adaptations in Pitjantjatjara loanwords of English origin.

Specific Objectives

1. Create a database of English loanwords in Pitjantjatjara based on available lexicographical sources.
2. Identify the grammatical categories in which English loanwords have been integrated into the lexicon and syntactic structure of Pitjantjatjara language.
3. Identify phonetic and phonological patterns in loanword adaptation, including sound substitutions, phonemic inventory adjustments, and phonotactic modifications, to understand how English loanwords are phonologically integrated into the Pitjantjatjara language
4. Identify and classify the phonological and some morphological adaptation processes that are incorporated in loans.

4. LITERATURE REVIEW

Short research concerning Pitjantjatjara language has been done. Hence, there are few materials related to the language to work with. However, borrowing of words is a common phenomenon of languages in contact and there is a whole body of literature discussing it in diverse languages, such as the articles *Australian English* and *Pitjantjatjara* in the Journal of the International Phonetic Association, the *Loanword Adaptation: A study of some Australian Aboriginal Languages* from McManus, among others.

Following main aspects concerning this research will be aimed, such as the contextualization of Australian English and Pitjantjatjara, the concepts of borrowed words, loanword adaptation and some previous studies on the Aboriginal language.

4.1 Australian English

Gorjón (2023) provides a general description of the linguistic characteristics of Australian English (AusE), which enlighten us about the sociohistorical and linguistic context of Australia. Telling us that since the mid-15th century European nations started to send explorers searching new routes across the sea, which led them to find the land we know today as Australia.

During their arrival they had an encounter with the Aborigines who opposed to their landing, but also found fertile and appealing lands with the opportunity of getting materials such as timber, which led the British to decide to settle in this new land. This decision was based on the high rate of unemployment and the increase of uncontrollably criminality and collapsed prisons which could not incorporate more convicts.

Decades after most of the prisoners decided to stay in this territory at the end of their sentence becoming part of the community. Additionally, settlers started to migrate from the

British Isles and eventually the population grew bigger and diverse. By the 19th century the linguistic landscape was very varied (Gorjón, 2023); the non-native population did not speak Standard English but rather in different dialects that varied in each region. as a consequence of the British settling in the country.

Australian English gradually emerged as a result of mixing different dialects, and turn into a dialect which derives from south-east England, Scotland, Ireland and London. Those considered Australian English speakers are either born in Australia or have immigrated at an early age. These speakers are generally divided into three groups: Standard Australian English (SAusE), the primary dialect spoken by the majority of the people; Aboriginal English, and Ethnocultural Australian English varieties, smaller group-focused dialects that speakers perform to express their identity among a wide Australian multicultural context.

In Cox and Palethorpe (2007) we find a general overview of the key characteristics of SAusE, as it is a starting point for the loanwords from Pitjantjatjara that we will analyze in this English dialect.

4.1.1 Vowels

In figure 1, we can appreciate the vocalic system of Australian English:

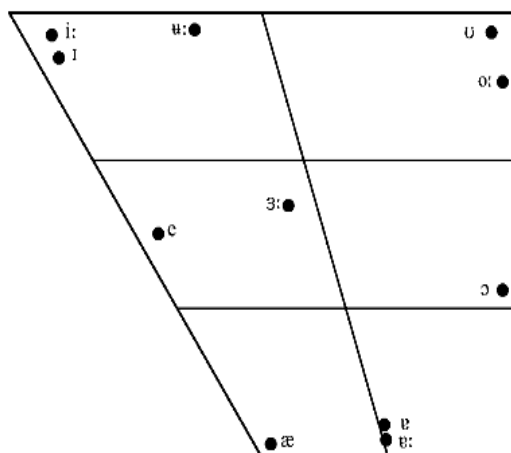


Figure 1: Vowels in Australian English. (Cox & Palethorpe 2007)

Australian English contains eleven vowel sounds. They suffer alterations in their pronunciation when compared to other English dialects, which are characterized by the Australian vowel shift, involving the alteration of their pronunciation, leading to less distinction between certain vowel sounds compared to other English dialects. In the following figure a comparison between Mitchell's (1946) and Harrington, Cox and Evans (1997) Australian English vowels descriptions is presented.

Harrington, Cox & Evans (1997)	Mitchell (1946)	Example word
i:	i	bead
ɪ	ɪ	bid
e	ɛ	bed
æ	æ	bad
ɜ:	ɑ	hard
ʊ	ʌ	bud
ɔ	ɒ	pod
o:	ɔ	board
ʊ	ʊ	good
ʊ:	u	booed
ɜ:	ɜ	bird
æɪ	eɪ	bayed
ɑɛ	aɪ	bide
æɔ	aʊ	bowed/loud
əʊ	oʊ	bode
oɪ	ɔɪ	Boyd
ɪə	ɪə	beard
e:	ɛə	bared/cared

Figure 2: List of vowel's examples. (Cox & Palethorpe 2007)

The symbols used in the left column of the table come from the Harrington et al. (1997) work, these were considered to reflect better the properties of SAusE compared to the previous ones presented by Mitchell (1946) which was strongly influenced by the British rather than the Australian standard due to its historical roots.

4.1.2 Diphthongs

SAusE is known for its use of diphthongs where two vowels are combined within a single syllable, contributing to the particular sound of the dialect. These phonological elements,

play a vital role in shaping the unique accent and pronunciation patterns observed across Australia. Some common diphthongs are:

/aɪ/ - as in *price*

/aʊ/ - as in *bide*

/eɪ/ - as in *face*

/ɔɪ/ - as in *boy*

/aʊ/ - as in *house*

/əʊ/ - as in *cow*

/ɪə/ - as in *beer*

/eə/ - as in *care*

/ʊə/ - as in *pure*

4.1.3 Consonants

The consonants of SAusE are organized as follows:

	Bilabial	Labio-dental	Dental	Alveolar	Post-alveolar	Palatal	Velar	Glottal
Plosive	p b			t d			k g	
Affricate					tʃ dʒ			
Nasal	m			n			ŋ	
Fricative		f v	θ ð	s z	ʃ ʒ			h
Approximant				r		j	w	
Lateral approximant				l				

Figure 3: Australian English consonants. (Cox & Palethorpe 2007)

Consonant sounds in Australian English are a great example of the distinctive fusion of influences, emerging from both British English roots and Indigenous Australian languages. It is well known by the variations in the pronunciation of specific consonants, such as the **r** sound, are common across different regions. Unfortunately, due to sharing many of the variations with other English dialects, consonants have not received the same level of research rigor as vowels. These are some of its characteristics:

1. Syllable-initial voiceless stops are aspirated before vowels in stressed syllables. [tɒp] *top*.
2. Australian English often reduces or deletes consonants occurring between vowels, particularly /t/ and /d/. ['bɒtəl] *bottle*, regularly results in a simplified pronunciation.
3. Voiceless stops are unaspirated when following /s/ in the same syllable. [spɪn] *spin*.
4. Australian English is a non-rhotic variety, as its Standard British counterpart. The **r** sound is not pronounced at the end of words or before a consonant. [kɑ:] *car*.

5. Voiceless plosives (/p/, /t/, /k/) may become voiced (/b/, /d/, /g/) in certain contexts, especially intervocalically. [pæt] *pat*.
6. Consonants preceding nasal vowels (/m/, /n/, /ŋ/) may be nasalized, influencing the pronunciation of the preceding vowel. [bæŋk] *bank*
7. Glottal stops may replace /t/ in word-final position, especially in casual speech. [wɒʔ] *what*.

4.1.4 Consonant clusters

The internal structure of syllables in Australian English often follows the pattern found in many varieties of English. Syllables are units of pronunciation consisting of a vowel sound or a combination of one or more consonant sounds, varying in complexity from simple to complex structures. Consonant clusters are repeatedly found at the beginning of syllables, but can also appear at the end of them. There are some features to remark concerning syllable structure:

1. **Syllable onset:** simple and complex onsets can occur, where one or more consonants are before the vowel nucleus. [tri:] *tree*, [stri:t] *street*.
2. **Vowel nucleus:** the nucleus is typically a vowel sound. [kɔɪn] *coin*, [mi:t] *meet*.
3. **Syllable coda:** simple and complex codas (consonant clusters) are allowed, these are the consonants occurring after the vowel nucleus. [la:st] *last*
4. **Intervocalic consonant reduction:** occurs in casual speech, speakers reduce or delete consonants between vowels, particularly stops like /t/ and /d/. ['betə] *better*.

#CC: Scholar, Schematic, Class, Play, Brave, Plum

CCC: Strengths, Scream, Strikes

In the case of intervocalic consonant clusters, mainly those including *t* and *d*, regularly pass through a reduction or deletion process resulting in a simplified pronunciation.

Deletion

Water /'wɔ:tər/: pronounced as ['wɔ:tə]

Better /'betər/: pronounced as ['betə]

Reduction

Middle /'mɪdəl/: pronounced as ['mɪd̩l]

Ladder /'lædər/: pronounced as ['lædə]

Simplification

Last /læst/: pronounced as [lɑ:st]

Mask /mæsk/: pronounced as [mɑ:sk]

4.1.5 Morphology

Geršl (2020) in his research compares differences and similarities in morphology and Syntax of Australian and Standard English. He states that unlike Standard English (SE) for Australian English (AusE) some morphological characteristics are not totally implemented, as a result of simplification from the early varieties of English as it was evolving, or also as a communicative strategy due to the fact that for Australian speakers it is important the explicitness and the correct interpretation of the information given. These are some features of the AusE morphology:

1. Suffixes:

- a. **Plural suffix:** it is not a stablished criteria to use ‘-s’ for denoting plural at the end of a word as Standard English or British English does. E.g: AusE: Her two cat. → British English (BrE): Her two cats.
 - b. **Past tense suffix:** in AusE the suffix ‘-ed’ to identify past tense is not used, they would say ‘I’ve block ‘im’ instead of ‘I’ve blocked him’. Even in regular verbs aboriginal speakers do not use it, they would say ‘I ask im out’ instead of ‘I asked him out’.
2. **Possession:** AusE speakers do not use the suffix ‘-s’ to indicate possession as Standard English does, they leave it out. E.g: SE: Juliana’s car. → AusE: ‘Juliana car’. A different example would be ‘baby toy’ instead of ‘baby’s toy’, in this case the meaning of the word would change, considering the word ‘baby’ as an adjective rather than a noun. For this case speakers use prepositions like ‘blong’ or ‘bla’ in addition with the possession instead of the ‘-s’. E.g: AusE: ‘baby blong toy’ → SE: The baby’s toy.
3. **Pronouns:** In contrast with SE, AusE has a simplified pronoun system, in which the third person pronouns are shortened (AusE: e, im, dey, dem → SE: he, him, they, them) and can be used in subject position. Also, the third person singular ‘he, she, it’ not always differentiates gender as ‘e’ can be either of them. The third person personal pronoun can function as possessive pronoun. E.g: AusE: ‘They all got they coat on’.
4. **Adjectives:** In AusE adjectives may have the suffix ‘-est’ without necessarily implying a superlative meaning, as is the case in SE. For instance, ‘a tallest tree’ in AusE would be a very tall one in SE. Additionally, the words derived from Aboriginal languages may incorporate nominalized suffixes as ‘-one’ or ‘-fella’. E.g: tasty-one, same-one, clever-fella, white-fella.

5. **Verbs:** In AusE verbs are not always inflected as in SE in the third person in the simple present tense, for example SE 'He comes home late' would be 'He come home late' in AusE.
6. **Adverbs:** Standard English usually implements the suffix '-ly' to indicate adverbs, but AusE have suffixes like '-way', '-time'. E.g: 'short-way', 'south-way', 'great-time', 'early-time'.
7. **Question tag:** Generally, the question tag in AusE end with 'eh?', but depending on the location it may vary, for example, in other places like South Australia 'inna' is used and in the West 'unna' is implemented. These three question tags have the same meaning as 'isn't it so?' or 'isn't that right?' in SE. E.g: AusE: 'They fly, eh?' → SE: 'They fly, isn't it so?' or AusE: 'best friends forever and ever unna' → SE: 'best friends forever and ever, isn't that right?'
8. **Hypocoristics:** Also known as diminutives forms of words or names. They are widely used and very important in AusE making the language richer. Its construction is usually a combination of cutting and adding a suffix to the root of the word, for example:
 - a. **Suffix 'ie' or 'i,y':** can have meanings as babytalk, occupation nouns or adjectives. Mom → mammy, Dad → daddy, Postman → postie, Biscuit → bickie, football → footy, Australian → Aussie.
 - b. **Suffix 'o':** this suffix is often found in Irish English as well as in AusE (remember that in the settling times Australia was used to send the convicts to work and as they had different English accents, they highly influenced AusE). E.g: Condobolin → Condo, Afternoon → arvo, Steve → Stevo.

- c. **Suffix ‘s’:** this suffix is common for personal names and place-names. E.g:
Gabrielle → Gabs, Pablo → Pabs, Margaret River area → Margs.
- d. **Suffix ‘a’:** this suffix is generally written as ‘er’ to form nouns derived from verbs. E.g: Biter → bite, chockful → chocker, immature → imma.

4.2 Pitjantjatjara

Tabain and Butcher (2014) provide an explanation of the Pitjantjatjara context concerning vowels and consonants. It is a dialect of the Western Desert Language of central Australia (WDL), spoken mainly in the north-west of South Australia. The WDL is a member of the south-west Pama-Nyungan group (the largest language family in Australia, encompassing over 300 languages, making it the most widespread and diverse language family on the continent), and has many others regional varieties, the closest being Yankunytjatjara, Ngaanyatjarra, Ngaatjatjarra, Pintupi-Luritja and some others. According to the Australian Bureau of Statistics (2021), Pitjantjatjara is among the 5 most widely spoken Aboriginal languages in Australia with 3,399 speakers. They are concentrated in the areas of Pukatja (Ernabella), Amata - Tjurma Homelands, Kaltjiti (Fregon) and Irintata Homelands. Most of them are located in the state of South Australia.

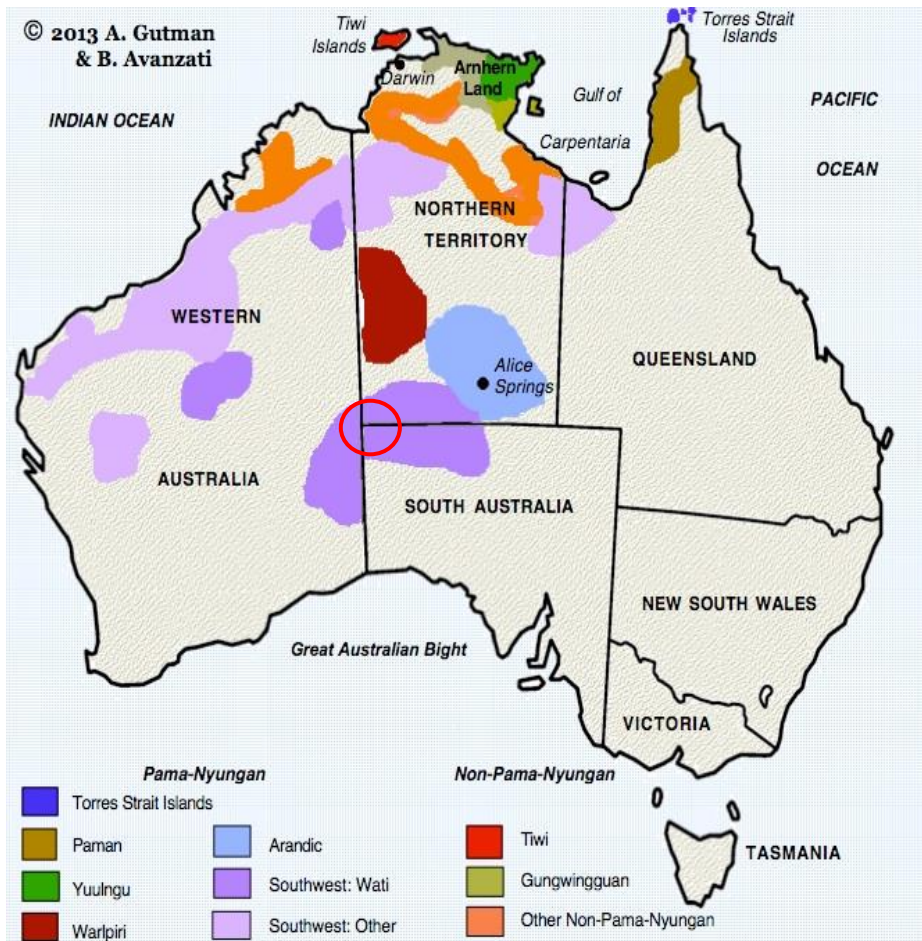


Figure 4: Map of Indigenous Australian languages. (Gutman & Avanzati 2013)

Besides sharing territory with these dialects, it also does so with English which has contributed to the enrichment of the language with lexical loans, positioning it as the dominant language, leaving Pitjantjatjara as a second language. Pitjantjatjara has been written applying the Latin alphabet since the 1940s, the spelling system was standardized in 1979 and confirmed in 1987 by the publication of the *Basic Pitjantjatjara–English dictionary* by Goddard. About 50-70% of Pitjantjatjara speakers, **Anangu**, are literate in their language (2M Language Services, 2021).

Anangu is the name designated to the Indigenous people who are the traditional owners and custodians of the land in the Anangu Pitjantjatjara Yankunytjatjara (APY) lands in Central Australia. They have a rich cultural heritage, including their language, art, traditional knowledge, and a deep spiritual and ancestral connection to the land, which is reflected in their cultural practices, ceremonies, and Dreaming stories, which are ancestral authentic beliefs that provide a cultural background about their history and traditions held through time. Their first interaction with non-aboriginal people was made over a hundred years ago, leading to bilingualism, code-switching, and language contact, which became common in schools and later its official language. Unfortunately, the language is at risk as senior people pass away. Thus, to preserve it, the Anangu community and the government have started projects creating didactic material in Pitjantjatjara to teach in community schools to maintain and strengthen their language.

There is not a wide variety of material discussing or studying Pitjantjatjara, but fortunately we have the *Pitjantjatjara/Yankunytjatjara to English Dictionary*, 2nd edition; also *A Learner's Guide to Pitjantjatjara/Yankunytjatjara*, by Goddard (1992), developed in order to contribute to students and native speakers to acknowledge one of the 5 most spoken languages of Central Australia; the *Pitjantjatjara/Yankunytjatjara Picture Dictionary*, compiled by Paul Eckert (2007), along the book there is a list of common words with definitions and illustrations, with examples by Pitjantjatjara and Yankunytjatjara speakers; and finally the database in *Toolbox*, a software developed by the Summer Institute of Linguistics (SIL) to assist during the documentation, analysis, and management of linguistic data. This compilation was created for this investigation, in which the information from the mentioned dictionaries were unified into a practical and highly useful corpus for the analysis of the language.

4.2.1 Vowels

Pitjantjatjara has only 3 vowels that can be pronounced short or long, giving 6 vowel phonemes [ɪ ʊ ʊ]. Long vowels are spelled by using double letters, e.g., /ii/, /aa/, and /uu/, and in transcription by using a colon after the vowel /i:/, /a:/, and /u:/; these are found mostly in the first syllable of the loanwords; the status of long vowels is still debatable. The vowel system is shown in the following figure:

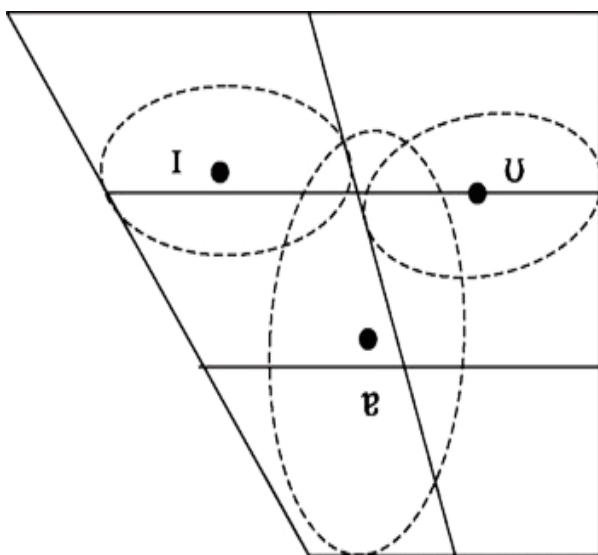


Figure 5: Pitjantjatjara vowels. (Tabain & Butcher, 2014)

a	ku <u>ḷ</u> a	Big brother	a:	ka: <u>ṇ</u> ka	Crow
i	inu <u>ṛ</u> a	Wild	i:	i: <u>l</u> i	Drizzle
u	pu <u>ḷ</u> ka	Big	u:	uu: <u>ḷ</u> inanyi	Pick on

4.2.2 Diphthongs

It should be mentioned that diphthongs are not very common in Pitjantjatjara, as the language predominantly uses long vowels instead.

[ai]		mirapai	Siren
ankuwai	Creek	kuyai	teenage girl

[au]		paul(pa)	Unpleasantly hot
taunu	Town	raunarinyi	Round

4.2.3 Consonants

In the following chart, the consonants of Pitjantjatjara are presented. On the right side of the symbol is the orthography used for these sounds.

	Bilabial	Apical		Laminal Alveo-palatal	Velar
		Alveolar	Post-alveolar		
Stops	p	t	ɽ ɽ̥	c tʃ	k
Nasals	m	n	ɳ ɳ̥	ɲ ny	ŋ ng
Laterals		l	ɭ ɭ̥	ʎ ly	
Tap/trill		r			
Glides			ɻ ɻ̥	j y	w

Figure 6: Pitjantjatjara consonants. (Tabain & Butcher 2014)

Pitjantjatjara consonant system has five manners and five places of articulation, and count with 17 consonants. To achieve their pronunciation, many considerations must be made, such as:

1. The lack of aspiration at the beginning the sounds **p**, **t** and **k** in Pitjantjatjara frequently sound like the English phonemes **b**, **d** and **g**.
1. The retroflex or post-alveolar sounds are characterized by having an underlining **ɳ**, **ɭ**, **ɻ**, and **ɽ**, and are pronounced by curling the tongue back slightly in the mouth.
2. The 2 types of **r-sounds**. The retroflex or smooth **ɻ** is like the **r** in ‘arrow’; and in contrast, the sharp **r** that is rolled. Bear in mind that at the beginning of a word only the retroflex **ɻ** will be found.

3. The laminodentals or teeth sounds **tj**, **ny**, and **ly**, are pronounced by extending the tongue forward until it contacts the rear of both sets of teeth.
4. The velar nasal **ng** is considered difficult to pronounce often, but its pronunciation is as ‘hang’.

4.2.4 Consonant clusters

Pitjantjatjara phonology does not allow syllables with consecutive consonants CC. Only consonant-vowel CV syllable structures are allowed; also, it does not allow ending with a single consonant C nor consonant clusters CC. In the following examples, syllable boundaries will be indicated with a period:

E.g:

Pitjantjatjara	English
a. ma.pal.ku	abruptly
b. ngam.paḷ.tju.na.nyi	stick together
c. wa.tar.ku	accidentally
d. u.wan.ma.na.nyi	agree
e. kar.pi.ni	bind
f. ti.ur.pa.tja.ṇi	bounce
g. kam.pan.yi	burn
h. ar.ka.ṇi	try
i. i.nun.tji	blossom
j. tjuḷ.pu	bird
k. mu.ngar.tji	afternoon
l. mim.pu	bowl

4.2.5 Morphology

Langlois (2004) describes the grammatical and sociolinguistic changes taking place in the Pitjantjatjara speech of young people in Areyonga, a Central Australian community, with data collected between September to December 1995.

In chapter 3, she develops the morphological features observed in this community, concentrating on two areas of inflectional morphology: nominal and verbal inflection. The main finding of the study is that there has been significant simplification, which is a normal process of change through language contact situations, in case marking allomorphy and certain aspects of inchoative verb formation. However, the system of verb inflection has largely remained unchanged. These findings will be shortly developed below:

1. Nominals: Langlois references Dixon who believes that nouns and adjectives fall into the same category (nominals) because they typically share the same morphological patterns, inflections, and derivational suffixes. Although Pitjantjatjara has fewer case categories than some other Australian languages, its case marking system is fairly complex due to the interaction of morphological, phonological, and semantic factors that influence the distribution of the markers.

Firstly, most cases differentiate between 'common' and 'proper' (i.e., names or other words in a name-like function). Secondly, there is phonological variation influenced by the final segment of the stem, which can be: **(a)** ending in a vowel, as in *papa* 'dog', *pituri* 'wild tobacco', **(b)** ending in laminal consonants (-ny or -ly), as in *utjany* 'ironwood', *malany* 'younger sibling', **(c)** ending in retroflex consonants (-ɭ or -l), as in *miral* 'angry', *paltjuɭ* 'foot', or **(d)** ending in alveolar consonants (-n, -r, -l), as in *piran* 'white person', *ngalkil* 'protector'. If there are

consonant-final variations, they typically start with a stop consonant that matches the stem-final consonant.

It is important to note that Pitjantjatjara does not allow consonants at the end of words.

Therefore, morphemes like -pa are used as special syllables to prevent words from ending in a consonant.

a. Common nouns: The primary change observed in the Areyonga teenagers is the reevaluation of the augmentative -pa as an integral part of the word's stem. As a result, all nouns and adjectives now end with a vowel. This makes the phonetically influenced variations in the traditional case-marking system unnecessary, as only vowel-ending markers are now used. Consequently, the case-marking system has been simplified from its original four different forms per case to just one per case. This transformation is further illustrated with the Ergative case, as shown below.

Environment	Traditional Pitjantjatjara	Areyonga Teenage Pitjantjatjara
vowel-final	<i>wati-ngku</i> man-ERG	<i>wati-ngku</i> man-ERG
-ny or -ly -final	<i>maḷany-tju</i> junior.sibling-ERG	<i>maḷanypa-ngku</i> junior.sibling-ERG
-ṇ or -ḷ -final	<i>mingkuḷ-tu</i> wild.tobacco-ERG	<i>mingkulpa-ngku</i> wild.tobacco-ERG
-l, -n, -r -final	<i>nyuyur-tu</i> stepfather-ERG	<i>nyuyurpa-ngku</i> stepfather-ERG

Figure 7 Case-marking system of Areyonga Teenage Pitjantjatjara for common nouns (Langlois 2004)

Declination of common nouns: Nominals that decline like 'common nouns' include both types of nouns (things you can count and things you can't), adjectives,

days of the week or months, the demonstratives such as *nyara* 'yonder', *pala* 'that', *nyanga* 'this', and *panya* 'that known', and the interrogative pronoun *nyaa* 'what'.

b. Proper nouns: It is important to mention that the religious and official administration has led Anangu to adopt European names besides their 'Aboriginal names', allowing them to choose between the two for specific situations. Many European names are adapted to fit into the Pitjantjatjara sound system. For example, names like 'Melissa' or 'Matthew' are transformed into 'Militja' or 'Matju'. Also, the traditional Pitjantjatjara names rarely end with a consonant, Langlois expressed that during the research informants were asked if they knew any aboriginal names with consonant ending, and they said that it does not exist within the community.

Bear in mind that in Traditional Pitjantjatjara, proper nouns have a vowel-final allomorph and several different consonant-final allomorphs for all cases. However, in Areyonga Teenage Pitjantjatjara, they only have two sets of markers, '-lu' for vowel-final or the marker is preceded by the epenthetic vowel -a. This can be illustrated as follows.

Environment	Traditional Pitjantjatjara	Teenage Pitjantjatjara
vowel-final	<i>Utju-lu</i> Utju-ERG.NAME	<i>Utju-lu</i> Utju-ERG.NAME
-ny or -ly -final	<i>Kanginy-tju</i> Kanginy-ERG.NAME	<i>Kanginy-alu?</i> Kanginy-ERG.NAME
-n or -l -final	<i>-n/-l -final -tu</i> <i>-n/-l -final-ERG.NAME</i>	<i>-n/-l -final-alu?</i> <i>-n/-l -final-ERG.NAME</i>
other C-final	<i>Fregon-tu</i> Fregon-ERG.NAME <i>Lauren-tu</i> Lauren-ERG.NAME	<i>Fregon-alu</i> Fregon-ERG.NAME <i>Lauren-alu</i> Lauren-ERG.NAME

Figure 8 Case-marking system of Areyonga Teenage Pitjantjatjara for proper nouns (Langlois 2004)

Declination of proper nouns: Nominals that decline similarly to 'proper nouns' encompass all names of people or places, nouns (usually animal terms) that identify characters in Dreaming stories, adjectives employed as nicknames (for example, Tungkunya 'Shorty'), and the question word ngana 'who'.

2. Verbal inflection: Verbs are the second group with morphological changes, involving conjugational classes and verb formation. Pitjantjatjara verbs have eight inflectional categories. They have no verbal concord between the subject and them. Verbs play a significant role in the linguistic structure, therefore understanding their characteristics and functions is essential for the comprehension of Pitjantjatjara syntax, and discourse structure. We may not study verbs in depth, but the basic construction will be explained. (For further syntactical information of Pitjantjatjara, see Langlois 2004, or Wilmoth and Mansfield, 2021).

From a syntactic perspective, Pitjantjatjara verbs are classified as transitive or intransitive, and some verbs can function as both, such as *kuntjulpu-ng* 'cough' (intransitive) or 'cough up' (transitive). It is necessary to understand that there are four conjugational classes of verbs and for each of them there is a different tense ending. Also, for the construction of a verb in Pitjantjatjara it is necessary to attach a determined suffix or ending to the basic part of a word, which is called the *stem* or *root*.

Tense	Conjugational classes			
	Ø*	l*	n	ng
Imperative	Ø	-la	-ra	-wa
Present	-nyi	-ni	-nanyi	-nganyi

Figure 9: Conjugational classes (Goddard 1993)

* The most common classes are the **Ø-class**, that are often intransitive verbs, and the **I-class**, which are mostly transitive verbs

E.g:

Ø-class	I-class
nyina ^{nyi} <i>sit/stay</i>	ura ⁿⁱ <i>get</i>
pitja ^{nyi} <i>come/go</i>	tjikini <i>drink</i>
kati ^{nyi} <i>take</i>	pauni <i>cook</i>

4.3 Borrowed words

Loanwords are phenomena of speech and language since ancient times, such as those of colonization and (wrongly called) discoveries of continents in which generally indigenous people, among others, were culturally, linguistically, and socially affected and altered for the rest of their existence through these forced instructions of language, culture, and social convention by those who colonized.

According to Castillo (2002) linguistic loans tend to fill a gap or seek to integrate into the recipient language with an unknown or more adequate concept. Loans can be categorized into two different perspectives: those that do not encounter resistance and those that coexist with the old terms, and are determined by internal (novelty of the term and origin from a prestigious language, homonymity, low frequency of the words, etc.) or external (the necessity of new concepts) causes, which allow to identify and analyze how deeply the language from which these loans are taken is immersed.

Intrinsic and extrinsic factors, often influence the adoption and adaptation of these loans according to the phonological and morphosyntactic habits of the speakers of the recipient

language, the first ones concerning the integration of new lexicon for unknown elements; and the second ones justifies the adoption by necessity.

As a relevant fact, it is necessary to consider the following *levels of loan adaptation*, mentioned Castillo (2002): absence of orthographic and morphological adaptation, where the loan maintains its foreign appearance; partial or non-existent adaptation; phonological adaptation based on orality, involving processes such as assimilation, suppression, addition, and metathesis; phonological adaptation based on writing; orthographic pronunciation; orthographic adaptation; simple morphological adaptation; and morphological adaptation through partial semantic calque. This categorization has been significant for this research as it serves as a reference point for its analysis.

4.4 Loanword adaptation

According to the study conducted by McManus (2008), the linguistic loans are considered within the framework established by Smith in his source-similarity faithfulness model. This framework employs a characterization or specific constraints on loans that express broad similarity both in their original form and in the loan, they correspond to. In this study, the author focused specifically on the constraints that delineate prosody and fidelity according to adaptation; vocalic epenthesis, being one of these, and less frequently, suppression and substitution.

In her research, the author provides examples of linguistic loan phenomena occurring within the Australian Aboriginal languages Martu Wangka, Warlpiri, and Pitjantjatjara. It is important to note that these languages present a peculiar structure where words even if they are loans cannot end in a consonant. McManus also explains that within the loan processes, three linguistic processes primarily emerge, with **epenthesis** being the most common. This

occurs due to the phonetic rules of these languages where syllable-internal consonant clusters CC are not allowed; **substitution** and, finally, **suppression** are the other processes that arise.

In the case of her analysis of Pitjantjatjara, McManus considered two population subgroups based on age, one of them integrated by adults and the other of young people. They were asked to pronounce loans in comparison to English. The main result was that adults adhered more faithfully to the pronunciation of Pitjantjatjara, whereas the younger individuals leaned more towards English phonology. It is noteworthy that individual speakers can make conscious differentiations in their use of linguistic borrowings.

To conclude her research, McManus explains why Smith's source-similarity faithfulness model allowed her to demonstrate and identify relevant characteristics within each language regarding word adaptation, highlighting the sounds that are inserted or removed to minimize the alteration of the perception of the source.

4.5 Previous Pitjantjatjara studies

In the *Lexical Stress in Pitjantjatjara* article (2014), the authors aim to contribute to the study of prosodic typology with a phonetic description of the Pitjantjatjara. This research mentions that most studies of prosodic structure in Australian languages describe them as having lexical stress. Tabain, Fletcher and Butcher emphasize that the results of their investigation are based on read text recordings of seven speakers, including two texts. As part of their conclusion, they state that there does not appear to be differences between Weak syllables and Word-medial Strong syllables, therefore the stress will be regular and foot-based, and that there is no evidence of secondary stress.

Additionally, Langlois (2004) conducted a grammatical and sociolinguistic research concerning the impact and changes occurring in the Pitjantjatjara speech of teenagers influenced by English speakers' contact. This study was carried out from September 1994 to December 1995. As a result, a meaningful corpus was built based on the data collected from different sources such as stories gathered from Dreaming and *mamu* 'monster' stories, to conversations about everyday life, and recordings that reflected most aspects of the life of Pitjantjatjara teenagers in those days.

Finally, a recent investigation carried out by Casanova (2018) in her professional practice report III contributed to the analysis of loanwords in Pitjantjatjara. This research process was developed in her home city, Maracaibo (Venezuela), using as principal sources Goddard's *Pitjantjatjara /Yankunytjatjara to English Dictionary* (1996), *Pitjantjatjara/Yankunytjatjara picture dictionary* compiled by Eckert (2007), McManus's thesis (2008), and the article on Pitjantjatjara written by Tabain and Butcher (2014). During the analysis stage, she built a database based on Goddard's and Eckert's dictionaries. This process concluded with the compilation of a corpus consisting of 3034 words, of which 228 were identified as loanwords from English. Within her analysis, she considers the phonological and morphological processes undergone by Pitjantjatjara in adopting these loanwords from English, such as prothesis, epenthesis, paragoge, apheresis, syncope, apocope, among others. As a result of her investigation, she found that the adoption of words is a dynamic process based on the phonology of the receiving language; this involves the substitution of sounds, aiming to integrate the words to the existing lexicon.

5. THEORETICAL FRAMEWORK

Language is an aspect of human culture that is constantly evolving and transforming by a variety of sociolinguistic, cultural, and historical factors. Consequently, in some cases, it becomes particularly evident when languages come in contact and influence one another, contributing to their enrichment and diversification. Indigenous languages, in this case Pitjantjatjara is not an exception to this process of linguistic evolution.

This theoretical framework aims to provide a foundation for understanding the significance, context, and implications of borrowing words.

5.1 Language borrowing

Riggs (2014) defines borrowed words or loanwords as words that are non-existent in the lexicon of the borrowing language. Typically, these borrowed terms seem unfamiliar to speakers because they contain sounds or sound sequences that are not inherent to their linguistic repertoire. Consequently, this leads to a difference in 'ease-of-perception' compared to 'ease-of-articulation'. In other words, while the sounds may be difficult to produce, they are relatively easy for language users to recognize and understand. As a result, language users can more easily interpret the auditory cues present within phonetic phenomena.

In accordance with the Cue Hypothesis, speakers adapt unknown words in order to widen their perception, employing two different strategies. First, the language user retains perceptual cues from the source word. Alternatively, they may modify or adjust the source word to enhance sound perceptibility, increasing the perceptual cues in terms of strength, quality, and quantity. This adaptation process optimizes the recognition and comprehension of loanwords within the

borrowing language's phonetic framework. Some examples of this borrowing process are exposed by Riggs (2014) from English to Irish, and Hara (2011), from English to Japanese. As sample of this:

Irish: 'toast' [tost] [tost^a].- Epenthesis

Japanese: 'accessory' *akusesari*.

Acknowledging that the processes of Deletion and Epenthesis, in the case of Irish, not only happens to conform to the phonotactic properties of the borrowing language, but to improve *perceptibility*. Hara considers that loanwords are accurate tools for English learning as long as the loanwords maintain similar sounds and meanings from the target language.

5.2 Code-switching and LOLIs

According to Johns and Dussias (2022), *code-switching* involves the act of alternating between two or more languages within a conversation or even a single statement; while *LOLIs* (lone other-language items) or spontaneous borrowings, specifically denote cases where a single word or a small set of words from one language are incorporated into a sentence or expression primarily in another language. These isolated language items from the other language are incorporated into the main one in use. Also, Poplack and Dion (2012) mention that while code-switching involves switching both words and grammar, LOLIs, only requires the word or lexical item from the other language keeping the grammar of the recipient language, therefore it allows to include the word into a conversation with no grammar changes. Below you will see some related examples:

Code-switching

- I was going to the store, pero se me olvidó
- I'm tired. Me voy a dormir
- María has a good chisme about Laura

LOLIs

- 'Parking' becomes 'parqueo' in Spanish
- 'Ballet' used in English and Spanish with the same meaning as in French.
- 'Café' is used in English to refer to a small coffehouse

Examining *LOLIs* and their function in code-switching is a frequent subject of focus in linguistic studies. Experts may discuss regarding whether these singular insertions are a representation of code-switching or if they arise from a distinct linguistic process.

5.3 Phonological processes

Wolfram and Johnson (1982) state that phonology is a dynamic system in which a unit gets modified by having contact with other units in the system; these changes are called Phonological processes, in which all sound systems are often influenced by their context. These changes usually take place when specific sound sequences are juxtaposed by the combination of morphemes into words, and words into sentences. Some of these processes are assimilation, dissimilation, neutralization, deletion, coalescence, epenthesis, and metathesis, etc. Along this investigation, our focus will be on the processes of epenthesis, paragoge, apheresis and syncope, which were the most recurrent phenomena among the loanwords observed.

- **Epenthesis:** involves the insertion of a vowel or consonant into a word to break clusters and facilitate pronunciation.
- **Paragoge :** involves the insertion of a vowel or consonant at the end of a word to break consonant clusters.
- **Apheresis:** involves the suppression of sounds at the beginning of a word.
- **Syncope:** involves the suppression of a sound within a word.

5.4 Morphological processes

Karũrũ (2013) states that although borrowed words bear resemblance to their source words, they undergo morphological strategies to conform to the structural norms and maintain the harmony of the recipient language, thereby facilitating communication. Through this adaptation process affixation, a fundamental mechanism in word formation, expansion and flexibility of language, encompasses the different strategies for incorporating grammatical and lexical information, such as:

- **Prefixation:** Adding a prefix to the beginning of a base word. For example, "un-" in "unhappy" or "re-" in "redo."
- **Suffixation :** Adding a suffix to the end of a base word. For example, "-ness" in "happiness" or "-ly" in "quickly."
- **Modification:** involves altering the form or structure of a word to change its meaning or grammatical category. This can include changes such as adding, removing, or altering sounds, letters, or morphemes within the word.

- **Compounding:** involves joining two or more roots to form a single word. Words from different parts of speech can be combined to form compounds (Offiong 2011).
- **Reduplication:** involves copying either a part or the entirety of a stem and attaching it to the beginning or end of the same stem.

Hara (2011) also expresses that morphological changes commonly occur during the borrowing process, including phenomena such as shortening, abbreviation, compounding, and affixation. She enlightens us through some English loanwords in Japanese examples as:

Backclipping of a word : akuseru (accel[erator])

Backclipping of the second word in phrase : masukomi (mass commu[nication])

Backclipping of the first word in phrase : omuraisu (ome[let] + rice)

Backclipping of both words in phrase : pansuto (pan[ty] sto[cking])

5.5 Perceptual Cues

Throughout Riggs (2014), *the Cue Hypothesis* (CH) and *Perceptual Cues* (PC) are often mentioned. These concepts are interconnected in the linguistic domain, used particularly in the studies of language acquisition and language processing. However, they refer to different aspects of language learning and perception. Cues are fundamental to speakers' perception and comprehension of a lexical item being borrowed into the native grammar; therefore, the loanwords from foreign languages in some extent preserves cues to phonological information.

As consonants are identified through perceptual cues, the PC of the source word are adjusted to meet this requirement. In particular, vowels are added before or after consonants, resulting

in a strengthening (or increase) of perceptual cues, which improves the detectability of the consonant.

- **The Cue Hypothesis:** theory or hypothesis that suggests that learners of a second language rely on perceptual cues to recognize and distinguish linguistic features, patterns, and other linguistic elements in the target language. According to this hypothesis, certain features of speech sounds provide crucial information that helps in identifying those sounds correctly. For example:

Cues for consonants: details like the time between the release of a consonant and the onset of vocal cord vibrations, place of articulation, and manner of articulation help distinguish between consonants.

Cues for vowels: specific frequency bands are crucial. For example, the first and second formant frequencies help differentiate between vowels like /i/ in "beet" and /a/ in "bat."

- **Perceptual Cues:** sensory signals that individuals use to interpret and understand language. These Cues can be auditory (related to sounds) or visual (relating to movements or gestures). It helps understand how people perceive and process language. Speakers incorporate words from foreign languages in a way that maintains phonological cues, and they modify these words to enhance the perceptibility of a language variety by increasing the strength, quality, and number of perceptual cues. For example:

Auditory Cues: include pitch, loudness, duration, and the specific frequencies of sounds. Allows to perceive the difference in pitch between the sounds /p/ and /b/, /θ/ and /ð/; helps listeners distinguish between "pat" and "bat."

Visual Cues: include lip movements and facial expressions, which can help in understanding spoken words, especially in noisy environments.

In essence, perceptual cues and the Cue Hypothesis offer a structure for comprehending how humans interpret the intricate sounds of language in the moment, facilitating successful communication.

6. METHOD

This study employed a qualitative research design, focusing on the analysis of the English loanwords in Pitjantjatjara drawn from lexicographical sources. The qualitative approach was chosen to provide a deeper insight into the language's structure and vocabulary.

The objective of this research is to collect relevant data for analyzing linguistic borrowings from English into Pitjantjatjara, aimed at English speakers. Fieldwork was omitted for logistical reasons such as limited resources, time constraints, and geographical location. Conducting fieldwork would have required time and financial investment to travel, set interviews with native speakers, and gather data. Therefore, to ensure practicality of this research project, we focus solely on analyzing existing lexicographical sources.

This study was carried out at the Universidad del Valle, in the School of Language Sciences, within an academic framework aimed at creating a database utilizing existing information on the Pitjantjatjara Aboriginal language. The objective is to examine the linguistic processes involved in the adoption and adaptation of loanwords discussed in this research paper.

Initially, we conducted a comprehensive search for research papers and articles related to Australian English and Pitjantjatjara. These sources covered different aspects including grammar, geographical location, native speaker population, cultural context, and linguistic loan processes. While it was relatively easy to find the necessary information for AusE, obtaining relevant materials for Pitjantjatjara was challenging. The majority of studies available were conducted around 15 years ago, indicating a lack of recent research on the Aboriginal language. All the gathered information is consolidated in the literature review section, contributing to our comprehension of the grammatical and syntactical features of both languages.

After this, we compiled the database for analysis, drawing from the following three primary sources provided by our supervisor, José Ramón Alvarez:

- *Pitjantjatjara/ Yankunytjatjara to English Dictionary* by IAD Press (Institute for Aboriginal Development)
- *Pitjantjatjara/ Yankunytjatjara Picture Dictionary*, compiled by Eckert (2007)
- *A Learner's Guide to Pitjantjatjara/ Yankunytjatjara*, by Goddard (1993)

To construct the database, we used the software of data management *Toolbox* due to its user-friendly interface and its capability to store and organize information effectively. This facilitated the systematic extraction and search of loanword adaptations from the three sources. It required over twelve hours for us to familiarize with the software, which involved reading the manuals and engaging in practice exercises provided with the download.

Extracting data from the sources was straightforward since the loans were clearly indicated within parentheses. The database was structured into six key fields based on their relevance to the investigation: lexeme, part of speech, paradigm, gloss, borrowed word (BW), and the corresponding spelling of the borrowed word, as illustrated in Figures 10 and 11. Each field serves a specific purpose in organizing and analyzing the loanwords from English to Pitjantjatjara:

1. **Lexeme:** This field contains the Pitjantjatjara word corresponding to the English loanword.
2. **Part of speech:** It indicates the grammatical category of the Pitjantjatjara word (e.g., noun, verb, adjective).

3. **Paradigm:** This field refers to any inflectional or derivational patterns associated with the Pitjantjatjara word.
4. **Gloss:** It provides a brief explanation or translation of the Pitjantjatjara word.
5. **Borrowed word (BW):** This field includes the English loanword that has been borrowed into Pitjantjatjara.
6. **Spelling of the borrowed word:** It specifies the spelling of the English loanword in Pitjantjatjara script.

\lx Lexeme	\ps Part of speech	\pd Paradigm	\ge Gloss	\bw Borrowed word	\sp Spelling
aapa	noun		(often spelt apa) part, some of	[ha:f]	half
akumunufnyi	iv.	nɟ	argue	[ˈa:ɡjəmənt]	argument
alatai	adj.act.		on holiday, on holiday trip e.g. a weekend	[ˈhʉlədəɪ]	on holiday
ali ~ arli	adv.		in the early mornig	[ˈɜ:li]	early
alipala	adv.		in the early morning	[ˈɜ:li] [ˈfɛlə]	early fella
alpa-milani	tv.	l	help	[hɛlp]	help
ankapa	noun		handcuffs	[ˈhændkʌfs]	handcuffs
angkala	noun		mother's brother or her male cousin	[ˈɔŋkəl]	uncle
apakatja	noun		person of mixed Aboriginal/European de	[ˈha:fka:st]	half-caste
apula	noun		apple	[ˈæpəl]	apple
arintananyi	tv.	n	go around something	[əˈraʊnd]	around
arinytji	noun		orange	[ˈvɹɪmɔʃ]	orange
atjupitila	noun		hospital, clinic	[ˈhʉspɪtəl]	hospital
ayana	noun		object made of metal, especially star pick	[aɪən]	iron
ayanturapa	noun		star picket	[aɪən] [ˈdrʉpə]	iron dropper
iniwai ~ aniwai	adv.		anyway, disregarding the normal, proper	#eniwei#	anyway
irupulaina	noun		aeroplane	#earoplein#	aeroplane

Figure 10: General overview of database in Toolbox.

The following figure presents an example entry, displaying the fundamental fields utilized in the research. This process involved cataloging 223 English loanwords, acting as a valuable resource for examining the phonological and some morphological characteristics of loanwords in Pitjantjatjara. It helped the understanding and identification of the processes involved in the transition from the source language to the recipient language.

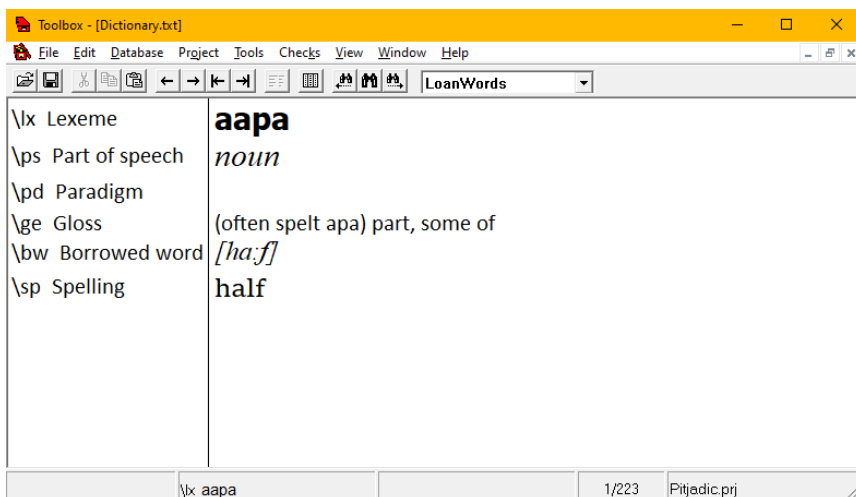


Figure 11: Record entry.

During the analysis phase, we became acquainted with reflective and laminal sounds. We inspected each vowel and consonant alteration within the words, examining the processes by which they undergone to be adapted into the recipient language. This exploration led us to identify three primary phonological processes: substitution, insertion, and suppression, which formed the basis of the results section.

Following the completion of these outlined procedures, the methodology phase concludes, providing a comprehensive framework for the subsequent analysis and interpretation of the collected data.

7. RESULTS

7.1 Substitution

Pitjantjatjara has his own sounds repertoire, therefore it lacks some phonemes that are part of English phonological system, and it works the way same around, English lacks sounds that are part of the Pitjantjatjara phonological system. Therefore, the gap of the 6 consonant missing sounds is substituted to fit into the closest phonological gap in the recipient's phonology, and as well as with the 8 vowel missing sounds.

7.1.1 Consonants

Considering that the number of consonants in English are 24 and is greater than in Pitjantjatjara composed by 17, substitutions will occur. All the examples in the analysis show the consonant in word-initial position, except for the retroflex stop, nasal and lateral, the laminal lateral and the thrill /r/, which do not occur in initial position, only intervocalically like in the following cases (the verbs will be marked with an asterisk (*) next to the Pitjantjatjara word):

The voiced bilabial stop /b/ is substituted by the closest phoneme, the voiceless bilabial stop /p/ in both the beginning and middle of the word.

/b/ → /p/

English		Pitjantjatjara
a. Banana	[bə'nɑ:nə]	punana
b. Battery	['bæt̪ri]	patari
c. Blanket	['blæŋkɪt]	pulangkita

d. Boot	[bu:t]	puta ~ puuta
e. Bottle	['bɒtəl]	patala
f. Bread	[brɛd]	purita
g. Brush	[brʌʃ]	puratji
h. Bus	[bʌs]	paatja
i. Butter	['bʌtə]	pata
j. Buy-Pay (tv.)	[baɪ]- [peɪ]	payamilani*
k. Double	['dʌbəl]	tapula
l. Goodbye	[gʊd'baɪ]	kulpai
m. Number	['nʌmbə]	nampa

The voiced alveolar stop /d/ is substituted by its voiceless counterpart in the initial, middle, or ending position, and in this last case an epenthetic vowel is added to follow syntactic rules which are going to be addressed forward.

/d/ → /t/

English		Pitjantjatjara
a. Damper	['dæmpə]	tampa
b. Deal (tv.)	[di:l]	tilamilani*
c. Dinner	['dɪnə]	tina
d. Doctor	['dɒktə]	takata
e. Dog	[dɒg]	tuuka
f. Dollar	['dɒlə]	tala
g. Donkey	['dɒŋki]	tangki
h. Door	[dɔ:]	tuwa
i. Double	['dʌbəl]	tapula
j. Dress	[dres]	tiritja

k. Bread	[brəd]	purita
l. Sitdown money	['sɪtdaʊn] ['mʌni]	tjitunmani

The voiced velar stop /g/ is substituted by its voiceless equivalent /k/. In the case of compound verbs, the second part is the one taken for the Pitjantjatjara word.

/g/ → /k/

English		Pitjantjatjara
a. Game	[geɪm]	kimi - kiimi
b. Garden	['gɑ:dən]	kaana
c. Get drunk (iv.)	[gɛt] [drʌŋk]	taɾaŋkarinyi*
d. Glass	[glɑ:s]	kalatji
e. Glasses	['glɑ:sɪz]	kuɾukalawatja
f. Goodbye	[gʊd'baɪ]	kulpai
g. Government	['gʌvənmənt]	kapamanta
h. Grape(s)	[greɪp]([ɛs])	kiɾipitji
i. Guitar	[ɡɪ'tɑ:]	kita

The voiceless labiodental fricative /f/ is replaced by the voiced bilabial stop /p/ in any position of the word.

/f/ → /p/

English		Pitjantjatjara
a. Film	[fɪlm]	pitja
b. Five	[faɪv]	paipa
c. Flour	[flaʊə]	pulawa

d. Full up	[fʊl] [ʌp]	pulapa
e. Funny (iv.)	[ˈfʌni]	paniringanyi*
f. Early fella	[ˈɜ:li] [ˈfelə]	alipala
g. Half	[hɑ:f]	aapa
h. Handcuffs	[ˈhændkʌfs]	ankapa

The voiceless glottal fricative /h/ does not have a correspondence with any of the existent sounds of the recipient language, consequently the phoneme is elided.

/h/ → /a/

English		Pitjantjatjara
a. Half	[hɑ:f]	aapa
b. Handcuffs	[ˈhændkʌfs]	ankapa
c. Help (tv.)	[help]	alpa-milani*
d. Hospital	[ˈhɒspɪtəl]	atjupitila

The voiced post-alveolar affricate sound /dʒ/ is replaced by the voiceless palato-alveolar affricate /tj/.

/dʒ/ → /tj/

English		Pitjantjatjara
a. Jam	[dʒæm]	tjama
b. Jam-pot	[dʒæm]-[pɒt]	tjampita
c. Jerry can	[ˈdʒɛri] [kæn]	tjirikana

The voiceless alveolar fricative /s/ and the voiceless post-alveolar fricative /ʃ/ are always replaced by the voiceless palato-alveolar affricate /tj/.

/s/ → /tj/

English		Pitjantjatjara
a. Salt	[sɒlt]	tjaltu
b. Sell (<i>tv.</i>)	[sɛl]	tjalamilani*
c. Side	[saɪd]	-tjaiti
d. Single	[ˈsɪŋɡl]	tjingkila
e. Sister	[ˈsɪstə]	tjitja
f. Soakage	[soʊkɪdʒ]	tjukitji
g. Soup	[su:p]	tjuupa
h. Store (shop)	[stɔː] ([ʃɒp])	tjuwa
i. Box	[bɒks]	pakutja-pukutja
j. Bus	[bʌs]	paatja
k. Cupsize	[ˈkæpsaɪz]	kapatjaitirinyi
l. Cement	[sɪˈment]	tjuminta
m. Cemetery	[ˈsemətɪ]	tjimitari
n. Cigarette	[ˌsɪɡəˈrɛt]	tjikita
o. Dress	[dres]	tiritja
p. Glass	[ɡlɑːs]	kalatji
q. Grapes	[ɡreɪps]	kiripitji
r. Hospital	[ˈhɒspɪtəl]	atjupitila

/ʃ/ → /tj/

English		Pitjantjatjara
s. Brush	[brʌʃ]	puratji

t. Rations	['ræʃnz]	ratjina
u. Rubbish	['rʌbɪʃ]	raputji
v. Sheep	[ʃi:p]	tjiipi
w. Sheet of iron	[ʃi:t] [ɒv] [aɪən]	tjitapana
x. Shirt	[ʃɜ:t]	tjaata- tjata
y. Shovel	['ʃʌvəl]	tjapila
z. Sugar	['ʃʊgə]	tjuka
aa. Pension	['pɛnʃən]	pintjin

The following phonemes remain the same in both languages since they share the manner and place of articulation.

/k/ = /k/

English		Pitjantjatjara
a. Key	[ki:]	kii
b. Milk	[mɪlk]	milka
c. Naked	['neɪkɪd]	nikiti
d. Truck	[trʌk]	taɾaka
e. Cake	[keɪk]	kaiki
f. Camel	['kæməl]	kamula
g. Clean	[kli:n]	kilina
h. Colour	['kʌlə]	kala
i. Comb	[kəʊm]	kuuma
j. Copper	['kɒpə]	kapa
k. Cranky	['kræŋki]	karangka
l. Cup of tea	[kʌp] [ɒv] [ti:]	kapaɽi

m. Calico	['kælikəʊ]	kaliki
n. Doctor	['dɒktə]	takata

/l/ = /l/

English		Pitjantjatjara
a. Lamb	[læm]	lama
b. Last	[la:st]	latja - laatja
c. Lavatory	['lævətəri]	laputuri
d. Letter	['letə]	lita
e. Level	['levəl]	lipula
f. Line	[laɪn]	laina
g. Pencil	['pensl]	pintjila

/m/ = /m/

English		Pitjantjatjara
a. Married	['mærɪd]	mariti
b. Match	[mætʃ]	matji
c. Mate	[meɪt]	miita - mita
d. Mechanic	[mə'kænik]	mukaniki
e. Medicine	['medsɪn]	miritjina
f. Meeting	['mi:tɪŋ]	mitingi
g. Milk	[mɪlk]	milka
h. Money	['mʌni]	mani
i. Motor car	['məʊtə]	mutuka
j. Lamb	[læm]	lama
k. Number	['nʌmbə]	nampa

/n/ = /n/

English		Pitjantjatjara
a. Naked	['neɪkɪd]	nikiti
b. Needle	['ni:dʒl]	nyila
c. New one	[nju:] [wʌn]	nyuwana
d. Number	['nʌmbə]	nampa

/p/ = /p/

English		Pitjantjatjara
a. Pain (tv.)	[peɪn]	paintamilani*
b. Pannikin	['pænikɪn]	panikina
c. Pencil	['pensl]	pintjila
d. Plate	[pleɪt]	pulita
e. Please	[pli:z]	pulitji
f. Policeman	[pə'li:smən]	pulitjumunu
g. Potato	[pə'tetəʊ]	putaita
h. Pump (iv.)	[pʌmp]	pampamilani*

/r/ = /r/

English		Pitjantjatjara
a. Rabbit	['ræbɪt]	rapita
b. Rag	[ræg]	raiki
c. Raisin(s)	['reɪzɪn]	raitjin
d. Rations	['ræʃnz]	ratjina
e. Read (tv.)	[ri:d]	ritamilani*
f. Ready	['redi]	riri
g. Red one	[red] [wʌn]	rituwana

h. Riffle	['rɪfəl]	raipula
i. Road	[rəʊd]	ruta - ruuta
j. Rubber	['rʌbə]	rapa

/t/ = /t/

English		Pitjantjatjara
a. Tea	[ti:]	tii
b. Teach	[ti:tʃ]	titjamilaṇi ~ tiitjamilaṇi*
c. Teacher	['ti:tʃə]	tijta
d. Team	[ti:m]	tima
e. Tick	[tɪk]	tiki
f. Tight	[taɪt]	taiti
g. Time	[taɪm]	taimi
h. Tinned meat	[tɪnd] [mi:t]	tinamita
i. Town	[taʊn]	taunu
j. Truck	[trʌk]	taṛaka
k. Watch (n.)	[wɒtʃ]	watji

/w/ = /w/

English		Pitjantjatjara
a. Watch (n.)	[wɒtʃ]	watji
b. Week	[wi:k]	wiki - wiiki
c. Wet	[wɛt]	wiita
d. Whitefella	[waɪt'fɛlə]	waipala
e. Windmill	['wɪnmɪl]	wirmila
f. Window	['wɪndəʊ]	winta

g. Wine	[wain]	waina
h. Winner	['winə]	wina
i. Wire	['waɪə]	waya
j. Wireless	['waɪələs]	wailitja
k. Wool	[wʊl]	wuul
l. Work (iv.)	[wɜ:k]	warkarinyi ~ waakarinyi*

7.1.2 Consonant clusters

As mentioned before, Pitjantjatjara does not allow consonant groups as English does, therefore phonological and morphological processes take place to adjust them. For example:

Beginning of the word

- **Clean** - kilina
- **Plate** - pulita
- **Truck** - taraka

Middle of the word

- **Bottle** - patala
- **Single** - tjingkiḷa
- **Sister** - tjitja

Ending of the word

- **Cement** - tjuminta
- **Tight** - taiti
- **Town** – taunu

Both, beginning and ending of word

- **Brush** - puratji
- **Drunk** - tarangka
- **Photograph**- putukaramilani
- **Trousers** - tarawatja

*Exceptions

bb. School	[sku:l]	kuula [°]
cc. School money	[sku:l 'mʌni]	kuulmani [°]

[°] These exceptions occur rarely, when the word begins with a consonant cluster, the first letter is lost, and the second letter is maintained in its adaptation.

7.1.3 Vowels

Considering that the number of vowels in English is 11 and is greater than in Pitjantjatjara that is 3, substitutions will occur, like in the following cases:

a	battery	['bat(ə)ri]	<i>patari</i>
i	dinner	['dɪnə]	<i>tina</i>
u	room	[ru:m, rɒm]	<i>ruma ~ ruuma</i>
a:	half	[hɑ:f]	<i>aapa</i>
i:	key	[ki:]	<i>kii</i>
u:	school money	[sku:l 'mʌni]	<i>kuulmani</i>
ai	cake	[keɪk]	<i>kaiki</i>
au	round (iv.)	[raʊnd]	<i>raunarinyi*</i>

Below a few examples of the substitution of the non-existent vowels in Pitjantjatjara, /e/ and /o/, by the existing ones, /a/, /i/, /u/ are shown. In these cases, mostly the written form is taken into account rather than the phonological.

/e/ → /a/

Early	['ɜ:li]	ali - arli
Dinner	['dɪnə]	dina
Government	['gʌv ^ə nmənt]	kapamanta

/e/ → /i/

Cake	[keɪk]	kaiki
Game	[geɪm]	kimi
Dress	[dres]	tiritja
Letter	['letə]	lita

/e/ → /u/

Camel	['kæməɫ]	kamula
Cement	[sɪ 'ment]	tjuminta
Level	['lev ^ə ɫ]	lipula

/o/ → /a/

Bottle	['bɒt ^ə ɫ]	patala
Colour	['kʌlə]	kala
Copper	['kɒpə]	kapa
Dollar	['dɒlə]	tala

/o/ → /i/

Jam-pot [dʒæm]-[pɒt] tjampita

Calico ['kælɪkəʊ] kaliki

/o/ → /u/

Aerodrome [ɛ:rədrəʊm] iruturuma

Boot [bu:t] puta - puuta

Chook tʃʊk tjuki

Comb [kəʊm] kuuma

Oil [ɔɪl] wila

Road [rəʊd] ruta - ruuta

As noted, certain words exhibit easier adaptation than others, primarily by the compatibility of pronunciation and the availability of corresponding sounds in the receiving language.

7.1.4 Diphthongs

As previously stated, diphthongs are combinations of two vowel sounds pronounced within the same syllable. English counts approximately eight diphthongs, while Pitjantjatjara only have two /ai/ and /au/. In the following examples the most frequent diphthongs found in loanwords and their respective adaptations are shown.

/ei/ /oi/ /ai/ - /ai/

Aeroplane ['ɛ:rəpleɪn] irupulaina

Anyway ['eniweɪ] iniwai ~ aniwai

Boil (iv.) [bɔɪl] pailirinyi*

Cake [keɪk] kaiki

Five	[fʌɪv]	paipa
Goodbye	[gʊd'baɪ]	kulpai

/au/ - /au/

Round (iv.)	[raʊnd]	raunarinyi*
Town	[taʊn]	taunu

7.2 Insertion

Given that the syllabic structure of English has a greater complexity in comparison to Pitjantjatjara, the latter language does not allow consonant clusters at the beginning, middle, or end of a word. Therefore, non-native phonological patterns are modified to fit the phonological combinations in the borrowing language, this is called *Accommodation* by Campbell (1998: p. 61), being accomplished by adding, deleting, or reorganizing certain sounds to adapt to the adopting language.

7.2.1 Epenthesis

This phonological process involves the addition of one or more phonemes to a word, often to ease pronunciation or adhere to phonological rules. Epenthesis plays a crucial role in facilitating the integration of borrowed words into the phonological system of the recipient language. Here are some examples (consonant clusters are in bold):

English		Pitjantjatjara
a. Glass	[gl ɑ:s]	ka l atji
b. Apple	['æ p l]	ap u la
c. Bloomers	['b l u:məz]	p u luma

d. Brush	[brʌʃ]	puratji
e. Rifle	['raɪfl]	raipula
f. Truck	[trʌk]	taraka

7.2.2 Paragoge

This linguistic phenomenon is characterized by the addition of one or more sounds at the end of a word. Paragoge in loanwords is used to adapt the borrowed word to the phonological or morphological patterns of the recipient language, which facilitates the incorporation of the loanword into the borrowing language's lexicon and improves its naturalness.

- In Pitjantjatjara writing the hyphen is sometimes used to show the etymology of the words and to facilitate its pronunciation.

English		Pitjantjatjara
a. Half	[hʌ:f]	aapa
b. Help (tv.)	[helɪp]	alpa-milani*
c. Hospital	['hɒspɪtəl]	atjupitila
d. Garden	['gɑ:dən]	kaana
e. Government	['gʌvənmənt]	kapamanta
f. Clean (n.)	[kli:n]	kilina
g. Clean (tv.)	[kli:n]	kilinananyi*
h. Mechanic	[mə'kænik]	mukaniki
i. Rations	['ræʃnz]	ratjina

7.3 Suppression

Suppression refers to the process by which certain sounds, phonemes, or linguistic elements from the source language are omitted or not fully integrated into the borrowing language.

When words are borrowed from one language to another, speakers of the borrowing language may choose to suppress certain elements that are difficult to pronounce or do not align with the phonological or grammatical patterns of their language. In the context of suppression in language, two specific phonological processes are observed: apheresis, and syncope.

7.3.1 Apheresis

Apheresis involves the suppression of sounds at the beginning of a word.

English		Pitjantjatjara
a. Handcuffs	['hændkʌfs]	ankapa
b. Hospital	['hɒspɪtəl]	atjupitila

7.3.2 Syncope

Syncope involves the suppression of a sound within a word.

English		Pitjantjatjara
a. Half-caste	['hɑːfkɑːst]	apakatja
b. Holiday	['hɒlədeɪ]	alatai
c. Musket	['mʌskɪt]	makiṯi

7.4 Morphological changes

The morphological adaptations undergone by English words in Pitjantjatjara exemplify the process of adoption, adaptation, and integration that are essential for the incorporation of the new lexicon into the recipient language.

In this study, we evidence 223 loanwords 173 (77%) are nouns, 16 (7%) are adjectives, 3 (1.3%) adverbs, 2 (0.9%) exclamations, 15 (6.7%) transitive and 14 (6.2%) intransitive verbs. The nouns, adverbs, exclamations and adjectives only suffer the process of phonological adaptation, while verbs also have to pass through a morphological adaptation, as shown in the following examples:

* Remember that there are four classes of verbs and for each of them there is a different tense ending. For further understanding see section 4.2.5 *Morphology*.

English	Pitjantjatjara	Type of verb
a. Boil (<i>iv.</i>)	pailirinyi	Ø
b. Photograph (<i>iv.</i>)	putukara milani	l
c. Get drunk (<i>iv.</i>)	ta rangkarinyi	Ø
d. Buy - pay (<i>tv.</i>)	pay amilani	l
e. Clean (<i>tv.</i>)	kilina nanyi	n
f. Help (<i>tv.</i>)	alpa- milani *	l

CONCLUSION

The interaction between English and Pitjantjatjara allowed the English words to be adapted for non-existent terms in Pitjantjatjara, mainly of concepts that were not originally in its lexicon until the colonization process forced the apprehension to reach an effective and accurate communicative dynamic.

The process of linguistic loans goes beyond the adoption of a term; it must undergo a series of linguistic processes to achieve the necessary dynamism to be adopted as part of common speech and be considered a linguistic loan. The implications of these processes are evident in the phonology and morphology of the receiving language.

This study led to a database creation based on available lexicographical sources as the *Pitjantjatjara/Yankunytjatjara to English dictionary* and the *Pitjantjatjara/ Yankunytjatjara Picture Dictionary*, which allowed to identify 6 grammatical categories of loanwords distributed within nouns, adjectives, adverbs, exclamations, transitive and intransitive verbs; building up a 223 group of loans.

Amongst the adaptation of the words, we evidenced the retention of 10 out of the 24 consonant sounds in English, in addition to 7 more existing in Pitjantjatjara that are absent in English repertoire. We could observe 8 substitutions, such as: /b/ → /p/ , /d/ → /t/, /g/ → /k/, /f/ → /p/, /h/ → /a/, /dʒ/ → /tj/, /s/ → /tj/, /ʃ/ → /tj/; and several adaptations into the recipient language.

Similarly, out of the 11 vowel sounds in English, only 3 were retained, [a], [i], [u], with the rest being adapted to these three existing vowels, like in these cases: /e/ → /a/, /e/ → /i/, /e/ →

/u/, /o/ → /a/, /o/ → /i/, /o/ → /u/. Besides, keeping in mind diphthongs, English counts approximately with eight diphthongs, while Pitjantjatjara only have two /ai/ and /au/, so that the diphthongs found in loanwords adapt in this way: /ei/ /oi/ /ai/ → /ai/, /au/ → /au/.

In addition to this, processes as insertion and suppression are also identified besides substitution. Within the insertion processes are Epenthesis and Paragoge, which are highly found in loanwords, but the most repeated is the use of epenthetic vowels due to the need to break consonant clusters, facilitating the adaptation of words, and allowing them to conform the basic syllabic structure of the language, which is consonant-vowel CV. And into the suppression processes we find Apheresis and Syncope, which can be found in an equal number of cases in the loanwords.

For further studies I would suggest that the analysis on morphology must be done in depth setting a broad variety of criteria to not omit ages, gender or any other aspect concerning aboriginal speakers' characteristics. As a result, we will have a wider basis to keep addressing the Pitjantjatjara language as a subject of research.

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APPENDIX

Pitjantjatjara Database

In this section you will find the database of the 223 loanwords taken from the

Pitjantjatjara/Yankunytjatjara to English Dictionary.

A - a

- aapa** *noun*. (often spelt apa) part, some of. *From*: half [hɑ:f]
akumunufinganyi *iv*. argue. *From*: argument ['ɑ:gjəmənt] *Prdm*: ng.
alatai *adj.act.* on holiday, on holiday trip e.g. a weekend excursion. *From*: ['hɒlədeɪ].
ali ~ arli *adv.* in the early morning. *From*: early ['ɜ:li]
alipala *adv.* in the early morning. *From*: early fella ['ɜ:li] ['fɛlə]
alpa-milani *tv*. help. *From*: help [hɛlp]. *Prdm*: l.
ankapa *noun*. handcuffs. *From*: ['hændkʌfs]
angkala *noun*. mother's brother or her male cousin. *From*: uncle ['ʌŋkəl]
apakatja *noun*. person of mixed Aboriginal/European descent. *From*: half-caste ['hɑ:fkɑ:st]
apula *noun*. apple. *From*: ['æpəl]
arintananyi *tv*. go around something. *From*: around [ə'raʊnd] *Prdm*: n.
arinytji *noun*. orange. *From*: ['ɒrɪndʒ]
atjupitila *noun*. hospital, clinic. *From*: ['hɒspɪtəl]
ayana *noun*. object made of metal, especially star picket (a type of metal fence post) and crowbar. *From*: iron [aɪən]
ayanturapa *noun*. star picket. *From*: iron dropper [aɪən] ['drɒpə]

I - i

- iniwai ~ aniwai** *adv.* anyway, disregarding the normal, proper or sensible way. *From*: ['ɛniwei]
irupulaina *noun*. aeroplane. *From*: ['ɛərəpleɪn]
iruturuma *noun*. airstrip, aerodrome. *From*: ['ɛərədrəʊm]

K - k

- kaana** *noun*. garden, field with crops, area under cultivation. *From*: ['gɑ:dən]
kaiki *noun*. cake. *From*: [keɪk]
kala *noun*. colour. *From*: ['kʌlə]
kalatji *noun*. glass, mirror. *From*: [glɑ:s]
kaliki *noun*. canvas. *From*: calico ['kælikəʊ].
kamula *noun*. camel. *From*: camel ['kæməl]
kantamilani *tv*. count. *From*: count [kaʊnt]. *Prdm*: l.
kapa *noun*. copper, nickel. *From*: copper ['kɒpə].
kapamanta *noun*. government. *From*: government ['gʌvənmənt].
kapaɬi *noun*. cup of tea. *From*: cup of tea [kʌp] [əv] [ti:]
kapatjaitirinyi *iv*. somersault, go head over heels. *From*: capsize [kæp'saɪz] *Prdm*: Ø.

karangki *adj.* foolish, acting stupid, misbehaving. *From:* cranky ['kræŋki]
kii *noun.* key. *From:* key [ki:].
kiiamilani *tv.* lock. *From:* lock [lɒk] *Prdm:* l.
kilina *adj.* clean. *From:* clean [kli:n].
kilinananyi *tv.* clean. *From:* clean [kli:n] *Prdm:* n.
kimi ~ kiimi *noun.* game. *From:* game [geɪm]
kimpi *noun.* disposable nappy. *From:* brand-name [brænd]-[neɪm]
kiripitji *noun.* grape(s). *From:* grape(s) [greɪp]
kita *noun.* guitar. *From:* guitar [gi'tɑ:]
kuki *noun.* camp cook. *From:* camp cook [kæmp] [kʊk].
kula *noun.* see kuula. *From:* see [si:]
kulpai *excl.* goodbye. *From:* goodbye [gʊd'baɪ]
kunpu *adj.* 1 strong, tough, has many figurative uses. *From:* strong [strɒŋ]
kurukalawatja *noun.* glasses, spectacles. *From:* glass [glɑ:s].
kuṭuṭu *noun.* 1 heart 2 place inside body where feelings of love or hate come from. *From:* hear [hɪə]
kuula ~ kula *noun.* school, college, university. *From:* school [sku:l]
kuulmani *noun.* absec (Aboriginal secondary school) allowances. *From:* school money [sku:l] ['mʌni].
kuuma *noun.* comb. *From:* comb [kəʊm]

L - l

laimi *noun.* plaster. *From:* lime [laɪm]
laina *noun.* line. *From:* line [laɪn].
lali *noun.* lolly. *From:* lolly ['lɒli]
lama-lama *noun.* lamb. *From:* lamb [læm]
laputuri *noun.* toilet. *From:* lavatory ['lævətəri]
latja ~ laatja *noun.* last one, final time. *From:* last [la:st]
lipula *adj.* 1 level, straight 2 equal, fair, even 3 looks like. *From:* level ['lævəl]
lipulananyi *tv.* 1 make level, straighten 2 make fair, equalise . *From:* make level [meɪk] ['lævəl]. *Prdm:* n.
lita *noun.* a letter, mail. *From:* letter ['letə]

M - m

makati (Y) *noun.* rifle. *From:* musket ['mʌskɪt]
makiṭi *noun.* rifle. *From:* musket ['mʌskɪt]
mani *noun.* money, an amount of money, funding. *From:* money ['mʌnei]
mariti *adj.* married. *From:* married ['mæɪɪd]
matjaramilani *tv.* muster, round up. *From:* muster ['mʌstə] *Prdm:* l.
matji *noun.* match. *From:* match [mætʃ]
miita ~ mita *noun.* spouse. *From:* mate [meɪt]
milka *noun.* milk. *From:* milk [mɪlk]
miritjina *noun.* medicine. *From:* medicine ['mɛdɪsɪn]
mitaparinyi *iv.* meet up. *From:* meet up [mi:t] [ʌp]. *Prdm:* Ø.
mitingi *noun.* meeting. *From:* meeting ['mi:tɪŋ]
mukaniki *noun.* 1 mechanic 2 mechanics i e knowledge about machinery. *From:* mechanic [mə'kænɪk].
mutuka *noun.* car. *From:* motor car ['məʊtə] [kɑ:]

N - n

- naipa** *noun.* knife. *From:* knife [naɪf]
nampa *noun.* 1 number 2 reading on a dial or gauge 3 sing e g road sign mani nampa, price. *From:* number ['nʌmbə]
nanikuta *noun.* goat. *From:* nannygoat ['næniɡəʊt]
nikiti *adj.* naked, bare, without clothes. *From:* naked ['neɪkɪd]
nyila *noun.* injection, needle. *From:* needle ['ni:dʒl]
nyuwana *adj.* new or recently obtained, made or grown. *From:* new one [nju:] [wʌn].

P - p

- paatja** *noun.* bus. *From:* bus [bʌs]
paiki-paiki *noun.* pack bags. *From:* pack bags [pæk] [bægz]
paila *noun.* metal file. *From:* metal file ['metʰl] [faɪl]
pailirinyi *iv.* boil, come to the boil. *From:* boil [bɔɪl] *Prdm:* Ø.
paintamilani *tv.* pain. *From:* pain [peɪn] *Prdm:* l.
paipa *adj. noun.* five. *From:* five [faɪv].
- paka** *noun.* tobacco. *From:* tobacco [tə'bækəʊ]
pakutja *noun.* box, cardboard carton, package. *From:* box [bɒks]
pampamilani *iv.* pump. *From:* pump [pʌmp]. *Prdm:* l.
panikina *noun.* pannikin, mug. *From:* pannikin ['pæniˌkɪn]
paniringanyi *iv.* go strange, go unny. *From:* funny ['fʌni]. *Prdm:* ng.
paritji *noun.* porridge. *From:* porridge ['pɒrɪdʒ]
pata *noun.* butter, fat. *From:* butter ['bʌtə]
patala *noun.* bottle. *From:* bottle ['bɒtʰl]
patari *noun.* battery. *From:* battery ['bætəri]
payamilani *tv.* buy. *From:* buy, pay [baɪ], [peɪ]. *Prdm:* l.
pilikana *noun.* billy, billycan. *From:* billycan ['bɪlɪkæn].
piluka *noun.* bullock, cow, beast. *From:* bullock ['bʊlək]
pintjila *noun.* pencil. *From:* pencil ['pensl]
pintjin *noun.* the pension, pension payment. *From:* the pension ['penʃn]
pitja *noun.* film, picture, movie. *From:* film [fɪlm]
pitjitji *noun.* rag(s), torn piece(s) of cloth. *From:* pieces ['pi:sɪz]
pukutja *noun.* box. *From:* box [bɒks]
pulangkita *noun.* blanket. *From:* blanket ['blæŋkɪt]
pulapa *adj.* full, in large quantities. *From:* full up [fʊl] [ʌp]
pulaparinyi *iv.* become full, fill up. *From:* become full [bɪ'kʌm] [fʊl]. *Prdm:* Ø.
pulawa *noun.* flour. *From:* flour [flaʊə]
pulita *noun.* plate. *From:* [pleɪt].
pulitji *excl.* (usually sentence-final, with imperative sentences) please! *From:* [pli:z].
pulitjumunu *noun.* 1 policeman 2 a type of reddish fly. *From:* [pə'li:smən]
puluka *noun.* bullock, cow, beast. *From:* ['bʊlək]
puluma *noun.* slacks, women's trousers or jeans, women's long underwear. *From:* ['blu:məz]
puluwana *adj.* blue. *From:* [blu:] [wʌn]
punana *noun.* banana. *From:* [bə'nɑ:nə]
punara *noun.* bow and arrow. *From:* bow and arrow [bəʊ] [ænd] ['ærəʊ]
purita *noun.* bread. *From:* bread [brəd]
puratji *noun.* brush e g hairbrush. *From:* brush [brʌʃ]
puta ~ puuta *noun.* shoe, boot. *From:* boot [bu:t]
putaita *noun.* potato. *From:* potato [pə'teɪtəʊ]
putukaramilani *iv.* photograph, film. *From:* photograph ['fəʊtəgrɑ:f]. *Prdm:* l.
putipulawa *noun.* flowers, wild flowers. *From:* pretty flower ['prɪti] [flaʊə]

putjikata *noun*. cat. *From*: pussycat ['pʊsɪkæt]
puwa ~ puuwa *noun*. bore. *From*: bore [bɔː].

R - r

raiki *noun*. piece of cloth, rag, length of fabric. *From*: rag [ræg]
raipula *noun*. rifle. *From*: rifle ['raɪfəl]
raitjin *noun*. raisin(s). *From*: raisin(s) ['reɪzən]
rapa *noun*. plastic water container. *From*: rubber ['rʌbə]
rapita *noun*. rabbit. *From*: rabbit ['ræbɪt]
raputji *noun*. 1 rubbish, refuse 2 rubbish dump, garbage bin. *From*: rubbish ['rʌbɪʃ]
ratjapa *noun*. rasp. *From*: rasp [rɑːsp]
ratjina *noun*. rations. *From*: rations ['ræʃnz]
raunarinyi *iv*. go round and about, go round and round. *From*: round [raʊnd]. *Prdm*: Ø.
riitjarinyi *iv*. run, move fast or excitedly. *From*: race [reɪs]. *Prdm*: Ø.
rikina *adj*. (slang) flash, spruced up, looking good. *From*: (I) reckon ['rɛkən]
rintjupa *noun*. washing powder. *From*: rinso [rɪns]
riri *adj*. ready to leave. *From*: ready ['rɛdi]
ritamilani *tv*. read. *From*: read [riːd]. *Prdm*: l.
rituwana *noun*. adj. red. *From*: red one [rɛd] [wʌn]
ruma ~ ruuma *noun*. a room. *From*: room [ruːm].
ruta ~ ruuta *noun*. road. *From*: road [rəʊd]
ruupa *noun*. rope. *From*: rope [rəʊp]

T - t

taimi *noun*. a specific time. *From*: time [taɪm]
taiti *adj*. 1 firmly in place, securely on 2 hard, unyielding. *From*: tight [taɪt]
takata *noun*. doctor. *From*: doctor ['dɒktə]
tala *noun*. money, an amount of money. *From*: dollar ['dɒlə]
tali-tali *noun*. doll. *From*: dolly-dolly ['dɒli]-['dɒli]
tamiyaka *noun*. tommyhawk, small axe uded for marking wooden implements. *From*: tomahawk ['tɒmɪhɔːk]
tampa *noun*. damper. *From*: damper ['dæmpə]
tangki *noun*. donkey. *From*: donkey ['dɒŋki]
tapula *noun*. 1 hem 2 a fold. *From*: double ['dʌbəl]
taraka *noun*. truck. *From*: truck [trʌk]
tarangka *noun*. drunk. *From*: drunk [drʌŋk]
tarangkarinyi *iv*. get drunk. *From*: get drunk [get] [drʌŋk]. *Prdm*: Ø.
tarapula *noun*. trouble, fights and conflicts, especially involving whitefellas. *From*: trouble ['trʌbəl]
tarawatja *noun*. trousers. *From*: trousers ['traʊzəz]
taunu *noun*. town. *From*: town [taʊn]
tii *noun*. tea. *From*: tea [tiː]
tiinta *noun*. 1 ten, canopy on vehicle 2 piece of canvas, tarpaulin. *From*: ten [tɛn]
tiintala *noun*. ten dollars, ten-dollar note. *From*: ten dollars [tɛn] ['dɒləz].
tiipi *noun*. tea-leaves. *From*: tea-leaves [tiː]-[liːvz]
tiki *noun*. (on) credit. *From*: tick [tɪk]
tikila *noun*. treacle. *From*: treacle ['triːkəl]
tilamilani *tv*. shuffle (cards). *From*: deal [diːl]. *Prdm*: l.

tima *noun*. 1 team 2 team members. *From:* team [ti:m].
tina *noun*. lunch. *From:* dinner ['dɪnə]
tinamita *noun*. tinned meat, canned meat. *From:* tinned meat [tɪnd] [mi:t]
tipi ~ tiipi *noun*. TV, television. *From:* tv [ti:'vi:]
tiritja *noun*. dress. *From:* dress [dres]
titja ~ tiitja *noun*. teacher. *From:* teacher ['ti:tʃə]
titjamilani ~ tiitjamilani *tv*. teach. *From:* teach [ti:tʃ]. *Prdm:* 1.
tjaata ~ tjata *noun*. shirt. *From:* shirt [ʃɜ:t]
tjaatamilani *tv*. make start, turn on. *From:* make start [meɪk] [stɑ:t] *Prdm:* 1.
tjaatarinyi *iv*. get going, set off. *From:* start [stɑ:t]. *Prdm:* Ø.
tjaintjamilani *tv*. cash a cheque. *From:* change [tʃeɪndʒ]. *Prdm:* 1.
-tjaiti *adj. adv-ending*. (usually spelt as a separate word) side. *From:* side [saɪd]
tjakumunu *noun*. stockman, stock work. *From:* stockman ['stɒkmæn]
tjalamilani *tv*. sell. *From:* sell [sel]. *Prdm:* 1.
tjalatjarinyi *iv*. be jealous, get jealous. *From:* be jealous [bi] ['dʒeləs]. *Prdm:* Ø.
tjaltu *noun*. salt. *From:* salt [sɒlt]
tjama *noun*. jam, golden syrup and other sweet spreads. *From:* jam [dʒæm]
tjampita *noun*. tin can, used to collect berries and to cook in. *From:* jam-pot [dʒæm]-[pɒt]
tjapa *noun*. supper, evening meal, tea. *From:* supper ['sʌpə]
tjapila *noun*. shovel. *From:* shovel ['ʃʌvəl]
tjatamilani *see*. *From:* see [si:].
tjiipi *noun*. sheep. *From:* sheep [ʃi:p]
tjikita *noun*. cigarette. *From:* cigarette [ˌsɪɡə'reɪt]
tjilpa *noun*. silver colour, aluminum foil. *From:* silver colour ['sɪlvə] ['kʌlə]
tjimitari *noun*. cemetery, funeral or memorial service. *From:* cemetery ['semətəri]
tjingkila *adj*. unmarried. *From:* single ['sɪŋɡl]
tjirikana *noun*. jerry can. *From:* jerry can ['dʒəri] [kæn]
tjitapana *noun*. corrugated iron. *From:* sheet of iron [ʃi:t] [əv] [aɪən]
tjitunmani *noun*. unemployment benefit. *From:* sitdown money ['sɪtdaʊn] ['mʌni].
tjitja *noun*. nurse, sister. *From:* sister ['sɪstə]
tjiya *noun*. chair. *From:* chair [tʃeə]
tjuka *noun*. sugar. *From:* sugar ['ʃʊɡə]
tjukitji *noun*. soakage. *From:* soakage [səʊkɪdʒ]
tjuki-tjuki *noun*. chook, chicken. *From:* chook [tʃʊk]
tjultura *noun*. a tooth filling, amalgam. *From:* solder ['səʊldə]
tjuminta *noun*. cement, concrete, brick or concrete blok. *From:* cement [si'ment].
tjuupa *noun*. soup, stew. *From:* soup [su:p]
tjuwa *noun*. store, shop. *From:* store [stɔ:]
tuuka *noun*. fox. *From:* dog [dɒg]
tuutju *noun*. torch. *From:* torch [tɔ:tʃ]
tuwa *noun*. door. *From:* door [dɔ:]
tuwi *noun*. toy. *From:* toy [tɔɪ]

U - u

ulkumunu *noun*. old, senior woman. *From:* old woman [əʊld] ['wʊmən]
upukuta *noun*. coat. *From:* overcoat ['əʊvəkəʊt]
upula *noun*. opal. *From:* opal ['əʊpəl]
uputju *noun*. office, especially community council office. *From:* office ['ɒfɪs]
uwila *noun*. oil. *From:* oil [ɔɪl]

W - w

wailitja *noun*. two-way radio. *From:* wireless ['waɪələs].

waina *noun*. alcohol, liquor, grog, booze. *From*: wine [wain]
waipala *noun*. white man, white person or people generally. *From*: whitefella [waitfɛlə].
waltaka *noun*. dingo. *From*: wild dog [waɪld] [dɒg]
wali *noun*. building, house. *From*: wurley ['wɜ:li]
warka ~ waaka *noun*. work, job. *From*: work [wɜ:k]
warkarinyi ~ waakarinyi *iv*. work, have a job. *From*: work [wɜ:k]. *Prdm*: Ø.
watji *noun*. watch. *From*: watch [wɒʃ].
watji-watji *noun*. meter, gauge. *From*: meter ['mi:tə]
waya *noun*. 1 wire 2 wire handle on a billy 3 power cord 4 things made of wire g e a cooking gill, bent wire used to burn designs onto carved items. *From*: wire ['waɪə]
wiita *noun*. wet. *From*: wet [wet]
wiki ~ wiiki *noun*. week. *From*: week [wi:k]
wilypara *noun*. wheelbarrow. *From*: wheelbarrow ['wi:l bærəʊ].
wina *noun*. winner, winners. *From*: winner ['winə]
winta *noun*. window. *From*: window ['windəʊ]
wirmila *noun*. windmill. *From*: windmill ['wɪnmɪl]
wuul(pa) *noun*. wool. *From*: wool [wʊl]

Y - y

yangupala *noun*. young unmarried man, youngfella. *From*: youngfella [jʌŋfɛlə]

✓ Total of entries: 223