

Cakki: An Incomplete Grammar

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Chapter 1

Introduction

Cakki is an attempt at a naturalistic constructed language (or *conlang*, for short). It aims to pass off as a language that could feasibly exist in our world. This sort of language has fascinated me for very long: how do you make something constructed *believable*?

I've been lurking within the constructed language sector, and more broadly, the linguistics sector of the Internet for about a year. In that time, I tried my hand at other naturalistic *conlangs*, none of which I found particularly satisfactory.

In the real world, Cakki is heavily inspired by the Formosan languages of Taiwan, particularly Paiwan Chang, 2006 and Saaroa (as detailed by [citation here]). Their phonological aesthetics and intriguing grammars heavily inspired this conlang. Admittedly, the author's amateurish dabbling in Austronesian alignment isn't reflected in this language, mostly because I've yet to grasp *how* it evolved and how to emulate such a system.

Speaking of, the linguistic features in this language are not nearly as complex or unique as those of *higher* conlangs, but this conlang was never meant to be creative or earth-shattering in its conception.

Cakki is my personal creation; it is something for me to take pride in.

Let Cakki be the very first time I stick through and present something I'm personally proud of. Let Cakki be my *magnum opus*, if you will.¹

¹ Insert some cool phrase in
Cakki here!

Chapter 2

Phonology

This chapter concerns the phonological aspects of Cakki, including its phonemes (section 2.1) and phonotactics (section 2.2). Notes on allophonic variation (section 2.3) and the romanisation system used throughout this reference grammar (section 2.4) follow.

2.1 Phonemic inventory

This section outlines the phonemes Cakki contains, and briefly discusses allophonic variation.

Consonants

Cakki has a relatively small set of consonants, as detailed in the following table (table 2.1). All symbols below can be found in the International Phonetic Alphabet.

As detailed in example (2.1), all consonants can take initial positions in syllables. Notions of syllables and their structure will be discussed later in section 2.2.

	Labial	Alveolar	Palatal	Velar	Glottal
Nasal	m	n		ŋ	
Plosive	p	t		k	ʔ
Affricate		ts			
Fricative		s		x	
Tap		r			
Approximant		l	j	w	

Table 2.1: Consonant inventory of Cakki

(2.1)	/m/	/m ^h əluk/	to fight
	/n/	/n ^h iniw/	breast
	/ŋ/	/ŋ ^h əʔ/	eye
	/p/	/p ^h istə/	to understand
	/t/	/t ^h əŋa/	to slit
	/k/	/k ^h əraʔ/	brittle
	/ʔ/	/ʔ ^h uli/	stomach
	/ts/	/ts ^h akki/	language
	/s/	/s ^h uxal/	to argue
	/x/	/x ^h aʔus/	to sigh
	/r/	/r ^h əŋuj/	willow
	/l/	/l ^h uwan/	male name
	/j/	/j ^h amu/	to be happy
	/w/	/w ^h atinak/	to accuse

Vowels

Cakki also has a relatively small inventory of vowels, represented in fig. 2.1. It has five monophthongs largely spanning the entire vowel space, and no diphthongs.

Because few distinct vowel phonemes exist in the language, the realisations of each vowel vary in different phonemic environments. However, neither length nor pitch are distinguished in the language.

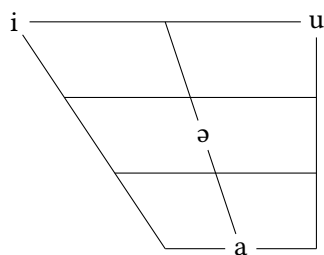


Figure 2.1: Vowel inventory of Cakki

Some dialects of Cakki may be starting to develop pitch accent, but oral evidence for this is scarce.²

² Do we want to add a tone system?

2.2 Phonotactics

This section outlines the syllable structure of Cakki, before describing, as its name aptly suggests, the language's phonotactics—how sounds are put together to make 'legal' words.

Syllable structure

Broadly, the syllable structure is CV(C). C represents any consonant, and V represents any monophthong.

Example (2.2) contains a selection of words with varying syllable patterns, up to roots containing two syllables.

(2.2)	CV	/ni/	and
	CVC	/ŋak/	to whine
	CV.CV	/pa.si/	to walk
	CVC.CV	/jak.ti/	red bean
	CV.CVC	/t̪sa.ʔut/	goat milk
	CVC.CVC	/rən.taw/	to laud

Most Cakki roots are disyllabic. Where partial or full reduplication is applied, roots may extend to three or four syllables.

Stress and prosody

The above discussion on *syllable* structure may be misleading—Cakki is a mora-timed language. The language obeys the following rules for determining the number of morae a syllable contains.

- The onset consonant does not contribute to the number of morae in the syllable, since every syllable must contain an onset.
- A syllable is *monomoraic* if it is open (CV).
- A syllable is *bimoraic* if it is closed (CVC).

Nominally, stress falls on the syllable which contains the penultimate mora. To illustrate, table 2.2 contains the same selection of words as example (2.2), this time with the number of morae and the stress indicated.

Syllable structure	Morae	Stress pattern	Gloss
CV	1	/ˈni/	and
CVC	2	/ˈŋak/	to whine
CV.CV	1–1	/ˈpa.si/	to walk
CVC.CV	2–1	/ˈjak.ti/	red bean
CV.CVC	1–2	/tsa.ˈʔut/	goat milk
CVC.CVC	2–2	/rən.ˈtaw/	to laud

Table 2.2: Morae patterns in disyllabic roots

Phonotactics—within the syllable

Below are general phonotactic rules governing the structure of individual Cakki syllables.

- A syllable cannot both start and end with /ʔ/.
- The combinations /ji ji wu ij ij uw/ are disallowed.

Curiously, a pseudo-vowel harmony system may be starting to emerge. Cakki roots seldom contain /i/ and the other high vowels /i u/ together. Where /i/ is found, the central vowels /ə a/ are likely to co-

exist within the same root instead. However, all other vowels may coexist in the same word. Therefore, the words /ʔirə/ and /ʔira/ are likely to exist, much more so than the words /ʔiri/ and /ʔiru/.³

³ This may be simply speculation, since /i/ is the least commonly occurring monophthong.

Phonotactics—between syllables

The consonant sequence /ʔʔ/ is disallowed⁴.

⁴ Pronouncing this would be a nightmare!

Only the plosive–affricate sequences outlined in table 2.3 are allowed. Each row represents the first consonant in the cluster; each column represents the second consonant in the cluster, hence /ʔəp.tsə/ is an allowed cluster, whereas /ʔəts.pə/ is not.

	p	t	ts	k
p	+	+	+	+
t	–	+	–	–
ts	–	–	+	–
k	–	+	+	+

Table 2.3: Allowed plosive–affricate sequences

Fricatives and approximants may cluster with plosives (excluding /ʔ/), fricatives and approximants between two syllables.

Where a nasal and an obstruent cluster, the nasal should match its place of articulation. To illustrate, /ʔəm.pə/ would be a valid word, but not /ʔəm.tsə/ or /ʔən.pə/.

2.3 Allophonic variation

Due to the rather minimalistic phonology of Cakki, allophonic variation is rife in various phonological environments. We discuss allophonic variation in consonants and vowels respectively.

Plosives

The voiceless plosives /p t k/ (except /ʔ/) become voiced commonly after nasal consonants, as in example (2.3). No minimal pairs between plosives /p t k/ and their voiced allophones [b d g] exist, however.

(2.3)	/ʔum <u>p</u> uj/	→	[ʔʊm. <u>b</u> ʊj]	‘birch’
	/tən <u>t</u> u/	→	[tən. <u>d</u> u]	‘rock’
	/xan <u>k</u> a/	→	[xan. <u>g</u> a]	‘firewood’

Plosives in syllable-final positions (except /ʔ/) become unreleased, as in example (2.4). In particular, syllable-final /k/ is often realised as [ʔ] due to their relative proximity in the oral cavity.

(2.4)	/sara <u>p</u> /	→	[sa.ra <u>p̚</u>]	‘dawn’
	/nan <u>ki</u> t/	→	[nan. <u>gi</u> t̚]	‘to feed (livestock)’
	/ʔa <u>li</u> k/	→	[ʔa.lɪ <u>ʔ</u>]	‘daikon’
	/ŋu <u>k</u> tu/	→	[ŋʊ <u>ʔ</u> .tu]	‘to pound’

[x~h~ɦ] alternation

Due to its proximity to the glottis, the velar fricative /x/ may be realised as [h] in all environments for convenience. Fairly widespread among younger speakers, a /x/ > /h/ sound shift may be possible.

More interestingly, however, [x~h] may be further lenited to [ɦ~∅] intervocalically. Vowel hiatus may arise because of this, violating the general rule that all syllables must begin with a consonant, as in example (2.5).

(2.5)	/ja <u>x</u> in/	→	[ja.in]	‘to hate’
	/minax <u>a</u> w/	→	[mi.na.aw~mi.na: <u>ʷ</u>]	‘bamboo’

[ɾ~d] alternation

The tap /ɾ/ may sometimes be realised as [d], or even [ð] in consonant clusters (where a closed syllable meets another syllable starting with a consonant) and syllable-finally, as in example (2.6). This does not clash with /t/ being realised as [d] in voiced contexts.

- (2.6) /xuɾna/ → [xʊd.na~xʊð.na] ‘moon’
 /nawar/ → [na.wad] ‘to greet’

/l/-vocalisation

The lateral approximant /l/ can usually be alternated with [w~ʋ], as in example (2.7). This happens most frequently syllable-finally, yet never happens syllable-initially. This occurrence is fairly common among younger speakers, although it is considered improper.

- (2.7) /ʔənil/ → [ʔə.nɪʋ] ‘aubergine’
 /məluk/ → [mə.luʔ~mə.wuʔ] ‘to fight’

Vowels in closed syllables

As shown amply in the above examples, the monophthongs [i u] tend to weaken or have their tongue root positions retracted in closed syllables, giving approximately /ɪ ʊ/, seen in example (2.8).

- (2.8) /niniw/ → [ni.nɪw] ‘breast’
 /ʔalik/ → [ʔa.lɪʔ] ‘daikon’
 /ʔumpuj/ → [ʔʊm.bʊj] ‘birch’

In particularly divergent dialects, the combinations /iw uj/ may even yield [ew oj].⁵

⁵ Perhaps this also signifies the first step towards the monophthongisation of vowel–approximant sequences!

2.4 Romanisation

Table 2.4 shows the romanised versions of each consonant. For clarity, each consonant phoneme is spelt with only one character. In addition, the following stylistic choices have been made:

- Writing $/\widehat{ts}/$ as *ts* may cause confusion with $/t.s/$, so *c* is used instead.
- Writing $/\eta/$ as *ng* may cause confusion with $/\eta.g/$, so η is used instead.
- Writing $/r/$ as its IPA symbol is cumbersome, so *r* is used instead.

The romanised consonants are shown in table 2.4.

	Labial	Alveolar	Palatal	Velar	Glottal
Nasal	<i>m</i>	<i>n</i>		η	
Plosive	<i>p</i>	<i>t</i>		<i>k</i>	<i>ʔ</i>
Affricate		<i>c</i>			
Fricative		<i>s</i>		<i>h</i>	
Tap		<i>r</i>			
Approximant		<i>l</i>	<i>y</i>	<i>w</i>	

Table 2.4: Romanised consonants in Cakki

The vowels will be romanised as in fig. 2.2. Due to the relative difficulty in typing the letter *ə*, it will be romanised with *e* instead. All other monophthongs remain as they are in the IPA.

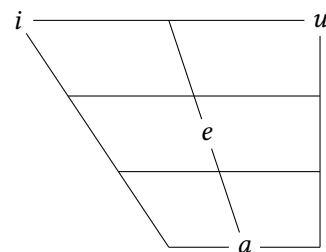


Figure 2.2: Romanised vowels in Cakki

Every phoneme will be spelt out in its original form: no allophony

will be indicated, and glottal stops will always be written. Since stress is non-contrastive, stress will not be indicated.

Chapter 3

Clause structure

This chapter briefly discusses the syntactical structure of Cakki. It discusses also Cakki's case system, and its prioritisation of nouns' roles in a clause.

3.1 Word order

Cakki is, by default, a subject–object–verb language. This is exemplified in example (3.1). The subject of a transitive verb is placed at the head of the sentence, then the direct object, then the verb itself.

(3.1) Pamat ta - pariw Ø = yahin

Pamat ACC - dog 3SG.NOM = hate

“Pamat hates (a certain) dog.”

Yet, word order is shifted around very frequently. Usually, the head of the clause is occupied by its *focus*, the bit of information that the speaker wishes to emphasise the most. The focus is followed by strings of additional information, usually adhering to the same SOV order as before. Contrast example (3.1) with the following examples carrying the same meaning, examples (3.2) and (3.3).

- (3.2) ta - pariw Pamat Ø = yahin
 ACC - dog Pamat 3SG.NOM = hate

“As for (*a certain*) dog, Pamat hates it.”

- (3.3) Ø = yahin Pamat ta - pariw
 3SG.NOM = hate Pamat ACC - dog

“As for *hating*, Pamat does with (a certain) dog.”

Postpositions

Although later chapters will cover postpositions (along with converbs) in greater detail, **postpositions** typically follow their attached noun. Observe example (3.4): the postposition *?umul* (‘below’) comes *after* the noun to which it is attached, *raŋuy* (‘willow’).

- (3.4) Luan ca?i - raŋuy ?umul ta - carik ?in - Ø =
 Luan LOC - willow below ACC - chicken PFV - 3SG.NOM =
 wahas
 kill

“As for *Luan*, he has killed a chicken below a willow tree.”

3.2 Stative verbs

Stative verbs, in contrast to dynamic verbs, are intransitive verbs without a direct object. In Cakki, this is equivalent to omitting the object role in a clause, where the default order is SV (subject–verb). This is seen in example (3.5), where the focus is the subject, *kawam* (a proper name).

- (3.5) Kawam Ø = pasi ~ pasi
 Kawam 3SG.NOM = walk ~ walk

“Kawam is walking.”

As with transitive (or dynamic) verbs, the order in which the subject and the verb occur can be reversed, so that the verb becomes the focus, as in the equivalent example (3.6).

- (3.6) \emptyset = pasi ~ pasi Kawam
 3SG.NOM = *walk* ~ *walk* *Kawam*
 “Walk, Kawam does.”

3.3 Modifiers

Modifiers are lexemes that supplement information to a base noun. This section quickly discusses the order in which they occur after a noun.

Adjectives follow their attached noun, as in example (3.7).

- (3.7) pariw mipu
 dog *red*
 “(a) red dog”

Similarly, **numbers** that detail the quantity of a certain referent also follow it, as in example (3.8). In example (3.9), for instance, the **noun classifier** also follows its attached referent, following the number.

- (3.8) ʔacak tami
 human *three*
 “three people”

- (3.9) hum halih pelaʔi
 book *six* CLF.*sheet*
 “six books”

Demonstrative nouns (DEM.PROX and DEM.DIST) also follow their referents. Observe examples (3.10) and (3.11) which demonstrate each demonstrative noun combined with another modifier.

- (3.10) *tentu* *ŋelahu* *rawa* *waʔiŋ* *ʔamuy*
 tree *long* *two* CLF.*tree* DEM.PROX

“these two tall trees”

- (3.11) *pariw* *tuʔat* *ʔaliŋ*
 dog *black* DEM.DIST

“that/yonder black dog”

Contrastingly, **relative clauses** precede their attached noun, as in example (3.12). More detail into relative clauses will appear in future chapters.

- (3.12) *wasu ~ wasu* *ʔaŋ* *pariw*
 PROG ~ *sleep* REL *dog*

“a dog which is sleeping”

The **possessor** of the noun, which is marked in the genitive (GEN), also precedes the noun. Since the ‘possessor’ noun always takes on an additional case marker, the ‘possession’ can easily be distinguished from it, as in example (3.13).

- (3.13) *tapiwaŋa* *ʔamuy* *me = katarŋ*
 king DEM.PROX 3SG.GEN = *boar*

“king’s boar”

⁶ Case markers and pronoun clitics will be discussed in the following chapter!

Where the ‘possessor’ is a personal pronoun, the personal pronoun is cliticised as a prefix onto the ‘possession’, as in example (3.14).⁶

- (3.14) hal = katan purah
3PL.GEN = *boar red*
“their red boar”

Where more than one possession occurs (i.e. the possessors are ‘nested’), each subsequent possessor is simply stacked before the previous one, as in example (3.15).

- (3.15) me = miwtiw me = ?aca - njurus
 3SG.GEN = *paternal.grandmother* 3SG.GEN = NMLZ.A - drug

 me = pariw
 3SG.GEN = dog

 “his/her grandmother’s doctor’s dog”

In short, nominal referents and their modifiers adopt the following general ordering.

relative clause – possessor – **referent** – adjective – classifier –
number – demonstrative

3.4 Adpositional phrases

Adpositional phrases in Cakki fall into one of three ‘universal’ categories: that of *time*, *manner* and *place*. Generally, the time–place–manner ordering of adpositional phrases is adopted, as seen in example (3.16).

- (3.16) Hayat nicawat ta-keʔiti caʔi-rewtew may-sakep
Khayat *tomorrow* *ACC-millet* *LOC-hut* *INS-pot*
 Ø=kunji
 3SG.NOM = *boil*

“Khayat will boil millet with a pot in a hut tomorrow.”

Again, as with foci in a clause, these adpositional phrases may be subject to reordering within it. An adpositional phrase can too serve as the focus of a clause, as in the hypothetical example (3.17).

- (3.17) nicawat Hayat ta-keʔiti caʔi-rewtew may-sakep
 tomorrow Khayat ACC - millet LOC - hut INS - pot

∅ = kuŋi

3SG.NOM = *boil*

“*Tomorrow, Khayat will boil millet with a pot in a hut.*”

Bibliography

Chang, A. H.-c. (2006). *A reference grammar of Paiwan*. <https://doi.org/10.25911/5d778712291bf>