



mini-language
documentation

Patrick Bowen

June 2018

Rationale

ki is a constructed language, described oligosynthetic, with the primary goal of being the fastest-to-speak language in the world. To try and achieve this I have taken a digital-first approach, ensuring full use of phonological combination. I have taken care to keep the language easy-to-learn, with a small grammar. Always looking for feedback on lexicon!

Email: phun@pm.me

Works: github.com/phunanon/conlangs

Community: reddit.com/r/conlangs

Dedicated to: [Mikhailah Yap Rañada](#)



creativecommons.org/licenses/by-sa/4.0

Issues

There are numerous issues with this conlang, which I'll list here for future reference:

- The lack of /m/ & /n/, the use of /θ/ & /ð/
- Use of tones
- Strict word-order
- The need to memorise consonant/vowel numeric values
- The need to mentally alter consonants depending on word order (needing active one-word lookahead)
 - Could offload this onto vowel tone, but using the first phoneme aids immediate mental lexicon recall
- Lack of phonetic redundancy measures
- Extreme similarity between lexicon
- Script doesn't distinguish between consonants & vowels

Rationale.....	2
Issues.....	3
Phonology & Orthography.....	6
Latin Consonants.....	6
Latin Vowels.....	6
Native Script.....	6
*Loans.....	7
Glossing.....	7
Syntax & Morphology.....	8
Syntax.....	8
Morphology.....	9
Grammar.....	10
Semantics.....	10
*Genre Semantics.....	10
Noun Semantics.....	11
Miscellaneous.....	11
Lexicon.....	12
Special Lexicon.....	12
Numerics.....	12
Periodic Elements.....	13
Kinship.....	13
*Proper Nouns.....	13
Mono-Roots.....	14
Grammar Roots.....	20

Multi-Roots.....	24
Emotions.....	24
*Time, Space, & Travel.....	25
Abstract.....	28
Generic.....	28
Omni-Roots.....	30
*Colours.....	30
Units & Powers.....	31
*Dates & Time.....	33
Frames.....	33
Expressions.....	34
Taxonomy.....	35
Examples.....	37

Phonology & Orthography

- Note consonant voicing

Latin Consonants

#	Ch	IPA	#	Ch	IPA
0	p	/p/	8	b	/b/
1	t	/t/	9	d	/d/
2	k	/k/	A	g	/g/
3	f	/f/	B	v	/v/
4	r	/θ/	C	x	/ð/
5	s	/s/	D	z	/z/
6	c	/ʃ/	E	j	/ʒ/
7	w	/w/	F	l	/l/

Latin Vowels

#	Ch	IPA	#	Ch	IPA
0	i i	/i/	8	ii í	/í/
1	y y	/e/	9	yy ì	/é/
2	e e	/ε/	A	ee é	/É/
3	a a	/a/	B	aa á	/á/
4	q q	/ɒ/	C	qq ò	/ó/
5	o o	/ɔ/	D	oo ó	/ó/
6	u u	/u/	E	uu ú	/ú/
7	h h	/ə/	F	hh ù	/á/

Native Script

- One consonant & vowel to each native char

pi	u	rq	u	bii	u	xqq	u
ty	u	so	u	dyy	u	zoo	u
ke	u	cu	u	gee	u	juu	u
fa	u	wh	u	vaa	u	lhh	u

*Loans

Foreign words go through phonetic & morphological conversion.

Foreign	ki
y i e	i
Y	I
ø œ ɜ æ	ε
e Æ	a
ɑ ʌ ɔ	ɒ
	o
ʏ ʊ ʋ ʉ	u
ə ɵ Ɔ	ə

Foreign	ki
ʈ ʈ ɖ ɖ ʃ	t
ɱ	m
ɳ ɳ ɳ N	n
B	b
ɾ R ɽ ɽ ʙ ʙ ɟ j ɥ ɭ ʎ ɮ	l
ʄ ʄ ʄ	ʃ
q G x ɣ ɣ	g
φ β ɸ † ʙ	θ
ʂ ʐ ʑ j	s
ħ ʕ h ɦ hw ʋ	w

Glossing

The English literal description of ki is called a "gloss". Apostrophes (') are prefixed to mark optional genres, double quotes (") are suffixed to Multi-/Omni-Roots, and commas (,) are suffixed to mark verbs.

Syntax & Morphology

ki is made of 'sentences'.

Syntax

Sentences are made of three 'genres': noun, verb, adjective. Each is a 'word'. Each sentence has a fixed pattern:

... (noun) noun (adj) verb (adj) noun ...

- Genres in parenthesis are optional, opposed to regular, marked by morphology.
- Until period is reached, the pattern will repeat at the ...
- Optional genres extend while marked
- adj apply to the preceding word
- Multi- and Omni-Roots extend over multiple words, and generally must fit each word into syntax; Special Lexicon interrupt normal syntax
- Adjacent numerics are treated as a list, by default as a set of separate options

Morphology

Words are made of 'bits', and correspond to a digital 8-bit byte. The first 4 bits is a consonant, the second 4 bits is a vowel.

- The first bit is 1 for optional, otherwise 0.
The proceeding 7 bits constitute the 'root'
- Omni-Roots possess more complex morphology than Multi-Roots
- It is optional, but recommended, for speakers to double the length of a verb's vowel, and for writers to append a comma (,) after a verb
- It is optional, but recommended, to put a space between all words except roots in the same Multi-/Omni-Root

Grammar

Semantics

*Genre Semantics

Whereby: (nouns) Subject, Object, Pronoun;
(other) Verb, Adjective.

Pattern	Semantics & Transitivity
S...VOO...	S does V to O's ...which do V to O's...
SVPOVP.	S does V1 to P who does V2 with O to P
SVPO	S does V to P with O
SVOOVP.	S does V1 to O's P does V2 to O's
SVOOVPOO	S does V1 to O1's P does V2 to O2's with O1's
PVObbyVPO	P1 does V1 to O1 by P2 doing V2 to O2
SVOPV.	S does V1 to O which P does V2 to
SVOPVPOO	

- pronoun ambiguity

- or SVOOV[by]SVOVO..., or OV[by]SVOOVVO..., or SVOPV (e.g. I like her me listen).

***Examples**

PVObyVPO – I show, work 'good 'by speak, him it

I show good work by him saying about it

Noun Semantics

Contiguous nouns are of their proceeding;

e.g. cat bird = cat of bird | bird's cat

This rule permeates all multi-nouns;

e.g. person school = person of school | teacher

- Default article is definite

Miscellaneous

***Possession**

thing my

***Imperative**

- Made by stating the possible scenario (e.g. You clean the bath!).

Special Lexicon

- Interrupt regular syntax

Numerics

Protocol 1

First root is "s_num10" ('KNP10'), proceeded by a byte: first bit ('overflow') signifies a proceeding numeric byte. All non-overflow bits constitute a N*7-bit binary value (N = amount of bytes).

Protocol 2.0 & 2.1

First root is "s_num20" (base-10, 'KNP20') or "s_num21" (base-16, 'KNP21'), proceeded by 4-bits: the numeric's floored logarithm, proceeded by 4-bits: 0x8 for negative or 0x0 for positive; plus 0x4 for decimal. The proceeding log(n) digits are of consonants & vowels by their numeric value. If decimal, the next 4-bits' value expresses amount of precision digits.

- Pad with vowel <i> when necessary
- Expresses -16^{16} to 16^{16}

Periodic Elements

First root is "o_element", then expressed as the number of protons using KNP20. If number supplied is 0, it is the noun "element".

Kinship

First root is "o_kinship", then move through relations from subject to kin.

Kinship	Link	C
male	link	b
male	final	p
female	link	d
female	final	t
unknown	link	g
unknown	final	k

Kinship	V
partner	i
sibling	y
parent	e
child	a
friend	o
neighbour	u
stranger	q

*Proper Nouns

Mono-Roots

- Adhere to normal syntax
- Root value is hexadecimal, regular
- Orthography is Latin word
- Includes frequent grammar roots
- **Yellow** highlights provisional/currently unused, **grey** highlights unusable

R	O	Noun	Verb	Adjective
Pronouns				
■ Form more complex pronouns like "me you"				
00	pi	me/I/my	am/is	thanks
01	py	you/your/hello	are/is_plu	please
02	pe	they/them/their/ her/him/his		
03	pa	me_you_them		
04	pq			
05	po			
06	pu	self		
07	ph	each_other		
Articles				
08	pí	obj_near_me/this		a/an
09	pì	obj_near_you		the
0A	pé	obj_near_us/this/	make/create/	this/it

R	O	Noun	Verb	Adjective
		it	make_exist	
0B	pá	obj_far_us/that		that
0C	pò	plu_near_me/ these		plural
0D	pó	plu_near_you		plu_the
0E	pú	plu_near_us/ these	make_happen	these
0F	pù	plu_far_us/those		those

Descriptors

- 'who' includes all beings ever animate
- Inclusion begs question

10	ti	what/who		what/who
11	ty	which		which
12	te	where		where
13	ta	when		when
14	tq	how		how
15	to	why/question	ask	why
16	tu	much/many		much/many
17	th	really		really/very

Conjunctions & Evidentials

18	tí	and/also		evi_direct
19	tì	xor		evi_non_vis
1A	té	or		evi_inferred
1B	tá	nand		evi_speculated
1C	tò	nor		evi_hearsay

Tenses

R	O	Noun	Verb	Adjective
1D	tó	past	became	past
1E	tú	present	become	present
1F	tù	future	will_become	future
General				
20	ki	ki/said	say/speak/tell	said
21	ky	yes/true	make_true/fix	true
22	ke	no/false	make_false/ break	false/not/ negative
23	ka			
24	kq	existence	exist	exists
25	ko			
26	ku	want	want	wanted
27	kh	need	need	needed
28	kí	ability		able
29	kì	success	succeed	successful
2A	ké	challenge	challenge	challenging
2B	ká	ease		easy
2C	kò			
2D	kó			
2E	kú			
2F	kù			
Humanity				
30	fi	person	know_person	public
31	fy	female		
32	fe	male		
33	fa	child		young

R	O	Noun	Verb	Adjective
34	fq	adult		old
35	fo	body	feel	
36	fu			
37	fh	food/possession	eat	hungry
38	fí	mind	know	known
39	fì	house		
3A	fé	display/show/ vista	display/show	viewable
3B	fá	clock	watch	watched
3C	fò	mind		
3D	fó			
3E	fú			
3F	fù	building		
Concepts				
40	ri	time		little
41	ry	space		same
42	re	thought/belief	believe/think	thought/ believed
43	ra	history/story		
44	rq	class	class	classed
45	ro			
46	ru	random		other
47	rh	fact	know_fact	known
Human Activities				
48	rí	work	work	result
49	rì	meeting	meet	met

R	O	Noun	Verb	Adjective
4A	ré	education	teach	learned
4B	rá			
4C	rò			
4D	ró			
4E	rú	cooking	cook	cooked
4F	rù			
Nature				
50	si	water	drink	wet
51	sy	life/animal	live	alive
52	se	plant	grow	
53	sa	heat	take/recieve	hot
54	sq	cold	give	cold
55	so			
56	su			
57	sh	world	see	good
58	sí	sky	fly	big
59	sì	mountain		
5A	sé	air/wind	blow	windy
5B	sá	movement	move/go	moved
5C	sò			
5D	só			
5E	sú			
5F	sù			
60	ci			
61	cy			
62	ce			

R	O	Noun	Verb	Adjective
63	ca			
64	cq			
65	co			
66	cu			
67	ch			

Literacy & Leisure

68	cí	book	read	
69	cì	word	write	written
6A	cé			
6B	cá			
6C	cò			
6D	có			
6E	cú			
6F	cù	game	play	

Listed Multi-Roots

70	wi	m_grammar		
71	wy			
72	we	m_travel		
73	wa	m_emotion		
74	wq	m_abstract		

Special & Omni- Roots

75	wo	s_num10		
76	wu	s_num20		
77	wh	s_num21		
78	wí	o_colour		

R	O	Noun	Verb	Adjective
79	wì	o_precise		
7A	wé	o_datetime		
7B	wá	o_kinship		
7C	wò	o_taxonomy		
7D	wó	s_element		
Null & Period				
7E	wú	null		
7F	wù	period		

Grammar Roots

- Begins with root “m_grammar”
- Adhere to normal syntax
- Includes less frequent grammar roots
- Frequent grammar roots are in Mono-Roots

R	O	Noun	Verb	Adjective
Aspects				
00	pi	progressive/ imperfect	do	progressive/ imperfect/ happening
01	py	perfective	complete	perfective/ complete
02	pe	prospective		prospective/

R	O	Noun	Verb	Adjective
				will_happen
03	pa	inceptive/start	start_act	started_act
04	pq	inchoative	start_be	started_be
05	po	cessative/end	stop_act/ stop_be	stopped_act/ stopped_be
06	pu	habitual/habit		often
07	ph	pausative/pause	pause	paused
08	pí	resumptive/ resumption	resume	resumed

Comparison

09	pì	negative	make_negative	not
0A	pé	equative, copula	make_equal	equal
0B	pá	comparative/ comparison	compare	more_than
0C	pò	superlative	make_most	most
0D	pó	sublative	make_least	least
0E	pú	similarity	make_similar	like, as
0F	pù			

Mood & Condition

10	ti	condition		if_then/if
11	ty			would
12	te	deduction		should/ought
13	ta	ability		can
14	tq	determination		will/shall
15	to	offer/invite	invite/offer	can/shall/will
16	tu	request	request	could

R	O	Noun	Verb	Adjective
17	th	possibility		could/may/ maybe/might
18	tí	slight possibility		
19	tì	permission	permit/allow/ let	can/could/may
1A	té	prohibition	prohibit	don't/avoid
1B	tá	obligation	obligate	must
1C	tò	advice/ suggestion	advise/suggest	should/ought/ shall
1D	tó	intention	intend	intended
1E	tú			
1F	tù			
Preposition				
20	ki	because		
21	ky	of, about		
22	ke	for		
23	ka	by		
24	kq	but/however		
Number & Size				
25	ko	plural		see 'plu_near_me'
26	ku	paucal/something		some
27	kh	none/nothing		none
28	kí	all/everything		all/every
29	kì	any/anything		any
2A	ké	much		much

R	O	Noun	Verb	Adjective
2B	ká	little		see 'time'
2C	kò	many		many
2D	kó	few		few
2E	kú	big		see 'sky'
2F	kù	small		small
Arithmetic				
30	fí	open_bracket		
31	fy	ordinal/power		
32	fe	division		
33	fa	multiplication		
34	fq	addition		
35	fo	subtraction		
36	fu	modulo		
37	fh	num_equal		
38	fí	close_bracket		
39	fì	greater_than		
3A	fé	less_than		
3B	fá	greater_equal		
3C	fò	less_equal		
3D	fó			
3E	fú			
3F	fù	num_inequal		

Multi-Roots

- Adhere to normal syntax
- Glossed as <word">

Emotions

First root is "m_emotion", then one word.

English	O	English	O	English	O
happy	pi	sad	ki	bad	ri
optimistic	py	hurt	yj	tired	ry
peaceful	pe	humiliated	ke	weak	re
accepted	pa	guilty	ka	stressed	ra
confident	pq	despairing	kq	busy	rq
proud	po	vulnerable	ko	let down	ro
playful	pu	lonely	ku	bored	ru
surprised	ti	fearful	fi	angry	si
excited	ty	scared	fy	mad	sy
amazed	te	anxious	fe	frustrated	se
confused	ta	insecure	fa	disgusted	sa
startled	tq	rejected	fq	sceptical	sq
		nervous	fo	distant	so

*Time, Space, & Travel

First root is "m_travel", then one word.

O	Noun	Verb	Adj
Time			
pi	now		now
pii	instantly		instantly
py	then		then
pyy	suddenly		suddenly
pe	again		again
pa	soon		soon
pq	ever		ever
ti	while/during		
tii	meanwhile		
ty	earlier/ago		
tyy	later		
te	since		
ta	finally		
tq	forever		
ki	start/firstly		
kii	finish/lastly		
ky	whenever		
ke	N st/nd/rd		
ka	N times		
kq	eventually		
ku	consequently		
Space			

O	Noun	Verb	Adj
fi	here		
fii	there		
fy	anywhere		
fyy	nowhere		
fe	source		
fee	destination		
fa	among		
fq	inclusion/with	include	with/included
ri	in		
rii	out		
ry	above		high
ryy	below		low
re	beside		
ree	opposite		
ra	on/over		
raa	off		
Mixed			
si	start/go		
sii	stop		
sy	continue		
se	up		
sa	down		
sq	up to/until		
so	before/previously		
su	after/next		
ci	in front		

O	Noun	Verb	Adj
cii	behind		
cj	middle/between		
ce	left		
ca	right		
cq	to/toward		
co	from/away		
cu	at/upon		
wi	beyond		
wii	against		
wy	along		
we	across/around		
wa	through		
wq	far/far_away		
wqq	long		
wo	close/near		
woo	short		
wu	succession		

Abstract

- First root “m_abstract”
- Contains roots with strongly abstract verbs, nouns, and adjectives

O	Noun	Verb	Adj
pi	application	apply	applied
py	document	document	documented
pe	carry	carry	carried
sy	forgotten_thought	forget	forgotten

Generic

- Uses pre-existing Mono-Roots

Roots	Noun	Adjective
sky cold	hell	
person education	teacher	
building education	school	
word word	sentence	
word life	language	
word life word	translation	
time move	speed/pace	fast/quick
work false	cheat	cheating/cheaty
class word	article (lingustics)	
word time	speech	

Roots	Noun	Adjective
time word	fluency	fluent
word below"	subtitle	subtitled
life random	fortune	fortunate
person water	hero	heroic
person plant	farmer	farmable/arable
possession success	prize	
mind old	wisdom	wise
mind village"	fame	famous
child plant	seed	
child air	pollen	
child sky	star	
heat animal sky	feather	feathered
mountain body	chest	
mountain body female	breast	
animal water	fish	

Omni-Roots

- Most adhere to normal syntax

*Colours

First root is "o_colour", one word proceeds.

C	Texture
p	flat & opaque
t	flat & transparent
k	reflective
f	glittery
r	dynamic shadows
s	sandy/furry/grassy
c	bumpy
w	jagged

V	Colour	RGB
i	black	000
y	grey	888
e	white	FFF
a	maroon	800
q	red	F00
o	green	080
u	lime	0F0
h	navy	008
ii	blue	00F
yy	olive	880
ee	yellow	FF0
aa	teal	088
qq	aqua	0FF
oo	purple	808
uu	fuchsia	F0F
hh	transparent	---

Units & Powers

- Interrupts normal syntax – must be treated as a whole regular noun

First root is "o_precise", one word proceeds.

The consonant is unit, the vowel is power.

Ch	English	Quantity	C
A	ampere	electric current	p
K	kelvin	temperature	k
s	second	time	s
m	metre	length	m
kg	kilogram	mass	g
cd	candela	luminous intensity	c
mol	mole	substance amount	l
V	volt	W/A	v
W	watt	J/s	w
°C	degree Celcius	K+273.15	d
L	litre	10^{-3} m^3	t
rad	radian	$1/2\pi$	n
°	degree	$\pi/180$	b
J	joule	$\text{kg}\cdot\text{m}^2\cdot\text{s}^{-2}$	j

English	Power	V	English	Power	V
deca	10^1	i	deci	10^{-1}	ii
hecto	10^2	y	centi	10^{-2}	yy
kilo	10^3	e	milli	10^{-3}	ee
mega	10^6	a	micro	10^{-6}	aa
giga	10^9	q	nano	10^{-9}	qq
tera	10^{12}	o	pico	10^{-12}	oo
peta	10^{15}	u	femto	10^{-15}	uu
exa	10^{18}	h	atto	10^{-18}	hh

Mostly from the *International System of Units*.

*Dates & Time

First root is "o_datetime", then ≥ 1 morphemes.

Frames

CV	Frame	CV	Frame	Description
Amounts				
pi	minute	pq	month	KNP20 amount proceeds; V+0x8: next (+n), prev (-n)
py	hour	po	year	
pe	day	pu	decade	
pa	week	ph	century	
Days of the week				
ti	mon	tq	fri	V+0x8: next/prev
ty	tue	to	sat	
te	wed	tu	sun	
ta	thur			
Months				
ki	jan	kii	jul	
ky	feb	kyy	aug	
ke	mar	kee	sept	
ka	apr	kaa	oct	
kq	may	kqq	nov	
ko	jun	koo	dec	

Expressions

yyyymmdd (big endian)

Taxonomy

Life forms are categorised by superficial traits, and then encoded into a 3 morpheme word, first root being "o_taxonomy".

Bitfield Morphology: XASMKKFF X0000000

Underlined show unique identifier.

Abb.	Name	Data
X	---	(Part of normal morphology)
A	Age	0 young, 1 adult
S	Society	0 collective, 1 individual
M	Amicibility	0 amicable, 1 hostile
K	Kingdom	00 plant, 01 insect, 10 animal, 01 microscopic
F	Features	00 walks, 01 flies, 10 swims, 11 burrows
0	ID number	Unique identifier

MKKFF	#	English	MKKFF	#	English
Insects					
00101	pi	bee	10101	pi	wasp
00111	pi	black_ant	10111	pi	red_ant
Animals					
01000	pi	dog			
01000	py	cat			

Examples

I ate the same food he ate.

How did you get here?

The children said they had eaten the plant
child 'the_plu 'past say, they plant eat,

- Note how the subject is made past, and so the whole sentence happened in the past

ka fó vó ki, pe gi mi,

Does anyone have a sentence for me to
translate?

person 'who have, word word make, me
translation"

yi lidi dí, fifi pé, pi dacida

My biggest success is me being alive
'success my 'most is, 'alive me

- Note how the adjective is applied to the verb

gyy pi libò pe, zi pi

Thirty plus sixteen is forty-six

30 plus, 16 'equals 46

I don't include many

I include", 'few

- Note how <include> is spread across both the adjective and the verb to form the verb

pi ljfq, ca

I forgot to tell him about it again.

I tell, !forgotten !again him it !about

- Note the transitivity of "it" for the verb "tell"

pi ki, zy lebe pe pé ligy