



Arts and  
Humanities  
Research Council



# Aspects in curating lexical resources for Enggano

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Enggano Research Seminar at the Faculty of Humanities, Udayana University (18 March 2024)

# Outlines

1. What are “lexical resources”?
2. What are the existing linguistic materials for Enggano?
3. How do we curate these materials into lexical resources?

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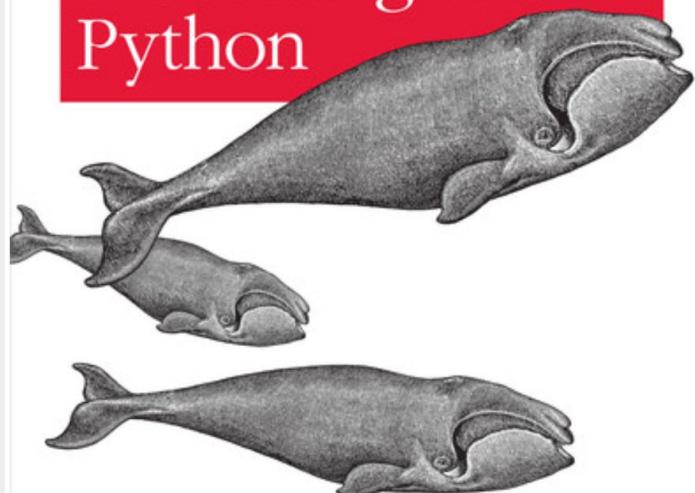
# Lexicon/Lexical Resource

“a collection of words and/or phrases along with associated information, such as part-of-speech and sense definitions.”

Bird et al. (2009: 59)

*Analyzing Text with the Natural Language Toolkit*

Natural Language Processing with Python



O'REILLY®

*Steven Bird, Ewan Klein & Edward Loper*

# Lexicon/Lexical Resource

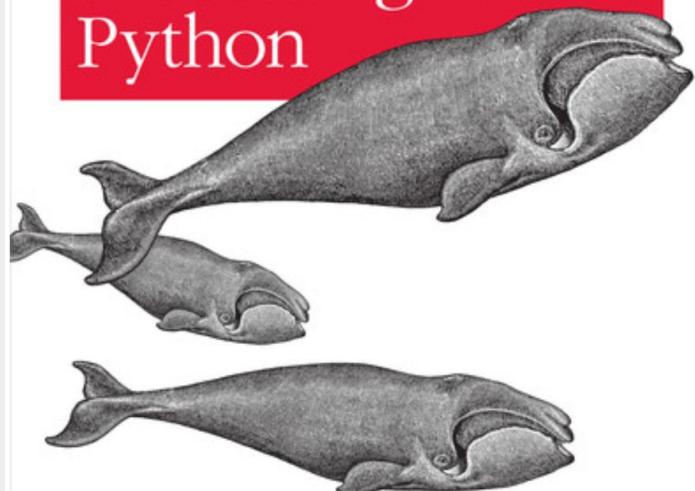
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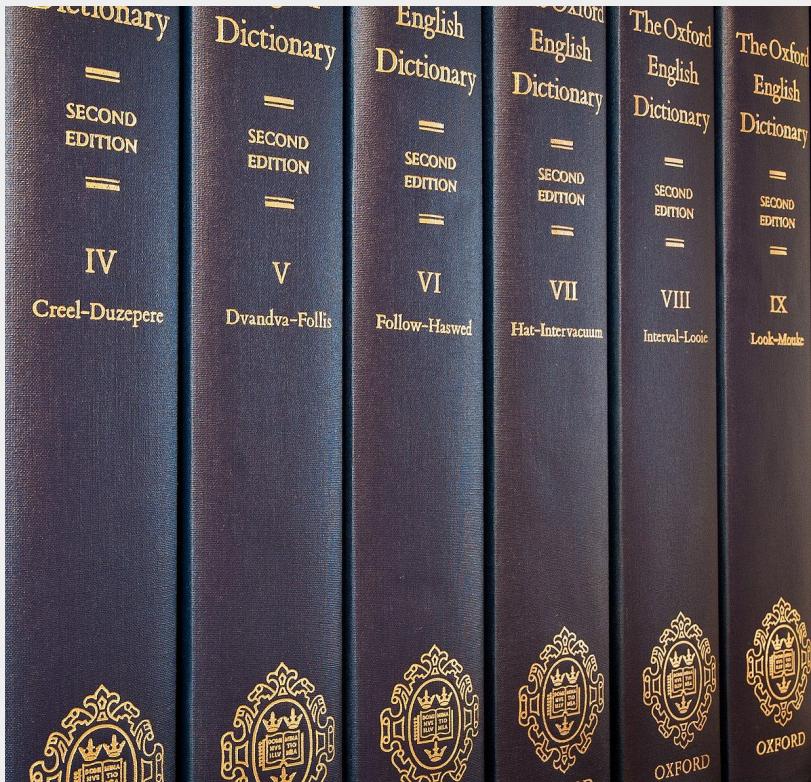
Natural Language Processing with Python



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# dictionary...



# word list

A simple lexical resource

(cf. Bird et al. 2009: 59-60)

In hunne taal tellen de Engano eilanders als volgt:

1 kahai,



2 adoea,

3 akoloe,

Boewang (1854: 391)

4 ampapa,

5 aliema,

22 items

6 akie akiena,

7 aliema adoea ,

8 apa joepa ,

Boewang, Djoeragan. 1854. Verslag

10 apa apa adoea ,

omtrent het Eiland Enggano.

100 adoea taka tapoeloe ,

*Tijdschrift voor Indische Taal-,*

200 aliema taka ,

*Land-en Volkenkunde 2.*

300 aliema adoea ,

379–393.

# Austronesian Basic Vocabulary Database

Word: black

Entries for "black":

ID	Language	Item	Annotation	Cognacy	Classification
183499.	Yogad	ngisít		17	A:M:P:N:N:C:Ibanagic
187233.	Dupaninan Agta	mangiset		17	A:M:P:N:N:N:Northern
187234.	Dupaninan Agta	mangitet		17	A:M:P:N:N:N:Northern
251250.	Itawis	ngisít		17	A:M:P:N:N:C:Ibanagic
299298.	Ayta Mag-antsi	nangitsit		17	A:M:P:C:Sambalic
299892.	Ayta Abellen	njítit		17	A:M:P:C:Sambalic
300158.	Ayta Mag-anchi	njitsit		17	A:M:P:C:Sambalic
300298.	Bolinao	njisít	from Ilokano	17	A:M:P:C:Sambalic
300438.	Botolan Sambal	njítit		17	A:M:P:C:Sambalic
300718.	Sambal	njítit		17	A:M:P:C:Sambalic
301934.	Malaweg	njísít		17	A:M:P:N:N:C:Ibanagic
52211.	Mekeo	umu		18	A:M:C:E:O:W:P:P:C:W:Nuclear
52342.	Roro	umu [?úmu]		18	A:M:C:E:O:W:P:P:C:W:Nuclear
106582.	Lala	umauma		18	A:M:C:E:O:W:P:P:C:W:Nuclear
328061.	Mekeo, East	umu		18	A:M:C:E:O:W:P:P:C:W:Nuclear
329989.	Lala	umauma		18	A:M:C:E:O:W:P:P:C:W:Nuclear
331461.	Mekeo, North-West	umu		18	A:M:C:E:O:W:P:P:C:W:Nuclear
332307.	Roro	umu		18	A:M:C:E:O:W:P:P:C:W:Nuclear
52303.	Punan Kelai	maèdang		19	A:M:N:N:K:K:Modang
52354.	Modang	mældung		19	A:M:N:N:K:K:Modang
52279.	Itbayaten	mavaiij		20	A:M:P:B:Itvatan
121485.	Iraralay	vaheng	black	20	A:M:P:B:Itvatan
121892.	Itbayat	vaeng	Note: vaeng/mavaeng and vaweng/mavaweng is a dialectal difference	20	A:M:P:B:Itvatan
121893.	Itbayat	mavaeng	Note: vaeng/mavaeng and vaweng/mavaweng is a dialectal difference	20	A:M:P:B:Itvatan

Comparative electronic lexical database with cognates grouping

Greenhill, Simon J., Robert Blust & Russell D. Gray.  
 2008. The Austronesian Basic Vocabulary Database: From Bioinformatics to Lexomics. *Evolutionary Bioinformatics*. SAGE Publications Ltd STM 4. EBO.S893.  
<https://doi.org/10.4137/EBO.S893>.

# Comparative electronic lexical database with cognates grouping (for [some] words meaning ‘black’ in Austronesian lang.)

299892.	Ayta Abellen	ŋitit	17	A:M:P:C:Sambalic	
300158.	Ayta Mag-anchi	ŋitsit	17	A:M:P:C:Sambalic	
300298.	Bolinao	ŋisit	17	A:M:P:C:Sambalic	
300438.	Botolan Sambal	ŋitit	17	A:M:P:C:Sambalic	
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52342.	Roro	umu [?úmu]	18	A:M:C:E:O:W:P:P:C:W:Nuclear	
106582.	Lala	umauma	18	A:M:C:E:O:W:P:P:C:W:Nuclear	
328061.	Mekeo, East	umu	18	A:M:C:E:O:W:P:P:C:W:Nuclear	
329989.	Lala	umauma	18	A:M:C:E:O:W:P:P:C:W:Nuclear	
331461.	Mekeo, North-West	umu	18	A:M:C:E:O:W:P:P:C:W:Nuclear	
332307.	Roro	umu	18	A:M:C:E:O:W:P:P:C:W:Nuclear	
52303.	Punan Kelai	maèdang	19	A:M:N:N:K:K:Modang	
52354.	Modang	məldung	19	A:M:N:N:K:K:Modang	
52279.	Itbayaten	mavaɪŋ	20	A:M:P:B:Ivatan	
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Bolinao	ŋisit	17	A:M:P:C:Sambalic
Botolan Sambal	ŋitit	17	A:M:P:C:Sambalic
Sambal	ŋitit	17	A:M:P:C:Sambalic
Malaweg	ŋísít	17	A:M:P:N:N:C:Ibanagic

Cognate set (ID 17)

# Comparative electronic lexical database with cognates grouping (for [some] words meaning ‘black’ in Austronesian lang.)

Mekeo	umu	18	A:M:C:E:O:W:P:P:C:W:Nuclear
Roro	umu [?úmu]	18	A:M:C:E:O:W:P:P:C:W:Nuclear
Lala	umauma	18	A:M:C:E:O:W:P:P:C:W:Nuclear
Mekeo, East	umu	18	A:M:C:E:O:W:P:P:C:W:Nuclear
Lala	umauma	18	A:M:C:E:O:W:P:P:C:W:Nuclear
Mekeo, North-West	umu	18	A:M:C:E:O:W:P:P:C:W:Nuclear
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Iraralay	vaheng	20	A:M:P:B:Ivatan
Itbayat	vaeng	20	A:M:P:B:Ivatan

# Comparative electronic lexical database with cognates grouping & alignment of sound segments

Form	Language	Concept	Alignment
akani	Abui, Fuimelang	black	- a k a n i -
a.ka.'ni	Abui, Petleng	black	- a k a n i -
ä.'qän	Abui, Takalelang	black	- a q a n - -
akani	Abui, Atimelang	black	- a k a n i -
akan	Kafoa	black	- a k a n - -
aqana	proto-AP	black	- a q a n a -
ani	Reta, Ternate	black	- a - - - n i -
akenj	Wersing, Taramana	black	- a k e n j - -
ka?ana	Blagar, Manatang	black	k a ? a n a -

# Other well-known lexical resources

- **WordNet** (lexical database for English for synonym groups)
- **FrameNet** (lexical database for English implementing the theories of Frame Semantics and Construction Grammar)
- **Lexibank** (large-scale cross-linguistic lexical data)

# Goals of the *Lexical Resources* research grant for Enggano

#1

Lexical database  
from different time  
slices of Enggano

#2

Digital contemporary  
Enggano dictionary  
(online and in mobile-app)

# #3

# Learner's dictionary

(coordinated with the textbooks)

# Outlines

1. What are “lexical resources”? 
2. What are the existing linguistic materials for Enggano?
3. How do we curate these materials into lexical resources?

- word lists (from mid-19th century [cf. Krauße, *under review*, for the detailed discussion of these word lists])
- texts
- grammar sketches
- dictionary

Krauße, Daniel. *Under review*. Early written records of Enggano.

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- texts
- grammar sketches
- dictionary

Krauße, Daniel. *Under review*. Early written records of Enggano.

# Brouwer (c. early 1850)

(Thanks to Daniel Krauße for deciphering this cryptic yet valuable hand-writing)

<p>Woordenlyst dat der Inlander door de Hollanders op Engano, te Barhaou ond medegedeeld tot den Enganeesche taal vertoldt door den Chinees Tsi-king aan den Landtschijf D. J. Brouwer.</p> <p>wordt vroegelyk door de Lente, die goede uitgegaan vergaderd</p>			
dag	Tols	duiven	Loekoe
staan	Mona	pas-pas	Laka
wacht	Kohol-leph	Storken	abi-ab
zon	Gulid	Hans	wajoh
sterren	apil-hou	muus	Abah
ogen	Luwok	muntje	Tala
hand	Boec	man	amana
voeder	Salow	Vrouw	amini
bladen	Kalidoko, Mona	Meno	akuduk
aarde	Popop	Sader	amana
water	Toli-lebo	Lutid	akadem
steen	Obi-ob	Broeder	johel-adoboe
water	Bilao		kenni
berg	Nava	Stem	panika
eiland	Nefeh	hists	Jolaa

Schijf	Goela-bon-kari
Geen	oefje
Huis	goawa
taampong	Leba
Obi-	botan
lijf	boero-boero
streef	malakato
staarten	panochos ambo-so
hiet	batta-batka
kanon	Pezi-kwet
tien	tuca-tuica
Hoogtoets	tuca-tuica
hoekhoek	ots
tegenaffels	Amoh
lens	hai
steen	apewa
oor	koeloe
zilver	ota
lijf	Leta
led	mekana
leven	alina-abewa
iect	apay-apah
regen	iloma-lafab
tuin	kapoeloe

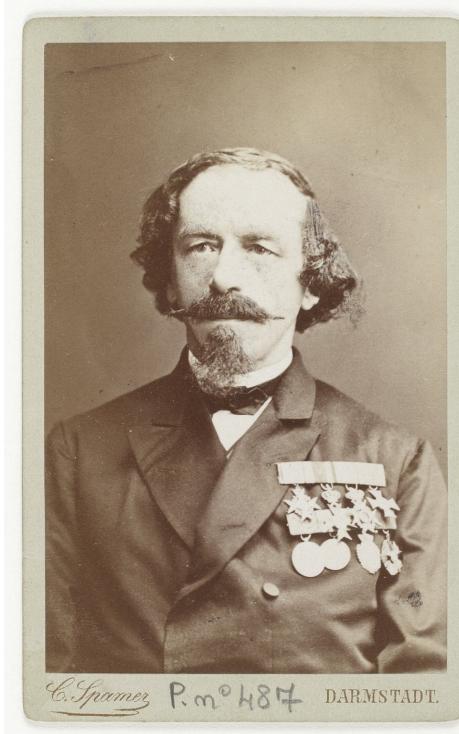
104 items

# Von Rosenberg (1855)

154 items

*Handwritten list of words from the book*

<i>Handwritten list of words from the book</i>	
Chaat	Taramchesa durven ... mit Komischen
Gaan	<i>Gezicht</i> etelen .... paaike
Coopie	Tarapeer poezen leugens .... ferro ferro
Zitten	Mahiegod kaegen .... actig
Komen	Panarsiy nechten .... pasea-oed
Elijken	Darsactad binden .... paani-i
geven	Take' huijen .... gesello-mello
openen	Peperik-i zovemmen .... peertas lemo
verrenden	pomarabu lemo.
Hoopen	pagekli kakaleka vischen .... fajekdinau
willen	popoey machten .... mafafé
Diep	pepinetjum kummen .... kakakapjiu
makken	peperik-i joh <i>e</i> volgen .... <sup>neij</sup> gasbjla
Zeehoo	namen .... dodajee.
spreken	Bipagaran wit .... si-hooy
eten	Faginona rood .... kakiaku
Drinken	faginona lekmo blauw .... kimono
Koken	tekno erwart .... klanoed
	poorakoni gel ..



Source gallica.bnf.fr / Bibliothèque nationale de France

Karl Benjamin Herman von Rosenberg  
([source](#) with cco license and in [Bibliothèque National](#))

# Von Rosenberg (1855)

154 items

<i>Woordenlijst.</i>		
<b>Slaan</b>	Jaramatregō.	
<b>Gaan</b>	Edie-édie.	
<b>Loopen</b>	Jarapoerpoera.	
<b>Zitten</b>	Matrego.	
<b>Komen</b>	Tawaweij.	
<b>Blijven</b>	Panoekoe.	
<b>Geven</b>	Pahè.	
<b>Schenken</b>	Pemanabo.	
<b>Koopen</b>	Pàgehlie.	
<b>Willen</b>	Popo-ej.	

# Van der Straaten & Severijn (1855)

## VERSLAG

VAN EEN IN 1854 BEWERKSTELLIGD ONDERZOEK OP HET EILAND

## ENGANO,

door den Luitenant ter zee 1<sup>e</sup> klasse, kommandant van Z. M. Schoenerbrik *Sylph*,

J. VAN DER STRAATEN,

en den Kontroleur der 1<sup>e</sup> klasse bij het binnenlandsch bestuur ter westkust van Sumatra,

P. SEVERIJN.

### Voorwoord.

In het tweede deel, bladz. 479 en volgg. van dit tijdschrift, is geplaatst een verslag omrent het eiland Engano door den djoeragan Boewang.

Haar	Oedoe.
Voorhoofd	Koe-oe.
Oogen	Baka.
Mond	Ko-a.
Tand	Nienie.
Neus	Pano.
Tong	Dio.
Hals	Tioeano.
Borst	Berakidoija.
Buik	Toeka.
Arm	Poeafa.
Voet	Edjaauw.
Teen	Aokinojai.
Lans	Poké poké.

199 items

# Walland (1864)

276 items

## *Hooge taal.*

Eten.	<i>eat</i>	menoh.
Droomen.		à-nihai.
Kruipen.	<i>crawl</i>	o-oboh.
Zingen.	<i>sing</i>	khorah.
Slaan.		bai-djihie.
Krabben.		phio-noh.
Knijpen.		pie-ie.
Wrijven.	<i>rub</i>	paka-kahah.
Duwen.		kebadah.
Stooten.		ha-èh.

## *Lage taal.*

		pakehnonno.
		.
		.
		kala-lehah.
		patta haleh.
		kanihonie.
		fabieah.
		khi-ioh.
		nja-hai.

The only  
19th-century author  
claiming  
speech-level system  
in Enggano

*Hooge taal.* (high  
language)

*Lage taal.* (low language)

# Walland (1864)

Hoe is uw naam?	ha-nia-moe?
Van waar komt gij?	koeloe-ia-oh?
Kom hier.	adeh-waij dje-éh.
Blijf daar.	kaiama djidjah (ohbea djidjah).
Gaat spoedig.	ma-akoe kehedie.
Verwijder u.	kahi-ah.
Ik heb honger.	oewah hiko.
Ik wil eten.	ika manoh.
Ik wil slapen.	ika bahoea.
Ik wil mij baden.	ika baikeh.
Het is warm.	mokhoh kehah.
" " koud.	mokhoh hioh.
Geef mij pisang.	ano-kiaij-ajoh.
Gaat daar zitten.	hèhoe djidjah.
Zijt niet bang.	iada niekie niekie.
Raap dat op.	na-ma-ana.
Vaart-wel.	wah-dji-eh.

The first to include phrases and clauses of Enggano

17 items

# Walland (1864)

The first to include phrases and clauses of Enggano (digitised & translated version)

category	English	Dutch	Enggano
phrases/clauses	What's your name?	Hoe is uw naam?	ha-nia-moe?
phrases/clauses	where do you come from?	Van waar komt gij?	koeloe-ia-oh
phrases/clauses	come here!	Kom hier	adeh-waij dje-éh
phrases/clauses	stay there!	Blijf daar	kaiama djidjah (ohbea djidjidah)
phrases/clauses	go soon!	Gaat spoedig	ma-akoe kehedie
phrases/clauses	move!	Verwijder u	kahi-ah
phrases/clauses	I'm hungry	Ik heb honger	oewah hiko
phrases/clauses	I want to eat	Ik wil eten	ika manoh
phrases/clauses	I want to sleep	Ik wil slapen	ika bahoea
phrases/clauses	I want to have a bath	Ik wil mij baden	ika baikeh

# Francis (1870, in Oudemans 1889)

99 items

NEDERLANDSCH.	FRANCIS.	VAN DER STRAATEN EN SEVERIJN.	VON ROSENBERG.	BOEWANG.
zwemmen	kaäke	pakiea	poeroe lewo lewo	
1 = 1	kahaie	egaij	daheij, dahei	kahai
2 = 2	adoea	adoea	adoea	adoea
3 = 3	akoloe	koloe	agoloe	akoloe
4 = 4	afa	afa	aopa	ampapa
5 = 5	aliema	lieba	aliema	aliema
6 = 6	kaikiene	akeno	akiaknio, akiakia	akie akiena
7 = 5 + 2	aliema é adoea	lieba doea	aliema adoe, aliemei a- doea	aliema adoea
8 = 4 + 4 of 5 + 3	afa é afa	afa afa	aliema agoloe, alimei agoloe	apa joepa
9 = 5 + 4	aliema é afa	lieba afa	aliema aopa, alimei aopa	
10 = 10 of 4 + 4 + 2	kahafoeloe	tapoeloe	tahapoeloe	
11 = 10 + 1	kahafoeloe é kahaie			
12 = 10 + 2	kahafoeloe é adoea			
13 = 10 + 3	kahafoeloe é akoloe			
14 = 10 + 4	kahafoeloe é afa			
15 = 10 + 5	kahafoeloe é aliema			
20 = 1 . 20	kahaie takka			
30 = 1 . 20 + 10	kahaie takka é kahafoeloe			
40 = 2 . 20	adoea takka			
50 = 2 . 20 + 10	adoea takka é kahafoeloe			
60 = 3 . 20	akoloe takka			
70 = 3 . 20 + 10	akoloe takka é kahafoeloe			
80 = 4 . 20	afa takka			
90 = 4 . 20 + 10	afa takka é kahafoeloe			
100 = 5 . 20	aliema takka			
200 = 10 . 20	kahafoeloe takka			

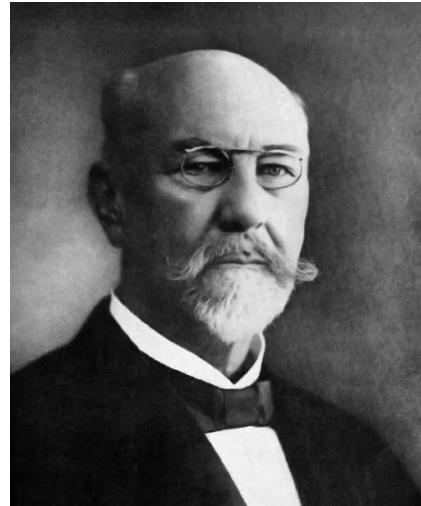
Comparative  
list with the  
earlier  
Enggano  
word lists

# Oudemans (1879)

150 items

WOORDENLIJST			
VAN DE TALEN VAN ENGGANO, MENTAWEI EN NIAS			
DOOR			
J. A. C. OUDEMANS.			
	ENGGANO.	MENTAWEI.	NIAS.
Hoofd	é oeloe	oté	heugeu
Oor	kaliha	talinga	talinga
Neus	éfano	asak	idong
Mond	ékā	bibo	baba
Oog	ébāka	mata	mata
Kin	ékie	bakëla	bèmbè
Hoofdhaar	foedoedoe-oeloe	alai	boe-oe
Baard	fororoife	boeloe	gambi
Hals	hoenoe	lolokat	bâgi
Borst	émâha	karoekat	baloedjoesoe
Buik	kiedái	bâcha	daloe
Arm	é afo	para	païo

Comparative list with  
the other Barrier  
Island Languages (i.e.,  
Mentawai and Nias)



Dr Anthonie Cornelis Oudemans, Jzn.  
[Source](#)

# Oscar Louis Helfrich

*The first providing detailed linguistic descriptions of Enggano in the 19th century*



from Aardweg et al. (1938: 632)

# Helfrich & Pieters (1891)

MALEISCH. NEDERLANDSCH. ENGANEESCH.

تڠكت	toengkat.	stok.	obak <sup>2</sup> .
تڠکر	tengkar.	krakeel, harrewar-	paoewē.
تڠکس	tangkis.	rerij.	
تڠکس	toengcoes.	het afweren, af-	kieieja.
تڠکف	tangkap.	wenden.	
تڠکف	tangkoep.	pakje, bundel.	pieoehak <sup>2</sup> .
تڠکف	tengkoek.	betaanvatten, vast-	kaie.
تڠکو	tongkau.	grijpen, pakken.	
		plat op den buik	pěkieofo.
		liggen.	
		de nek.	éokahač.
		drie steenen voor	koenajo.
		treeft om het kook-	
		sel op te zetten.	

“the hitherto  
longest and most  
comprehensive  
collection of the  
Enggano language”

1,012 items

34 sentences

(Krauße, under  
review: 26)

# Helfrich & Pieters (1891)

- Preceded by ethnographic description of the Enggano island (Helfrich 1888), incl. (i) over 200 cultural terms and (ii) 18 words with dialectal variation

Helfrich, Oscar Louis. 1888. De eilandgroep Engano. *Tijdschrift van het Koninklijk Nederlandsch Aardrijkskundig Genootschap* 5. 272–314.

Helfrich, Oscar Louis. 1893. Aanvullingen en verbeteringen op de Maleisch-Nederlandsch-Enganeesch woordenlijst. *Tijdschrift voor Indische Taal-, Land- en Volkenkunde* 35. 228–233.

# Helfrich & Pieters (1891)

- Followed by correction in Helfrich (1893)

Helfrich, Oscar Louis. 1888. De eilandgroep Engano. *Tijdschrift van het Koninklijk Nederlandsch Aardrijkskundig Genootschap* 5. 272–314.

Helfrich, Oscar Louis. 1893. Aanvullingen en verbeteringen op de Maleisch-Nederlandsch-Enganeesch woordenlijst. *Tijdschrift voor Indische Taal-, Land- en Volkenkunde* 35. 228–233.

# Modigliani (1894)

266

*Capitolo XVII*

Another comparative list  
but with Italian

ITALIANO	MALESE	NIAS	TOBA-BATACCO	ENGANESE
<b>Abbassare</b>	Turún	Manada	Munduc *	Paúho tópo
<b>Abbastanza</b>	Sampé	Irugí	Siccop *	Ho abacó
<b>Abbastanza (Non)</b>	Tida sampé	Loo irugí	Sowada siccop *	Chèfe iabacó
<b>Abitazione grande</b>	Rúma besár	Banúa sebúa	Bagas na balga	Èuba
<b>Accanto</b>	Decát	Bangái	Giala	Panéna
<b>Accesso, piaga</b>	Bárah	Fao sa	Cugang	Baro
<b>Acoettare</b>	Trimá	Tema halo	Mandgialo *	Menaá
<b>Accomodare</b>	Membáichi	Gama *	Mangundgiam *	Parié ecáua
<b>Aqua</b>	Aier	Idáno	Aec	Ebò
<b>A. mare</b>	Aier laót	· · · · ·	Aec ni tao * (veramente acqua di lago perchè i Toba non hanno mare).	Lebo. ? Eué

546 items (of Italian headwords)

# Holle List of Enggano (collected in 1895)

The “Holle List” was a series of publication by Wim A. L. Stokhof

878 items (of  
Enggano translation)

The Enggano one appears in Stokhof and Almanar (1987)

Rajeg, Gede Primahadi Wijaya. 2023a. Digitised, searchable Holle List in Stokhof (1980). University of Oxford, UK. <https://doi.org/10.5281/zenodo.7972273>.

Rajeg, Gede Primahadi Wijaya. 2023b. CLDF dataset of the Enggano word list from 1895 in Stokhof and Almanar's (1987) Holle List. Zenodo. <https://doi.org/10.5281/zenodo.8038975>.

Stokhof, W. A. L. (ed.). 1980. *Holle lists, vocabularies in languages of Indonesia, Vol. 1: Introductory Volume*. Vol. Materials in Languages of Indonesia. 1 vols. Canberra, A.C.T., Australia: Dept. of Linguistics, Research School of Pacific Studies, The Australian National University. <https://core.ac.uk/reader/15946/813>. (21 May, 2023).

Stokhof, W. A. L. & Alma E. Almanar. 1987. *Holle lists, vocabularies in languages of Indonesia, Vol. 10/3: Islands off the west coast of Sumatra* (Pacific Linguistics (Series D) 76). Vol. Materials in Languages of Indonesia. 36 vols. Canberra, A.C.T., Australia: Dept. of Linguistics, Research School of Pacific Studies, The Australian National University.  
<http://hdl.handle.net/1885/144580>.

# Materials from the 20th and 21st century

- Dictionaries (Helffrich 1916; Kähler 1987)
- Word list (Kasim et al. 1987) & loanwords (Nothofer 1992)
- Contemporary word list (Edwards et al. 2022)
- Lexicon (based on the corpora of the Documentation project) - the basis of online Enggano dictionary

Helffrich, Oscar Louis. 1916. Nadere bijdrage tot de kennis van het engganeesch. *Bijdragen tot de taal-, land- en volkenkund.* Leiden, The Netherlands: Brill 71(1).

472–555. <https://doi.org/10.1163/22134379-90001719>.

Kähler, Hans. 1987. *Enggano–Deutsches Wörterbuch* (Veröffentlichungen Des Seminars Für Indonesische Und Südseesprachen Der Universität Hamburg 14).

Berlin; Hamburg: Dietrich Reimer Verlag.

Kasim, Yuslina, Marjusman Maksan, Syamsir Arifin & Zailoet Zailoet. 1987. *Pemetaan bahasa daerah di Sumatra Barat dan Bengkulu.* Jakarta: Pusat Pembinaan dan Pengembangan Bahasa. <https://repositori.kemdikbud.go.id/1684/>. (28 January, 2024).

Owen Edwards (collector), Engga Zakaria Sangian (consultant), I Gusti Ayu Gde Sosiowati (interviewer, transcriber), Ni Wayan Sukarini (interviewer, transcriber), 2022. *Enggano Wordlist.* MPEG/MP4/MXF/VND.WAV/EAF+XML/PDF/PLAIN. OCSEAN-ENO\_20220712 at catalog.paradisec.org.au.  
<https://dx.doi.org/10.26278/R0N1-BG13>

# Outlines

1. What are “lexical resources”? 
2. What are the existing linguistic materials for Enggano? 
3. How do we curate these materials into lexical resources?

- Digitisation
- Merging different data
- Translation
- Etymologisation
- Orthography transliteration

- Digitisation
- Merging different data
- Translation
- Etymologisation
- Orthography transliteration

# Curating the Enggano Holle List (1895)

(Rajeg 2023a, b)

Rajeg, Gede Primahadi Wijaya. 2023a. Digitised, searchable Holle List in Stokhof (1980). University of Oxford, UK. <https://doi.org/10.5281/zenodo.7972273>.

Rajeg, Gede Primahadi Wijaya. 2023b. CLDF dataset of the Enggano word list from 1895 in Stokhof and Almanar's (1987) Holle List. Zenodo. <https://doi.org/10.5281/zenodo.8038975>.

# # 1 - The reference Holle List (Stokhof 1980)

## 5. THE NEW BASIC LIST (NBL)<sup>7</sup>

ID	DUTCH	ENGLISH	MALAY	1894	1904/11	1931
1.	lichaam	body	badan, tubuh	4	4	1
2.	hoofd	head	kepala	5	5	2
3.	gezicht, aangezicht	face	muka, wajah	6	6	3
4.	voorhoofd	forehead	dahi	24	25	4
5.	schedel	skull	tempurung kepala	26	27	5
6.	hoofdhaar	hair	rambut	72	73	6
7.	kaal	bald	gundul, botak	-	-	7
8.	kruin (v.h.hoofd)	crown	hulu kepala	7	7	8
9.	oor	ear	telinga	8	8	9
10.	oorsmeer	earwax	tahi telinga	-	-	10
11.	oog	eye	mata	9	9	11

# # 2 - The regional Holle List for Enggano (Stokhof & Almanar 1987)

## 2. THE ENGGANO LIST

### ID ENGGANO

1. kärāhā, koedǒdǒkǒ
2. èoeloe/èoedoe <1>
3. èbaka
4. èkoe(k)
5. èaoeloe
6. poeroeroe èoeloe
8. kèlekèle poeěkā
9. kariehā, kaliehě
11. èbaka

Stokhof, W. A. L. & Alma E. Almanar. 1987. *Holle lists, vocabularies in languages of Indonesia*, Vol. 10/3: Islands off the west coast of Sumatra (Pacific Linguistics (Series D) 76). Vol. Materials in Languages of Indonesia. 36 vols. Canberra, A.C.T., Australia: Dept. of Linguistics, Research School of Pacific Studies, The Australian National University. <http://hdl.handle.net/1885/144589>.

# # Challenge 1:

The **reference** Holle List is  
*separated from* the  
regional Holle List

# The IDs in the two lists need to be matched!

## 5. THE NEW BASIC LIST (NBL)<sup>7</sup>

ID	DUTCH	ENGLISH
1.	lichaam	body
2.	hoofd	head
3.	gezicht, aangezicht	face
4.	voorhoofd	forehead
5.	schedel	skull
6.	hoofdhaar	hair
7.	kaal	bald
8.	kruin (v.h.hoofd)	crown
9.	oor	ear
10.	oorsmeer	earwax
11.	oog	eye

MALAY
badan, tub
kepala
muka, waja
dahi
tempurung
rambut
gundul, bo
hulu kepala
telinga
tahi telinga
mata

## 2. THE ENGGANO LIST

### ID ENGGANO

1. kārāhā, koedōdōkō
2. èoeloe/èoedoe <1>
3. èbaka
4. èkoe(k)
5. èaoeloe
6. poeroeroe èoeloe
8. kèlěkèlě poeěkā
9. kariehā, kaliehě
11. èbaka

# The IDs in the two lists need to be matched!

## 5. THE NEW BASIC LIST (NBL)<sup>7</sup>

ID	DUTCH	ENGLISH
1.	lichaam	body
2.	hoofd	head
3.	gezicht, aangezicht	face
4.	voorhoofd	forehead
5.	schedel	skull
6.	hoofdhaar	hair
7.	kaal	bald
8.	kruin (v.h.hoofd)	crown
9.	oor	ear
10.	oorsmeer	earwax
11.	oog	eye

## MALAY

badan, tul  
kepala  
muka, waja  
dahi  
tempurung  
rambut  
gundul, bo  
hulu kepala  
telinga  
tahi telinga  
mata

## 2. THE ENGGANO LIST

### ID ENGGANO

1. kārāhā, koedōdōkō
2. èoeloe/èoedoe <1>
3. èbaka
4. èkoe(k)
5. èaoeloe
6. poeroeroe èoeloe
8. kèlěkèlě poeěkā
9. kariehā, kaliehě
11. èbaka

# The IDs in the two lists need to be matched!

## 5. THE NEW BASIC LIST (NBL)<sup>7</sup>

ID	DUTCH	ENGLISH
1.	lichaam	body
2.	hoofd	head
3.	gezicht, aangezicht	face
4.	voorhoofd	forehead
5.	schedel	skull
6.	hoofdhaar	hair
7.	kaal	bald
8.	kruin (v.h.hoofd)	crown
9.	oor	ear
10.	oorsmeer	earwax
11.	oog	eye

## MALAY

ID	ENGGANO
badan, tul	1. kärāhā, koedōdōkō
kepala	2. èoeloe/èoedoe <1>
muka, waja	3. èbaka
dahi	4. èkoe(k)
tempurung	5. èaoeloe
rambut	6. poeroeroe èoeloe
gundul, bo	8. kèlekèle poeěkā
hulu kepala	9. kariehā, kaliehě
telinga	
tahi telinga	11. èbaka
mata	

## 2. THE ENGGANO LIST

# # Challenge 2:

- > The lists are in PDFs
- > Manual matching is tedious
- > Aim for replicable workflow

1. Digitise the reference and regional Holle List

# 1. Digitise the reference and regional Holle List

- > O(ptical) C(haracter) R(ecognition)
- > manual correction for typos

Thanks to Mary Dalrymple for the OCR and Fitri Koemba, S.S. for the correction.

# The digitised *reference* Holle List (Rajeg 2023a)

Interactive, web version (<https://engganolang.github.io/digitised-holle-list/>)

1.	lichaam	body
2.	hoofd	head
3.	gezicht, aangezicht	face
4.	voorhoofd	forehead
5.	schedel	skull
6.	hoofdhaar	hair
7.	kaal	bald
8.	kruin (v.h.hoofd)	crown
9.	oor	ear
10.	oorsmeer	earwax
11.	oog	eye



► Code

Table 1: The digitised, new basic list of the Holle List in Stokhof (1980: 22–72)

Index	Dutch	English	Indonesian	v1894	v1904/1911	v1931
1	lichaam	body	badan, tubuh	4	4	1
2	hoofd	head	kepala	5	5	2
3	gezicht, aangezicht	face	muka, wajah	6	6	3
4	voorhoofd	forehead	dahi	24	25	4
5	schedel	skull	tempurung kepala	26	27	5
6	hoofdhaar	hair	rambut	72	73	6
7	knal	bald	gundul, botak	-	-	7
8	kruin (v.h.hoofd)	crown	hulu kepala	7	7	8
9	oor	ear	telinga	8	8	9
10	oorsmeer	earwax	tahi telinga	-	-	10
11	oog	eye	mata	9	9	11

# The digitised *reference* Holle List (Rajeg 2023a)

Raw plain-text file (<https://github.com/engganolang/digitised-holle-list/tree/main/data>)

Screenshot of a GitHub repository page showing the 'digitised-holle-list / data / digitised-holle-list-in-stokhof-1980.tsv' file. The file contains 1632 lines (1632 loc) and is 92.8 KB in size. A note from user 'gederajeg' says 'Add concepticon mapping to some of the unspecified entries.' The file is currently being previewed.

1	Index	Dutch	English	Indonesian	v1894	v1904/1911	v1931
2	1	lichaam	body	badan, tubuh	4	4	1
3	2	hoofd	head	kepala	5	5	2
4	3	gezicht, aangezicht	face	muka, wajah	6	6	3
5	4	voorhoofd	forehead	dahi	24	25	4
6	5	schedel	skull	tempurung kepala	26	27	5
7	6	hoofdhaar	hair	rambut	72	73	6
8	7	knal	bald	gundul, botak	-	-	7
9	8	kruin (v.h.hoofd)	crown	hulu kepala	7	7	8
10	9	oor	ear	telinga	8	8	9
11	10	oorsmeer	earwax	tahi telinga	-	-	10

# The digitised *Enggano* Holle List (Rajeg 2023b)

Raw plain-text file (<https://github.com/engganolang/holle-list-enggano-1895/tree/1.1.0/data-raw>)

## 2. THE ENGGANO LIST

1. kärāhā, koedōdōkō
2. èoeloe/èoedoe <1>
3. èbaka
4. èkoe(k)
5. èaoeloe
6. poeroeroe èoeloe
8. kélékélě poeěkā
9. kariehā, kaliehě
11. èbaka



```
Enggano-Holle-List - Notepad
File Edit Format View Help
# Appearing in Stokhof and Almanar (1987: 189-205)
# Year of investigation: 1895
# Investigator: Abs vd Noord
# Place of investigation: Pulau Dua (in Enggano island)
# OCR by Mary Dalrymple
# Checked (proofread and corrected) and processed (annotated
footnotes and wrangled into a table) by Gede Primahadi Wijaya
Rajeg

<wordlist>
1. kärāhā, koedōdōkō
2. èoeloe/èoedoe <1>
3. èbaka
4. èkoe(k)
5. èaoeloe
6. poeroeroe èoeloe
8. kélékélě poeěkā
9. kariehā, kaliehě
11. èbaka

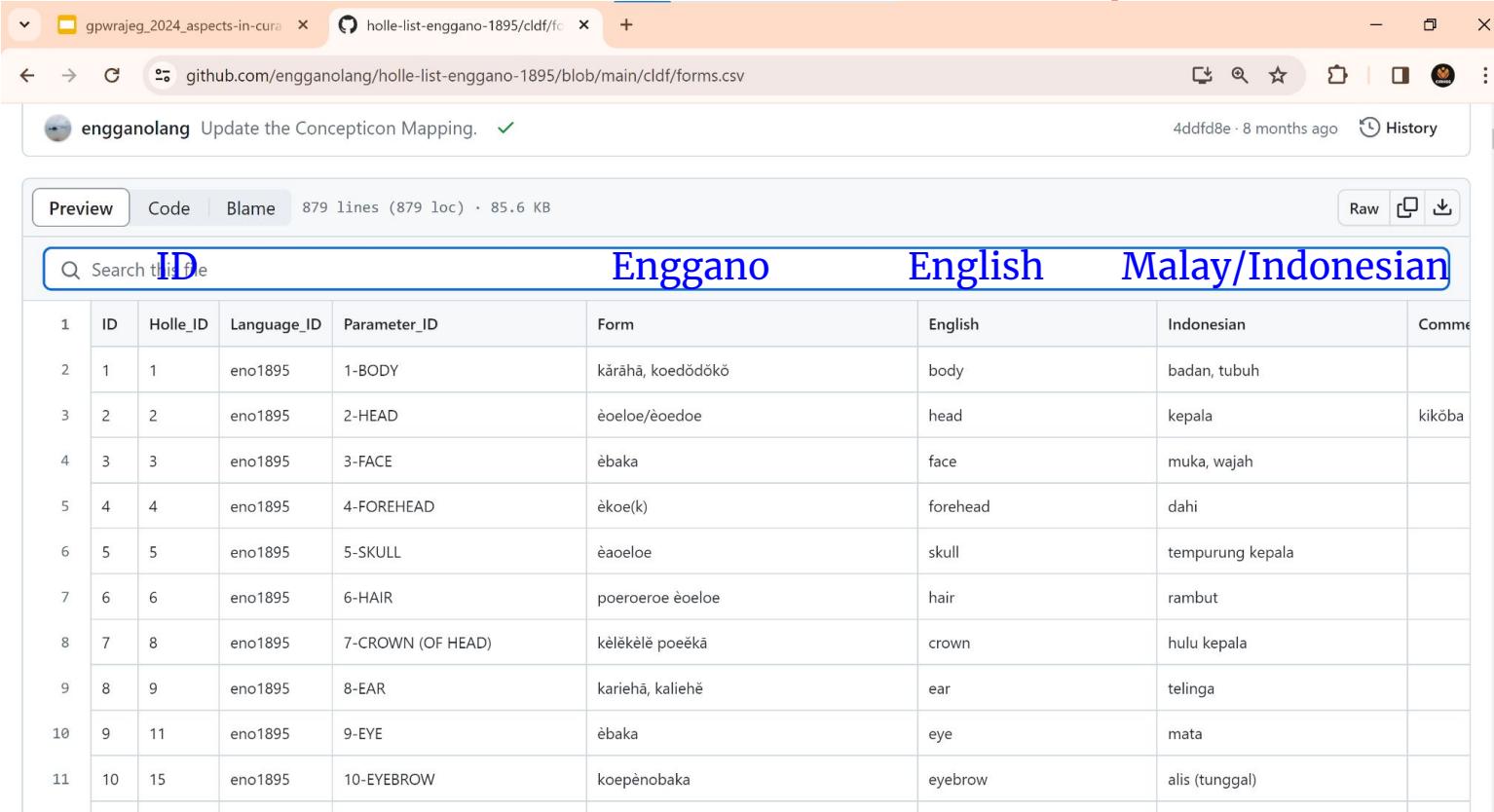
Ln 1, Col 1      100%   Unix (LF)   UTF-8
```

- Digitisation 
- Merging different data
- Translation
- Etymologisation
- Orthography transliteration

*Write R codes to  
merge the (i)  
reference HL and (ii)  
the Enggano HL by  
matching IDs*

<https://github.com/engganolang/holle-list-enggano-1895/tree/main/code>

# The Enggano Holle List with English & Indonesian translation (now searchable & manipulatable)



A screenshot of a GitHub repository page for 'holle-list-enggano-1895'. The repository has 879 lines (879 loc) and is 85.6 KB in size. The CSV file contains 11 rows of data, each with an ID, Holle\_ID, Language\_ID, Parameter\_ID, Form, English, Indonesian, and Comment. The columns are labeled 'ID', 'Holle\_ID', 'Language\_ID', 'Parameter\_ID', 'Form', 'English', 'Indonesian', and 'Comment'. The first row is a header. The data includes entries for body parts like head, face, forehead, skull, hair, crown, ear, eye, and eyebrows.

ID	Holle_ID	Language_ID	Parameter_ID	Form	English	Indonesian	Comment
1	1	eno1895	1-BODY	kärähä, koedödökö	body	badan, tubuh	
2	2	eno1895	2-HEAD	èoeloe/èoedoe	head	kepala	kiköba
3	3	eno1895	3-FACE	èbaka	face	muka, wajah	
4	4	eno1895	4-FOREHEAD	èkoe(k)	forehead	dahi	
5	5	eno1895	5-SKULL	èaoeloe	skull	tempurung kepala	
6	6	eno1895	6-HAIR	poeroeroe èoeloe	hair	rambut	
7	8	eno1895	7-CROWN (OF HEAD)	kèlekélè poeékā	crown	hulu kepala	
8	9	eno1895	8-EAR	kariehā, kaliehē	ear	telinga	
9	11	eno1895	9-EYE	èbaka	eye	mata	
10	15	eno1895	10-EYEBROW	koepènobaka	eyebrow	alis (tunggal)	

<https://github.com/engganolang/holle-list-enggano-1895/blob/main/cldf/forms.csv>

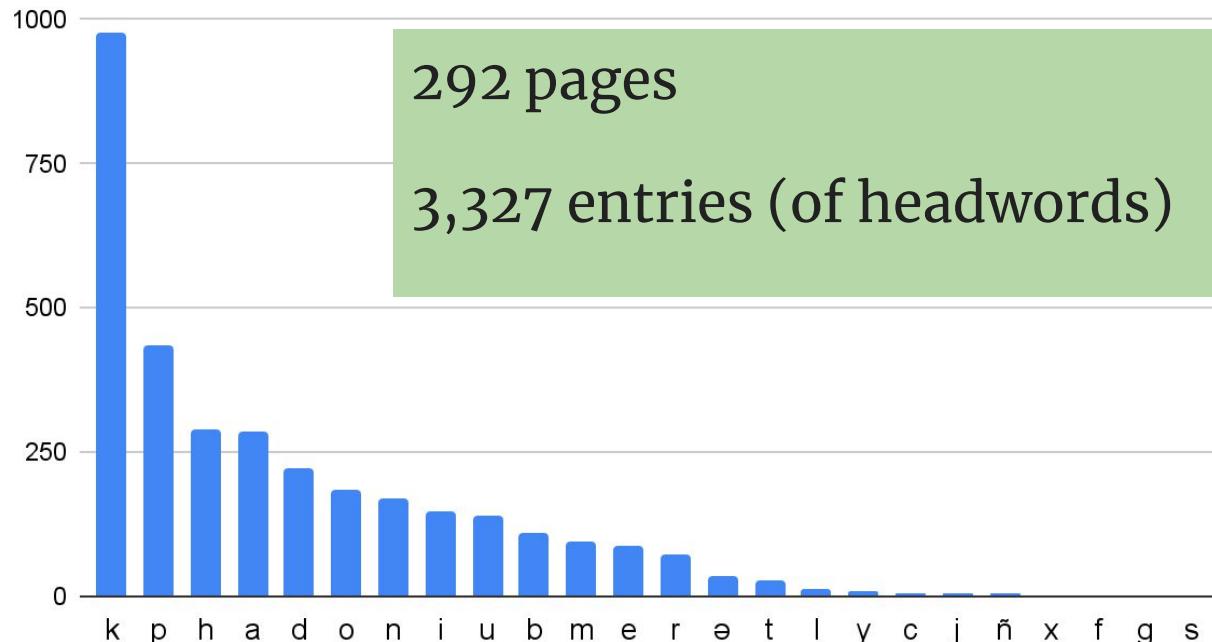
Now, the other (digitised) regional HLs can be matched computationally with the reference HL to gain their translations.

- Digitisation 
- Merging different data 
- Translation
- Etymologisation
- Orthography transliteration

Retro digitising the  
Enggano-German  
dictionary  
(Kähler 1987)

# Enggano-German (Kähler 1987)

Number of stems/headwords per alphabet (manual count)



Veröffentlichungen des Seminars für Indonesische und  
Südseesprachen der Universität Hamburg

Band 14

Hans Kähler †

## ENGGANO-DEUTSCHES WÖRTERBUCH

aus dem Nachlaß herausgegeben  
und mit einem Deutsch-Enggano-Wörterverzeichnis  
versehen von  
Hans Schmidt

DIETRICH REIMER VERLAG · BERLIN · HAMBURG

# Enggano-German (Kähler 1987: 276)

tē	(DIA) = tō, dō	Art und Weise (§ 31a)
	kitē = kidō	sein wie
tebe:	itebe = iðebe (DIA)	an der Oberseite, oben (§ 26b)
te?ei:	ka?ite?ei	jmd schlechte Speisen anbieten
teo	kiteo ekitai	überreden
təhəda	(DIA) = dəhəda	
tixoi	= didixoi, didiki: kitixoi	etwas umwickeln
tikī	kahatikī	(mit etwas Biegsem) schlagen
°etiri	(< ML sirih)	Betelbissen
tō	= dō, tē (DIA)	wie (beim Vergleich; § 31a)
	kitoiya < kitō eiya	wie das Wesen sein

# # Challenge 1:

deciphering the  
components of a  
dictionary entry

# Enggano-German (Kähler 1987: 276)

tē	(DIA) = tō, dō	Art und Weise (§ 31a)
	kitē = kidō	sein wie
tebe:	itebe = iðebe (DIA)	an der Oberseite, oben (§ 26b)
te?ei:	ka?ite?ei	jmd schlechte Speisen anbieten

Enggano HEADWORDS		
təhəda	(DIA) = dəhəda	
tixoi	= didixoi, didiki: kitixoi	etwas umwickeln
tikī	kahatikī	(mit etwas Biegsamem) schlagen
°etirī	(< ML sirih)	Betelbissen
tō	= dō, tē (DIA)	wie (beim Vergleich; § 31a)
	kitoiya < kitō eiya	wie das Wesen sein

# Enggano-German (Kähler 1987: 276)

tē	(DIA) = tō, dō	Art und Weise (§ 3la)
	kitē = kidō	sein wie
tebe:	itebe = iðebe (DIA)	VARIANTS (=) (b)
te?ei:	ka?ite?ei	jmd schlechte Speisen anbieten
teo	kiteo ekitai	überreden
təhəda	(DIA) = dəhəda	
tixoi	= didixoi, didiki:	kitixoi etwas umwickeln
tikī	kahatikī	(mit etwas Biegsem) schlagen
°etiri	(< ML sirih)	Betelbissen
tō	= dō, tē (DIA)	wie (beim Vergleich; § 3la)
	kitoiya < kitō eiya	wie das Wesen sein

# Enggano-German (Kähler 1987: 276)

tē	(DIA) = tō, dō	Art und Weise (§ 31a)
	kitē = kidō	sein wie
tebe:	itebe = iðebe (DIA)	an der Oberseite, oben (§ 26b)
te?ei:	ka?ite?ei	jmd schlechte Speisen anbieten
teo	kiteo ekitai	überreden
təhəda	(DIA) = dəhəda	
tixoi	= didixoi, didiki: kitixoi	etwas umwickeln
tikī	kahatikī	(mit etwas Biegsem) schlagen
°etirī	(< ML sirih)	Betelbissen
tō	= dō, tē (DIA)	wie (beim Vergleich; § 31a)
	kitoiya < kitō eiya	wie das Wesen sein



# Enggano-German (Kähler 1987: 276)

tē	(DIA) = tō, dō	Art und Weise (§ 31a)
	kitē = kidō	sein wie
tebe:	itebe = iðebe (DIA)	an
te?ei:	ka?ite?ei	jmd schlechte
teo	kiteo ekitai	überreden
təhəda	(DIA) = dəhəda	
tixoi	= didixoi, didiki: kitixoi	etwas umwickeln
tikī	kahatikī	(mit etwas Biegsem) schlagen
°etirī	(< ML sirih)	Betelbissen
tō	= dō, tē (DIA)	wie (beim Vergleich; § 31a)
	kitoiya < kitō eiya	wie das Wesen sein

## DERIVED FORMS/EXAMPLES

# Enggano-German (Kähler 1987: 276)

tē	(DIA) = tō, dō	Art und Weise (§ 3la)
	kitē = kidō	sein wie
tebe:	itebe = iðebe (DIA)	an
te?ei:	ka?ite?ei	jmd schlechte Speisen anbieten
teo	kiteo ekitai	überreden
təhəda	(DIA) = dəhəda	
tixoi	= didixoi, didiki: kitixoi	etwas umwickeln
tikī	kahatikī	(mit etwas Biegsem) schlagen
°etirī	(< ML sirih)	Betelbissen
tō	= dō, tē (DIA)	wie (beim Vergleich; § 3la)
	kitoiya < kitō eiya	wie das Wesen sein

CROSS-REF.

# Enggano-German (Kähler 1987: 276)

tē	(DIA) = tō, dō	Art und Weise (§ 31a)
	kitē = kidō	
tebe:	itebe = iðe	
te?ei:	ka?ite?ei	
teo	kiteo ekita	
təhəda	(DIA) = dəhə	
tixoi	= didixoi,	
tikī	kahatikī	
°etirī	(< ML sirih)	Betelbissen
tō	= dō, tē (DIA)	wie (beim Vergleich; § 31a)
	kitoiya < kitō eiya	wie das Wesen sein

Many more:

- Loanword
- Etymology
- Remark/Note
- Direction of derivation
- Homograph/Homonym ID

# Challenge 2:

Lexicographic training  
for transcribers

Reverse-engineering of  
the entry to be  
transcribed

# Reverse-Engineering 1: Manual identification of the entry component in the print out.

lo4

-ka?a	unser (in), von mir und euch: Possessivsuffix der 1.Pl in (§ 11)
	eubák'a?a      unser (in) Haus
eka?a?aho	= eka?aho, eka?a?oho      Baumart (ML kasai, Pometia pinnata Forst.)
Ka?a?äi	Ort auf Enggano
ka?abéha	(ka + abéha)      und nachdem (Konjunktion)
ka?abu	kika?abu      vergessen hō buka?abu      vergaß bereits kika?abui      jmd, etwas vergessen dibuka?abui      sie vergaßen etwas eka?abua      Vergessensorst eaka?abu = eka?abu      das Vergessen eka?abuía?a      d Vergessene eka?abuía?au edobu      mein Vergessenes ware <u>Sachen</u> eka?abuiyo      d zu Vergessende

117	
1	kakahao
2	kaka?fshōjī
3	kakanākā
4	kakanē?a
5	kakape
6	kakapi
7	kakarai
8	kakari
9	kakarodi
10	ekakaroku
11	kakáupe
12	kaki
	source form
	‘ kahao
	source form
	‘ ka?fshōjī
	source form
	‘ kākā
	source form
	‘ kano?a
	ar. tr.
	wf kikakapei bestreiten, leugnen
	wx kikakapeá?a etwas leugnen ar. tr.
	stos rel stem stoss rel stem ar. tr. stem
	(132z14) herausgeben item var. vor 2 ar. tr. stem
	= kakarei, [kakadei (DIA): kikakarai] (ver)folgen, verjagen, jagen; fortziehen (intr) item stem
	↑ kikakarai eben e?ana ich verjage den Hund ar. tr.
	ax kabukakaraixa kia (133z31) er jagte sie fort ar. tr.
	edikakarai d Fortgejagte ar. tr.
	↑ kakareica (?) zu erlangen trachten ar. tr.
	source form ex ar. tr.
	(‘ kari); kikakarfa?a sich umdröhnen ar. tr.
	kipakakarfa?a etwas umdröhnen, rotieren lassen ar. tr.
	edipakakarfa?a d Umgewendete ar. tr.
	source form
	‘ karodi ar. tr.
	Baumart; daraus gewonnenes Fischgift (Derris, Xizaliff); Fischgift ... stellte man aus den Früchten des gleichnamigen Baumes her, die zu Pulver zerrieben, zu handgroßen Bündeln in Blätter verpackt und über dem Feuer erhitzt wurden. Diese wurden bei Ebbe in die Wasserlöcher des Riffes geworfen, und nach etwa einer Stunde konnte man die betäubten Fische herausnehmen.)
	new var. ar. tr.
	= kápue bevor ar. tr.
	↑ kikaki hoheln (mit dem Baumesser)

Each page was checked for accuracy

# Huge thanks to the Transcription Team



Putu Dea Indah Kartini



Fitriani Putri Koemba



Ni Putu Wulan Lestari



Yul Fulgensia Rusman Pita

<https://www.ling-phil.ox.ac.uk/news/2023/05/28/retro-digitalisation-work-enggano-german-dictionary-udayana-university-indonesia>



Ida Bagus Made Ari Segara



Putu Wahyu Widiatmika



I Gede Semara Dharma Putra

around two and a half months work

# # Challenge 3:

How to transcribe in  
real-time into a single  
database storage for all?

# Reverse-Engineering 2

*Build an online  
database entry  
system*

*Crowdsource the  
transcription  
process in real-time*



Cokorda Pramartha  
(Comp. Sci., Udayana U)



Ida Bagus Gede  
Sarasvananda  
(Comp. Sci., INSTIKI)

Kamus Enggano

enggano.oss.web.id/pages/populate\_details/viewData.php?id=10\_1683776956

Kamus Bahasa Engg... 25:00 - Time to focus! ipa-sil cldf python ocr oxford Transl - Ger-Eng engganolang (Engg... github

# KAMUS ENGGANO

Total Stem 3328 Total Example 5711 Recent Stem năpū Total Users 17

Hello Gede Primahadi

Menu

Users

Input Data Kamus

Questionnaire

Logout

Metadata

Alphabet K Page in Kähler 157

Entry No 9

Input Stem

Stem Form kodo

German Translation

homonymID

Recent Stem

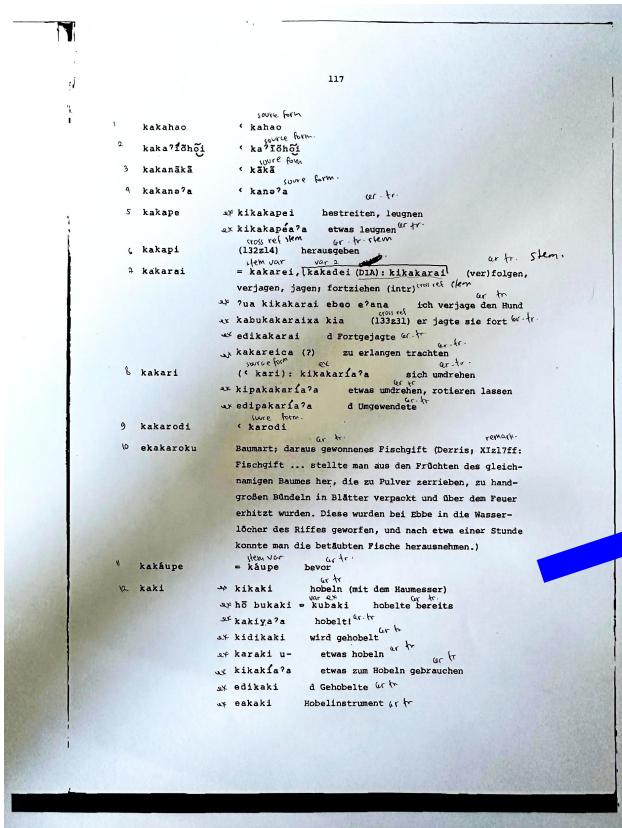
năpū by Putu Dea Indah Kartini

năpū by Putu Dea Indah Kartini

napōnā?â by Putu Dea Indah Kartini

# Reverse-Engineering 3

Type in (by hand) the identified component into the relevant slot



Metadata	
Alphabet	K
Page in Kähler	157
Entry No	9
Input Stem	
Stem Form	kodo
German Translation	
homonymID	

# # Challenge 4:

Processing the transcribed  
data into excel-like format

Handling strange characters  
in the output

# Snippet of the digitised Enggano-German dictionary

1\_stem\_german\_translation-to-check

File Edit View Insert Format Data Tools Extensions Help Accessibility

A1 | fx stem\_id

	A	B	C	D	E	F	G	H	I
1	stem_id	kms_Alphabet	kms_page	kms_entry_no	stem_form	German	German_corrected	category	English
2	11_1685428252	a	1	1	a-	leitet Objektssätze ein		stem_GermanTr	introduces object sentences
3	11_1685428330	a	1	2	a-	wenn, falls; denn, weil		stem_GermanTr	if, if; because of
4	11_1685428509	a	1	3	[?]a-	Präfix, das Wortstämme erweitert		stem_GermanTr	Prefix that expands word stems
5	11_1685429142	a	1	4	-[C]a	kennzeichnet Zukunft bei Verben		stem_GermanTr	indicates future in verbs
6	11_1685429642	a	1	6	?aa	Hallo! He! (Anruf)		stem_GermanTr	Hello! He! (call)
7	11_1685430716	a	2	1	a?a	geh!		stem_GermanTr	go!
8	11_1685430762	a	2	2	éa?a	jene(r,s) - korrelat zur 3.P		stem_GermanTr	those - correlative to the 3rd
9	11_1685430833	a	2	3	-a?a	kennzeichnet die komplexe Variation bei Verben		stem_GermanTr	marks the complex variation
10	11_1685430954	a	2	4	-a?a	Suffix an Verbalstümmen, das die Aufforderung an die 2.PI kennzeichnet		stem_GermanTr	Suffix on verbal stems that indicates
11	11_1685431789	a	2	10	?a?anö	einige(s), soviele		stem_GermanTr	some, so many
12	11_1685431862	a	2	11	eaba	Grasart		stem_GermanTr	Grass type
13	11_1685431896	a	2	12	e?aba?a:ua	Rochen		stem_GermanTr	Rays
14	11_1685432004	a	2	13	aba:i kaha:i?i	("es kommt [noch] eines" =) neun		stem_GermanTr	("It comes [still] one" =) nine
15	11_1685432114	a	2	14	e?abakoko	Dämon, der kleine Kinder entführt		stem_GermanTr	Demon who kidnapped your
16	11_1685497746	a	3	1	abe	wenn, falls		stem_GermanTr	if

# Write codes (in progress for over 9 months)

main  kahler-1987 / code / 

---

 gederajeg Add editing code and de-activate the access to Google Sheets

---

Name

---

 ..

 1-pre-processing.R

 2-read-the-translation-sheets.R

 3-read-the-translation-sheet-EXAMPLE.R

 4-pre-processing-the-checked-translation.R

 5-combine-original-and-checked-translation.R

 6-check-stems-and-examples-without-German-translation.R

 7-checking-loanword-data.R

<https://github.com/engganolang/kahler-1987>

# Some distributional insights from the digitised dictionary

# Count of etymological info/marker for the headword

#	A tibble: 7 × 2	n
	lang	<int>
1	PAN (Proto-Austronesian)	86
2	PMP (Proto-Malayo-Polynesian)	42
3	ML (Malay [now BI])	6
4	SMTw (Sudmentawai [South Mentawai])	2
5	BAR (Bare`e [Austronesian, Sulawesi])	1
6	MKB (Minangkabau [Austronesian, Sumatra])	1
7	Nias	1

# Count of forms marked as variant (=)

	# A tibble: 532 × 3	stem_form	stem_formVarian	variant_forms
		<chr>	<chr>	<int>
1	adiu	adúú	; ariu ; arúú ; aliu	4
2	a?io?oi	ai?io?oi	; aya?ioi ; aya?io?oi ; ayo?oi	4
3	da?a	kida?a	; kinā?ã ; kida?a:o ; kita?a:o	4
4	?adiba	?ariba	; ?aliba ; ?alibe	3
5	arúú	adúú	; adiu ; ariu	3
6	aya?ioi	ayo?oi	; a?io?oi ; aya?ioi	3
7	ci?a	cici?a	; jiji?a ; ici?a	3
8	-da	-ta	; -ra ; -nã	3
9	-da?a	-ra?a	; -nã?ã ; -ta?a	3
10	doo	nõõ	; too ; tee	3

# Revamping *EnoLEX*, a diachronic lexical database for Enggano

(Rajeg, Krauße, & Pramartha, to be  
presented at *the AsiaLEX 2024* [Tokyo])

<https://github.com/engganolang/enolex>

# Snippet of the diachronic lexical database (Krauße, Rajeg, & Pramartha) - wide format

## Semantic domain & Glosses

## Sources of the words in diachrony

A	D	E	F	G	H	I	J	K
Semantic field	Indonesian gloss	English gloss	Enggano (Brouwer early 1850s)	Enggano (Boewang 1854)	Enggano South? (v. Rosenberg 1855)	Enggano Northwest? (vd Straten & S. 1855)	Enggano North (Walland 1864)	Enggano (Francis 1870)
human objects	rumah	house	djoeba[-beri-berri], joeba	joewa	tjoeba, djoeba	oebah, oebah[-dobah]	oeba, oeoba [kiemo], oeba [ejobie]	

*word forms*

# # Challenge 1:

**Etymologising**: grouping  
words of the same origin  
(in progress by Daniel Krauße)

# Etymologising results: A case for ‘house’

#	A tibble: 20 × 5	id	year	words	gloss_by_year
		id	year	words	gloss_by_year
1	1043 <1855 djoeba[-beri-berri] ; joeba	1043	<1855	djoeba[-beri-berri] ; joeba	house
2	1043 1855 joewa	1043	1855	joewa	house
3	1043 1855 tjoeba ; djoeba	1043	1855	tjoeba ; djoeba	house
4	1043 1864 oebah ; oebah[-dobah]	1043	1864	oebah ; oebah[-dobah]	house
5	1043 1870 oeба ; eoeba [kiemo] ; oeба [ejobie]	1043	1870	oeба ; eoeba [kiemo] ; oeба [ejobie]	house
6	1043 1879 oeба ; eoeba[-kiemo]	1043	1879	oeба ; eoeba[-kiemo]	house
7	1043 1888 èoeba	1043	1888	èoeba	house, cage
8	1043 1891 èoebě	1043	1891	èoebě	house, chest, place
9	1043 1891 èoeba	1043	1891	èoeba	house, chest, place
10	1043 1894 èuba	1043	1894	èuba	house
11	1043 1895 èoba ; èobě ; èoeba ; èoebadiē	1043	1895	èoba ; èobě ; èoeba ; èoebadiē	house
12	1043 1916 èoeba ; èoebě	1043	1916	èoeba ; èoebě	house, home, chest, suitcase
13	1043 1982 uba	1043	1982	uba	house
14	1043 1987 euba ; euabai	1043	1987	euba ; euabai	house
15	1043 2011 iub	1043	2011	iub	house
16	1043 2019 yu	1043	2019	yu	house
17	1044 1894 cacario	1044	1894	cacario	house
18	1045 <1855 praauw	1045	<1855	praauw	house
19	1045 1855 praauw	1045	1855	praauw	house
20	1045 1864 prahoe	1045	1864	prahoe	house

# Etymologising results: A case for ‘house’

1	<u>1043</u> <1855	djoeba[-beri-berri] ; joeba	house
2	<u>1043</u> 1855	joewa	house
3	<u>1043</u> 1855	tjoeba ; djoeba	house
4	<u>1043</u> 1864	oebah ; oebah[-dobah]	house
5	<u>1043</u> 1870	oeba ; eoeba [kiemo] ; oeba [ejobie]	house
6	<u>1043</u> 1879	oeba ; eoeba[-kiemo]	house
7	<u>1043</u> 1888	èoeba	house, cage
8	<u>1043</u> 1891	èoebě	house, chest, place
9	<u>1043</u> 1891	èoeba	house, chest, place
10	<u>1043</u> 1894	èuba	house
11	<u>1043</u> 1895	èoba ; èobě ; èoeba ; èoebadiê	house
12	<u>1043</u> 1916	èoeba ; èoebě	house, home, chest, suitcase
13	<u>1043</u> 1982	uba	house
14	<u>1043</u> 1987	euba ; euabai	house
15	<u>1043</u> 2011	iub	house
16	<u>1043</u> 2019	yu	house

Cognate set (ID 1043)

# Etymologising results: A case for ‘house’

#	A tibble: 20 × 5	id	year	words	gloss_by_year
		id	year	words	gloss_by_year
1	1043 <1855 djoeba[-beri-berri] ; joeba	1043	<1855	djoeba[-beri-berri] ; joeba	house
2	1043 1855 joewa	1043	1855	joewa	house
3	1043 1855 tjoeba ; djoeba	1043	1855	tjoeba ; djoeba	house
4	1043 1864 oebah ; oebah[-dobah]	1043	1864	oebah ; oebah[-dobah]	house
5	1043 1870 oeба ; eoeba [kiemo] ; oeба [ejobie]	1043	1870	oeба ; eoeba [kiemo] ; oeба [ejobie]	house
6	1043 1879 oeба ; eoeba[-kiemo]	1043	1879	oeба ; eoeba[-kiemo]	house
7	1043 1888 èoeba	1043	1888	èoeba	house, cage
8	1043 1891 èoebě	1043	1891	èoebě	house, chest, place
9	1043 1891 èoeba	1043	1891	èoeba	house, chest, place
10	1043 1894 èuba	1043	1894	èuba	house
11	1043 1895 èoba ; èobě ; èoeba ; èoebadiē	1043	1895	èoba ; èobě ; èoeba ; èoebadiē	house
12	1043 1916 èoeba ; èoebě	1043	1916	èoeba ; èoebě	house, home, chest, suitcase
13	1043 1982 uba	1043	1982	uba	house
14	1043 1987 euba ; euabai	1043	1987	euba ; euabai	house
15	1043 2011 iub	1043	2011	iub	house
16	1043 2019 yu	1043	2019	yu	house
17	1044 1894 cacario	1044	1894	cacario	house
18	1045 <1855 praauw	1045	<1855	praauw	house
19	1045 1855 praauw	1045	1855	praauw	house
20	1045 1864 prahoe	1045	1864	prahoe	house

# Etymologising results: A case for ‘house’

17	<u>1044</u>	1894	cacario	house
18	<u>1045</u>	<1855	praauw	house
19	<u>1045</u>	1855	praauw	house
20	<u>1045</u>	1864	prahoe	house

Cognate set (ID 1044)

Cognate set (ID 1045)

# # Challenge 2:

Processing the complex  
notes on the different  
meaning/gloss of a word per  
period

# Detailed notes about the meaning of word (component) for HOUSE across period.

English gloss	Remarks
house	meaning1888 'house, cage'_meaning1891 'house, chest, place'_meaning1916 'house, home, chest, suitcase'_note<1855: first word means 'ship', second word means 'village', second element in first word unclear but cf. boat_note1855vdS: first word means 'boat', second word means 'village'_note1864: first word means 'house', second word means 'box'_note1864: second element of second word means 'thing'_note1870: first word means 'house', second word means 'sailboat', third word means 'steamboat'_note1879: first word means 'house', second word means 'ship', second word literally means 'house of the sea'_note1895: first word means 'house', second word means 'house', third word means 'proa, canoe, case for cloth', fourth word means 'box, case'_note1987K: first word means 'house, container, nest', second word means 'coffin, closed container'

# Write R codes to deal with the Remarks (c. 2 months work between Jan.- Feb. 2024)

```
# A tibble: 20 × 5
  id year words
  <int> <fct> <chr>
1 1043 <1855 djoeba[-beri-berri] ; joeba
2 1043 1855 joewa
3 1043 1855 tjoeba ; djoeba
4 1043 1864 oebah ; oebah[-dobah]
5 1043 1870 oēba ; oēba [kiemo] ; oēba [ejobie]
6 1043 1879 oēba ; oēba[-kiemo]
7 1043 1888 èoeba
8 1043 1891 èoebě
9 1043 1891 èoeba
10 1043 1894 èuba
11 1043 1895 èoba ; èobě ; èoeba ; èoebadiē
12 1043 1916 èoeba ; èoebě
13 1043 1982 uba
14 1043 1987 euba ; euabai
15 1043 2011 iub
16 1043 2019 yu
17 1044 1894 cacario
18 1045 <1855 praauw
19 1045 1855 praauw
20 1045 1864 prahoe
```

		gloss_by_year	note_year
1	1043 <1855	house	"djoeba[-beri-berri] means 'ship' ; joeba means...
2	1043 1855	house	NA
3	1043 1855	house	"tjoeba means 'boat' ; djoeba means 'village...
4	1043 1864	house	"oebah means 'house' ; oebah[-dobah] means 'box...
5	1043 1870	house	"oēba means 'house' ; oēba [kiemo] means 'sa...
6	1043 1879	house	"oēba means 'house' ; oēba[-kiemo] means 's...
7	1043 1888	house, cage	NA
8	1043 1891	house, chest, place	NA
9	1043 1891	house, chest, place	NA
10	1043 1894	house	NA
11	1043 1895	house	"èoba means 'house' ; èobě means 'house' ; èoe...
12	1043 1916	house, home, chest, suitcase	NA
13	1043 1982	house	NA
14	1043 1987	house	"euba means 'house, container, nest' ; euabai ...
15	1043 2011	house	NA
16	1043 2019	house	NA
17	1044 1894	house	NA
18	1045 <1855	house	NA
19	1045 1855	house	NA
20	1045 1864	house	NA

# Write R codes to deal with this (c. 2 months work between Jan.- Feb. 2024)

Tidying up and restructuring remarks on meaning variation of forms per year (`gloss_by_year`) and meaning of word component (`note year`)

# # Challenge 3:

Standardising  
orthography across word  
list & IPA mapping

# Orthography standardisation

- Use `qlcData` R package (Cysouw 2018) to create a **skeleton of orthography profile** from a word list
  - orthography profile: occurrences of distinct types of characters/letters

# Orthography profile skeleton for Brouwer (early 1850s)

Left	Grapheme	Right	Class	Replacement
	oh	\$		o
	oe			u
	oé			u
	ou			o:u
	ie			ii
	ié			ii
	dj			j
	eh	\b		e

# Standardised orthography with tokenisation/segmentation

Left	Grapheme	Right	Class	Replacement
	oh	\$		o
1	words	commons	commons_tokenised	
11	kokoh	kOko	k O k o	
102	okoha	OkOha	O k O h a	

# Mapping IPA phoneme with standardised/common orthography

Enggano\_Transcription\_LongFormat

File Edit View Insert Format Data Tools Extensions Help Accessibility

Search 125% £ % .0 .00 123 Default... - 10 +

E454	A	B	C	D	E
1	cats	phoneme	grapheme	commons	source
247	vowel	o	oh	o	Brouwer <1855
268	vowel	ɔ	o	O	Brouwer <1855
287	vowel	ɔ̃		õ	Brouwer <1855
306	vowel	u	oe	u	Brouwer <1855

# Mapping IPA phoneme with standardised/common orthography (Brouwer early 1850s)

1	words	commons	commons_tokenised	ipa	ipa_tokenised
11	kokoh	kOko	k O k o	kɔko	k o k o
102	okoha	OkOha	O k O h a	ɔkɔha	ɔ k o h a

# Mapping IPA phoneme with standardised/common orthography (Brouwer early 1850s)

1	words	commons	commons_tokenised	ipa	ipa_tokenised
11	kokoh	kOko	k O k o	kɔko	k o k o
102	okoha	OkOha	O k O h a	ɔkɔha	ɔ k o h a

Segmentised/tokenised sound segments are (i) standard in modern lexical database and (ii) allow quantitative historical language comparison ([List & Forkel 2022](#))

# Outlines

1. What are “lexical resources”? 
2. What are the existing linguistic materials for Enggano? 
3. How do we curate these materials into lexical resources? 

## Closing

Enggano has rich resources of legacy materials for historical lexical database

## Closing

Digitisation and curation processes involve a range of domain-specific knowledge:

*linguistics  
computational/coding  
data(base) management*

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UK Research and Innovation (UKRI): Arts and Humanities  
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Programs (Master & Doctoral) ; Faculty of Humanities

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Arts and  
Humanities  
Research Council



# Aspects in curating lexical resources for Enggano

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Enggano Research Seminar at the Faculty of Humanities, Udayana University (18 March 2024)