



Angus McIntosh Centre
for Historical Linguistics

Corpus of Historical
Mapudungun



The Morpho-Phonology of Affect

Mapudungun kinship terms then and now

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THE UNIVERSITY
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Roadmap

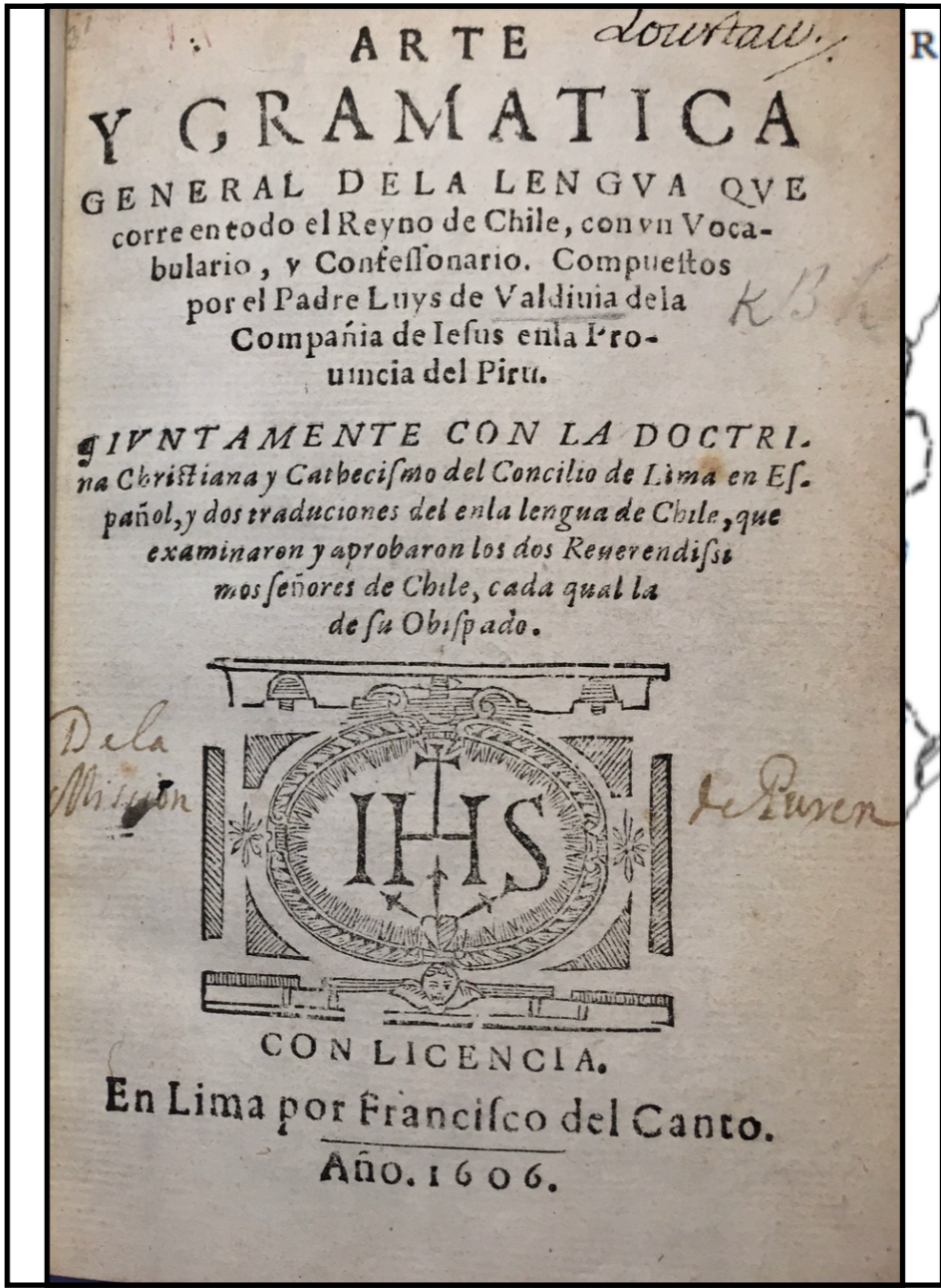
- The Mapuche people and their language
- The rich coronal consonant inventory of Mapudungun
- Affective alternations: palatalisation and dentalisation
- Consonant alternations as evaluative morphology
- Diachrony: lexicalisation and morphologisation
- Affect-laden domains: kinship and terms of endearment
- Consonantal affect, Mapuche kinship terms and the construction of affinity

Mapudungun

- A.K.A. Mapuche, *Araucanian
- Ancestral tongue of the Mapuche people
- Presumed isolate
- ±200,000 speakers today (optimistically)
- Documented since early 17th century



Early contact history



Incan conquest

Spanish conquest

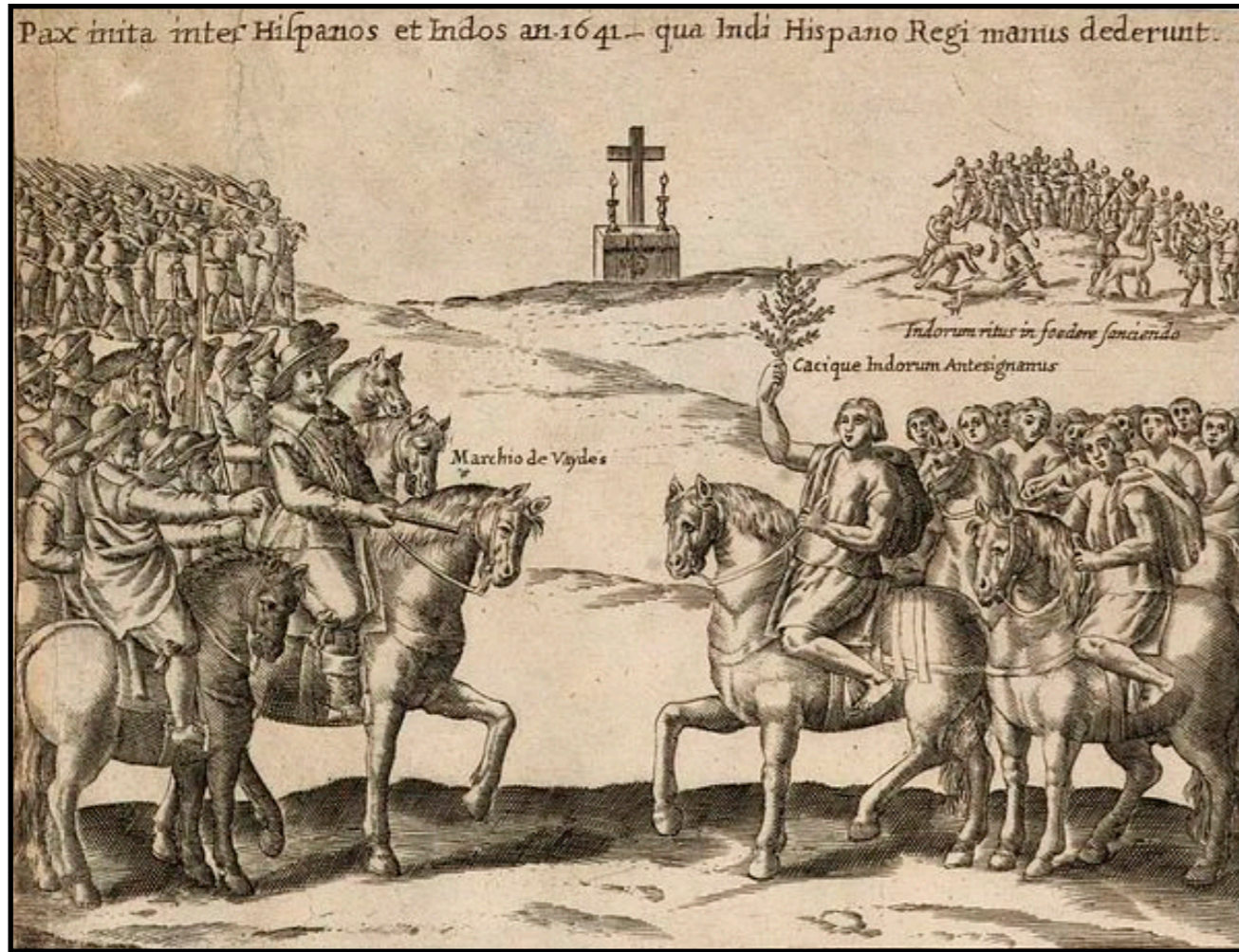
First grammar

1470s

1541

1606

'La Frontera'



Incan conquest Spanish conquest First grammar Treaty of Quilín

1470s 1541 1606 1641

Independence (for some)



Incan
conquest

Spanish
conquest

First
grammar

Treaty of
Quilín

Chilean
independence

Occupation of
Araucanía

1470s

1541

1606

1641

1810

1861-1883

The Mapuche Nation



Incan conquest

Spanish conquest

First grammar

Treaty of Quilín

Chilean independence

Occupation of Araucanía

1470s

1541

1606

1641

1810

1861-1883

The territorial battles continue



- The 'Mapuche Conflict' is a major political issue in Chile today
- Territorial reclamations have intensified as militarisation increases

Kinship then and now



- The Mapuche family has become progressively more nuclear
- We can attempt to reconstruct the kinship terms and structures of the 300-year nationhood period

Mapudungun: morphological structure

- Mapudungun is usually treated as polysynthetic and agglutinating
 - The locus of these features is the verb
 - Nominal incorporation is well attested
 - Nouns are morphologically rather boring (**but... evaluative morphology!**)
 - The morphology is exclusively concatenative (**well... almost!**)

/pɪ̃naŋ-tuku-lel-ŋe-ke-rke-j-m-i/

place-ASP-APPL-PASS-HABIT-REP-IND-2-SG

‘they say you are usually placed directly onto it’

/aθkintu-we-ŋiʎa-n-mansun-kijaw-i/

watch-new-buy-PTCP-ox-AMB-IND.3

‘They(he/she/it) go around watching recently bought oxen’



Mapudungun consonants

	Labial	Dental	Alveolar	Retroflex	Postalveolar/ Palatal	Velar
Stop/affricate	p	t̪	t	ʈʂ	t͡ʃ	k
Fricative	f	θ	s	ʂ	ʃ	
Nasal	m	n̪	n		ɲ	ŋ
Lateral		l̪	l		ʎ	
Approximant	w				j	ɰ

(based on Sadowsky et al. 2013)

- Key distinction between *peripheral* and *coronal*
- Rich coronal inventory, including a robust dental-alveolar contrast

Dental-alveolar contrast in Mapudungun

- This is backed up by a number of more recent phonetic studies:
 - Sadowsky *et al.* 2013, Fasola *et al.* 2015, Painequeo *et al.* 2018, Mena and Salamanca 2018, Figueroa *et al.* 2019,

/mɪ_{n̪}a/
‘cross-cousin’



/mɪ_{n̪}a/
‘enough’



Stops	Nasals	Laterals	Fricatives
[t̪ən] ‘head louse’	[mɐ. _{n̪} a] ‘cousin’	[ki. _{l̪} a] ‘bamboo’	[θa.kel] ‘pact/agreement’
[tən] ‘high sound’	[mɐ.na] ‘much’	[ki.la] ‘three’	[sa.ku] ‘sack’(<Spa.‘saco’)

'Expressive' alternations in Mapudungun



- María Catrileo Chiguailaf
 - 1986: *La variación estilística en el nivel fonológico del mapudungun*
 - 2010: *La lengua mapuche en el Siglo XXI*
 - 2022: *La importancia de los enunciados simbólicos en la mantención del mapudungun en Chile*

“The expression of affective values in Mapudungun takes place via sound alternations” (Catrileo 1986:12)

'Expressive' alternations in Mapudungun

- Fresia Loncon Antileo: 2021-2025 (elicitations)



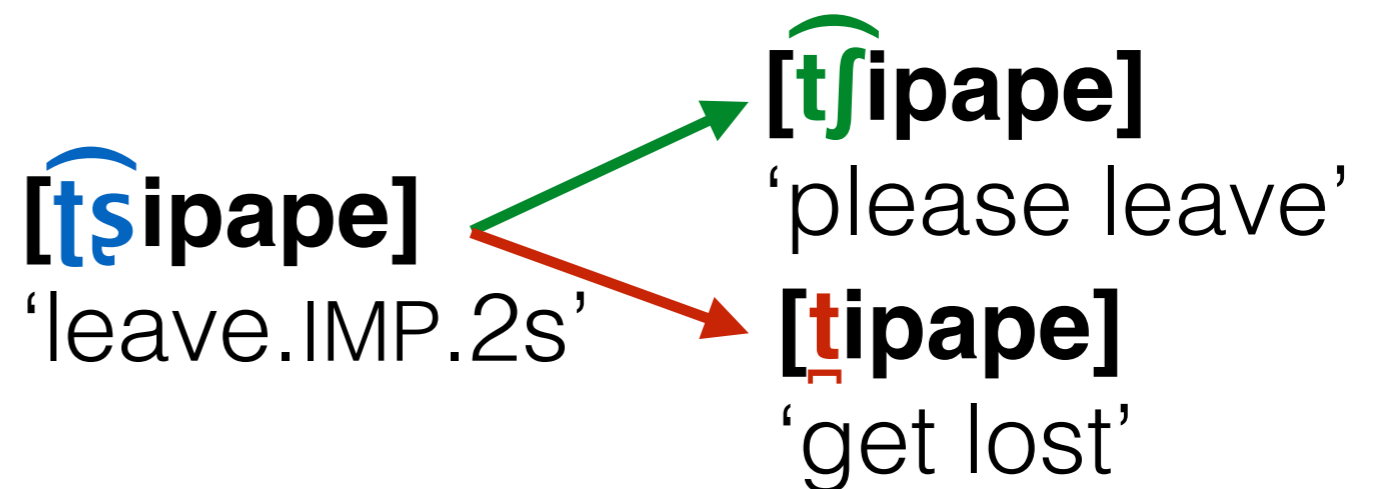
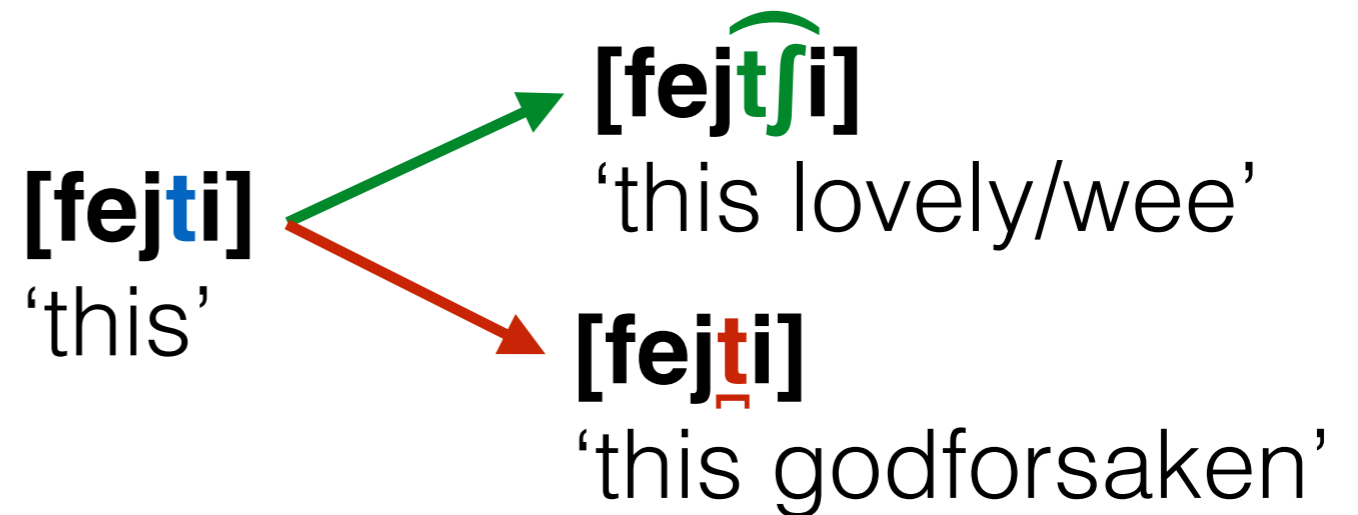
'Expressive' alternations in Mapudungun

t > **tʃ** (positive)

t > **t̚** (negative)

tʃ > **tʃ** (positive)

tʃ > **t̚** (negative)



'Expressive' alternations in Mapudungun

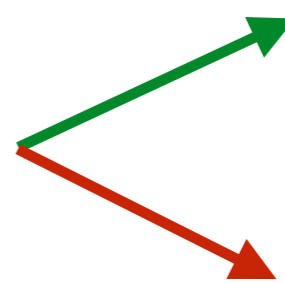
n > **ɲ** (positive)

z > **ʃ** (positive)

n > **ɲ̄** (negative)

z > **θ** (negative)

[**n**az**z**ki]
'cat'



[**ɲ**a**ʃ**ki]
'kitty'

[**ɲ̄**a**θ**ki]
'damn cat'



[**n**az**z**ki]

[**ɲ**a**ʃ**ki]



[**ɲ̄**a**θ**ki]



'Expressive' alternations in Mapudungun

Negative

Neutral

Positive

Dental	Alveolar	Retroflex	(Alveolo-) Palatal
t̪	t	ʈ	tʃ
θ	s	ʂ	ʃ
n̪	n		ɲ
l̪	l		ʎ



'Expressive' alternations in Mapudungun

Neutral		Neutral		Affection
Dental	Alveolar	Retroflex	(Alveolo-) Palatal	
t̪	t	ʈ	tʃ	
θ	s	ʂ	ʃ	
n̪	n		ɲ	
l̪	l		ʎ	

θ > ʃ (positive)
l̪ > ʎ (positive)

[θewmalen] → [ʃewmaʎen]
'do x for me' → 'please do x for me'

'Expressive' alternations in Mapudungun

Deprecation

Neutral

Neutral

Dental	Alveolar	Retroflex	(Alveolo-) Palatal
t̪	t	ʈ	tʃ
θ	s	ʂ	ʃ
n̪	n		ɲ
ɬ	l		ʎ

ʎ > ɬ (negative)

t > t̪ (negative)

[aʎkituen]
'listen to me'



[alkit̪uen]
'listen, already!'

'Expressive' alternations

- The range of meanings of the processes varies widely.
- Examples from Catrileo 1986, 2010:

Neutral	Neutral gloss	Affected	Affected gloss
si λ o	'partridge'	ʃi λ o	'little/lovely partridge'
		θi λ o	'annoying partridge'
nilan	'I did not grab'	n $\dot{\lambda}$ ilan	'please, believe me, I did not grab'
		n $\dot{\lambda}$ il $\dot{\lambda}$ an	'I did not grab (how dare you suggest it)'
ni $\dot{\lambda}$ sam	'conversation'	n $\dot{\lambda}$ i $\dot{\lambda}$ sam	'a nice chat'
		n $\dot{\lambda}$ i $\dot{\lambda}$ am	'to have words'
t $\dot{\lambda}$ ipape	'let them out!'	t $\dot{\lambda}$ i $\dot{\lambda}$ pape	'let the poor souls out'
		t $\dot{\lambda}$ i $\dot{\lambda}$ pape	'let them out, if you must'
mi $\dot{\lambda}$ ke	'toasted flour'	mi $\dot{\lambda}$ ke	'yummy toasted flour'
		mi θ ke	'yucky toasted flour'

θewmalen	'prepare this for me'	ʃewmalen	'please, prepare this for me'
θomo	'woman'	ʃomo	'kind/lovely woman'
t $\dot{\lambda}$ alin	'greeting'	t $\dot{\lambda}$ alin	'unpleasant greeting'
t $\dot{\lambda}$ e	'person'	t $\dot{\lambda}$ e	'unpleasant person'

'Expressive' alternations?

- Range of emotional/pragmatic meanings
 - **Catrileo (2010):** 'stylistic' alternations in Mapudungun
 - **'a position of linguistic politeness can be marked as emotional, contemptuous or sarcastic when it is pronounced in a manner that differs from the usually accepted patterns for the occasion'**(52)
- Can be treated as processes of **morphological derivation of the evaluative type:**
 - *diminutives* (palatalisation)
 - *augmentatives* (dentalisation)
- (see Bauer 1997, Grandi & Körtyvélyessy 2015, Merlini Barbaresi 2015, and Molineaux 2025 specifically for Mapudungun)

Alternations as evaluative morphology

Ponsonet 2018: *Diminutives and augmentatives do not contrast sharply with respect to emotional valence (positive or negative), but while diminutives are anchored in intimacy, the emotions conveyed by augmentatives more often relate to broader social contexts.*

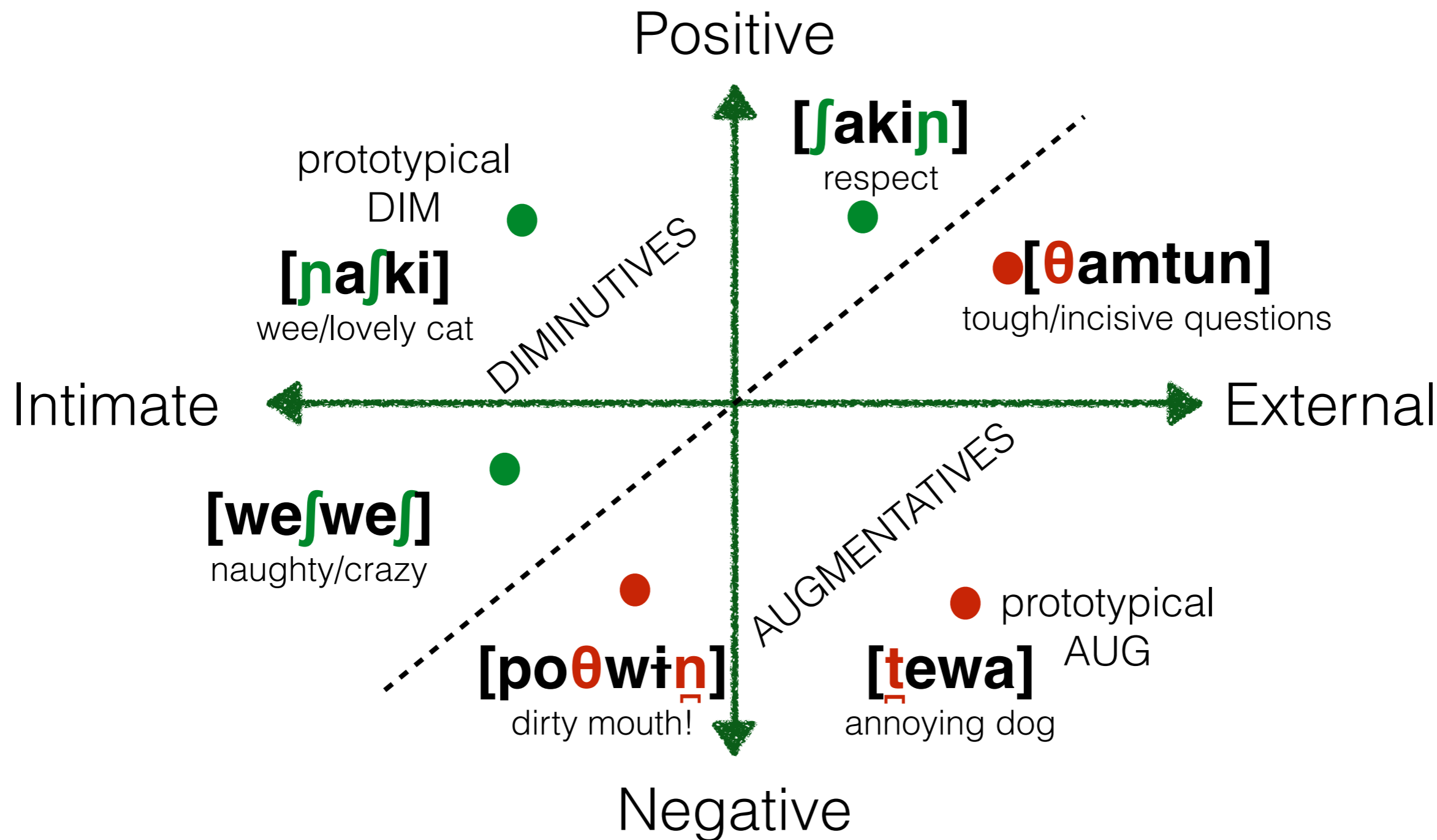
○ **Palatalisation as diminution**

- small size ✓
- tenderness/compassion ✓
- pleasure/love ✓
- politeness/deference ✓
- sarcasm/ridicule ✓

○ **Dentalisation as augmentation**

- large size/quantity ?
- rudeness/pejoration ✓
- indifference ✓
- sarcasm/distaste ✓
- respect/admiration ✓

Emotional space of DIM v. AUG



Alternations and sound symbolism

- Are these patterns sound-symbolic?
 - ‘the expressively symbolic character of sounds quite aside from what the words in which they occur mean in a referential sense’ (Sapir: 1929: 225).
 - ‘non-arbitrary mappings ... between phonetic properties of labels and perceptual properties of their referents’ (Knoeferle: 2017: 1).
 - High vowels and **palatal consonants** are well-known indicators of small size and their emotional correlates (Nichols 1971, Ohala 1994, Alderete & Kochetov 2017, Winter & Perlman 2021, Akita et al. 2024)
 - The same has been claimed for **low vowels and dorsal consonants (not so for dentals!)**

The Frequency Code

- Synaesthetic sound-symbolism: ‘acoustic symbolisation of non-acoustic phenomena’ (Hinton et al 1994)
- Size-based patterns follow a **‘frequency code’** (Ohala 1994, 2006)
 - Higher acoustic frequency indicates small size, while lower frequency indicates large size
 - This appears to be an ethologically-motivated pattern
 - Speakers are attuned to this and recognise it in lab settings (Sapir 1929 ... Calhoun et al. 2024)

‘small/sharp/fast’

high tones

high F2 vowels

higher frequency consonants*

‘large/soft/slow’

low tones

low F2 vowels

lower frequency consonants*

The Frequency Code & Mapudungun

- Cross-linguistically, palatals have the overall highest F2 transitions by place of articulation (Nirgianaki 2014; Tabain *et al.* 2020)
- Labial and velar consonants have the lowest F2 transitions
- A coronal v. peripheral distinction would be expected to follow the frequency code (Ohala 1994)
- *Among coronals*, dentals have the lowest F2 transitions (Fasola *et al.* 2015, Figueroa *et al.* 2019)
- These associations are both culturally and structurally embedded:
 - language-specific pragmatics
 - restricted to coronal place
- Consonantal articulations realised with the tongue blade have a special status in Mapudungun, both structurally and semantically.

Some formalisation...

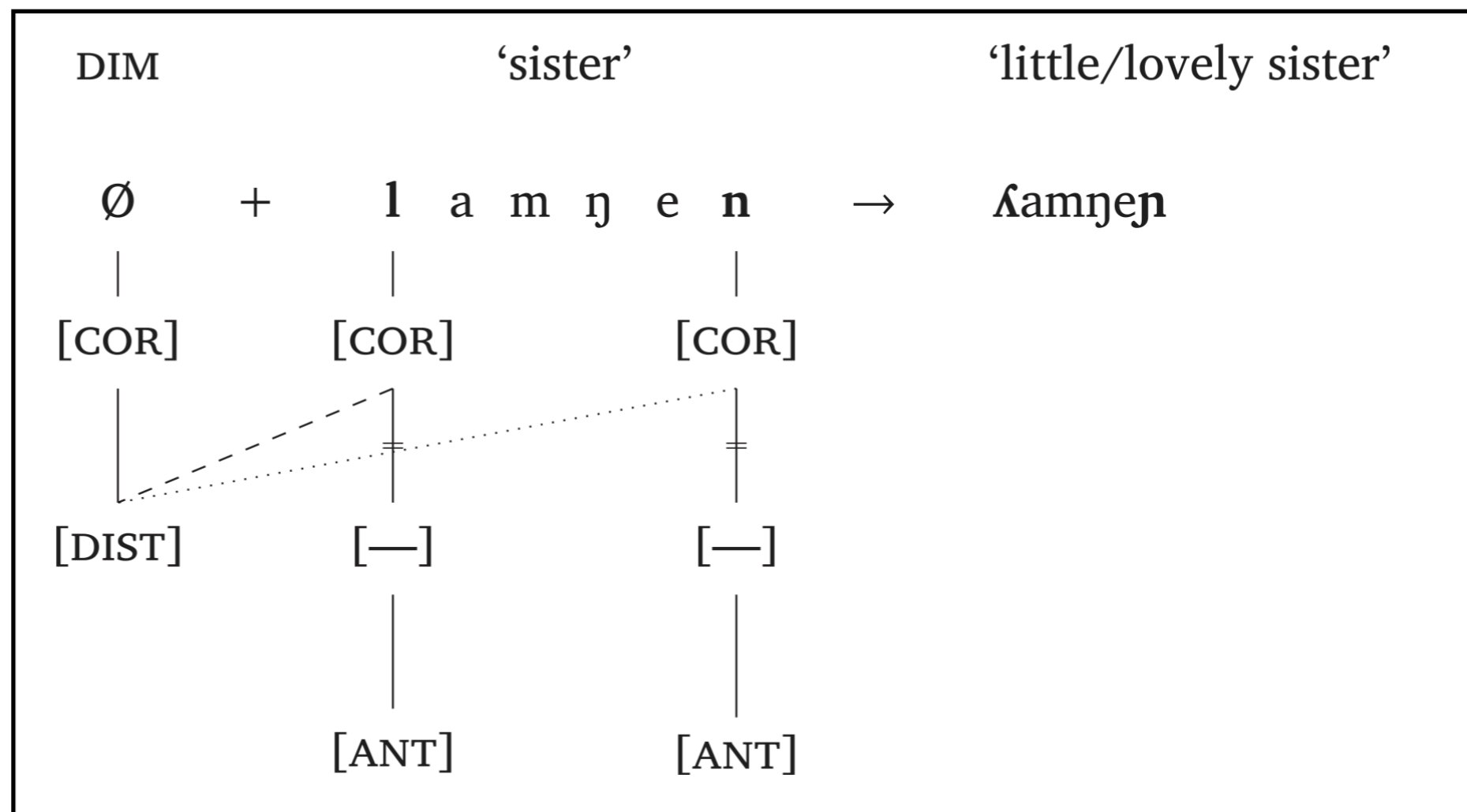
- Mapudungun coronal consonant contrasts: a four-way contrast

Coronal			
laminal		apical	
anterior	posterior	anterior	posterior
t̪	t̠	t	t̠
θ	ʃ	(s)	z̠
n̪	ɲ	n	
l̪	ʎ	l	

Some formalisation...

Diminutive (DIM)

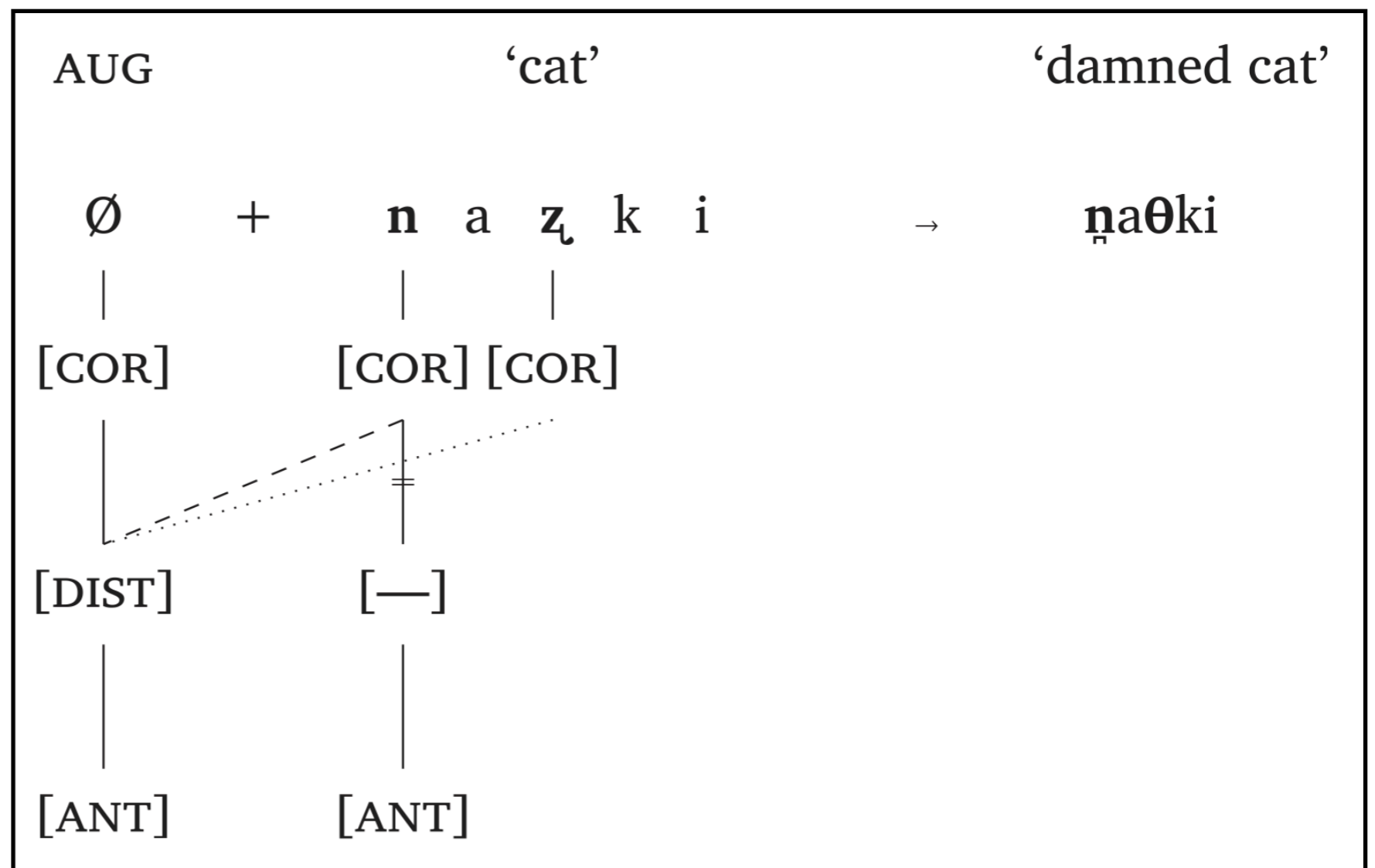
[COR]
|
[DIST]



Some formalisation...

- ‘Affective alternations’ as single-feature evaluative morphemes

Augmentative (AUG)



Default laminal forms

- No evidence for evaluative origins
-

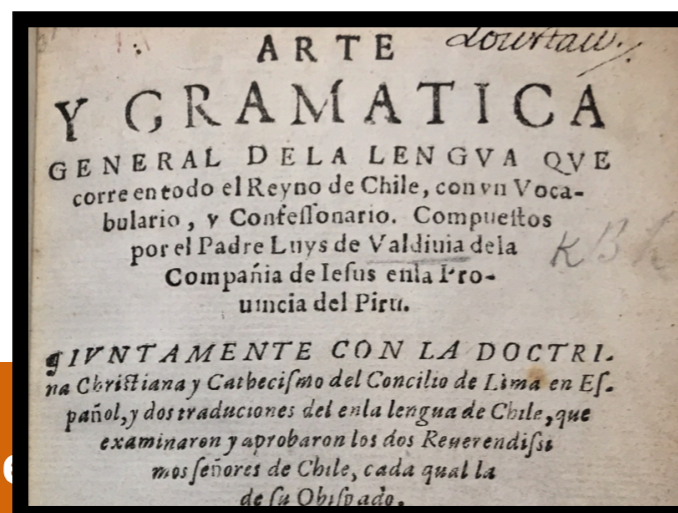
	Dental		Palatal
θiŋu-	‘speak’	paŋiŋka	‘bronze’
t̪ue	‘earth/ground’	kat̪ʃu	‘grass’
wiŋ	‘mouth’	iwiŋ	‘grease/fat’

- Likely evaluative origins (lexicalised forms)
-

weθa	‘bad’	ʃet̪ʃi	‘dwarf/gnome’
aʃa	‘bad/perverse’	pit̪ʃi	‘small/wee’
kaʃku	‘wizard’	ʃuʃu	‘newborn’
ŋape	‘slow/lazy’	ŋapa	‘beloved friend/sister’

Historical evidence

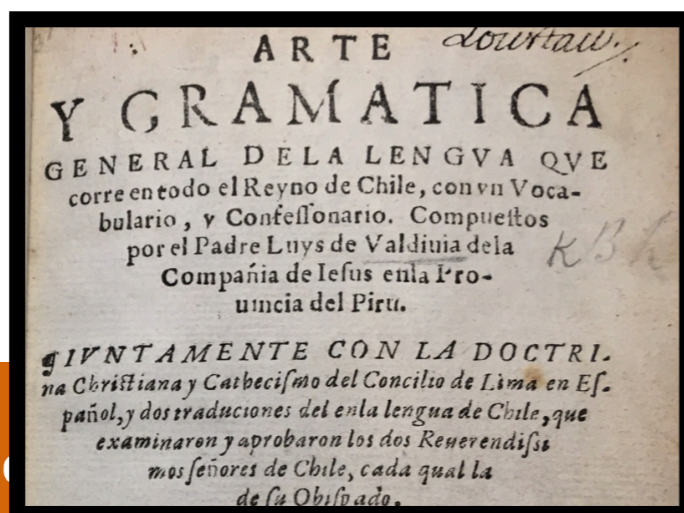
- Palatal alternations are found in earliest materials: Valdivia 1606, 1621
 - [ʎamwen] ‘dear sister’ (~[lamwen] ‘sister’)
 - [iʎim] ‘birdie’ (~[iðim] ‘bird’)
 - [ñumun] ‘good smell’ (~[numun] ‘smell’)
- Dentals are only marked sporadically – probably as a result of insufficient awareness by Spanish-speaking priests
- Two words are consistently marked as dental
 - [lan] ‘death’
 - [alit] ‘too much’



Historical evidence

- Where dentals and palatals are marked, there is a ‘affective’ skew

<code>	[koðe]	‘stupid’	<pchi>	[ptʃi]	‘small’
<huedon>	[weðon]	‘wound the head’	<cachomin>	[katʃomin]	‘pacify’
<ùden>	[iðen]	‘despise’	<ñochi>	[notʃi]	‘a bit’
<l’an>	[lan]	‘death’	<llallin>	[laʎin]	‘skinny’
<huedùduam>	[weʎiðuam]	‘cruel’	<yall>	[jaʎ]	‘child/offspring’
<lduquin>	[lukij]	‘dirty’	<lladqmin>	[ʎadkmin]	‘pity someone’
<n’otumin>	[notumin]	‘act stubbornly’	<ñomcLen>	[nomklen]	‘quiet’
<n’ou̇gen>	[noijen]	‘be pugnacious’	<ñuque>	[nuke]	‘mother’

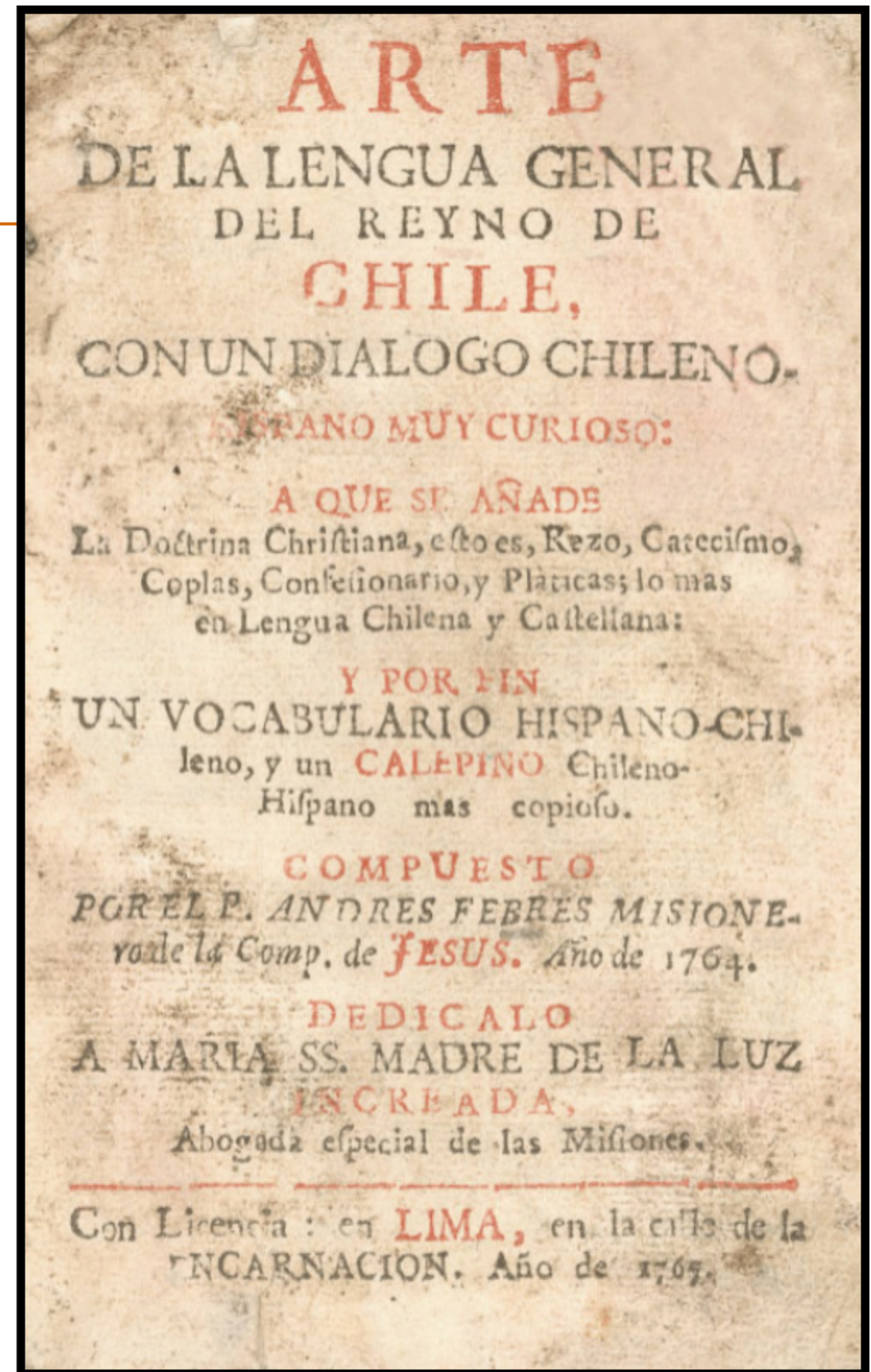


Historical evidence

- The first metalinguistic commentaries come in the 18c

Andrés Febrés'
Arte de la Lengua General del Reino de Chile
1765:6

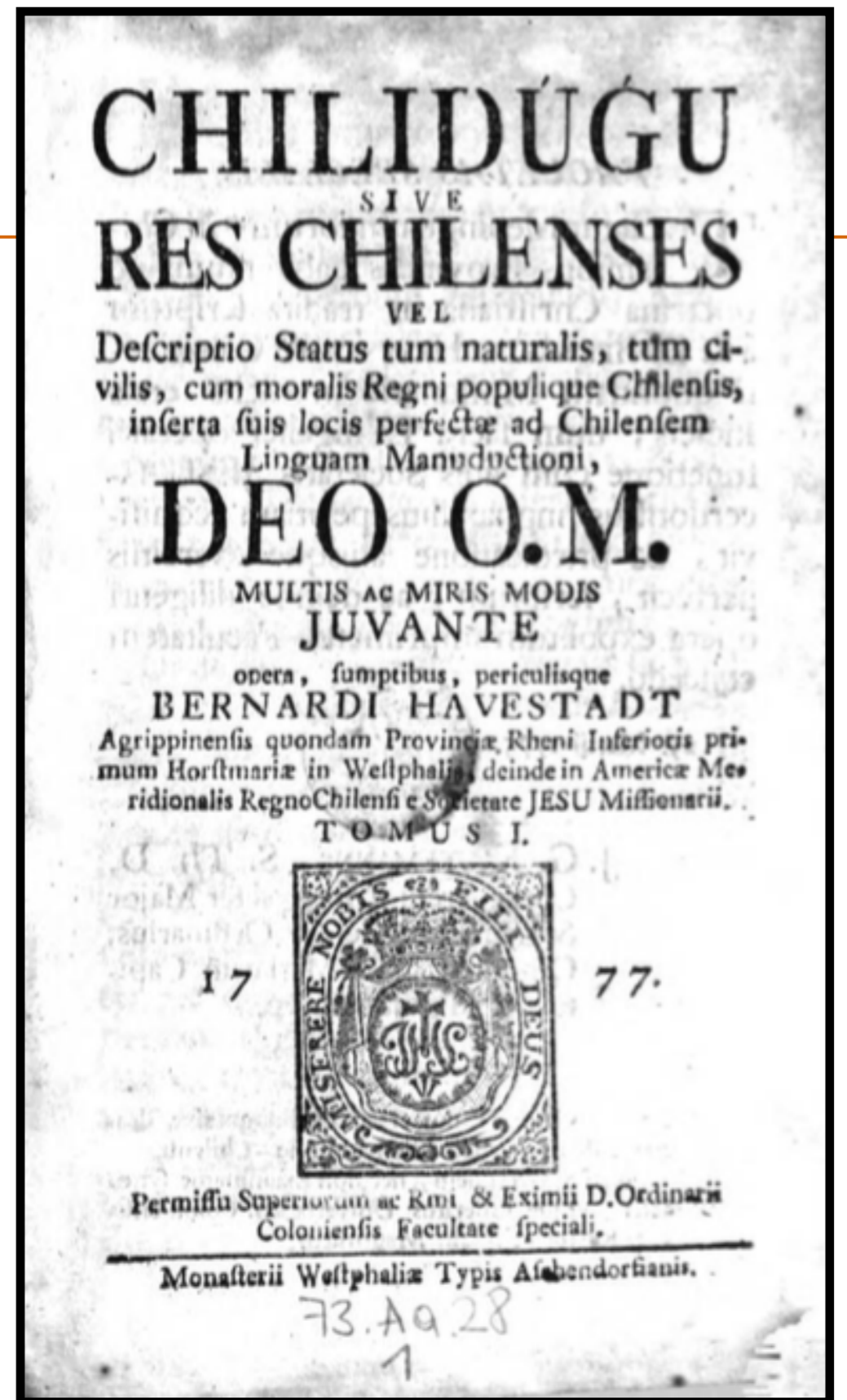
“the Indians [sic] tend to turn some letters into others... the **t** [t] and **th** [t] into **ch** [tʃ]... the **n** [n] into **ñ** [ɲ]... the **l** [l] into **ll** [ʎ]... the **r** [r] into **d** [ð] and further into the **ja, jo, ju** of Catalan or **gia** of Italian or **ge, gi** of French [ʒ], to speak affectedly”



Historical evidence

Bernard Havestadt's
Chilidúgu 1765:6

“The Chilean Tongue takes license to replace one letter for another, to create diminutives, express love, affect and tenderness, as well as elegance... e.g. *ruca* [z], *duca* [ð], *juca* [3] 'house' ”



Evidence for change in default forms

- Comparing Valdivia's 17 works to present-day usage, we see that 'affective' forms seem to have become lexicalised

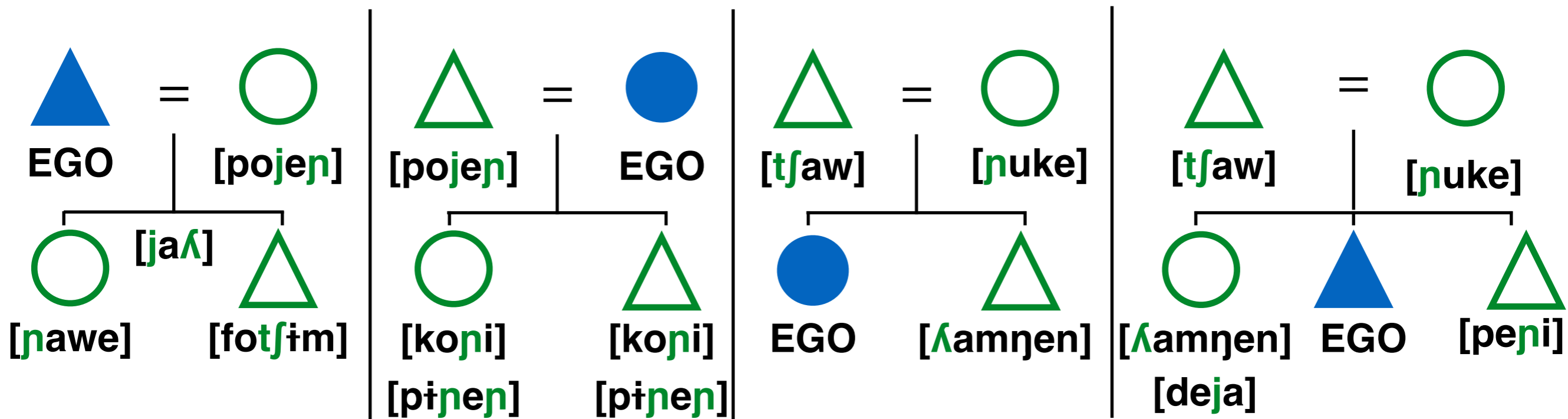
<wera>	'bad'	>	[weθa] (never [weza])
<por>	'dirty'	>	[poθ] (never [poz])
<coilla>	'lie'	>	[koj _l a] ([koj _l a] as 'affective')
<calcu>	'wizard/witch'	>	[ka _l ku] (never [kalku])

My name is [ka_lku]



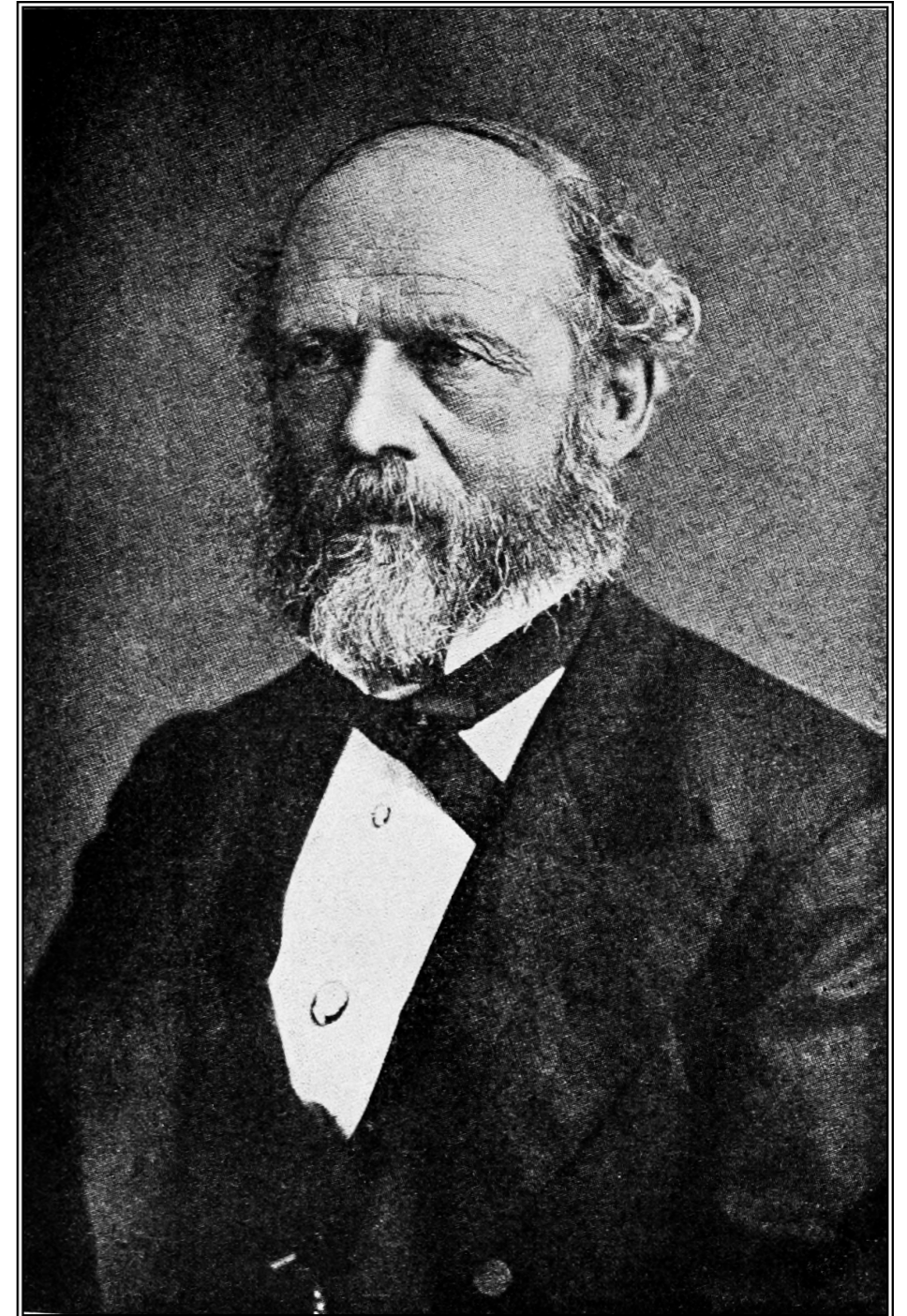
Mapudungun kinship & endearment terms

- Affect-neutral, apical coronals are virtually absent in this semantic domain
- There is very little alternation and coronals are almost always laminal
- While these are not the result of synchronic palatalisations and dentalisations, they do seem to reflect historical emotional involvement



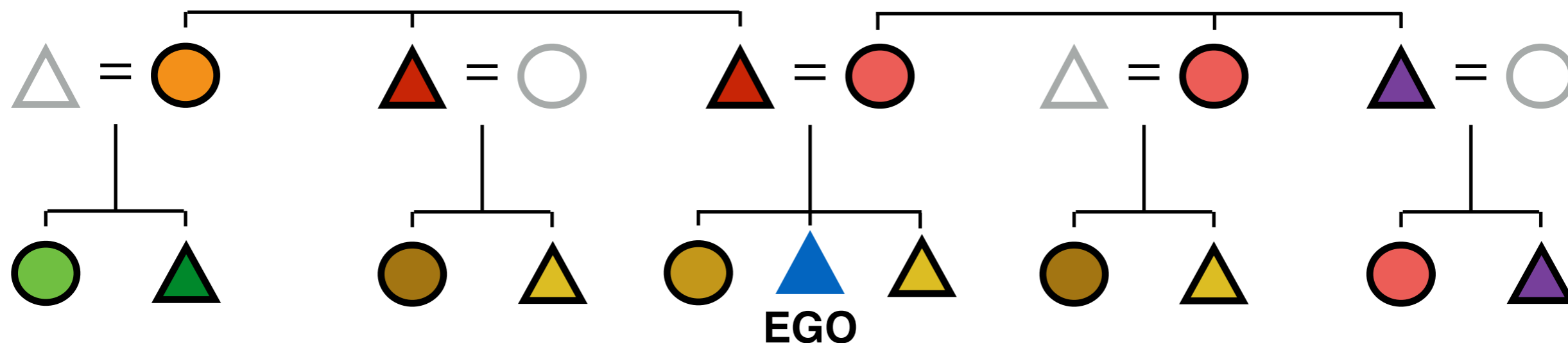
Anthropological foray: Kinship & affect

- Lewis Henry Morgan (1871):
‘terminological systems contain principles that organize social relationships in human societies’
- Goal: a typology of kinship terms as a means of understanding social ties
- Morgan’s six basic types:
 - Hawaiian, Sudanese, Eskimo, Iroquois, Crow and Omaha
- Early 20th century anthropology classed Mapuche society as roughly ‘Omaha’ (Hallowell 1943, Faraon 1956)



Omaha kinship

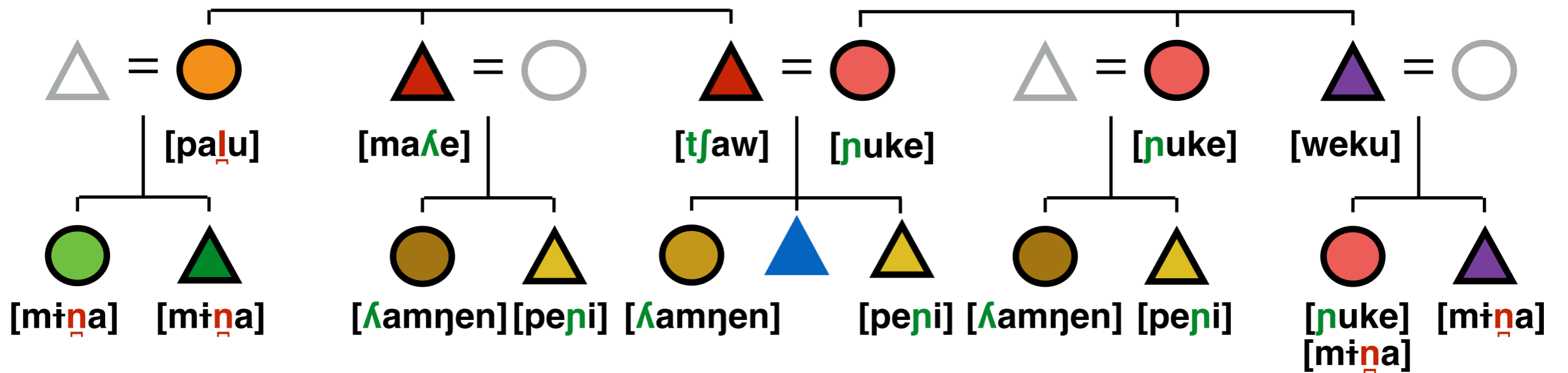
- This is an 'asymmetric' system
- Crucially, there is a difference between parallel and cross cousins



- The generations in the mother's brother's offspring are also collapsed

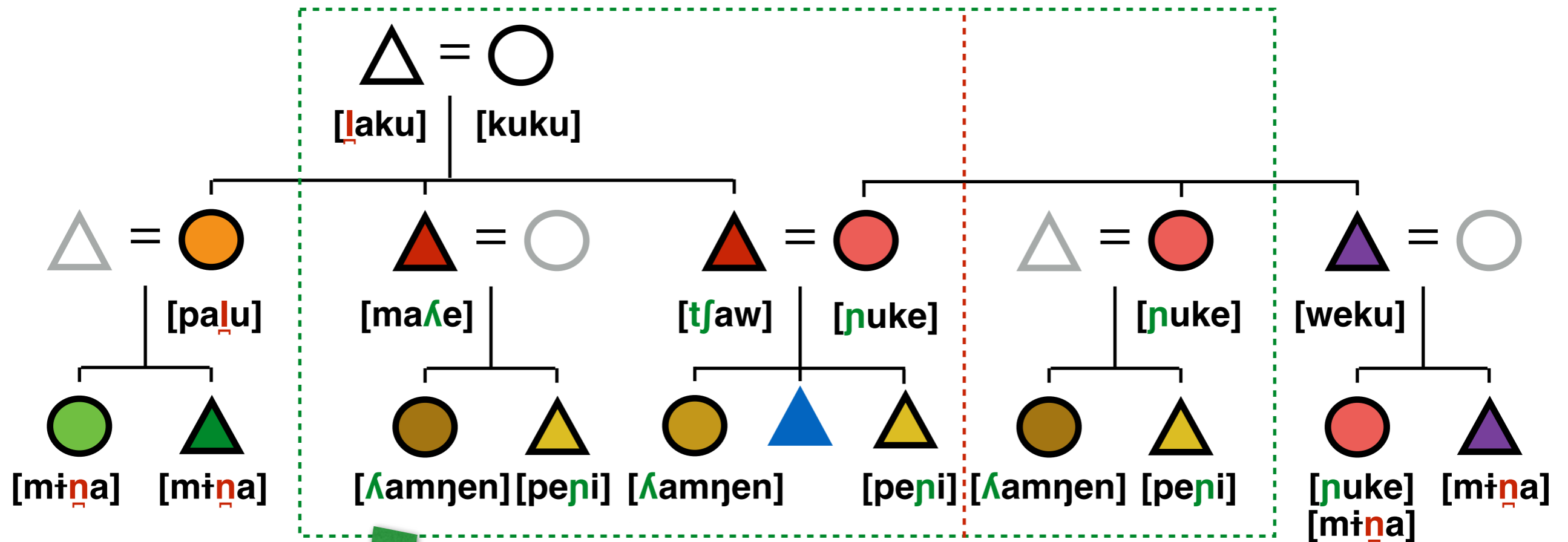
Omaha kinship and the Mapuche?

- According to Faraon 1956, this is the pattern for Mapudungun



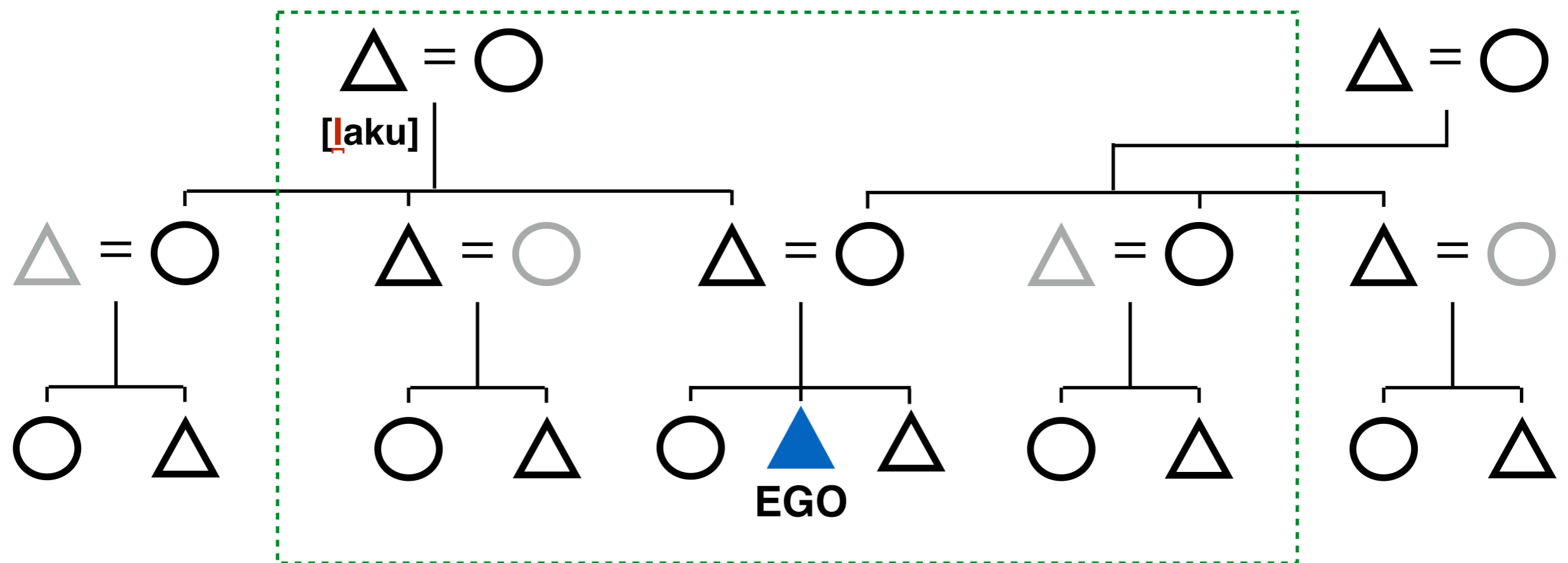
Omaha kinship and the Mapuche?

- The system is patrilineal and patrilocal, including sororal polygyny



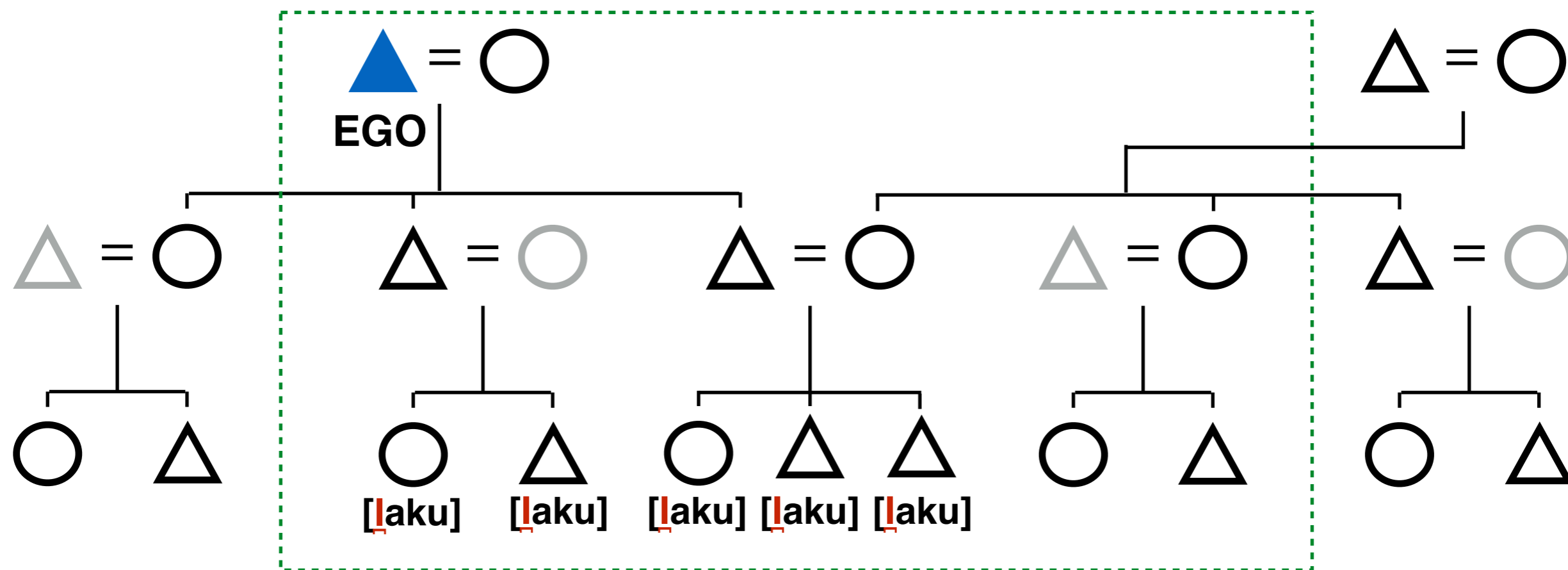
Extended Mapuche kinship

- Reciprocal naming practices



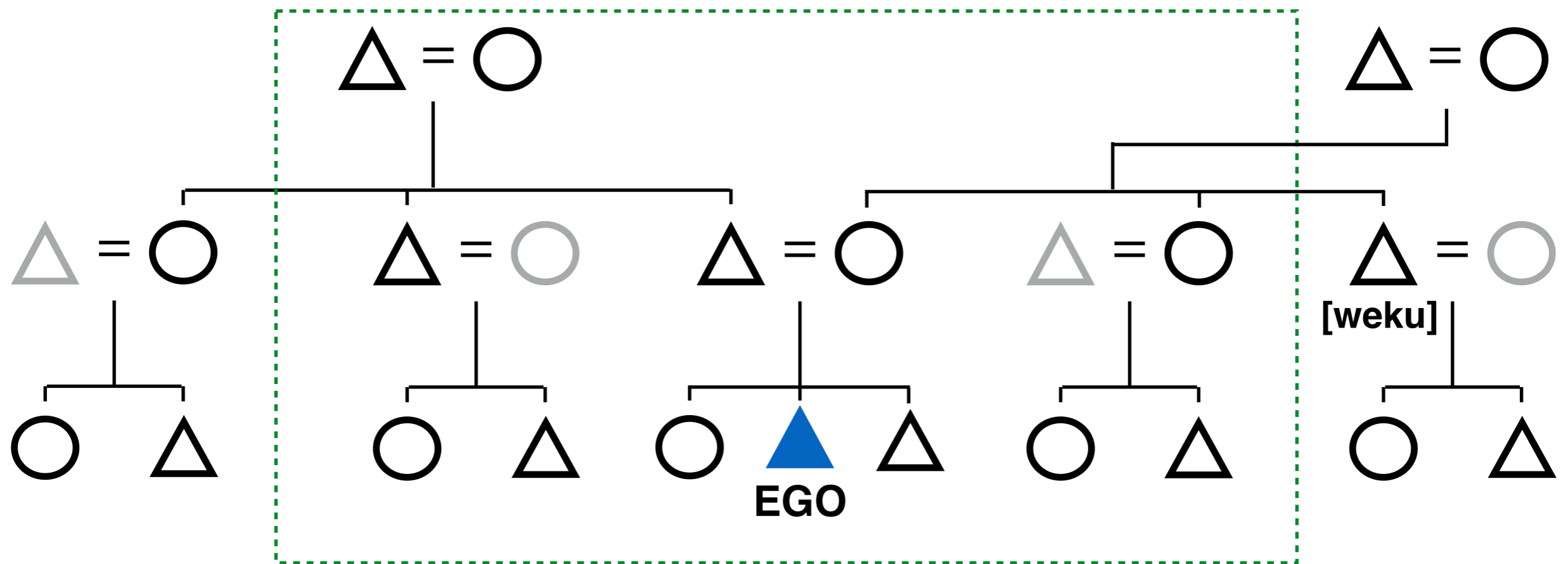
Extended Mapuche kinship

- Reciprocal naming practices



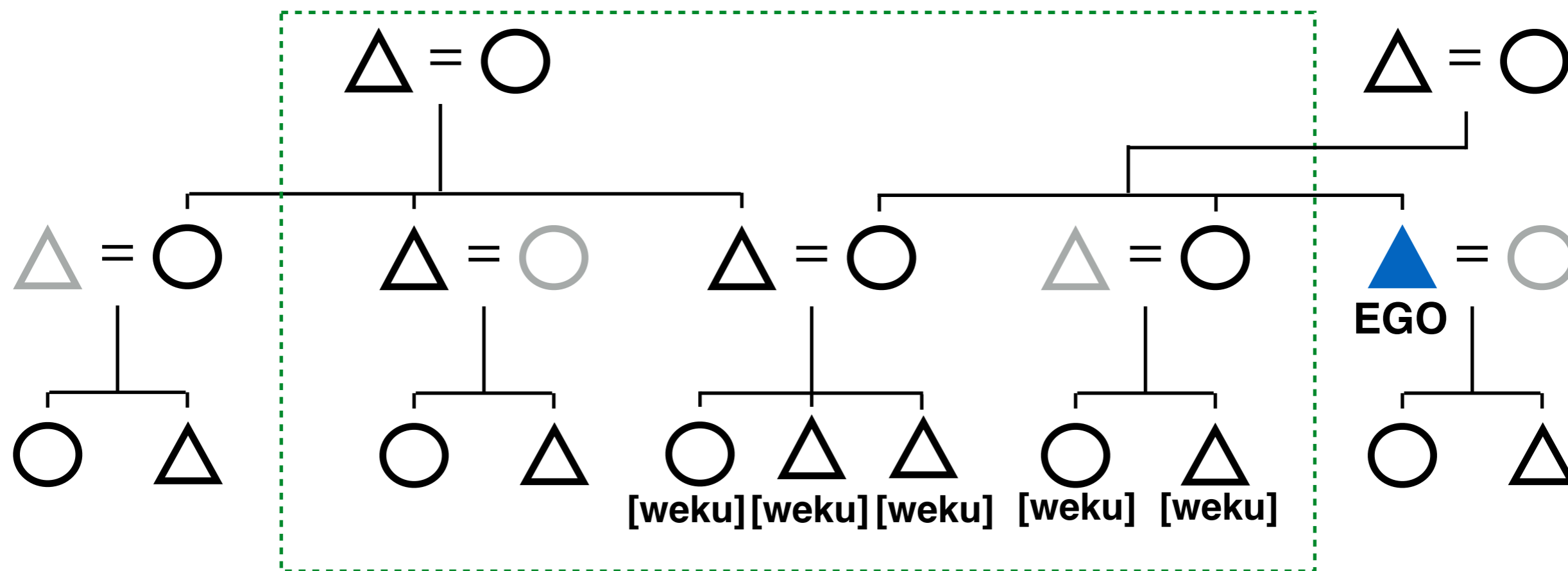
Omaha kinship and the Mapuche?

- Reciprocal naming practices



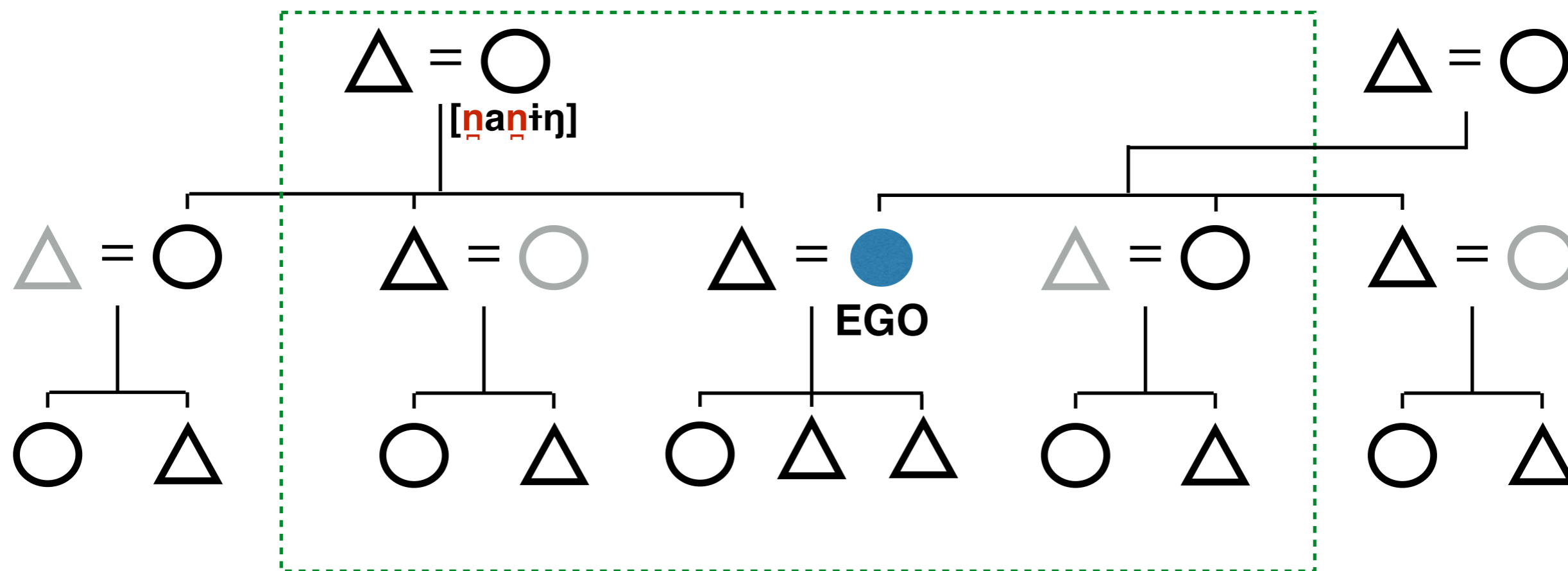
Extended Mapuche kinship

- Reciprocal naming practices



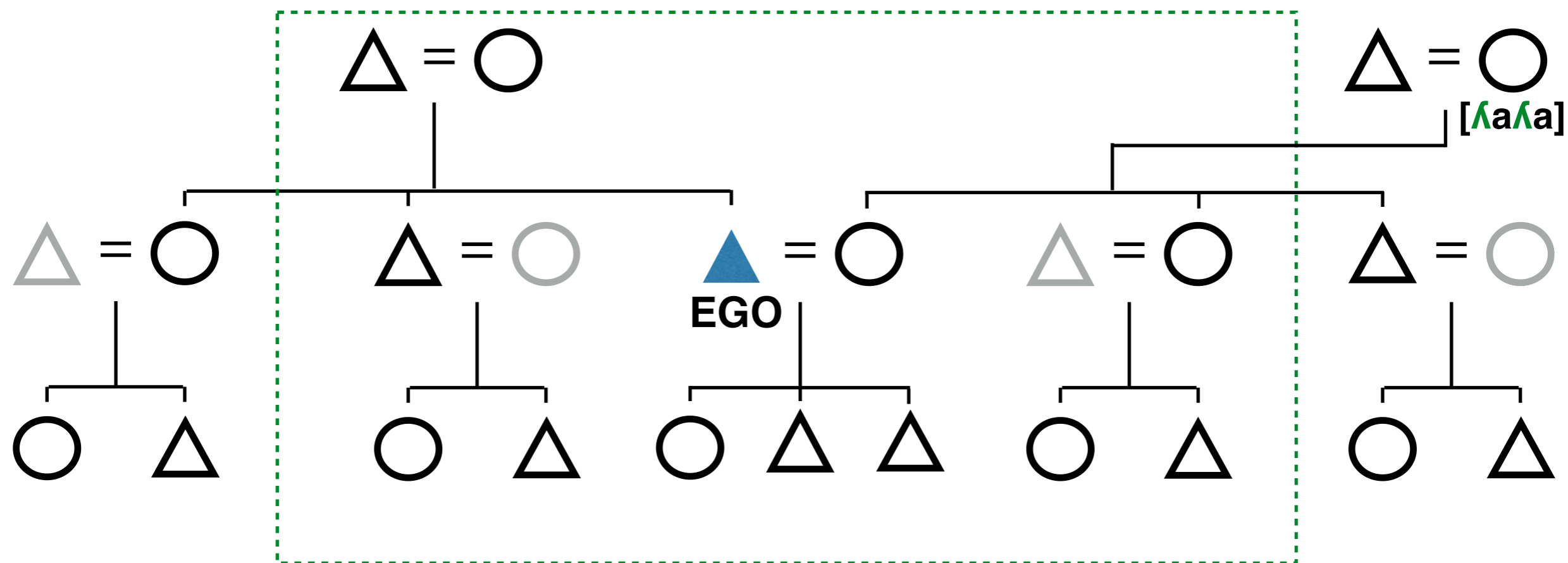
Extended Mapuche kinship

- Complicated relationships...



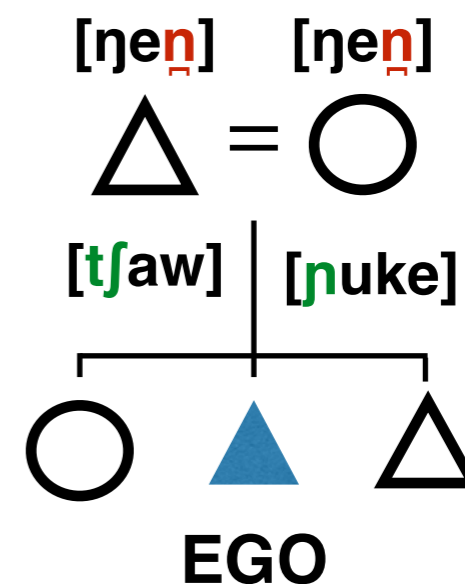
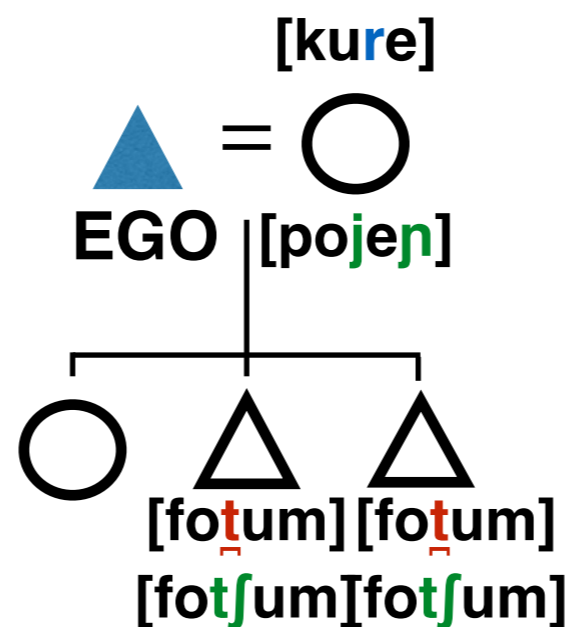
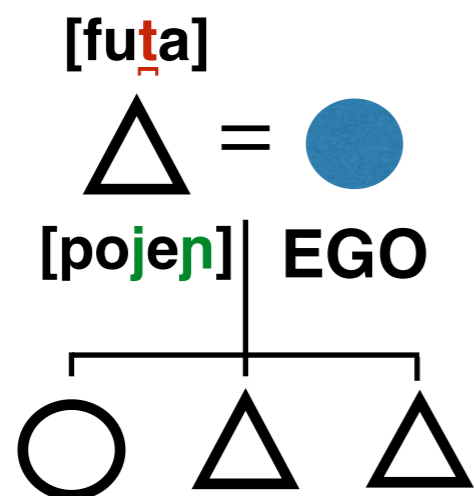
Extended Mapuche kinship

- Complicated relationships... are not symmetrical



Extended Mapuche kinship

- Two views of a relationship: hierarchy v. intimacy



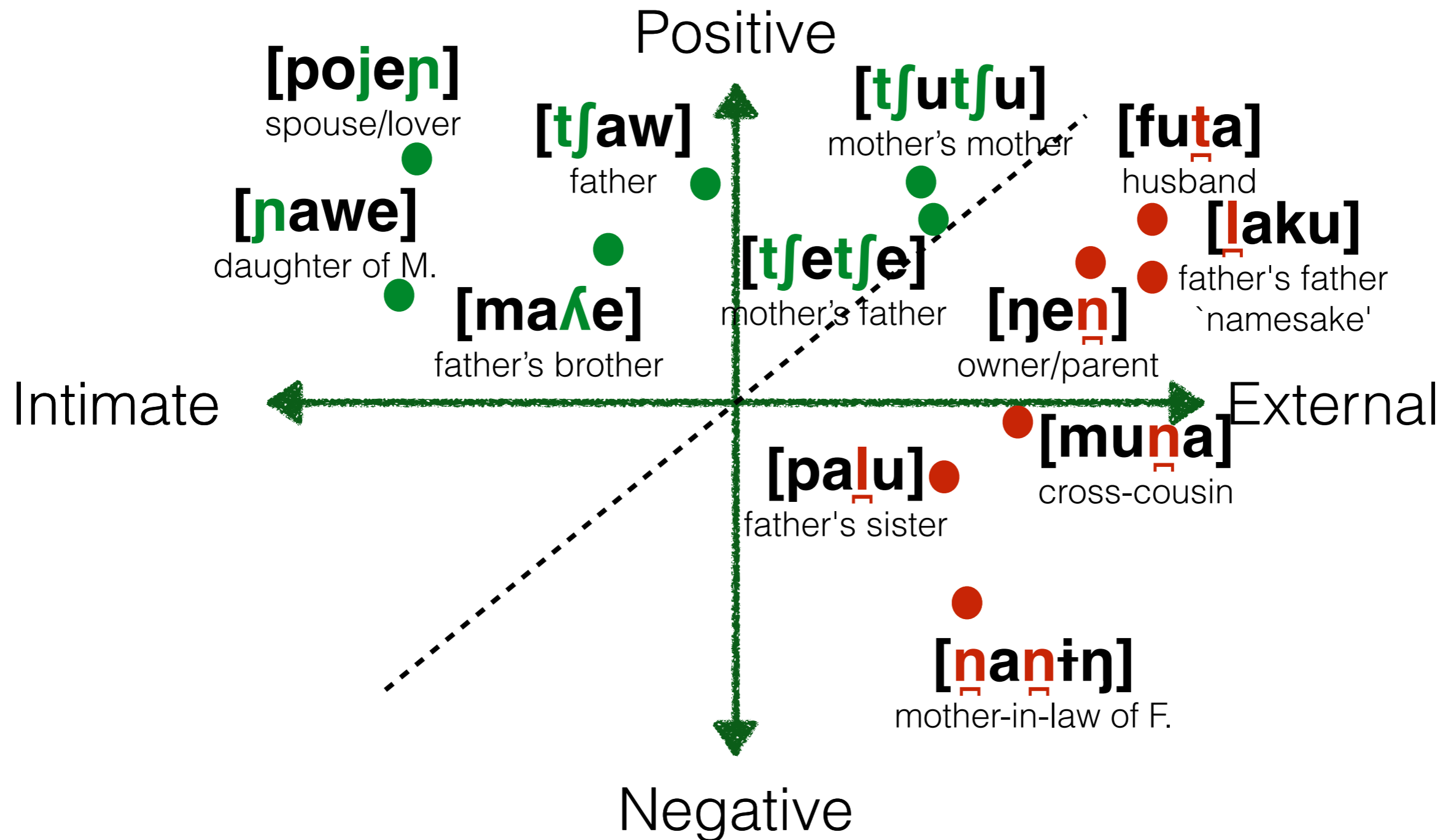
Descent and affinity

- Traditional ideas about kinship have been heavily critiqued and kinship ‘types’ are mostly out of vogue
- The categories of descent (blood) and affinity (marriage) do not appear to be cross-culturally neutral
- Western anthropology is biased towards assuming that descent is a ‘given’ category, while affinity is constructed through social pacts
- An alternative, emerging from Amazonian anthropology, is that affinity is ‘given’ (Lévi-Strauss 1934, Rivière 1984) while descent relations are a sub-category of affinity (Viveiros de Castro 2001)
- The default – unmarked – relation is one of distance and danger where sociality begins by establishing affinal relationships – creating bonds, treaties from potential affinity and reaching their deepest ties in *consanguinity*

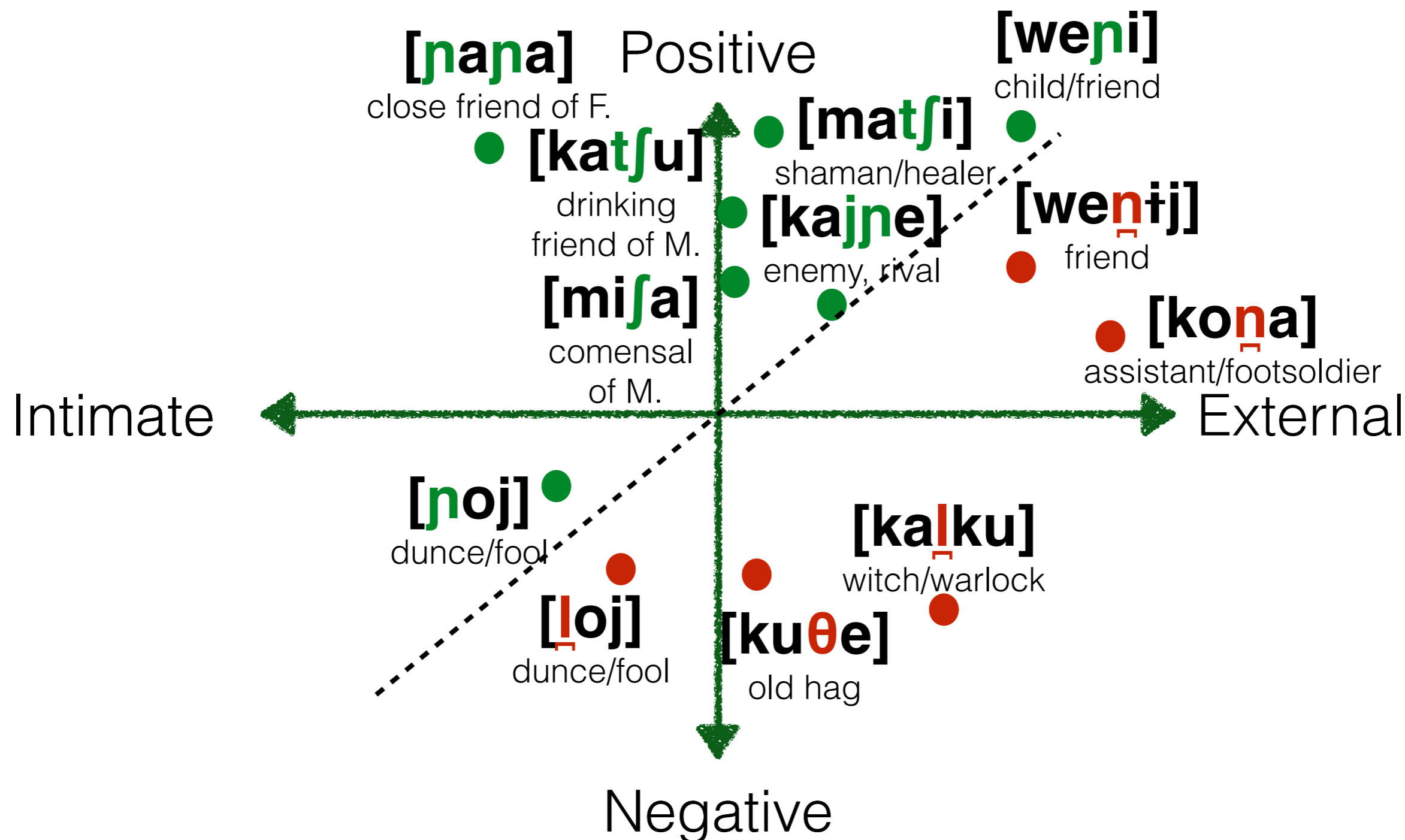
Kinship and evaluative morphology

- Following Magnus Course (2005, 2011), the Mapuche seem to have quite a bit of flexibility in terms of defining the closeness of bonds with non-virilocal relatives.
 - In this sense, their ‘kinship’ v. ‘friendship’ (i.e. their degree of affinity) is built through sociality
- Evaluative morphology gives us a window into how these degrees of affinity have been constructed both in explicit kinship relations and in broader sociality terms

Emotional space of Mapuche kinship



Broader affinity among the Mapuche



Conclusions

- Coronal place alternations in Mapudungun can be accounted for by affective, likely heavily conventionalised sound-symbolic patterns
- These patterns can be modelled as morphological processes of diminution and augmentation
- They show evidence of being deeply embedded in the phonology
- In this sense, they exemplify what Rhodes (1994) terms ‘tame’ sound symbolic patterns (as opposed to ‘wild’ ones)
- The alternations can be traced back to the earliest records

Conclusions:

- ◉ Lexicalised diminutive and augmentative morphology is particularly prevalent in the context of kinship terms
- ◉ Diminution with the implication of intimacy and positive affect appears to be the most common pattern, applying primarily to the patrilocal family
- ◉ Notable exceptions are augmentatives found in contexts of intense hierarchical distancing/conflict, as in the figure of the paternal grandfather and the mother-in-law of a woman
- ◉ Cross cousins, who are traditionally non-local, are by default distant from the nuclear family and need to be 'brought in' via marriage or gift-giving
- ◉ Avuncular relationships (with non-local uncles) appear to be an area for the construction of social ties and may manifest as distant or intimate
- ◉ Morpho-phonological alternations can tell us something about historical social structure!

Acknowledgments



Fresia Loncon



Magnus Course



References

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Thanks!
[tʃaltu maj]



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‘Expressive’ alternations?

(4) Palatalisation as mitigation in Febrés (1765)²⁶

inche *coyllatupaquelayu*

intʃe *kojʌa-tu-pa-ke-la-ju*

1s lie-TR-CIS-HAB-NEG—1s.A.2s.P

‘I don’t come here to tell you (little) lies’

(5) Palatalisation as deference in (1930: 14)³⁴

a. *Mëtewe shakiņefui* *fillpëlle tēfachi mapu mew*

mətewe ʃaki-ņe-fu-j *fiʌ-pəʎe təfatʃi mapu mew*

much think-PASS-RI-3.IND all-near this land in

‘He was much respected by all in these parts’

The Frequency Code & Mapudungun

- These associations are both culturally and structurally embedded:
 - language-specific pragmatics
 - restricted to coronal place
- Consonantal articulations realised with the tongue blade have a special status in Mapudungun, both structurally and semantically.
- Lexicalised affective forms contribute to this percept: they provide evidence for learners of what may synchronically be seen as phonaesthetic behaviour (like /sw/-initial words in English)
- The sound symbolic nature of the key Mapudungun processes is patently ‘tame’ in the sense of Rhodes (1994), demonstrating a high degree of cultural and structural embeddedness.
- The ‘affective’ shifts do not produce new segments but repurpose the ones at hand just enough to convey their meaning.

Productive alternations and lexicalisation

Category	Dental	Palatal
Productive alternation	t̪sewa~t̪ewa ‘dog~damn dog’	t̪sewa~t̪sewa ‘dog~doggy’
Long-term lexicalisation	ali ‘much’ n̪aj ‘woe’ mol̪- ‘be wrong’	pit̪si ‘small’ aʌa ‘pretty’ ɲom- ‘be calm’
Recent lexicalisation	kalk̪ku < kalku ‘wizard’ poθ < poz̪ ‘dirty’	fisk̪u < Sp. <i>fresko</i> ‘fresh/cool’ manʃun ‘ox’ < Sp. <i>manso</i> ‘tame’
Semantic split	in̪un̪ ‘foul-tasting’~ inun ‘hold water in the mouth’ kuθe ‘nasty old woman’~ kuze ‘wife’	ʃaki- ‘respect’~ zaki- ‘think’ weɲi ‘boy/child’~ weɲuj ‘friend/trainee’ kufe ‘lovely old woman’~ kuze ‘wife’