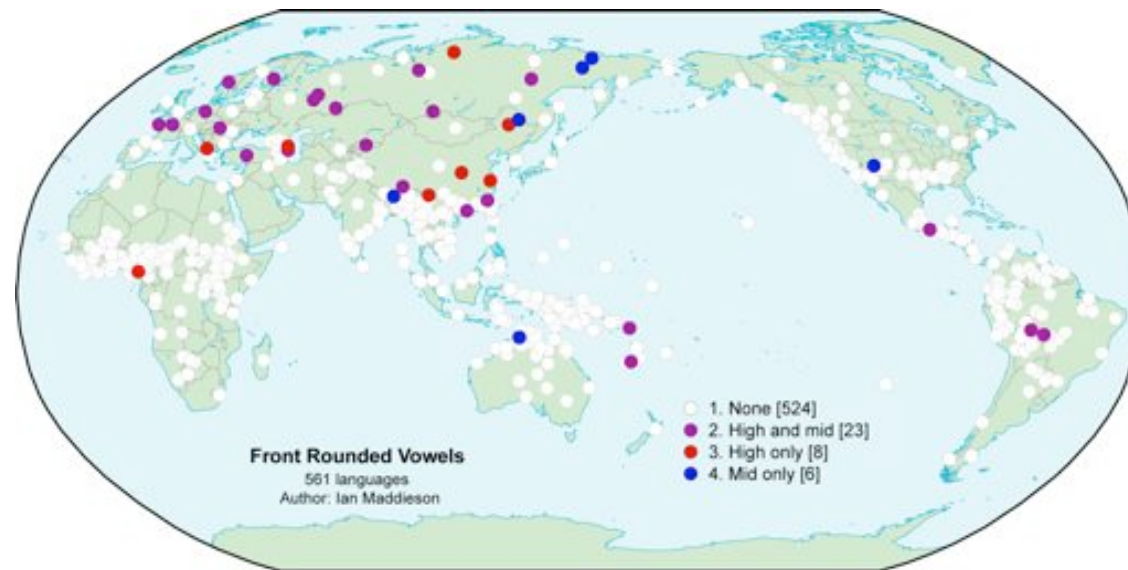


# EVOLVING LINGUISTIC COMPLEXITY



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Explaining complexity:

how complex structures could have evolved

from simpler structures

on the basis of parallels with attested changes

including plausible variations on these

Does not exclude the possibility of simplification,

which is of course also a historically observable kind of change

Assume

a species (*homo sapiens sapiens*)

that is biologically adapted to linguistic complexity

(“language-ready”)

but has not yet put into practice

substantial parts of this complexity

# Simple vowel system

i

u

a

i

u

a

*high*

*high*

*front*

*back*

*unrounded*

*rounded*

*low*

*unrounded*

i

u

e <a → i>

o <a → u>

a

*high*

*mid*

*low*

Latin

*aurum*

‘gold’

Spanish

*oro*

ü      IPA [y]      < u → i >

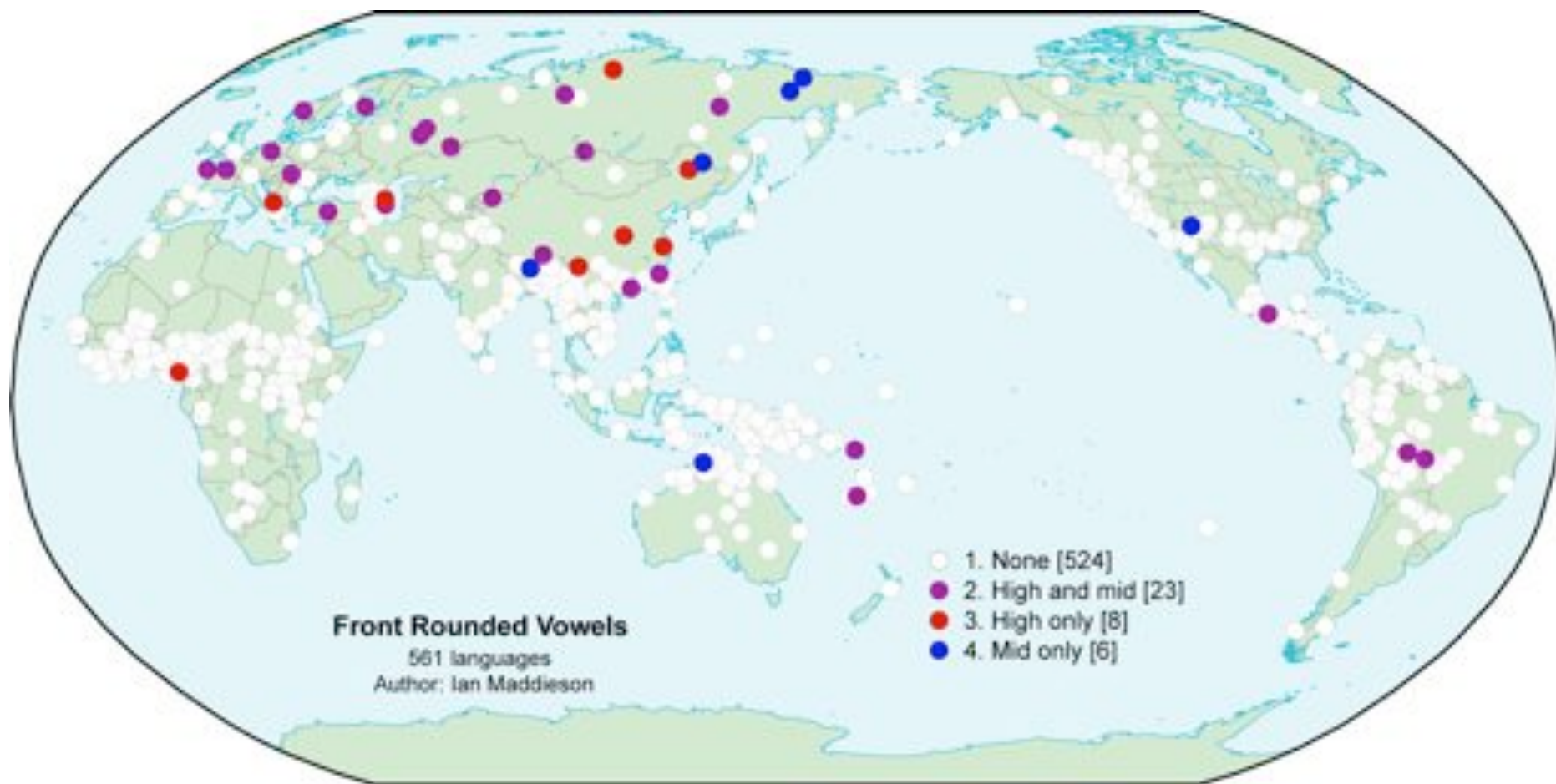
ö      IPA [ø]      < o → i >

“umlauted vowels”

*front*

*rounded*





Old High German	<i>jung</i>	‘young’
	<i>jungiro</i>	‘younger (COMPARATIVE)’
Modern German	<i>jung</i>	‘young’
	<i>jünger</i>	‘younger (COMPARATIVE)’

ɯ

< i → u >

ɤ

< e → o >

back

unrounded

labial dental velar

p	t	k	voiceless	stop
	s		voiceless	fricative
m	n		voiced	nasal
	l		voiced	liquid

labial dental velar

p t k voiceless obstruent

s

m n voiced sonorant

l

## Voiced obstruents

b      < p → voiced >

Latin

*sapere*

‘to know’

Brazilian Portuguese

*saber* [sa'βɛx]

voiced stop

Spanish

*saber* [sa'βer]

voiced fricative

## Voiceless sonorants

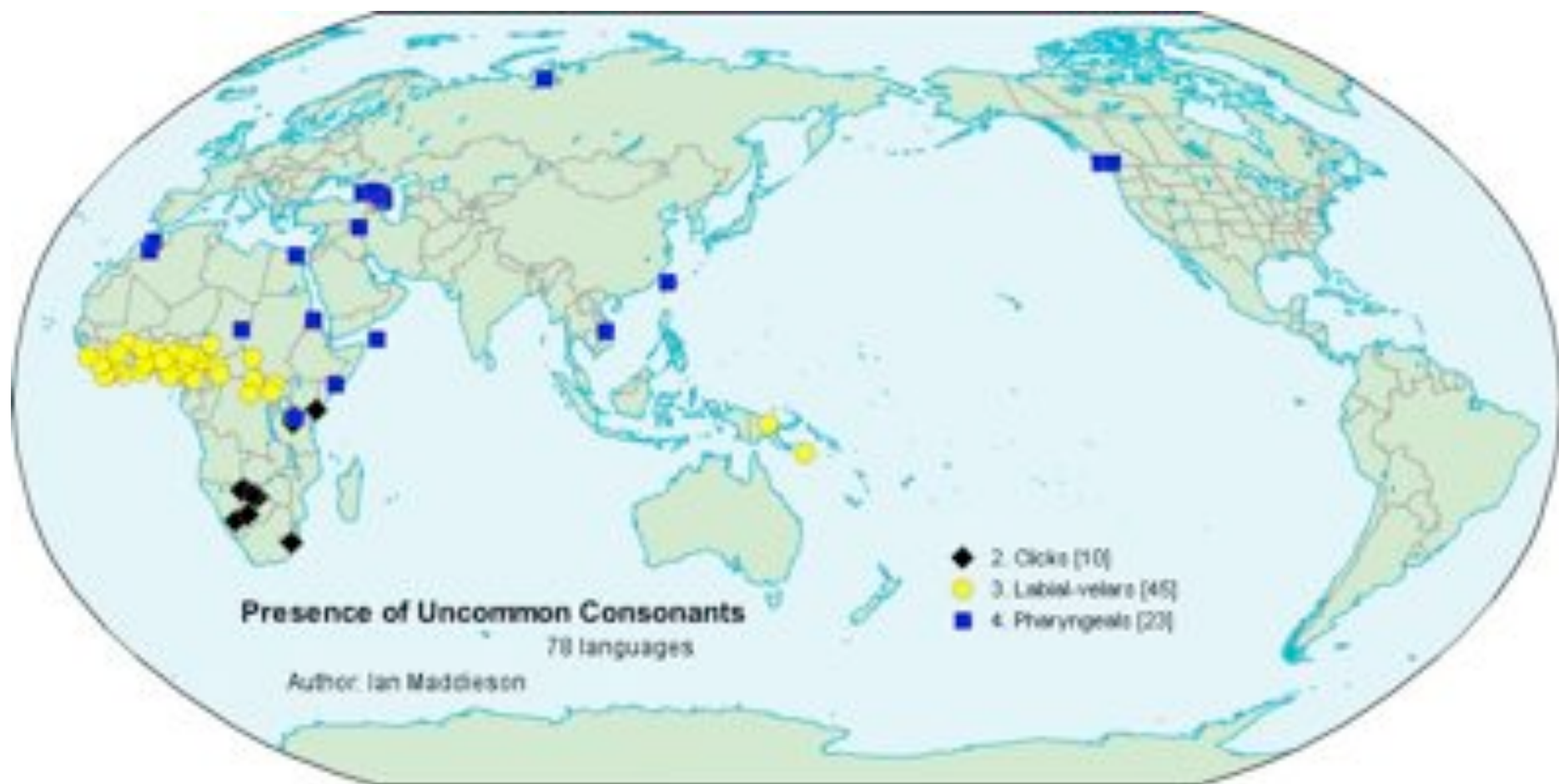


## Welsh

*llan*      [ɫan]      ‘church’ (especially in place names)



Pharyngeals	[ħ]	unusual place of articulation
Labial-velars	[k͡p]	co-articulation
Clicks	[⦿]	non-pulmonic, ingressive



‘young’    ‘younger’

Old High German

jung    [juŋg]  
jungiro    [juŋgɪrɔ]

Intermediate

jung    [juŋg]  
jungiro    [jʏŋgɪrɔ]    [ʊ] and [ʏ] are allophones

Modern German

jung    [juŋ]  
jünger    [jʏŋɐr]    [ʊ] and [ʏ] are phonemes

Morphophonological alternations,

i.e. different forms of the same morpheme

in different environments ( $[j\omega\eta] \sim [j\Upsilon\eta] + [\text{ər}]$ ),

which introduce complexity,

often arise historically

from regularly conditioned sound changes

(e.g. vowels are fronted before [i]-like vowels)

followed by loss of the conditioning environment

(e.g. unstressed [ɪ] is weakened to [ə])

“Internal reconstruction”

reverse-engineers this,

postulating for morphophonological alternations

an earlier stage with a regular phonetic environment

## Evolving complexity

Stage I          no morphophonological alternations

Stage II        morphophonological alternations

## Complex morphology, e.g. Latin

	'master'		'table'	
	SG	PL	SG	PL
NOM	<i>dominus</i>	<i>dominī</i>	<i>mēnsa</i>	<i>mēnsae</i>
VOC	<i>domine</i>	<i>dominī</i>	<i>mēnsa</i>	<i>mēnsae</i>
ACC	<i>dominum</i>	<i>dominōs</i>	<i>mēnsam</i>	<i>mēnsās</i>
GEN	<i>dominī</i>	<i>dominōrum</i>	<i>mēnsae</i>	<i>mēnsārum</i>
DAT	<i>dominō</i>	<i>dominīs</i>	<i>mēnsae</i>	<i>mēnsīs</i>
ABL	<i>dominō</i>	<i>dominīs</i>	<i>mēnsā</i>	<i>mēnsīs</i>

‘boy’

‘with [the] boy’

Finnish (standard)

*poika*

*pojan kanssa*

(*poja-n* ‘boy-GENITIVE’)

Finnish (dialectal)

*poika*

*pojankā*

(*isä* ‘father’

*isänkā*)

(Vowel harmony)

Estonian

*poeg*

*pojaga*

(*poja-ga* ‘boy-COMITATIVE’)



*Quis multā gracilis tē puer in rosā*  
what many slender you boy in roses

*perfūsus liquidīs urget odōribus*  
sprinkled liquid woos scents

*grātō, Pyrrha, sub antrō?*  
pleasant Pyrrha in grotto

(Horace, *Odes*, 1.5)

‘What slender boy, sprinkled with liquid scents, woos you, Pyrrha, in many roses in a pleasant grotto?’

*Quis multā gracilis tē puer in rosā*  
what many slender you boy in roses

*perfūsus liquidīs urget odōribus*  
sprinkled liquid woos scents

*grātō, Pyrrha, sub antrō?*  
pleasant Pyrrha in grotto

NOMINATIVE SINGULAR

*Quis multā gracilis tē puer in rosā*  
what many slender you boy in roses

*perfūsus liquidīs urget odōribus*  
sprinkled liquid woos scents

*grātō, Pyrrha, sub antrō?*  
pleasant Pyrrha in grotto

ABLATIVE SINGULAR FEMININE

*Quis multā gracilis tē puer in rosā*  
what many slender you boy in roses

*perfūsus liquidīs urget odōribus*  
sprinkled liquid woos scents

*grātō, Pyrrha, sub antrō?*  
pleasant Pyrrha in grotto

ABLATIVE PLURAL

*Quis multā gracilis tē puer in rosā*  
what many slender you boy in roses

*perfūsus liquidīs urget odōribus*  
sprinkled liquid woos scents

*grātō, Pyrrha, sub antrō?*  
pleasant Pyrrha in grotto

ABLATIVE SINGULAR MASCULINE

Guugu Yimidhirr

(Northeast Queensland, Australia; data from John Haviland)

*Yarragaagamun   guda   gunday   biibangun.*

boy

dog

hit

father

*Yarraga-aga-mu-n*                      *gudaa*                      *gunday biiba-ngun.*

boy-GENITIVE-mu-ERGATIVE dog.ABSOLUTIVE hit              father-ERGATIVE

‘The boy’s father hit the dog.’

ERGATIVE              case for the subject/agent of a transitive verb

ABSOLUTIVE              case for the object/patient of a transitive verb  
and for the subject of an intransitive verb



*Yarraga-aga-mu-n*                      *gudaa*                      *gunday biiba-ngun.*  
boy-GENITIVE-mu-**ERGATIVE** dog.ABSOLUTIVE hit              father-**ERGATIVE**

i.e. ‘boy’ and ‘father’ belong together

*Yarraga-aga-mu-n*                      *gudaa*                      *gunday biiba-ngun.*  
boy-**GENITIVE**-mu-ERGATIVE dog.ABSOLUTIVE hit              father-ERGATIVE

i.e. ‘boy’ is “possessor” of ‘father’ (‘the boy’s father’)

Development of explicitness

in written (or more generally: non-face-to-face) communication

Work on Seychelles Creole by Susanne Michaelis

(1974 translation of Gospel according to Mark)

*Lever, prend ou natte, marcher.*

‘Rise, take your bed, walk.’

(1987 translation of same passage)

*Lever, ranmas ou nat e marse.*

‘Rise, pick\_up your bed and walk.’

*Son konteni pou fer parti tes dray imedyatman*

‘Its contents will form part of drivers’ tests immediately

*e konsekanman bann bon drayver i a war la endispansab.*

and consequently potential drivers will find it indispensable.’

*I osi regretab ki*

‘It is also regrettable that

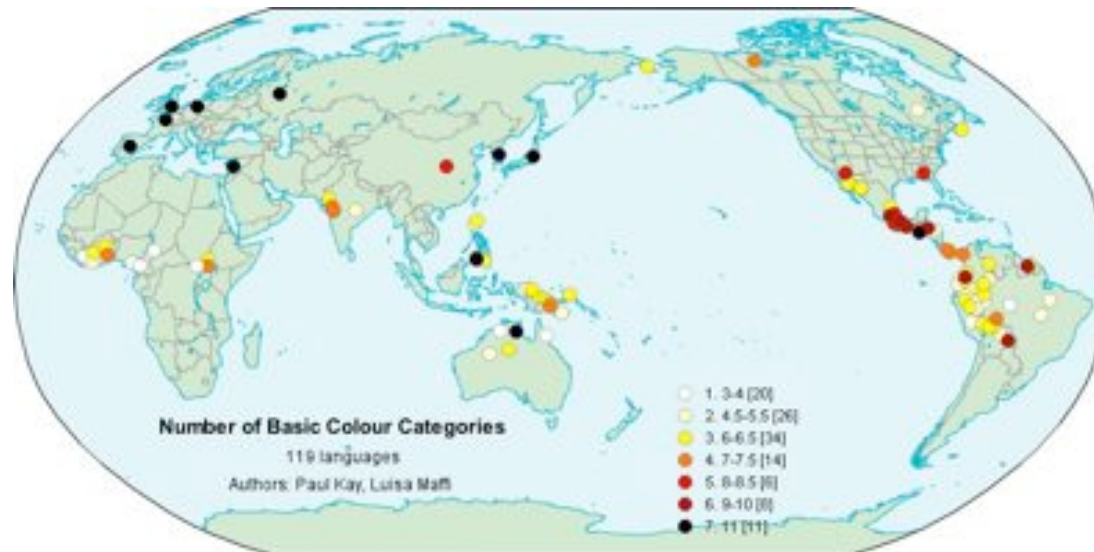
*kanmenm en sirkiler pour kresolizasyon lo nivo nasyonal in sorti,*  
although a circular for creolization at the national level has been issued,

*i ankor annan bann batiman piblik*  
there are still public buildings

*ki pa ankor koriz fot lortograf lo zot lansenny.*

which have not yet corrected spelling mistakes in their signs.’

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