

Beyond the individual language

What are the limits on the diversity of human languages?

What are the structural constraints on phonological systems?

([stʌfðetsnarɪnðəbʊk])

We'll briefly consider ...

- phonotactic constraints
- a set of features that could be used to describe all languages
- constraints on their occurrence

Syllables

- Speech sounds are organized in syllables.
- Syllable structure differs from language to language
- Syllables consist of
 - Onset (optional in many languages)
[sæm] [æm]
 - Nucleus (obligatory in all languages)
[sæm] [fɹm]
 - Coda (optional or prohibited in most languages)
[sæm] [sɔ]

Not all languages allow consonant clusters in onset and/or coda, and those that do allow different kinds of clusters. Think about what clusters occur in English.

Syllabification

(or, once a coda not always a coda)

[sæmələwzɪdʒtətʃuwevriθɪŋ]

[sæ m ə l ə w z ɪ d ʒ t ə t ʃ u w ɛ v r i θ ɪ ŋ]

- Simple syllables: Hawai'ian
(C)V(V)
– 25 Vs, 8Cs
- Complex syllables: English
(C)(C)(C)V(C)(C)(C)(C)
– strengths, split, texts

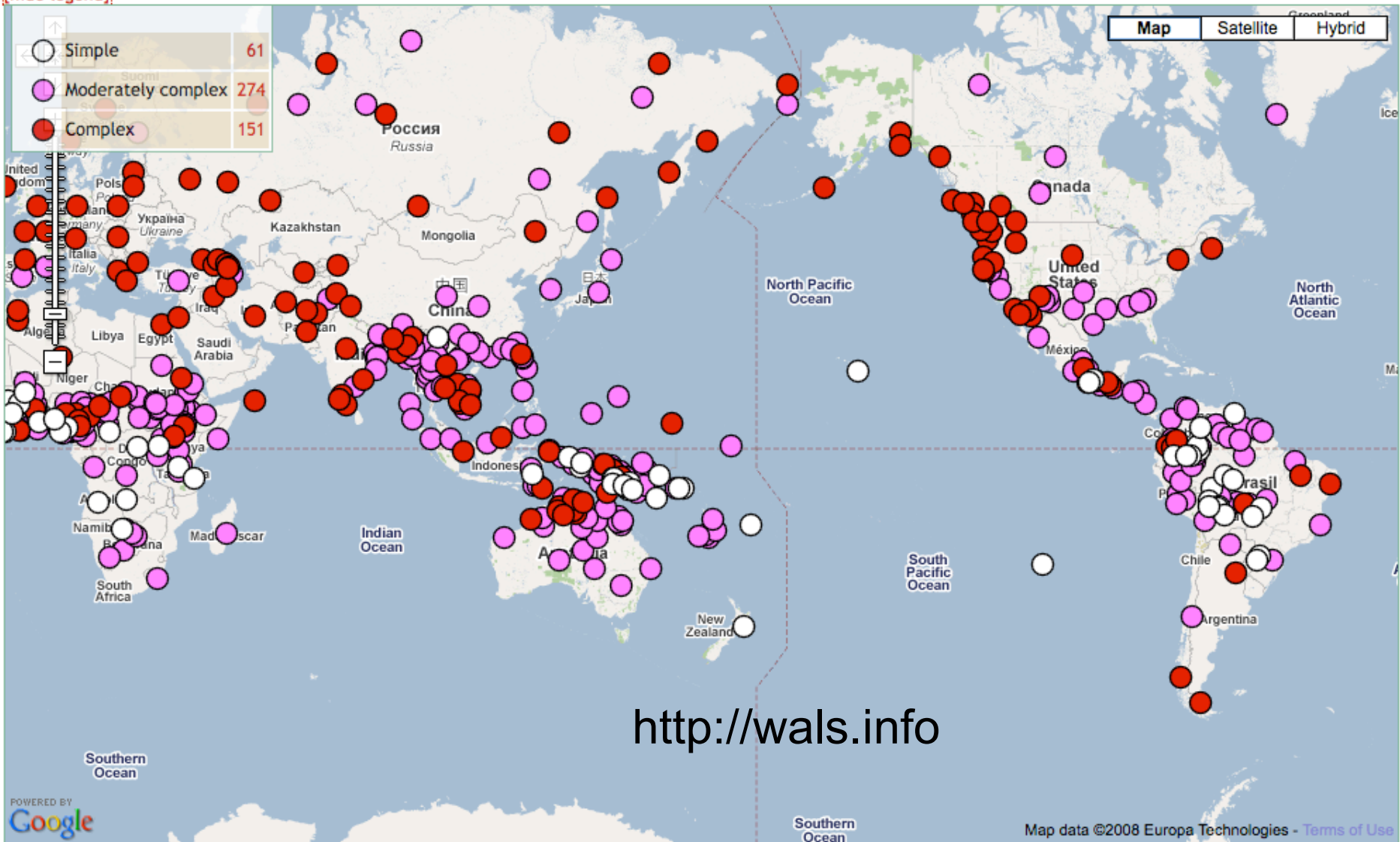
Feature/Chapter 12: Syllable Structure

by Ian Maddieson

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Phonological systems tend to maximize

- **Distinctiveness**

The phonemes in a system tend to be maximally distinct.

- **Features**

The features that are used in a language tend to be used generally

Distinctive features

Basic units of phonological structure

The following features are commonly used. However, the inventory and nature of distinctive features are ongoing theoretical issues.

Class Features

- [+/- consonantal] (oral constriction)
- [+/- sonorant] (resonance vs turbulence)
- [+/- syllabic] (syllable nucleus)

Manner Features

[+/- continuant] (no oral obstruction)

[+/- lateral] (center of tongue touches roof)

[+/- nasal]

[+/- strident] (high energy white noise)

The beginning of a feature matrix

	plosives	fricatives	nasals	liquids	glides/vowels
[consonantal]	+	+	+	+	-
[sonorant]	-	-	+	+	+
[continuant]	-	+	-	+	+

Laryngeal Features

[+/- voice]

[+/- aspirated] (spread glottis)

[+/- glottalic] (constricted glottis)

Place Features

[+/- round]

[+/- high]

[+/- low]

[+/- back]

[+/- tense] ('advanced tongue root')

[+/- anterior] (tip of tongue in front of alveolar ridge)

[+/- distributed] (tongue extended in mouth)

a common vowel system

i

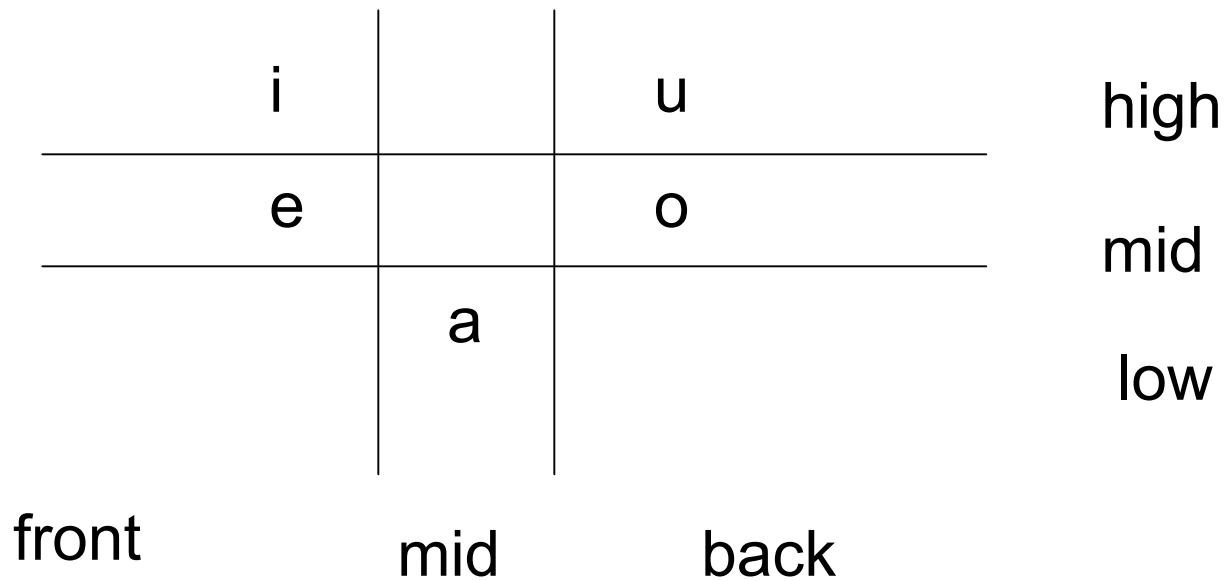
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e

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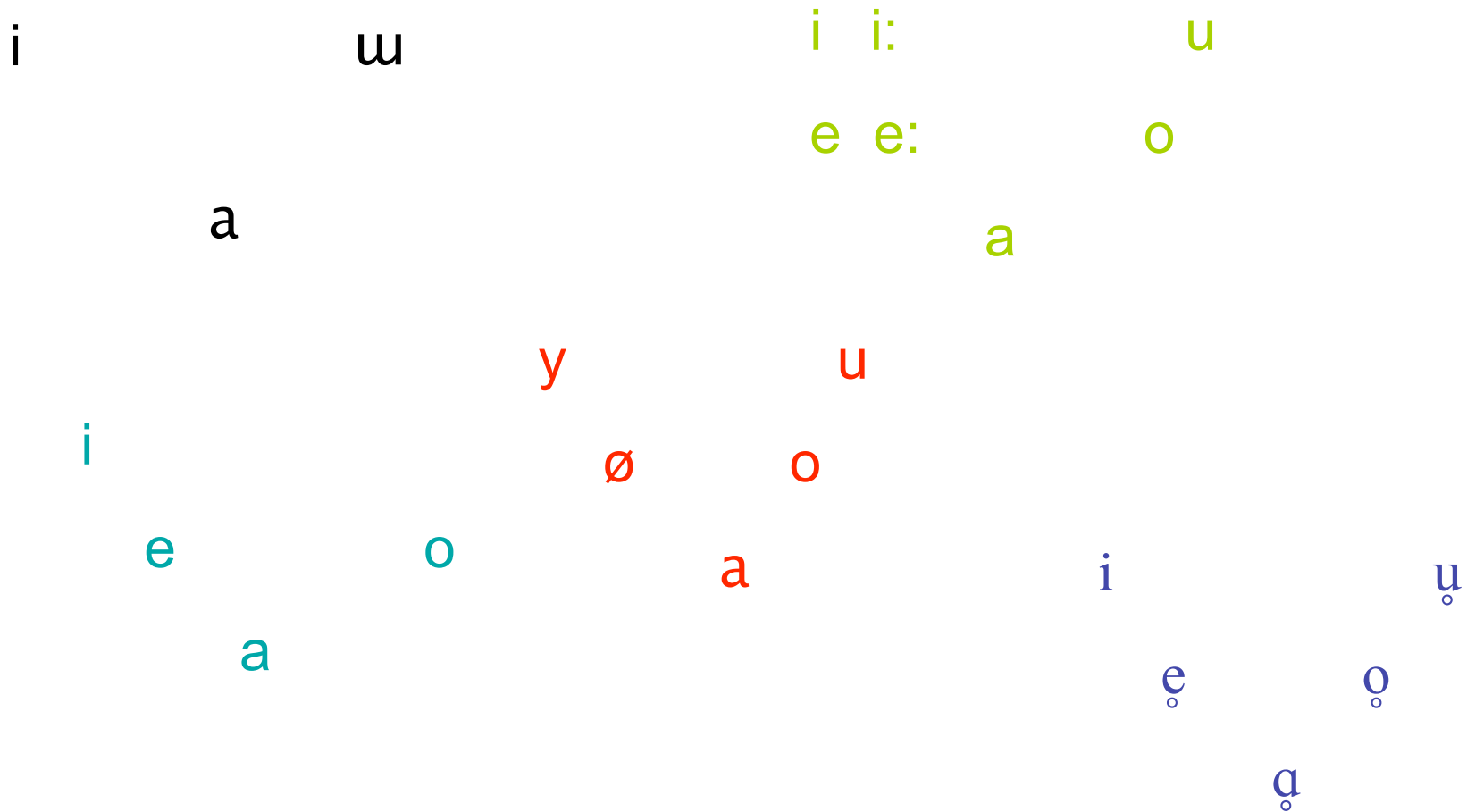
a common vowel system



What's odd about this consonant system?

p	t	k	p	t	ph
b			b	d	bh
f	s	x	f	s	
v	z	ɣ	v	z	
m	n	ŋ	m	n	

What's odd about this vowel system?



markedness

Certain, **unmarked**, properties of language are more basic, or natural, than others. They constitute a default.

Marked features

- occur more rarely
- imply the occurrence of the corresponding unmarked feature

i ÿ ù
ẽ ø õ
 ã

i y u
e ẽ ø ø o õ
 a ã

Nasalized vowels are
marked