Units of sound – what should we inventory?

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‘Establishing Phoneme Inventories’

The workshop call refers, on the one hand, to debates within the phonemic framework, and on the other to theoretical dismissals of the phoneme concept.

My focus today is on the nature of the phoneme – as a ‘contrastive unit of sound’ – and how one might use it in inventories.

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ǀ	ǀ̬	ǀʰ	ǀ̬ʰ	ǀʼ	ǀ̬ʼ	ǀ̃	ǀ̬̃	ˀǀ̬̃	ǀq	ǀ̬q	ǀqʰ	ǀ̬qʰ	ǀqʼ	ǀ̬qʼ	ǀqˣʼ	ǀ̬qˣʼ	ǀχ	ǀ̬χ	ǀh	ǀ̬h	ǀʔ	ǀ̬ʔ
ǃ	ǃ̬	ǃʰ	ǃ̬ʰ	ǃʼ	ǃ̬ʼ	ǃ̃	ǃ̬̃	ˀǃ̬̃	ǃq	ǃ̬q	ǃqʰ	ǃ̬qʰ	ǃqʼ	ǃ̬qʼ	ǃqˣʼ	ǃ̬qˣʼ	ǃχ	ǃ̬χ	ǃh	ǃ̬h	ǃʔ	ǃ̬ʔ
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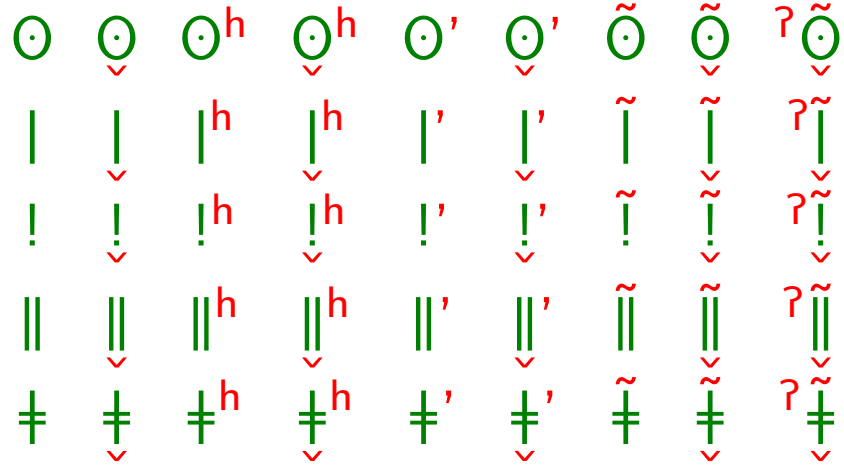
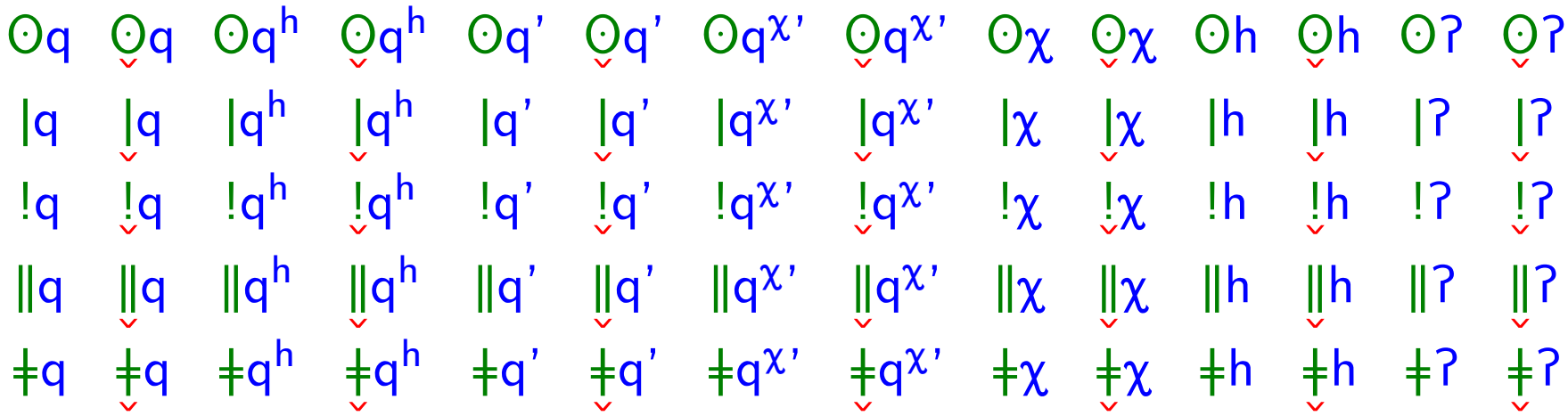
I have argued that the *click* can be factored out **at the phonemic level** from the *accompaniment* – either in feature-based or element-theoretic analyses. Also, it’s now generally (but not universally) accepted that some of the ‘clicks’ are clusters with other consonants.

Trail 1985, Naumann 2016, B. 2014

Clicks, accompaniments, and clusters





Clicks, accompaniments, and clusters

ʘ ǀ ǃ ǁ ǂ

clustering ‘vertically’ with

ʁ ʁ̬ ʁʰ ʁ̬ʰ ʁʼ ʁ̬ʼ ʁ̃ ʁ̬̃ ˀʁ̬̃

and ‘horizontal’ clusters of

ʁ ʁ̬ with q qʰ qʼ qᵡʼ χ h ʔ

Each item is a ‘phoneme’, in a sensible inventory of Taa.

The role of the speaker

There are theoretical and cognitive arguments for separating clicks and accompaniments. But there is also a psychological argument:

- In both Taa and Nguni (e.g. Zulu, Xhosa), practical orthography marks them independently: Taa *!áa*, *g!àa*, *!hàma*, *g!hàma*, *!'áan*, *g!'òre*, *n!áa*, *nh!á'a*, *'n!ài*; Xhosa *úkúqona, úkúqhula, úqhayí, ínqâba, úkungqúsha*.

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- Naive (but literate) Nguni speakers can pronounce all their accompaniments with novel clicks from orthographic prompts (e.g. *uʘhayi*).

Naumann 2016, B. 2014

Likewise vowels

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Taa does not have [y]: if you teach a Taa speaker [y], can they say *ʘyhyn* ?

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No, because AT denies the phoneme, or at least reduces it to an emergent property.

Features vs phonemes

Features are in the mind of the phonologist, phonemes in the mind of the speaker. (Psychological realism!)

If you can get speakers to manipulate it, it's a phoneme.

Taa/Nguni speakers can manipulate clicks independently of accompaniments to make novel sounds.

English speakers cannot manipulate voicing/aspiration in consonants.

Nasality – sometimes a feature, sometimes a phoneme

In Portuguese, like Taa, any* vowel (and some diphthongs) can be nasal. Are there five nasal vowels, or just a nasal (archi)phoneme /N/?

In French, fewer occur nasal, and the qualities differ (*un bon vin blanc* ≠ [ỹ bɔ̃ vĩ blɑ̃]). (Is ⟨in⟩ /ĩ/ → [æ̃] or /ɛ̃/ → [æ̃]?)

In much of middle and south America, nasality is a word-level property. Can speakers manipulate it – e.g. delete nasality from a nonce-word?

Barbosa & Albano 2004, Stanton 2017

Harmony more generally

If the harmony is strict, maybe you should analyse it as a 'phoneme'.

Finnish vowels: no. (Violable in non-native words, harmony of neutral vowels varies, lack of /ɯ, ɤ/.)

Many African ATR-harmonies: yes? (Spreading, neutral and opaque vowels all expressible whether ATR is a feature or a 'phoneme'.) But can speakers manipulate it?

Classic suprasegmentals

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What about Estonian overlength and Danish stød? Phonological contrast, but limited distribution.

Lehiste 1965, Pöchtrager yesterday

Summary

It's not just features and feature contrast hierarchies that can be language-dependent, the definition of features vs phonemes can be too!

A more general notion of 'contrastive unit of sound' than the classical 'segment' can be useful – pragmatically and analytically. Speaker intuition and response to psycholinguistic tests is relevant.