## English obstruents and laryngeal markedness

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# type frequency of singleton obstruents in CUBE\*

		fortis	lenis	f/I ratio
initial	plosive	23,730	17,694	1.34
	fricative	14,546	2,154	6.75
	all	38,276	19,848	1.93
medial	plosive	41,488	28,601	1.45
	fricative	23,552	11,218	2.10
	all	65,040	39,819	1.63
final	plosive	10,953	9,321	1.18
	fricative	6,885	16,617	0.41
	all	17,838	25,938	0.69

<sup>\*</sup> a 103k-entry online pronunciation dictionary at cube.elte.hu, figures as of November 2017

type frequency of obstruent clusters: as per transcription

		fortis	lenis	f/l ratio	examples
initial	plos+plos	0	0	_	
	plos+fric	13	5	2.60	tsetse, Dvorak
	fric+plos	4,143	0		spot
	fric+fric	29	0		sphere
	all	4,185	5	837.00	
medial	plos+plos	2,360	376	6.28	Atkins, Edgar
	plos+fric	2,787	479	5.82	apsis, absorb
	fric+plos	6,758	284	23.80	system, wisdom
	fric+fric	424	38	11.16	asphalt, evzone
	all	12,329	1,177	10.47	
final	plos+plos	954	301	3.17	act, bagged
	plos+fric	4,990	1,616	3.09	Ritz, adze
	fric+plos	2,606	596	4.37	boost, used
	fric+fric	313	370	0.85	luffs, loves
	all	8,863	2,883	3.07	

fortis+lenis: 631 (eg Afghan, anecdote); lenis+fortis: 886 (eg Aztek, subtract)

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## suffixes and clitics

- ▶ 3sg, plur, gen: hits, hit's, hits' [hit]+[z]  $\rightarrow$  [hits]
- is, has: it's [it]+[z]  $\rightarrow$  [its]
- ▶ past, part: hissed [his]+[d] → [hist]

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## a well-known pattern

```
batik [bəthijk] \sim Nadine [nədijn]
cartoon [kaxthúwn] ~ sardine [saxdíjn]
boutique [buwthíjk] ~ modiste [məwdíjst]
Maltese [molthíjz] ∼ Chaldee [kaldíj]
antique [anthíjk] ~ Dundee [dəndíj]
Aztek [ázthek] ~ Nasdag [názdak]
fructose [frékthewz] ∼ anecdote [ánekdewt]
VS
mistique [mist*híjk]
```

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- 4. prevocalic fortis plosives are aspirated, but not after fortis fricative

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all obstruents are phonologically voiceless

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- a fortis obstruent may spread its Cness on adjacent sounds (Cness protrudes on the adjacent sonorant, making its voiced phase, Vness, shorter)
- a fortis obstruent resists the Vness (voicing) of its environment (pace flapping)

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## lenis = absence of excessive voicelessness/consonantalness

a lenis obstruent may accommodate (some of) the Vness (spontaneous voicing) of adjacent sounds (sonorants)

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- fortis fricatives are not followed by a fortis plosive: mistique is not [mistíjk], but [misdíjk] (eg Twaddell 1935, Davidsen-Nielsen 1969, Kaye & Pöchtrager 2017)
  - ▷ so [p t k] are not aspirated after [s f], because only [b d g] may occur there within a morpheme

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fortis+fortis X
only across a word boundary: mis#time, kiss#Pam, brief#case
```

let's assume that...

\*fortis+fortis extends to all clusters

obstruent+plosive+sonorant

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the assumption that any voiceless obstruent that does not contrast with a fortis is itself fortis

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#### lenis obstruents

are voiceless except between two nonfortis segments: [g] is voiced in dagger, alga, anger, singular, language, angry, English, Magda, Pisgah, exam; but voiceless in god, dog, actor [agtə], action [agʃən], Agfa, Afghan

### neutralization

## apparently

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word finally the fortis+lenis vs lenis+fortis contrast is neutralized: tract [tragt] (cf tractate [tragtejt]) vs tracked [trakd] (cf track [trak]) ie [tragt] and [trakd] are homonyms
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#### note

in both [trakd] and [tragt] the vowel is shorter than in rag or Brad because it is followed by a fortis, like in rant, scalp, or ramp

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- 4. prevocalic fortis plosives are aspirated, but not after fortis fricative
  - because fortis plosives cannot occur after a fortis fricative

so why do we transcribe fortis+lenis as fortis+fortis?

imagine we didn't...

sport [sboxt], Asperger's [asbəxgəz], kissed [kisd], licks [likz], etc would be fine for German or Chinese learners

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sport [sboxt], Asperger's [asbəxgəz], kissed [kisd], licks [likz], etc would be fine for German or Chinese learners

but many others would notoriously mispronounce [zbo:t], [azbə:gəz], [kizd], [ligz]

## thanks to

- you & the organizers
- ► NKFI #119863

