Segmenting clusters

(and a look at obstruent clusters)

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counting segments

- *chip* **tʃɪp** — one or two skeletal slots?

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- *loud* **lawd** — one or two constituents?

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- notational conventions aimed at biassing counting:
  chip **t^{ʃ}ɪp**, **ʧɪp**, **t͡ʃɪp**, **čɪp**; *tip* **t^{h}ɪp**; *prince* **prɪn^{t}s**; *loud* **la‿wd**

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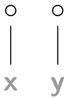
- **xy** =  **x^{y}**, **x͡y** = 

tʃ as a cluster

tʃ vs tr

	tʃ	tr	tʃ	tr	tʃ	tr
	__V		__C		__#	
V__	✓	✓	✓	✗	✓	✗
C__	✓	✓	✓	✗	✓	✗
#__	✓	✓	✗	✗	—	

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- reason: **tr** is a rising-sonority cluster

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tʃ vs kʃ/ks

	tʃ	kʃ	tʃ	kʃ	tʃ	ks[1]
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C__	✓	✓	✓	✓[3]	✓	✓
#__	✓	✗[4]	✗	✗	—	

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3. *functional* fə́ŋkʃnəl
4. so tʃ and kʃ/ks are different only #__V

tʃ as a segment

tʃ vs t

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- the distributions of both tʃ–kʃ/ks and tʃ–t differ in one cell

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so far its distribution does not convincingly decide if tʃ is a segment or a cluster

tʃ and ks / C__#

	__tʃ#	__ks#
ɛj__	1	2
ɪj__	17	0
aj__	0	1
oj__	0	1
əw__	10	2
ʉw__	6	8
aw__	8	2
ː__	18	4
n/ŋ__	66	31
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- but also **ːnt** vs *__ːŋk__!

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word-final plosive+fricative

	p-	t-	k-
-s	33	61	350
-ʃ	0	289	0

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word-initial rising-sonority clusters (aka branching onsets)

nonstrident obstruent (except **v ð**)+approximant

	w	**l**	**r**	**j**	**h**
p/b/f	(✓)	✓	✓	✓	?
t/d/θ	✓	(✓)	✓	(✓)	?
k/g	✓	✓	✓	✓	?

we here ignore C**j** (eg **mj**, **lj**, **hj** etc)

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  - if phrɪm, E has CCC onset clusters

can we extend this analysis to fricatives?

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- ⇒ no!

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  - but if their temporal order is not fixed, **t** and **h** can hardly be separate segments

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  - unless we have rule ordering: **píjpə** → **píjbə** ordered before the "deaspiration" rule

an excursus: obstruent clusters in English

two sets of obstruents: 1. marked, 2. unmarked

1.	p	t	tʃ	k	f	θ	s	ʃ
	pin	tin	chin	kin	fin	thin	sin	shin
2.	b	d	dʒ	g	v	ð	z	ʒ
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fortis+fortis clusters ruled out (← marked!)

apparent fortis+fortis clusters: **pt kt tʃt ft fk sp st stʃ sk ps ts ks**

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back to counting segments. . .

epenthesis of fortis plosive between nasal & fortis fricative

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- $\Rightarrow$ the result is not an affricate

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- so what is happening here? is an extra skeletal slot inserted?

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- do we give the same answers to the first three questions if English was a language with no writing and unknown history?

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- are *print* **prɪnt** and *prince* **prɪnts** a minimal pair?

it is not consistent to say

- that $[_O\ \mathbf{t}\ \mathbf{r}\ ]\ \ [_N\ \mathbf{ɪ}\ ]\ \ [_O\ \mathbf{p}\ ]$ / $[_O\ \mathbf{t}\ ]\ \ [_N\ \mathbf{ɪ}\ ]\ \ [_O\ \mathbf{p}\ ]$ are not a minimal pair,

  but $[_O\ \mathbf{l}\ ]\ \ [_N\ \mathbf{a}\ \mathbf{w}\ ]\ \ [_O\ \mathbf{d}\ ]$ / $[_O\ \mathbf{l}\ ]\ \ [_N\ \mathbf{a}\ ]\ \ [_O\ \mathbf{d}\ ]$ are a minimal pair

another problem with diphthongs

- is *now* **naw** CVV or CVC?

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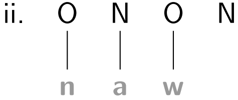
- standard GP:

or



another problem with diphthongs

- is *now* **naw** CVV or CVC?
- standard GP:
  i.
  O N
  n a w
  or
  ii.
  O N O N
  n a w
- standard CV:
  i.
  C V C V
  n a w
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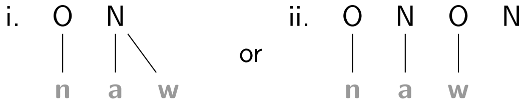
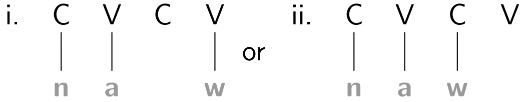


- standard CV:



- in case (i), in what sense is the offglide vocalic?

ceterum censeo: diphthongal offglides are consonantal

- **ə**-epenthesis: *feel* **fɪj⟨ə⟩l**, *fail* **fɛj⟨ə⟩l**, *file* **fɑj⟨ə⟩l**, *foil* **foj⟨ə⟩l**, *hour* **aw⟨ə⟩(r)**: the diphthongal offglides are consonants

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- NZ Acrolect flapping: *factor* **faktə**, *faster* **fastə**, *Fanta* **fantə**, *fighter* **fajtə**, *pouter* **pawtə**, *farter* **faːtə** vs *fatter* **faɾə**: only after vowel, so **j w ː** are consonants

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ceterum censeo: diphthongal offglides are consonantal

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- unstressed vowels: only **ɪ ə ʉ** *and* **ɪj əw ʉw** (eg *happy, motto, value*)

thanks to

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