



Unit 4

The syllable margins in the material world

restricting the airflow to produce contoids

Print version of the
Phonetics with Listening Practice (British)
presentation given on
le nonidi 19 floréal an CCXXXII
(7 May 2024)

Robert Spence, English Department, Saarland University

[ˈɪŋ.gəlɪf fə.ˈnet.ɪks ˈjuː.nɪt ˈfɔː]
English Phonetics: Unit 4:

4.1

[ðə ˈsɪl.əb.əl ˈmɑːdʒɪnz ɪn ðə mə.ˈtɪəri.əl ˈwɜːld]
The syllable margins in the material world

[ɪ.ˈstɪkt.ɪŋ ði ˈeə.fləʊ tə pɹəˈdjuːs ˈkɒnt.ɔɪdz]
restricting the airflow to produce contoids

[ˈɹɒb.ət ˈspens | ˈbeɪst ɒn mə.ˈtɪəri.əl baɪ ˈwɪljəm ˈbæ.ɪ ən ˈɪŋ.mɑː ˈstɑɪn.ɜː (ˈɪŋmæ ˈstæɪn)]
Robert Spence, based on material by William Barry and Ingmar Steiner

[lə nɔː.nɪ.di dis.nœf flɔː.re.al ã dø.sã.tʁãt.dø]
le nonidi 19 floréal an CCXXXII

[ˈtjuːz.deɪ ðə ˈsev.ɪθ əv ˈmeɪ ˈtwent.i.ˈtwent.i.ˈfɔː]
(Tuesday 7 May 2023)

4.2

- This unit's subtitle in the previous iteration of the course was:
- [ə.ˈpɹəʊtʃ.ɪŋ ˈkɒn(t)s.(ə)n(ɪ).ən(t)s ˌvɑː(ɪ)(.ə)ɹə ə.ˈnæt.əm.i ɪ ɪ ɑː.ˈtɪk.jəl.ətʃ.i fə.ˈnet.ɪks]
- which is shorthand for either:
- [ə.ˈpɹəʊtʃ.ɪŋ ˈkɒnts.ən.ənts ˌvɑːɹə ə.ˈnæt.əm.i ɪ ɪ ɑː.ˈtɪk.jəl.ətʃ.i fə.ˈnet.ɪks]
- or:
- [ə.ˈpɹəʊtʃ.ɪŋ ˈkɒns.nəns ˌvɑːɹə ə.ˈnæt.əm.i ɪ ɪ ɑː.ˈtɪk.jəl.ətʃ.i fə.ˈnet.ɪks]
- or something in-between.

4.3

1 The syllable in the material world: which model?

The syllable in the material world: which model?

- Two possible models of the structure of syllables:
 1. **Initial Margin + Nucleus + Final Margin**
 2. **Onset + Rhyme**
(Nucleus + Coda)
- In **phonology**, more *interactions* occur between the Nucleus and the Final than between the Initial and the Nucleus.
- At the levels of **phonetics** and **material reality** the simpler model will do:
 - **Initial Margin + Nucleus + Final Margin**
- Phonologically: **vowels** (typically occur at Nucleus) vs **consonants** (typically occur at margins).
- Phonetically: **vocoids** (unobstructed central airflow through mouth) and **contoids** (all other sounds).
- Nucleus **more sonorant** (=“*sounds*” more) than margins; cf. dt. *Selbstlaute* (vowels), *Mitlaute* (consonants).
- / s t r e ŋ θ s /
- [s t r e ŋ k θ s]

4.4

2 Words of warning and encouragement

Words of warning and encouragement (1)

- Phonetics is the only part of language that interfaces with material reality ...
- ... studying phonetics = ‘getting too close and personal’ ...
- ... and it forces you to confront unsettling ideas.
- Even a brief glance at the human vocal tract confirms that it is not the result of conscious design; it is pure *Bastelarbeit*:
 - lungs were originally buoyancy tanks
 - only humans can speak
 - only humans can choke on their food
 - so speaking must be worth the risk
 - see the handout: http://spence.saar.de/phonetics/unit04_20241/B__Handout/01_dawkinsetc_new.pdf
- Are you afraid of the IPA?
 - Keep your chart handy: http://www.spence.saar.de/phonetics/unit01_20241/D__IPA_Chart/
 - Only learn as many symbols as you need.
 - You probably already produce way more sounds than you’re aware of.

4.5

Words of warning and encouragement (2)

- Why bother to learn to produce all possible consonant sounds?
 - **Negative stereotypes** that involve (perceived) ethnicity involve (unexamined, misunderstood) sounds: (Chinese; Arabic)
 - Wrong **consonants** are more associated with foreignness:
 - * Are you sure you want to sound foreign?
 - Wrong **vowels** are more associated with social inferiority/superiority (class) and non-standardness/standardness (region):
 - * *I don't like their vowels* = ‘I don't like their values’.

- **Allophones:** many phonemes have more than one phonetic realisation, depending on the surrounding sounds and/or the speech style: *thRough, veRy; aeSthetic, calliSthenics, StrengthS*
- **Other first-world Englishes:** (AuE) ['raɪrə] for <writer> *or* <rider>; (Irish) [tʰm] for <thin> vs [tʰm] for <tin>; (Scottish) /r/ realised as [r]; joke-telling(?)
- **Third-world Englishes** (retroflex [ŋ t d ʒ z ɽ ɻ]) in Indian English).
- **Non-native beginners and speakers with speech defects:** understanding the 'wrong' sounds they're making.

3 How we make sounds

The human vocal tract (after Catford)

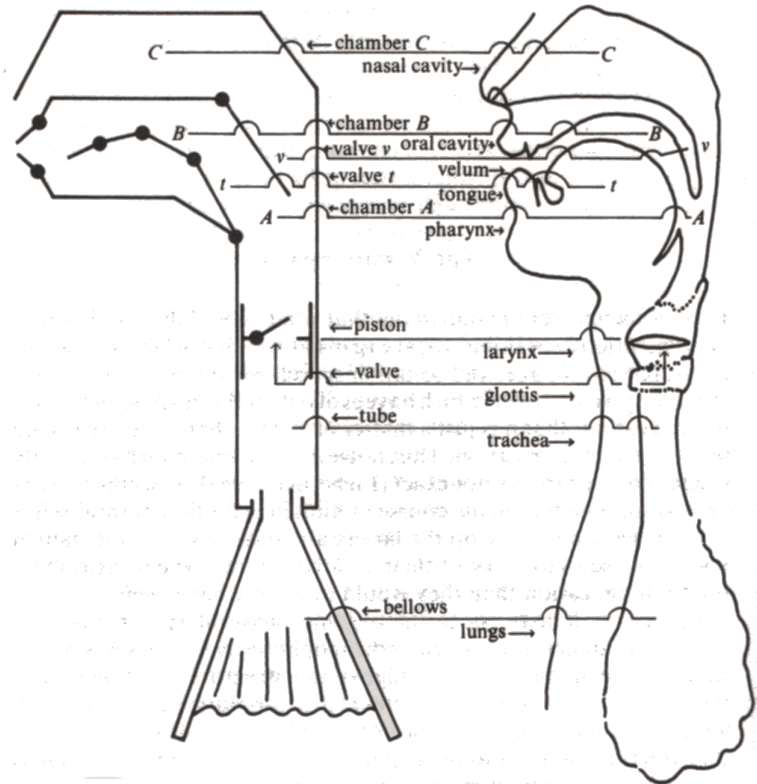


Figure 1: The vocal tract as a machine (J.C. Catford, *Fundamental Problems of Phonetics*, Bloomington: Indiana University Press, 1977)

4 (Pulmonic) Consonants: dimensions of articulation

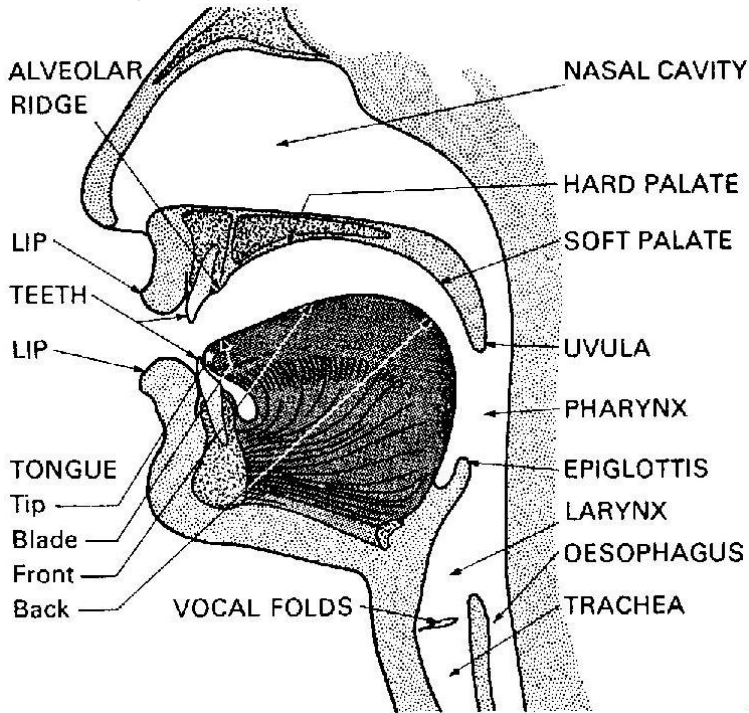
(Pulmonic) Consonants: dimensions of articulation

- Consonants (contoids) can be looked at in terms of their articulation, their acoustics, or their auditory perception
- Their articulation can be described in terms of:
 - AIRFLOW (for the moment, we assume 'pulmonic')
 - VOICING
 - * voiceless [stimmlos] or voiced [stimmhaft]

- PLACE of articulation (the “horizontal” dimension) specifying upper (passive) and (if necessary, also:) **lower (active) articulators**
 - * bilabial, **labiodental**, dental, alveolar, postalveolar, **retroflex**, palatal, velar, uvular, pharyngeal, glottal
 - * more delicately: **apico-/apical**-alveolar, **lamino-/laminal**-alveolar, **(antero)dorsal**-palatal, **(postero)dorsal**-velar, etc.
 - MANNER of articulation (the “vertical”) dimension
 - * plosive, nasal, trill, tap or flap, fricative, lateral fricative, approximant, lateral approximant (make sure you understand what each of these terms means; note Eckert and Barry’s way of classifying these into “obstruents” and “sonorants” [E&B: 36–39]; and don’t forget to add affricate = plosive+fricative)
- Check out: Glossika Phonics <https://www.youtube.com/channel/UCFu0FZ0wFoHK2deKf1daLGA> (for the diagrams; some of the pronunciations are strange...)

5 You can make any consonant you want

You can make any consonant you want



You can make any consonant you want

THE INTERNATIONAL PHONETIC ALPHABET (revised to 2005)

CONSONANTS (PULMONIC)

© 2005 IPA

	Bilabial	Labiodental	Dental	Alveolar	Postalveolar	Retroflex	Palatal	Velar	Uvular	Pharyngeal	Glottal
Plosive	p b			t d		ʈ ɖ	c ɟ	k ɡ	q ɢ		ʔ
Nasal	m	ɱ		n		ɳ	ɲ	ŋ	ɴ		
Trill				ʀ					ʁ		
Tap or Flap		ⱱ		ɾ		ɽ					
Fricative	ɸ β	f v	θ ð	s z	ʃ ʒ	ʂ ʐ	ç ʝ	x ɣ	χ ʁ	ħ ʕ	h ɦ
Lateral fricative				ɬ ɮ							
Approximant		ʋ		ɹ		ɻ	j	ɰ			
Lateral approximant				l		ɭ	ʎ	ʟ			

Where symbols appear in pairs, the one to the right represents a voiced consonant. Shaded areas denote articulations judged impossible.

4.10

You can make any consonant you want

- Can you make the following sounds?
 - a voiceless velar fricative
 - a voiceless uvular fricative
 - a voiceless uvular plosive
 - a voiced velar nasal
 - a voiced bilabial fricative
 - a voiced palatal approximant
 - a voiced labiodental approximant

4.11

You can make any consonant you want

- Use voicing as well as place and manner of articulation to describe the consonant sounds indicated by the framed graphemes or by the framed IPA symbols:
 - < th is na ti on has enou gh f i sh to feed itself >
 - [m m eməɪ ə v ɔ:l wɪmɪn ɪer p t m ɔ:l w ɔ:z]
- Read Eckert and Barry pp 36–39 on manner of articulation and on the voiceless/voiced opposition http://spence.saar.de/phonetics/unit04_20241/B_Handout/
- We'll follow Eckert and Barry in talking about **fortis** consonants (stronger, like [p]) and **lenis** consonants (weaker, like [b])

4.12

6 Which English consonants do you find difficult?

Which English consonants do you find difficult?

p	t	k	pit	to	cod
b	d	g	bit	do	god
				chin gin	
	f θ	s	fin	thin	sin
	v ð	z	van	the	zoo
					shin
m	n	ŋ	man	not	sing
	l	r		lay	ray
w		j	wet		yet

4.13

7 We are mammals and have mammalian reflexes

What is this baby hominid doing?



4.14

We are mammals and have mammalian reflexes

- One of the first things a mammal does ...
- ... after trying out its lungs ...
- ... is ...
- ... to suck!
- (If it doesn't, it dies.)
- What does your mouth do when you suck?
- There are two basic 'postures' — / u / and / i /
- For / u / the oral cavity is long and thin, the lips are rounded, the back of the tongue is up, and the front of the tongue is down
- For / i / the oral cavity is short and wide, the lips are spread, the front of the tongue is up, and the back of the tongue is down
- 'Neither / u / nor / i /' is / ə /.
- What is 'both / u / and / i /'?

4.15