Unit 4

φων

The syllable margins in the material world

restricting the airflow to produce contoids

Print version of the
Practical English Phonetics /
Phonetics with Listening Practice (British & General)
presentation given on
le duodi 12 brumaire an CCXXXV
(03 November 2026)

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4.1

['ɪŋ.glɪʃ fə.'net.ɪks 'ju:n.ɪt̚ 'fɔ:] (BrE)
['ɪŋ.glɪʃ fə.'neɾ.ɪks 'ju:n.ɪt̚ 'fɔ:ɹ] (AmE)
English Phonetics: Unit 4:

[ðə 'sɪl.əb.ɬ 'mɑ:dʒ.ɪnz ‿ ɪn ðə mə.'tʰɪ̯ə̯ɹ.i.əɬ 'wɜ:ɬd] (BrE)
[ðə 'sɪɬ.əb.ɬ 'mɑ:ɹdʒ.ənz ‿ ɪn ðə mə.'tʰɪ̯ə̯ɹ.i.əɬ 'wɜ:ɹɬd] (AmE)
The syllable margins in the material world

[ɹi.'stɹɪkt.ɪŋ ði ‿ 'eə̯.fləʊ̯ tə pɹə.'dju:s 'kʰɒnt.ə̯ɪdz] (BrE)
[ɹə.'stɹɪkt.ɪŋ ði ‿ 'eə̯ɹ.floʊ̯ tə pɹə.'du:s 'kʰɑ:nt.ə̯ɪdz] (AmE)
restricting the airflow to produce contoids

['ɹɒb.ət 'spens] (BrE)
['ɹɑ:b.əɹt 'spens] (AmE)
Robert Spence

[lə dy.o.di duz bʁy.mɛ:ʁ ɑ̃ dø.sɑ̃.tʁɑ̃t.sɛ̃k]
le duodi 12 brumaire an CCXXXV

['tju:z.deɪ̯ ðə 'θɜ:d ‿ əv nə(ʊ).'vem.bə 'tw̥ent.i.'tw̥ent.i.'sɪks] (BrE)
['tu̟:z.deɪ̯ ðə 'θɜ:ɹd ‿ əv ‿ noʊ.'vɐ̟m.bəɹ 'tw̥ɐ̟n.i.'tw̥ɐ̟n.i.'sɪks] (AmE)
(Tuesday 03 November 2026)

4.2

· This unit's subtitle in the previous iteration of the course was:

· [əˈpˌəʊʊ̯tʃ.ɪŋ ˈkʰɒn(t)s.(ə)n(.)ən(t)s ˌva(ɪ̯)(.)ə̯ɹ ‿əˈnæt.əm.i ‿ n̩ ‿ ɑːˈtʰɪk.jʊl.ətˌ.i fəˈnet.ɪks] (BrE)

· which is shorthand for either:

· [əˈpˌəʊʊ̯tʃ.ɪŋ ˈkʰɒnts.ən.ənts ˌvaɪ̯.ə̯ɹ ‿əˈnæt.əm.i ‿ n̩ ‿ ɑːˈtʰɪk.jʊl.ətˌ.i fəˈnet.ɪks] (BrE)

· or:

· [əˈpˌəʊʊ̯tʃ.ɪŋ ˈkʰɒns.nənsˌvaə̯ɹ ‿əˈnæt.əm.i ‿ n̩ ‿ ɑːˈtʰɪk.jʊl.ətˌ.i fəˈnet.ɪks] (BrE)

· or something in-between.

· In American English it could be pronounced as:

· [əˈpˌoʊʊ̯tʃ.ɪŋ ˈkʰɑːns.nənsˌvi.ə ‿əˈnæɾ.əm.i ‿ n̩ ‿ ɑːɹˈtʰɪk.jə.ləˌtɔːɹ.i fəˈneɾ.ɪks] (AmE)

4.3

Dedication (1)



Image source: Obituary for John C. (Ian) Catford https://www.legacy.com/obituaries/

John Cunnison (Ian) Catford
26.03.1917–-06.10.2009

4.4

Dedication (2)



Image source: Jacket design by David Rowley, from: Richard Dawkins: The Ancestor's Tale. London: Weidenfeld and Nicolson, 2004. Image flipped L-R for phonetic reasons.

The animal that we (and mice, and elephants, and whales, ...) were before that asteroid gave us our big chance. Note that we had a dorsal surface above and a ventral surface below. In describing the tongue, we use the same terms: dorsal and ventral. In this picture, where is "anterodorsal"? and where is "posterodorsal"?

4.5

1 Did you do your homework?

Places of articulation

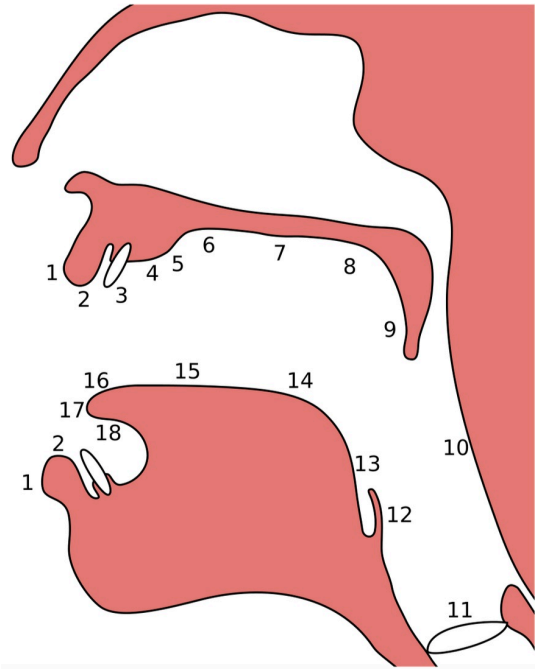


Image: https://commons.wikimedia.org/wiki/File:Places_of_articulation.svg

Pronounce the adjectives that relate to the places of articulation as indicated.

4.6

2 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).
- /ʃtreŋθs/
- [s̟tɹe̞ŋkθs̟]

4.7

3 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_20262/B__Handout/01_dawkinsetc_new.pdf`
- Are you afraid of the IPA?
  - Keep your chart handy: `http://www.spence.saar.de/phonetics/unit01_20262/D__IPA_Chart/`
  - Only learn as many symbols as you need.
  - You probably already produce way more sounds than you're aware of.

4.8

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: ***th**Rough, ve**R**y; ae**S**thetic, calli**S**thenics, **S**trength**S***
  - **Other first-world Englishes**: (AuE) [ˈɹaɪɹə] for ⟨writer⟩ ***or*** ⟨rider⟩; (Irish) [t̪ʰɪn] for ⟨thin⟩ vs [tʰɪn] for ⟨tin⟩; (Scottish) /r/ realised as [ɾ]; joke-telling(?)
  - **Third-world Englishes** (retroflex [ɳ ʈ ɖ ʂ ʐ ɻ ɭ] in Indian English).
  - **Non-native beginners** and **speakers with speech defects**: understanding the 'wrong' sounds they're making.

4.9

4 How we make sounds

The human vocal tract (after Catford)

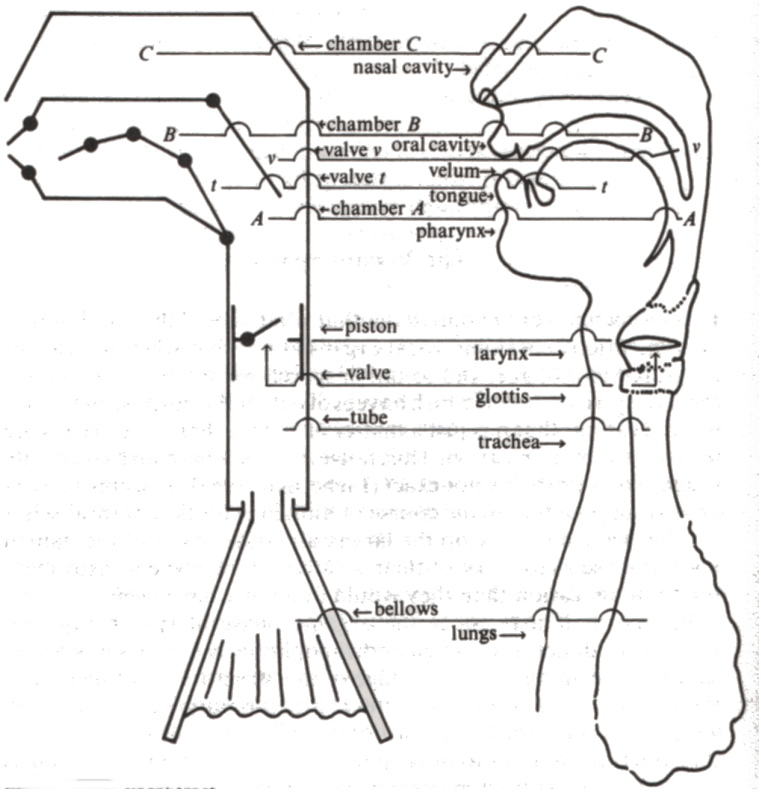


Figure 1: The vocal tract as a machine(J.C. Catford, Fundamental Problems of Phonetics, Bloomington: Indiana University Press, 1977)

4.10

5 (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/UCFuOFZ0wFoHK2deKFldaLGA` (for the diagrams; some of the pronunciations are strange...)

4.11

6 Which English consonants do *you* find difficult?

Which English consonants do *you* find difficult?

p			t				k	
b			d				g	
					tʃ			
					dʒ			
	f	θ		s		ʃ		h
	v	ð		z		ʒ		
m			n				ŋ	
			l			r		
w							j	

pit			**t**o				**c**od	
bit			**d**o				**g**od	
					chin			
					gin			
	fin	**th**in		**s**in		**sh**in		**h**it
	van	**th**e		**z**oo		vi**s**ion		
man			**n**ot				si**ng**	
			lay			**r**ay		
wet							**y**et	

4.12

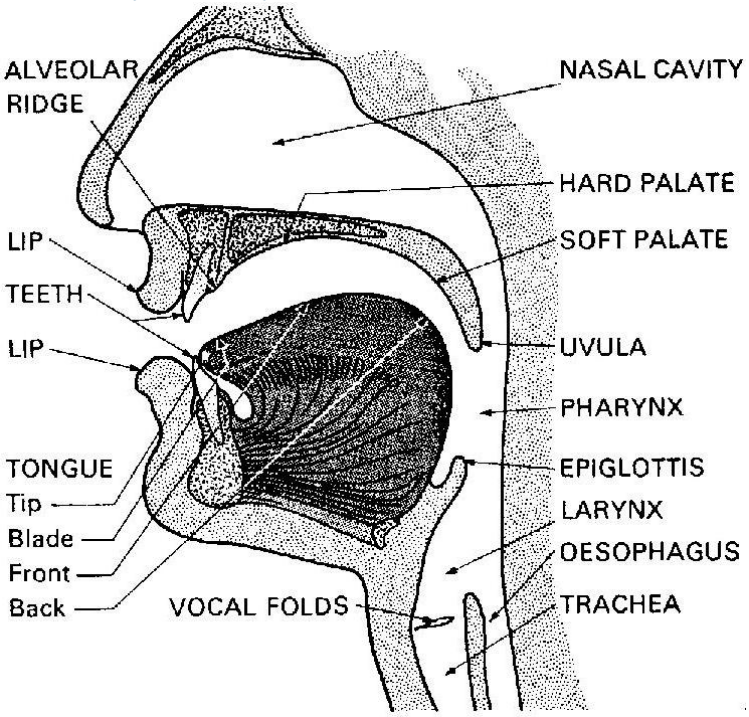
The most important thing to practise:

obstruents	voiceless plosives	p t k	
	voiced plosives	b d g	
	voiceless affricates	tʃ	
	voiced affricates	dʒ	
	voiceless fricatives	f θ s ʃ h	
	voiced fricatives	v ð z ʒ	← turbulent airflow
sonorants	voiced approximants	w l ɹ j	← smooth airflow
	voiced nasals	m n ŋ	

4.13

7 You can make any consonant you want

You can make any consonant you want



4.14

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 g	q ɢ		ʔ
Nasal	m	ɱ		n		ɳ	ɲ	ŋ	N		
Trill	B			r					R		
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.

- Keep your copy of the **IPA chart** handy.
- You have received the **description** of a **consonant** sound to produce (**voicing**, and **place** and **manner** of articulation).
- **Read out** the description aloud.
- **Pronounce** the sound.
- Hint: If the sound seems difficult, move **up and down the column** and **back and forth along the row**, until you have situated it in relation to other possible consonants.

4.15

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 〉
  - [ɪn m emərɪ ə v ɔːl wɪmɪn ɹeɪ p t ɪn ɔːl w ɔːz]
- Read Eckert and Barry pp 36–39 on manner of articulation and on the voiceless/voiced opposition `http://spence.saar.de/phonetics/unit04_20262/B__Handout/`
- We'll follow Eckert and Barry in talking about **fortis** consonants (stronger, like **[p]**) and **lenis** consonants (weaker, like **[b]**)
- We could add **tenuis** to refer to a consonant like the /k/ in BrE /skɑː/ skɑr [skɑː] AmE /skɑr/ [skɑɹ]
- We could experiment with a dialect-neutral representation; cf `https://en.wikipedia.org/wiki/Help:IPA/English`

4.16

Plosives in English and Ancient Greek

- Pronounce the following, in either British or American English:

par	spar	harp
tar	star	art
car	scar	arc

  The three sounds in each line are ALLOPHONES of a single phoneme in English.

- Check out Marcel Linnenkohl's excellent pronunciation of unaspirated (/p t k/) versus aspirated (/ph th kh/) voiceless plosive phonemes in Ancient Greek: `https://www.instagram.com/p/DXml6WtEbjG/` or `https://www.tiktok.com/@dersprachgeschichtler/video/7633119076876930326` or `https://www.instagram.com/p/DXml6WtEbjG/`

4.17

What are the *other* parts of the tongue doing?

- I was (almost) today years old when I learnt / learned that:
  - The reason why the Chinese don't mind whether you pronounce 北京 〈Beijing〉 as /beɪ.dʒɪŋ/ or /beɪ.ʒɪŋ/ is that both are wrong. Leaving aside the voiced/voiceless, unaspirated/unaspirated problem,
    - /beɪ.dʒɪŋ/ gets the MANNER of articulation right: [affricate]
    - /beɪ.ʒɪŋ/ gets the PLACE of articulation (almost) right: [palatoalveolar].
    - Actually, it's [alveolopalatal] – the tip of the tongue is pointing downward and is touching the oral surface of the bottom front teeth at the gum line.
    - For years I tried to pronounce 习近平 〈Xí Jìnpíng〉 [ɕɪˊ tɕɪnˇ.pʰɪŋˊ] as a slightly fronted variant of [çɪˊ tçɪnˇ.pʰɪŋˊ], and my Chinese teacher Chen Lansun was never completely satisfied; the place of articulation was wrong — (pre-) palatal [ç̟], not palatoalveolar [ɕ].
    - If I had used the older, English-specific Wade-Giles transliteration system 〈Hsi Chin-P'ing〉, I would have got the initial consonant of the articulation of the family name 习 exactly right.
- And from a student in winter semester 2024/2025 I learnt that
  - English [ɹ] is produced with the blade of the tongue placed close to the roof of the mouth just behind the alveolar ridge; but the ***sides*** of the tongue are ***raised***, and are in contact with the oral surface of the ***upper back teeth*** at the gum line.

4.18

8 We are mammals and have mammalian reflexes

What is this baby hominid doing?



4.19

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 / ' ?

4.20