

The Sounds of the International Phonetic Alphabet.

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- W: We've made this recording in order to illustrate the sounds associated with the phonetic symbols shown on the 1993 version of the chart of the International Phonetic Alphabet.
- H: This is a copyright recording, and may not be reproduced without permission. It was recorded on the tenth of March 1995 at University College London. My name is Jill House.
- W: And mine is John Wells. The recording was monitored by Michael Ashby and John Baldwin, and the sound engineers were Steve Nevard and David Cushing. Copies of the recording are available from the Department of Phonetics and Linguistics, University College London, Gower Street, London WC1E 6BT, United Kingdom.
- H: Before we start we'd like to call attention to two points that should always be kept in mind. The first is that any phonetic symbol - for vowel, consonant, or prosodic feature - can be applied to a range of sound-types. We have aimed at what we take to be a neutrally typical version of each.
- W: The symbol for 'aspirated', for example, doesn't specify the degree of aspiration - how many milliseconds of delay between plosive release and onset of voicing, delay during which turbulence may be audibly present - and in fact there is a continuous range of possible degrees of aspiration.
- H: The second, and related, point is that when IPA symbols are used to transcribe the sounds of a particular language, the neutrally typical versions we try to offer may not correspond exactly to the language-specific sounds.

- W: The same letter {[l]} is used in the transcription of English, Spanish, Zulu and Korean; in each case not only will it cover a range of allophonic variants, but also the default realisation will vary somewhat from language to language. So it's inevitable that our version of the voiced alveolar lateral, {la}, may not quite correspond to the typical sound of the language you may be interested in.
- H: We start with the table at the top of the Chart. It illustrates consonants produced with a pulmonic egressive air-stream mechanism. We begin with the **plosives**: sounds made with a complete obstruction of the air flow.
- W: They come in pairs, voiceless and voiced. At each place of articulation you will hear first the voiceless plosive, then the voiced one. We will make the voiceless plosives with a slight aspiration, and the voiced ones fully voiced. Each consonant will be said twice: first followed by a vowel, of the type [a:], and then with a vowel both before and after.
- H: First, then, the bilabials, made by the two lips: [pa ba].
- W: [apa bba]. Then the alveolars, made by the tongue tip against the alveolar ridge: [fa da].
- H: [ata ada]. The retroflex plosives, made by curling the tongue tip back and articulating against the rear slope of the alveolar ridge: [ʈa ɖa].
- W: [aʈa aɖa]. The palatals, made by the front of the tongue against the hard palate: [ca ja].
- H: [aca aɟa]. The velars, made by the back of the tongue against the velum, the soft palate: [ka ga].
- W: [aka aŋa]. The uvulars, made by the extreme back of the tongue against the uvula: [qa ɢa].
- H: [aqa aɣa]. Then the glottal plosive, made by bringing the vocal folds together. Here of course voicing is not possible: [ʔa].
- W: [aʔa].

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- H: Next we take the **nasals**. Their articulation is like that of the plosives, except that the soft palate is lowered, allowing the airstream to escape through the nasal cavity. We pronounce all the nasals voiced. First, a bilabial nasal: [m].
- W: [am]. Then the labiodental nasal, made by articulating with the lower lip against the upper teeth: [ɱ].
- H: [aɱ]. Alveolar: [n].
- W: [an]. A retroflex nasal: [ŋ].
- H: [aŋ]. And a palatal: [ɲ].
- W: [aɲ]. Velar: [ŋ].
- H: [aŋ]. A uvular nasal: [ɴ].
- W: [aɴ].
- H: Next are the **trills**, involving the repeated vibration of one articulator against another. There are only three of these, and we pronounce them all voiced. First, a bilabial trill: [ʙ].
- W: [aba]. Then an alveolar trill: [r].
- H: [ara].
- W: And a uvular trill: [ʀ]. [arɑ].
- H: Like a trill, but involving just a single touch, is a **tap** or **flap**. The alveolar tap: [ɾ].
- W: [a ɾ]. And a retroflex flap: [ɽ].
- H: [aɽ].
- W: Now come the **fricatives**. They involve forcing the airstream through a narrow gap, which causes it to be turbulent: the result is heard as friction. The fricatives come in pairs, with first a voiceless and then a voiced one at each place of articulation. We begin with the bilabial fricatives: [ɸa βa].
- H: [aɸa aβa]. Then the labiodentals: [ɸa ɸa].
- W: [aɸa aɸa]. Dental fricatives: [θa ða].
- H: [aθa aða]. Alveolars: [sa za].

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- W: [asa aʒa]. And postalveolars, sometimes known as palatoalveolars: [ʃa ʒa].
- H: [aʃa aʒa]. The retroflex fricatives are: [ʒa ʒa].
- W: [aʒa aʒa]. Then the palatals: [ça ʝa].
- H: [aça aça]. Velars: [xa ya].
- W: [axa ayɑ]. And uvular fricatives: [χa ʀa].
- H: [axɑ aʀɑ]. Then we take the pharyngeal fricatives, made by constricting the pharynx: [ʕɑ ʕɑ].
- W: [aʔɑ aʔɑ]. And last along the fricative row, the so-called glottal fricatives: [hɑ fa].
- H: [aha afa]. And then there are also the lateral fricatives, at the alveolar place of articulation: [ʎa ʝa].
- W: [aʎɑ aʝɑ].

H: **Approximants** are similar in their manner of articulation to fricatives, but are produced without friction, without making the airstream turbulent. They are all pronounced with voicing. First, the labiodental approximant: [ʋɑ].

- W: [aʋɑ]. Next, an alveolar or postalveolar approximant: [ɹɑ].
- H: [aɹɑ]. And a retroflex: [ɻɑ].
- W: [aɻɑ]. A palatal approximant or semivowel: [jɑ].
- H: [ajɑ]. And a velar one: [wɑ].
- W: [aʷɑ].

H: The **lateral approximants** are articulated with the air escaping around a central obstruction. We pronounce them voiced. The alveolar lateral is: [lɑ].

W: [alɑ]. Retroflex: [ɭɑ].

H: [aɭɑ]. The palatal lateral: [ʎɑ].

W: [aʎɑ]. And a velar lateral: [ɭɑ].

H: [aɭɑ]. That brings us to the end of the consonants shown in the main grid of the chart.

- W: Next we come on to the **non-pulmonic** consonants. Their initiation originates somewhere other than in the lungs. First we take the **clicks**, made with an oral or **velaric ingressive** airstream mechanism. We pronounce them without any specific simultaneous articulation, and they are accordingly voiceless. First, the bilabial click: [ɓɑ].
- H: Between vowels, that's: [aɓɑ]. The dental click is: [ɗɑ]. You will notice that it has an affricated release.
- W: [aɗɑ]. An alveolar or postalveolar click, often called retroflex, is: [ɓ̠ɑ].
- H: [aɓ̠ɑ]. A so-called palatoalveolar click is: [ʈɑ]; it has alveolar contact and an abrupt release.
- W: [aʈɑ]. And lastly the alveolar lateral click is: [ɓ̠̠ɑ].
- H: [aɓ̠̠ɑ].

W: The **voiced implosives** are made with a pharyngeal or **glottalic ingressive** airstream mechanism. The bilabial implosive stop is: [ɓɑ].

- H: [aɓɑ]. Dental or alveolar: [ɗɑ].
- W: [aɗɑ]. And a palatal implosive: [ʄɑ].
- H: [aʄɑ]. Velar: [ɡɑ].
- W: [aɡɑ]. Then the uvular: [ʁɑ].
- H: [aʁɑ]. The **ejectives** also have a pharyngeal or glottalic airstream mechanism, but an egressive one. They are voiceless. First, the bilabial ejective stop: [p̰ɑ].
- W: [ap̰ɑ]. Dental or alveolar (this one is alveolar): [t̰ɑ].
- H: [at̰ɑ]. Velar: [k̰ɑ].
- W: [ak̰ɑ]. And lastly, an alveolar fricative ejective: [s̰ɑ].
- H: [as̰ɑ].

W: Now we come to the **vowels**. We'll take these in the order in which they're displayed on the chart, reading across. We'll say each vowel first on a falling tone, and then on a mid level tone. We'll make each vowel fairly long.

- H: We start with the **close** vowels, which can also be termed **high**.
Close front unrounded, cardinal one: [i].
- W: [i]. Close front rounded, cardinal nine: [y].
- H: [y]. Close central unrounded, cardinal seventeen, barred-i, [ɨ].
- W: [ɨ]. Close central rounded, cardinal eighteen, barred-u: [ʉ].
- H: [ʉ]. Close back unrounded, cardinal sixteen: [ʉ].
- W: [ʉ]. Close back rounded, cardinal eight: [u].
- H: [u]. Next the chart shows three vowels that are lax or mid-centralized counterparts of some we've just had. Fairly front, fairly close unrounded, lax cardinal one, small cap i: [ɪ].
- W: [ɪ]. Then the corresponding rounded vowel, lax cardinal nine, small cap y: [ʏ].
- H: [ʏ]. And then fairly back, fairly close, rounded, lax cardinal eight: [ʊ].
- W: [ʊ]. Now we turn to the **close-mid** vowels, also termed half-close or mid-high. Close-mid front, unrounded, cardinal two: [e].
- H: [e]. Close-mid front, rounded, cardinal ten: [ø].
- W: [ø]. Close-mid central, unrounded, a closish schwa, reversed e: [ɘ].
- H: [ɘ]. The corresponding rounded vowel, close-mid central, barred o: [ɚ].
- W: [ɚ]. Then a close-mid back unrounded vowel, cardinal seventeen, ram's-horn: [ɤ].
- H: [ɤ]. Close-mid back rounded, cardinal seven: [o].
- W: [o]. Then the schwa, which is quite loosely defined: a mid central vowel, normally unrounded: [ə].
- H: [ə]. Next we take the **open-mid** vowels, also termed half-open or mid-low. Open-mid front, unrounded, cardinal three: [ɛ].
- W: [ɛ]. Open-mid front, rounded, cardinal eleven, o-e digraph: [œ].
- H: [œ]. Open-mid central, unrounded, an openish schwa, reversed epsilon: [ɜ].

- W: [ɜ]. The corresponding rounded vowel, open-mid central: [ɞ].
- H: [ɞ]. And the open-mid back unrounded vowel, cardinal fourteen, inverted v: [ɰ].
- W: [ɰ]. Open-mid back rounded, cardinal six: [ɔ].
- H: [ɔ]. Then a front unrounded vowel between open-mid and open, a-e digraph: [æ].
- W: [æ]. And a central unrounded vowel at the same height, inverted a: [ɶ].
- H: [ɶ]. Lastly among the vowels, we come to the **open** vowels, also termed low. An open front unrounded vowel, cardinal four: [a].
- W: [a]. The corresponding rounded vowel, open front rounded, cardinal twelve, capital o-e digraph: [ɶ].
- H: [ɶ]. Then an open back unrounded vowel, cardinal five: [ɑ].
- W: [ɑ]. And an open back rounded vowel, cardinal thirteen: [ɒ].
- H: [ɒ]. And that completes the vowels.
- W: Now beneath the vowels on the chart is a section labelled "**other symbols**". These are an assortment of consonants. First comes the voiceless labial-velar fricative, inverted w: [ɰɑ].
- H: [ɰɑ]. Then the voiced labial-velar approximant: [wɑ].
- W: [wɑ]. And the voiced labial-palatal approximant: [ɰɑ].
- H: [ɰɑ]. Then the epiglottal fricatives, articulated by making a constriction between the epiglottis and the wall of the pharynx: first the voiceless epiglottal fricative: [ʔɑ].
- W: [ʔɑ]. Then the voiced epiglottal fricative: [ʕɑ].
- H: [ʕɑ]. If we obstruct the airstream completely at this place, we get an epiglottal plosive: [ʔɑ].
- W: [ʔɑ]. At the top of the righthand column under Other Symbols we have the alveolo-palatal fricatives, voiceless and voiced: [çɑ zɑ].
- H: [çɑ aza]. Then we have an alveolar lateral flap: [ɬɑ].
- W: [ɬɑ]. And then the famous sound of Swedish identified here as consisting of simultaneous: [ʃ] and: [x], namely: [ʃxɑ].

- H: [aŋɑ]. Beneath this symbol the chart mentions the possibility of using a tie bar to join two symbols for affricates and double articulations. The illustration of a double articulation is the voiceless labial-velar plosive: [k̟pɑ].
- W: [ak̟pɑ]. And the affricate is a voiceless alveolar affricate: [tsɑ].
- H: [atsɑ]. Another use for the tie bar might be to show nasalized clicks, where the click articulation occurs simultaneously with a voiced velar nasal that uses a pulmonic air-stream, thus a nasalized postalveolar click: [ŋ̠ɑ].
- W: [aŋ̠ɑ].
- W: Next we turn to the **suprasegmentals**. The English word: [ˈfounəˈtʃən], so pronounced, illustrates secondary stress on the first syllable and primary stress on the penultimate.
- H: [ˈfounəˈtʃən]. We shan't demonstrate the symbols for degrees of length, for syllable break, for group boundaries, or for linking, because these can't easily be demonstrated with segments in isolation and out of context.
- W: Turning to **tones** and word accents, we start with **level tones**. An extra high tone is: [é] ([ʔe]). A high tone is: [é] ([ʔe]). A mid tone: [è] ([ʔe]). A low tone: [è] ([ʔe]). And an extra low tone: [è̇] ([ʔe]).
- H: To demonstrate downstep and upstep, we can take an English sentence: *He's determined to *take Vcharge*. That was an unmarked intonation pattern.
- W: *He's determined to *take Vcharge*. With a downstep on *take*, it becomes: *He's determined to *take Vcharge*
- H: *He's determined to *take Vcharge*. And with an upstep on *take*, it becomes: *He's determined to *take Vcharge*.
- W: *He's determined to *take Vcharge*. Looking now at the **contour tones**, we have first a rising tone: [é̇] ([ʔe]).
- H: [é̇] ([ʔe]). And then a falling tone: [è̇] ([ʔe]).

- W: [é̇] ([ʔe]). A high rising tone: [é̇] ([ʔe]); and a low rising tone: [è̇] ([ʔe]).
- H: A rising-falling tone is: [é̇] ([ʔe]).
- W: An English sentence with a global rise is: ↗ **WHAT** did you say you *wanted*?
- H: And a global fall is heard in: ↘ *What* did you say you **WANT**ed?
- W: Lastly we come to the section of the chart labelled **diacritics**. The left-hand column begins with the diacritic to show that a segment is voiceless. A voiceless alveolar nasal is: [n̥ɑ].
- H: [n̥ɑ]. And a voiceless lenis alveolar plosive: [d̥ɑ].
- W: [ɑd̥ɑ]. At the top of the grid here you will also notice the symbol for a voiceless velar nasal, with the diacritic placed above rather than below the rest of the symbol: [ŋ̥ɑ].
- H: [ɑŋ̥ɑ]. Next, the diacritic to show that a segment is voiced. A voiced fortis alveolar fricative: [s̪ɑ].
- W: [ɑs̪ɑ]. Aspiration can be shown by a small raised h: aspirated voiceless alveolar plosive: [tʰɑ].
- H: [ɑtʰɑ]. And an aspirated voiced alveolar plosive: [dʰɑ].
- W: [ɑdʰɑ].
- H: We shan't illustrate the remaining diacritics in this column until we come to the one at the bottom, which shows rhoticity. A rhoticized schwa is: [œ̃].
- W: [œ̃]. In the central column of diacritics, we start with the diacritic for breathy voicing. A breathy voiced bilabial plosive and open vowel are: [b̤ɑ].
- H: [b̤ɑ]. Creaky voicing, on the other hand, sounds like this: the same sequence creaky voiced is: [b̰ɑ].
- W: [b̰ɑ]. Lingualal consonants are articulated with the tongue tip against the upper lip. Voiceless and voiced linguolabial plosives are: [tɑ dɑ].

- H: [aʔa aɖa]. Next we have a number of symbols to show secondary articulations. First, labialized segments: [tʷ a dʷ a].
- W: [aʔ^w a aɖ^w a]. And palatalized: [tʰ a dʰ a].
- H: [aʔ^h a aɖ^h a]. Velarized: [tʰ^ʷ a dʰ^ʷ a].
- W: [aʔ^h a aɖ^h a]. And lastly pharyngealized: [tʰ^ʕ a dʰ^ʕ a].
- H: [aʔ^h a aɖ^h a]. The tilde-through can be used to show either velarization or pharyngealization, as in dark l: [t̃a].
- W: [aʔa].
- H: In the third column of diacritics we start with symbols specifying with greater precision the place of articulation of sounds involving the tip or blade of the tongue as primary articulator. First, voiceless and voiced dental plosives, articulated against the teeth: [ʈ a ɖ a].
- W: [aʈ a aɖ a]. Then, apical alveolar plosives, made with the tip of the tongue: [ʈ a ɖ a].
- H: [aʈ a aɖ a]. And then laminal alveolar plosives, made with the blade of the tongue: [ʈ a ɖ a].
- W: [aʈ a aɖ a]. The symbol for nasalization is a tilde over a symbol: [aʈ̃ a aɖ̃ a]. The symbol for nasalization is a tilde over a symbol: [aʈ̃ a aɖ̃ a].
- H: [ẽ]. The next three symbols show different varieties of plosive release. We hear nasal release in the sequence: [d̃ⁿ na].
- W: [ad̃ⁿ na]. And we hear lateral release in the sequence: [d̃^l la].
- H: [ad̃^l la]. There is no audible release of the plosive in the sequence: [ad̃].
- W: The same is true of the first plosive in the sequence: [ad̃^h ba].
- H: Towards the bottom of this grid you see the symbols to show raised and lowered varieties. A raised close-mid front unrounded vowel is: [e̝].
- W: [e̝]. And a lowered close-mid front unrounded vowel is: [e̞].
- H: [e̞]. Where a symbol might be interpreted as denoting either a

- fricative or an approximant, the raising symbol makes it clear we mean the fricative, as in the voiced apico-alveolar fricative: [ʃa].
- W: [aʈa]. And the lowering symbol makes it clear we mean the approximant, as in the voiced bilabial approximant: [ʃa].
- H: [aβa]. The last two symbols at the bottom right of the chart are used to show advanced tongue root and retracted tongue root. Cardinal two, a close-mid front unrounded vowel, usually has a relatively advanced tongue root, giving a wide pharynx and tense quality: [e̝].
- W: [e̝]. With a retracted tongue root we get a narrower pharynx and lax quality: [e̞].
- H: [e̞]. And with that we come to the end of this recording.
- W: We hope you've found it useful.

THE INTERNATIONAL PHONETIC ALPHABET (revised to 1993)

CONSONANTS (PULMONIC)

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