

# Welsh pronunciation

(neutral, traditional, mediatic)

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*Neutral Welsh* (GB: Celtic, IE) has various phonetic and phonemic diphthongs (these, together with true triphthongs, are nothing but /V, VV/ + /i, u/ [i, ɪ; u]); there is also /ə/ [ʌ]: *hynny* [ʰhɛni]. Vowel ‘length’ (again, actually, narrow diphthongs) is contrastive, mainly in stressed syllables. We have shown the possible variants of the diphthongs /ei, ei, ui/ [ei, ɪi], [ɛi; ɛi], [uɪ; oɪ], too.

In traditional treatises on Welsh pronunciation, we generally find the ‘/rh, hj, hw, χw/’ sequences (which somehow follow traditional spelling clusters: *rh, mh, nh, ngh, hy, hw, ch*), with different possible realizations, including analytical [rh, hj, hw, χw]; although we think it better to propose a more systematic use of [r, h, ʌ, χ̂] (and [χ̂] before front vowel), not only phonetically, but also phonemically.

Thus, as shown in the consonant table, we prefer to use the more specific symbols not only for the voiceless contoids (but also for the corresponding phonemes): /r, h, ʌ, χ̂/ [r, h, ʌ, χ̂] (including [χ̂], occurring before front vowels).

All this, of course, in addition to the certainly possible analytical realizations, [rh, hj, hw, χw] (including more or less partially different further realizations, such as [hr, h<sub>ɕ</sub>, h<sup>h</sup>, h<sub>ɕ</sub>, r<sub>h</sub>] – [h] is a very weak [h]; while [h] is a voiceless laryngeal semiapproximant, weaker than normal [h]).

Let us also notice that, before front vowels all (labio)velar and (labio)uvular consonants, naturally have pre-velar and pre-uvular taxophones: [k, g, ŋ, ŋ; χ, χ̂]; but, for the labio-velar approximants /h, w/ the more typical taxophones are (labio)pro-velar: [ʃ, w]. The same goes for ‘/mh, nh, ŋh/’, which are better indicated as /m, h, ŋ/ [m, h; ŋ, ŋ].

Besides, /p, t, k/ are usually [ph, t<sub>h</sub>, kh] (and [kh]), while /b, d, g/ are [p̣, ṭ, ḳ] (and [ḳ]); there is neutralization of /p, t, k/ and /b, d, g/ into [p, t, k] before other consonants. Welsh also has /ṭ, ḍ/ [ṭ<sub>h</sub>, ḍ<sub>h</sub>] mostly in loans. Generally, before silence or voiceless consonants, we only find voiceless consonants, even for ‘/v, ð/’; only in voiced contexts can we find [v, ð] or, at most, [ḅ, ḍ, ɡ̣, ḍʒ].

The consonants shown in round brackets, in the table, are generally used in loans or very rarely, indeed (while, of course, the consonants put in square brackets are normal taxophones). Let us notice that the table does not contain only the neutral con-

toids, but also the variant taxophones of mediatic Welsh. The ograms of all those contoids are shown in fig 5-12 (for useful comparisons and deductions).

Cases of consonant gemination are possible. For /tr/ we find [tʰz, tʰz] (also [tʰz, dz]; sometimes [z] is found for /r/ too). For /l/, the normal phone is [l̥], while [l] occurs only before front vowels; besides, we have [n≡C] (homorganic taxophones of /n/, by assimilation). Celtic syllabification links a final consonant to an initial vowel: *Yn y botel yn yr oergell* [ɹ-nɹ-ɹɔʰfʰε ɹ-nɹ-ɹɔɪr̥kεɹ] ‘in the bottle in the fridge’.

Even if describing ‘mutaton’ is not our main aim (because, first, it concerns more grammar than pronunciation), let us briefly mention how Welsh, just like any other modern Celtic language (albeit in different forms), features what is usually called ‘initial consonant mutation’ (or *inital consonant alternation*).

This happens when an initial consonant can phonemically change according to its morphological and syntactical context (although, historically, in a taxophonic phonetic change). Thus, an initial basic form of Welsh words (including the ones of the words listed below, of course), also called ‘radical’, must not be generalized in entire phrases or sentences.

There are four types of initial consonant mutation, all motivated by historical changes, across word boundaries: mostly lenitions, particular post-consonantal positions and protheses, before further changes occurred, leaving the initial consonant mutation as a trace for historical changes.

Thus, we have: ‘soft mutation’ (or *lenited alternation*), ‘nasal mutation’ (or *nasal alternation*), ‘aspirate mutation’ (or *constrictive alternation*), *h-prothesis*, /h/ is added to an initial vowel or /j-| i-.

In the ‘soft mutation’ /p, t, k; b, d, g; r, ɹ; m/ *p, t, c; b, d, g; rh, ll; m* become /b, d, g; v, ð, θ; r, l; v/ *b, d, g; f, dd, θ* (zero); *r, l; f* (no change for the other consonants). This is the most frequent mutation, and is found after certain determiners (like *y, yr, ’r*), the predicate particle *yn*, certain adverbs, certain preverbal particles, certain conjunctions, certain numbers, after proposed adjectives, and some other more specific contexts.

In the ‘nasal mutation’ /p, t, k; b, d, g/ *p, t, c; b, d, g* become /m, n, ŋ/ *mb, nb, ngh; m, n, ng* (with no change for the other consonants). This is found after the determiner *fy*, the preposition *yn/ym/yng*, certain time words after certain numbers.

In the ‘aspirate mutation’ /p, t, k/ *p, t, c* become /f, θ, χ/ *ph, th, ch* (no change for the other consonants). This is found after certain modifiers, certain preverbal particles, certain conjunctions and certain prepositions.

In the *h-prothesis* a simple /h/ is added to an initial vowel. This is normal after the possessive determiners and infixed pronouns, and some other more specific contexts.

Welsh learners (but even Welsh speakers themselves, from time to time), are advised to always check a good grammar book, looking for the most frequent cases and (not infrequent) exceptions. We advise learners not to use the basic form of a word in any context, particularly in its spoken form, also in order to avoid bad looks all around (and in general not to ‘disrespect’ the language, as this can happen especially to minority languages).

Here are a few general examples, based on the neutral accent (including some curious words, also due to spelling ‘oddities’): *chwilio* [χ̥ɪl̥l̥jɔ̃, -iɔ̃], *heno* [hɛɛnɔ̃, hɛnnɔ̃], *dydd* [t̥iɪθ], *dydd Sul* [t̥iɪθ'siɪt̥; t̥iθ'siɪt̥], *diolch yn fawr* [t̥iɪɔ̃t̥χɔ̃ŋ 'vaʊr, t̥jɔ̃t̥χ-; t̥jɔ̃t̥χ-, t̥ɟ̥-], *noswaith dda* [nɔ̃sweiθæ, -θ̥ðæ], *croeso* [khrɔ̃issɔ̃], *tywydd* [t̥hɔ̃uɪθ], *nessaf* [nɛssaf, nɛssa], *llongyfarchiadau* [l̥ɔ̃ŋk̥ɔ̃varχ̥aɪt̥t̥ei, -ɛ], *iechyd* [jɛχχɪt̥], *llawen* [l̥ɔ̃auɛn], *newydd* [nɛuɪθ], *chwech* [χ̥ɛɛχ], *cwm* [k̥hɔ̃m], *chwarae* [χ̥ɔ̃ærei, χ̥arɛ-, -ɛ], *sioled* [s̥jɔ̃kkhlɛt̥], *wi* [uɪ], *sbeis* [s̥p̥iɪs], *ying Ngwynnedd* [ɔ̃ŋŋuɪnɛt̥].

Further useful examples: *marw* [m̥æru, m̥arru], *wythnos* [uɪθnɔ̃s, 'θn-, 'ɔsn-], *pump* [p̥hɪmp̥h], *Iau* [j̥ei], *hwilio* [h̥uɪl̥jɔ̃, -iɔ̃], *gwlad* [k̥ɔ̃t̥æf̥, 'k̥t̥-], *ymwelwr* [ɔ̃m'wɛl̥ɔ̃r, -'wɛl̥t̥-], *cyw* [k̥hiu], *mawrth* [m̥auɪθ], *rheolaidd* [r̥ɛ'ɔ̃s̥t̥eiθ, -ɔ̃t̥-, -ɛθ], *blwydd* [p̥l̥uɪθ], *pen-blwydd* [p̥hɛm'p̥l̥uɪθ], *dŵr* [t̥uɔ̃r], *ôl* [õs̥t̥], *ar ôl* [a'rõs̥t̥], *mwg* [m̥uɔ̃k̥], *cwpan* [k̥hɔ̃pp̥han], *sgorio* [s̥k̥ɔ̃ɔ̃rjɔ̃, -ɔ̃rɛ-, -iɔ̃], *coffio* [k̥hɔ̃v̥v̥jɔ̃, -iɔ̃], *galaru* [k̥a'l̥arri], *ymosodiad* [ɔ̃mɔ̃'sõs̥t̥j̥aɪ, -s̥ɔ̃t̥j̥j-], *ysbrid* [ɔ̃s̥p̥riɪt̥], *tri* [t̥hziɪ], *tsips* [t̥ʃ̥hɪps].

*Traditional Welsh* differs from neutral Welsh especially for the preservation of /i̥, ii̥/ (often spelled *u, y*, in place of neutral Welsh /i, ii/) and of a consequent series of diphthongs and triphthongs with /i̥/: *haul* /h̥aɪl/ [h̥aɪt̥], *hael* /h̥aaɪl/ [h̥aɛɪt̥]. We have shown three possible variants, /iu, ei, eu/ [iu; əu], [iɪ; ei], [ɛu; eu], and two taxophones for /ei, ei̥/ [ɛi(C(C))#, ɛi̥(C(C))#]. There are no cases of consonant gemination; [n≡C]; /th, t/ are [t̥h, t̥]; /l/ [l̥, l̥t̥].

*Mediatic Welsh* has /χ/ [χ̥] more often than [χ] (with the addition, in broader accents, of [ɬv] or [ɬw], in some words); /ʃ/ [ʃ̥], /tʃ/ [t̥ʃh, t̥ʃ̥] (with labial protrusion), more often than [ʃ], [t̥ʃh, t̥ʃ̥]; /t̥/, which, besides remaining [t̥], can become [t̥̥, ç, ɸ]. /r/ is sometimes [r] (especially in stressed syllables), also with /r̥/ [r̥h, r̥h̥; h̥r, çh; r̥, r̥]; for /l/, we can have prevocalic [l̥] even before central and back vowels, but [l̥, l̥t̥], in postnuclear positions (before consonants or pauses).

In addition, /m, h, ɲ/, similarly to /r/, are also often clearly voiceless nasals [m̥, h̥; ɲ̥, ɲ̥] (besides [m̥, ɲ̥; ɲ̥, ɲ̥]): *fy mbrif ddiddordeb* [v̥l̥m̥riɪf̥ ð̥uð̥ɔ̃rɔ̃ɔ̃p̥], *fy nhad* [v̥l̥h̥aɛt̥], *ying Nghymru* [ɔ̃ŋŋh̥ɔ̃m̥ru].

/t/ can be [t̥ʃh], and /tr/ [t̥ʃhɔ̃, t̥ʃ̥ɔ̃; t̥ʃhɔ̃, t̥ʃ̥ɔ̃], also with possible voiceless [-z̥] for /tr/. Voicing of simple /p, t, k, t̥/ (mostly in contexts that are not /s(̥)K/, where they can even be [s(̥)C̥]) may be rather strong, with [p̥, t̥, k̥, t̥̥], even finally, where /p, t, k/ can be unreleased: [C̥]; and in purely voiced (even sometimes postpausal) contexts, we can also have [b, d, g, t̥̥].

Internal /p, t, k/ (and, obviously, not after silence) often become [̥Ch, ̥C], and [Ch̥, C̥#] (audibly released), so that voicing, in this accent, is more contrastive than ‘aspiration’ (or, better *laryngism, laryngilization*). Words spelled with final *-f, -dd* /f, θ/, before voiceless consonants or pauses, can be [v̥, θ̥].

Some mild consonant gemination can be found. Words like *theatr, medr, cenedl, ofn* often have [-ɸ; -ɜC], while some more familiar ones, like *pobl* or *rhestr*, can present an echo realization of the preceding vowel: [t̥phɔ̃bbɔ̃t̥, r̥ɛstɛr].

Let us add that stress, in polysyllabic Welsh words, can often fall on an ‘unexpected’ syllable, especially for prosodic reasons, like in *Cymru* ‘Wales’ [kʰɫmɾɪ, kʰɫmɾɪ], including a very frequent change into [-m(ɔ)br-].

*Orthographical remarks:* unfortunately, the Welsh orthography has many orthographical issues, although not as many as in the other Celtic languages (not to mention English). For instance, in spite of a mandatory circumflex accent, in some words, in order to represent ‘length’, it is rarely used in a logical manner.

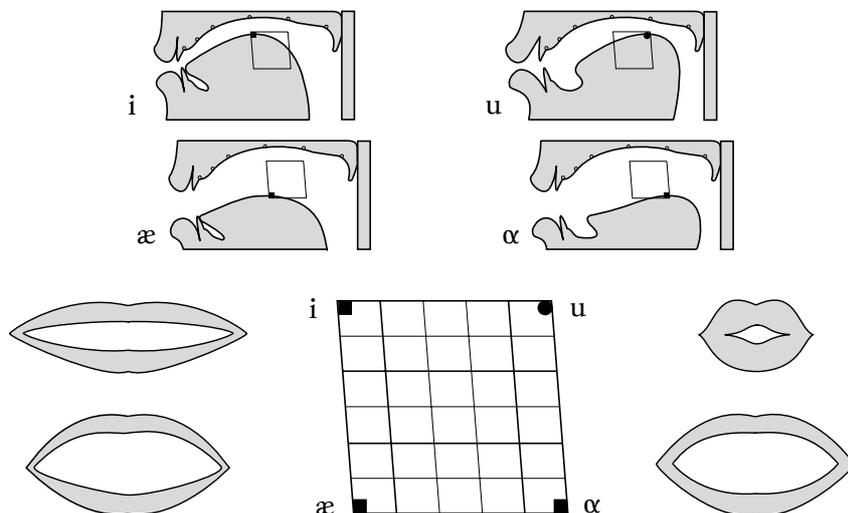
One has to rely on some kind of ‘rules’, which are barely consistent, especially in loanwords. In addition, many words, especially polysyllabic ones, oscillate, with various possible realizations. Also, the choice to represent some phonemes, can be very odd; not just for vowels, but also for consonants.

For instances, for etymological reasons, *u* and *y* normally represent /ii, i/ (/i̯i, i̯/ in *traditional* and *northern* Welsh), also in diphthongs, just like *i* does! And *y* also represents /ə/, but not for historical reasons, this time. Strangely enough, *w* also represents /u, uu/, and there is no orthographical distinction between /j, w/ and /i(i), u(u)/, all written just as *i, u*.

Since this language also features some kind of geminated consonants, we are also rather puzzled about *ll, dd, ff* /ʎ, ɟ, f/; but *f* /v/ is very odd, indeed too odd, especially since Welsh has no *v*. And, not less strange are *th, ch* /θ, χ/, even if we are rather used about this ‘barbarous’ representation of these phonemes.

The so called grammatical ‘aspirate mutation’, also features *ph* /f/ (which is just like *ff* /f/), in order to keep a connection with *p* /p/, but this trend is not consistent with other consonants, thus making this connection useless and tiring, even more so. Similarly strange is the use of *siV* (ie *si* plus a vowel) /ʃ/, *ts* /tʃ/, and *j* /dʒ/ (for adapted English loans, as *Jac-y-do* ‘Jackdaw’, although it could have been much more practical to use *j* for /j/, since *y* represents /i, ii/).

fig o. The *canIPA* vocogram.



After this general introduction, with some useful examples, following the *Natural Phonetics Method*, we will explain systematically the vowels and consonants of Welsh, including the necessary tonograms in order to show the intonation patterns in a concise, but objective and reliable way.

Thus, fig 0 shows how the vowels of any language are produced. The four extreme points on the vocogram ([i, æ, a; u]) indicate the space in the mouth within which all the possible vocoids are articulated, including lip rounding, for [u].

In closed relation to fig 0, fig 1 gives the *vowels* and *diphthongs* of *neutral* Welsh. For a useful and necessary comparisons, fig 2 shows those of *traditional* Welsh, while fig 3 gives those of *mediatic* Welsh. They all include some variants, which occur in each accent given.

fig 1. Neutral Welsh vowels & diphthongs.

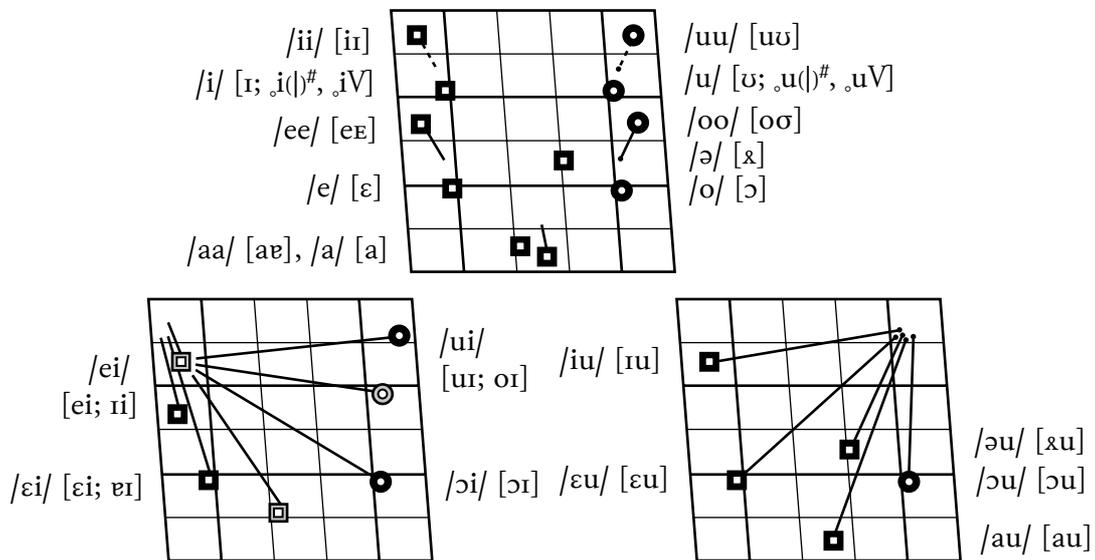


fig 2. Traditional Welsh vowels & diphthongs.

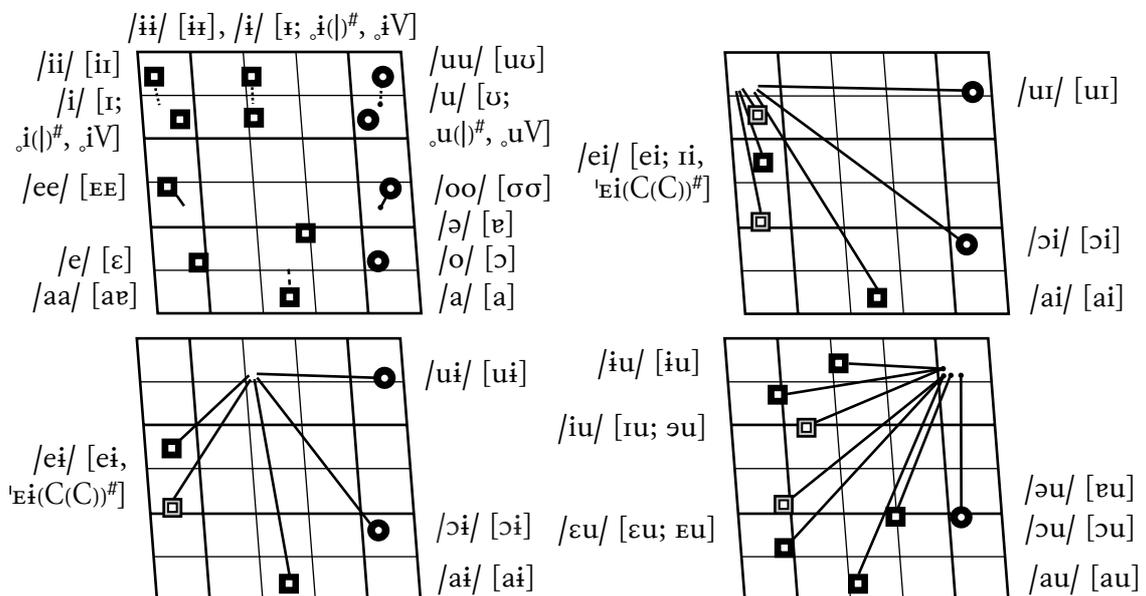
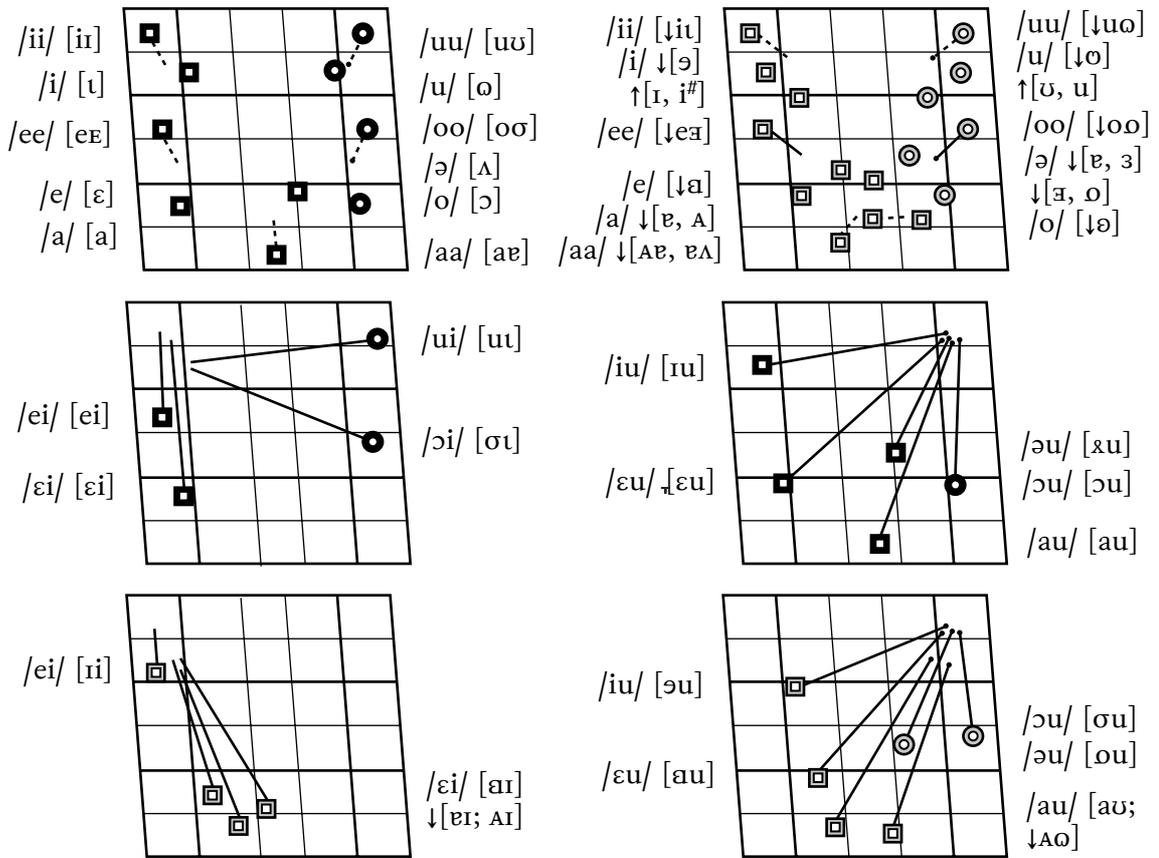


fig 3. Mediatic Welsh vowels & diphthongs.



Let us pass, now, to the *consonants* of Welsh. The table in fig 4 shows all the con-  
toids we found in this language, including mediatic variants. Their orograms are pre-  
sented in fig 5-12.

fig 4. Welsh consonants.

h̃ m	m [m]	[ɾ]	h̃ n	[ɾ]	[ɾ]	[h̃ ɲ]	h̃ ɲ	[N]	[N]
p	b		f̃ d̃	(t̃ d̃)	[t̃ d̃]	[k̃ g̃]	k̃ g̃		
		f v	θ ð	s(z)	ʃ (z)	[ç/ɣ]		[χ]	[χ̃]
			[z̃ z̃]			(h̃) j	[p̃ w̃]	(h̃) w̃	χ [χ̃]
			[r̃ r̃]						h [h]
			r̃ r̃						[ɾ]
		[l]	l	[l̃ l̃]	[l̃]	[λ]			
			ɬ		[ɬ]				

fig 5. Welsh consonants: nasals.

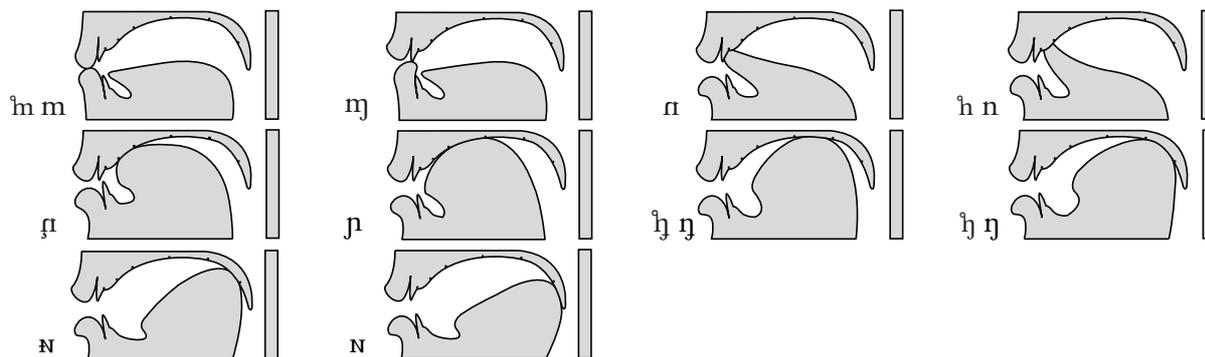


fig 6. Welsh consonants: stops.

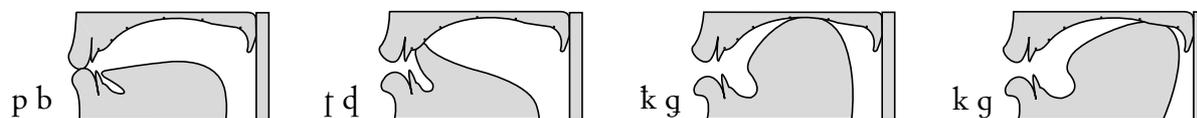


fig 7. Welsh consonants: Stop-strictives.

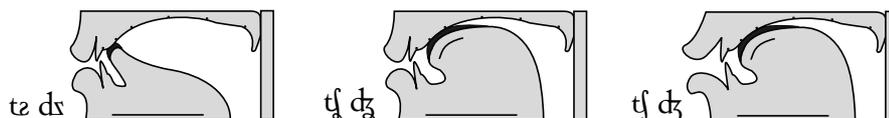


fig 8. Welsh consonants: constrictives.

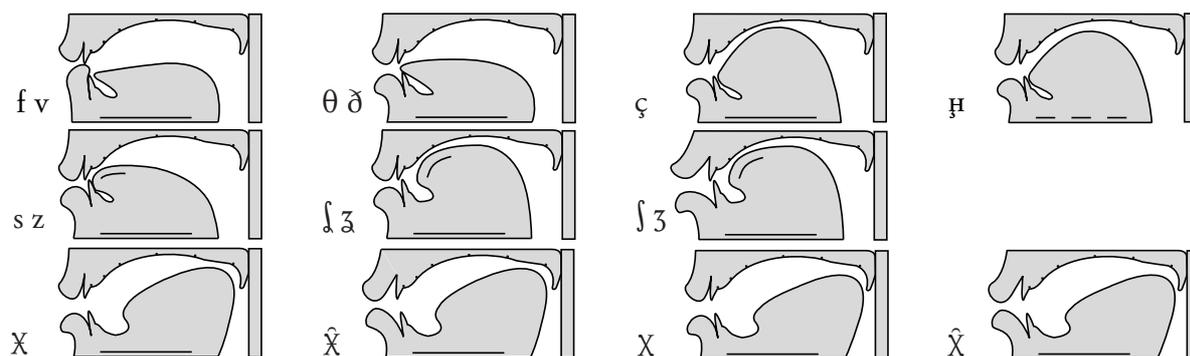


fig 9. Welsh consonants: approximants.

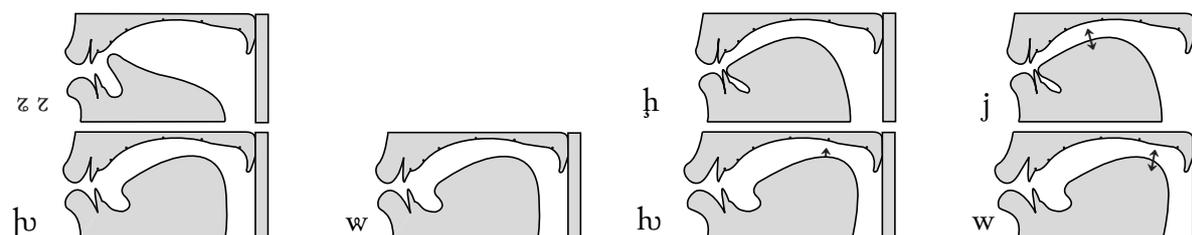


fig 10. Welsh consonants: laryngeal voiceless approximant and semi-approximant.

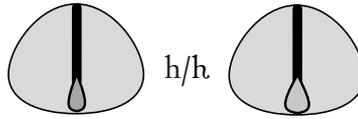


fig 11. Welsh consonants: alveolar trills and taps, and voiceless uvular constrictive trill.

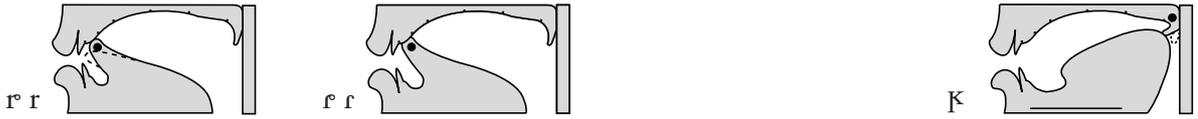
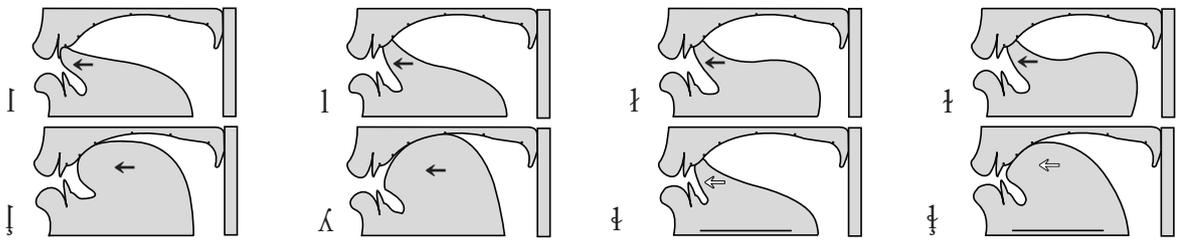


fig 12. Welsh consonants: laterals.



Let us end this concise description of the pronunciation of Welsh, by adding the intonation patterns of the three accent considered, cf fig 13. For an introduction to Natural Intonation, the *Natutral Tonetics* pdf may be downloaded from the [canipa.net](http://canipa.net) site.

fig 13. Welsh intonation patterns.

