

1.

On vowels & vocoids

A necessary introduction to vowel production and classification

1.1. As far as *vowels* are concerned, let us recall that from a phonetic point of view it is more convenient to use the term *vocoids*, while reserving the more traditional terms for *phonemes* and *graphemes*.

fig 1.1 will help to «reconstruct» the typical modalities for the production and identification of vocoids, or vowel phones, which have *three* fundamental components that – concisely– are: the *fronting* and *raising* of the dorsum (or central part of the tongue), with different degrees of jaw opening, and different *lip* positions, since lip rounding doubles the number of all possible vocoids.

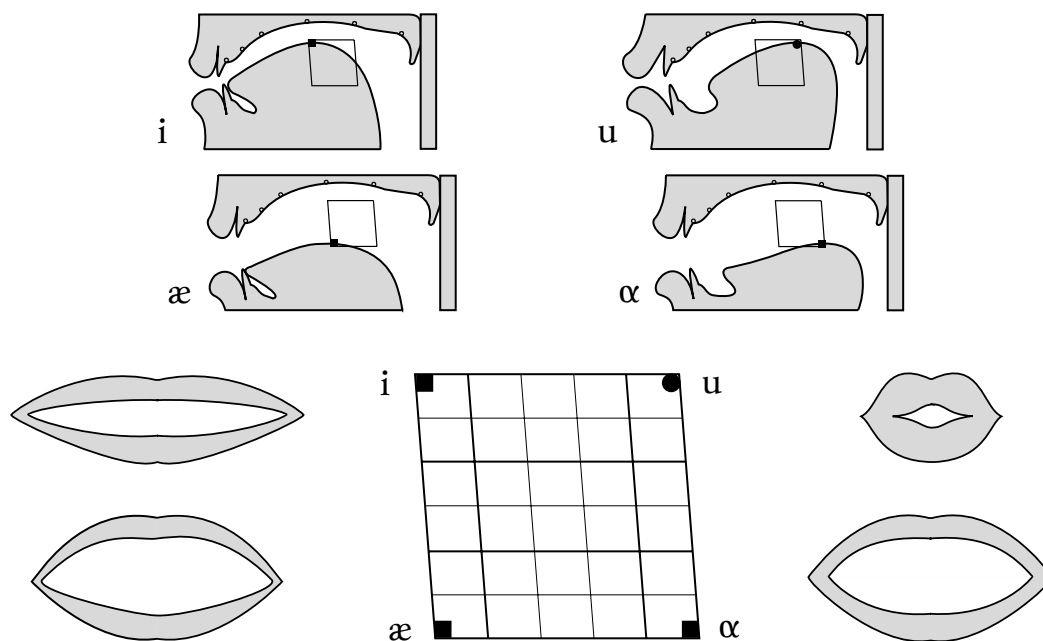
1.2. Let us notice that our *vocogram* is different from the currently official *trapezoid*, which we decided to abandon because of its partially unsatisfactory shape and conception (cf ¶ 6-8 of our *HPh*, *A Handbook of Phonetics*, for more details and general information, as well).

Besides, the vocogram is subdivided in a considerable number of boxes, which renders it more precise a tool than the too generic official one (which can be seen at the end of the book***).

Furthermore, the two low vocoids are –more realistically– [æ, α], not «[a, a]» (as acoustic phonetics can easily show, as well).

1.3. In addition, fig 2(.2-3) will complete our general view, by providing all possible vocoids (both unrounded and rounded), again in *orograms* which contain a miniature *vocogram*, in order to help to see nuances and differences better. For half-rounded vocoids (some of which are certainly needed even for neutral American, as for instance /ɐ/ before the *diaphoneme* /ɫ/, as in [ˈlɔɫɪ] /ˈleɫ/ *lull*), cf fig 1.4.

fig 1.1. *Orograms* of the four extreme points for vocoid articulations (with corresponding *labiograms*) and the *vocogram*. Note that rounded vocoids (such as [u]) have round *markers*, instead of square ones. Below, all possible vocoids are shown (including eight theoretical or less frequent ones).



	front	front-central	central	back-central	back	front rounded	front-central rounded.	central rounded	back-central rounded.	back rounded		
i	ɪ	ɨ	ɯ	(ɯ)	ɥ	y	ɥ	ɯ	u	high (A)	} CLOSE	
ɪ	ɪ	ɨ	ɯ	(ɯ)	ɥ	y	ɥ	ɯ	u	lower-high (B)		
e	ɛ	ɛ	ɤ	(X)	(ø)	ø	ø	ø	o	higher-mid (C)	} MID	
E	ɛ	ɛ	ɤ	(X)	(ø)	ø	ø	ø	o	lower-mid (D)		
ɛ	ɛ	ɛ	ɤ	ɬ	(œ)	œ	œ	ø	ɔ	higher-low (E)	} OPEN	
æ	A	a	ɑ	ɑ	(œ)	œ	œ	ø	ɔ	low (F)		
	0	1	2	3	4	5	6	7	8	9		

1.4. For vocoids, voicing is the normal type, so much so because voicelessness is considered to be the marked characteristic for vowels. For the eight vocoids which appear without any grey background, and with symbols in brackets, no language has been found that uses them systematically, as yet.

fig 1.2. Orograms of unrounded (or spread and normal) vocoids.

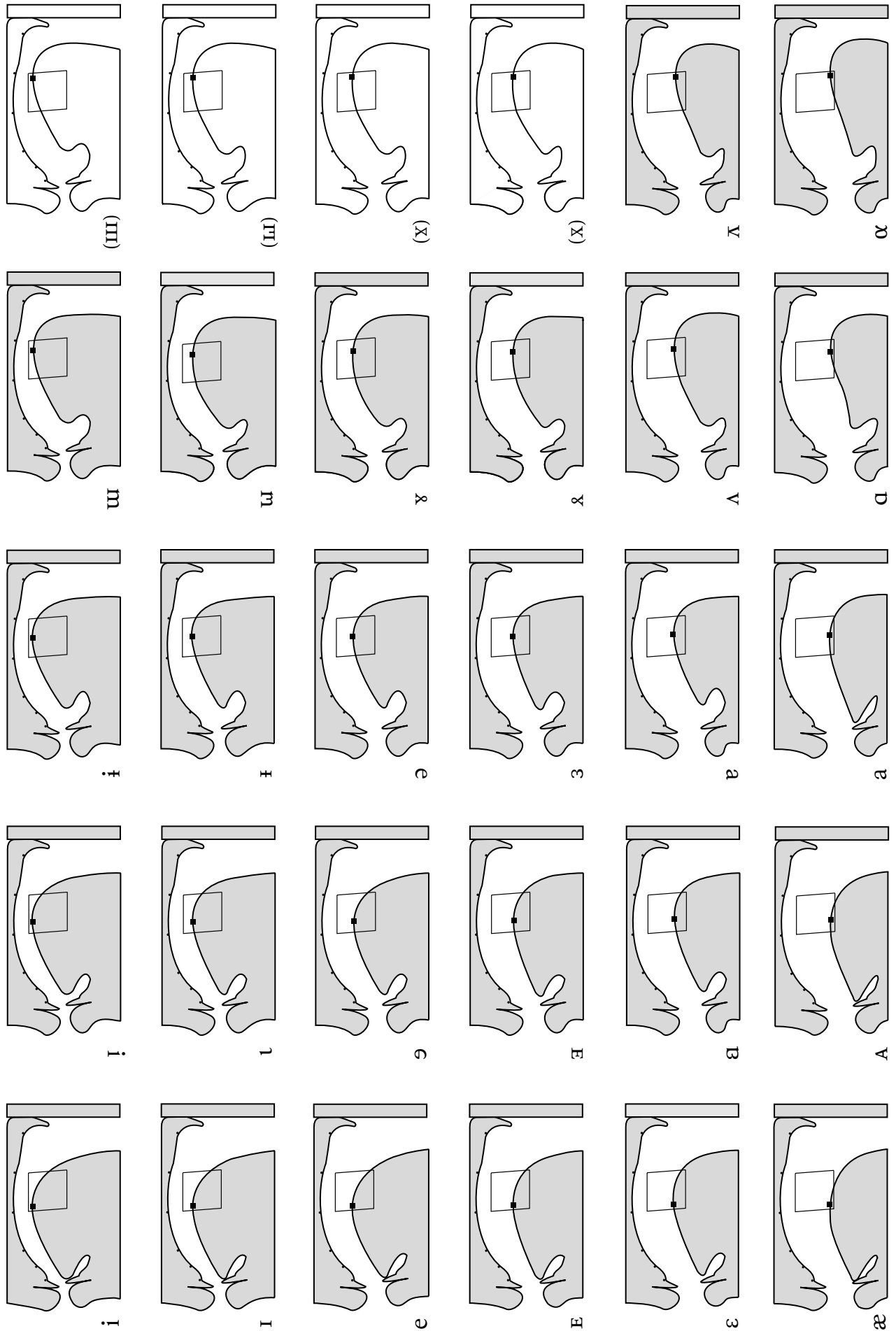


fig 1.3. Orograms of rounded vocoids.

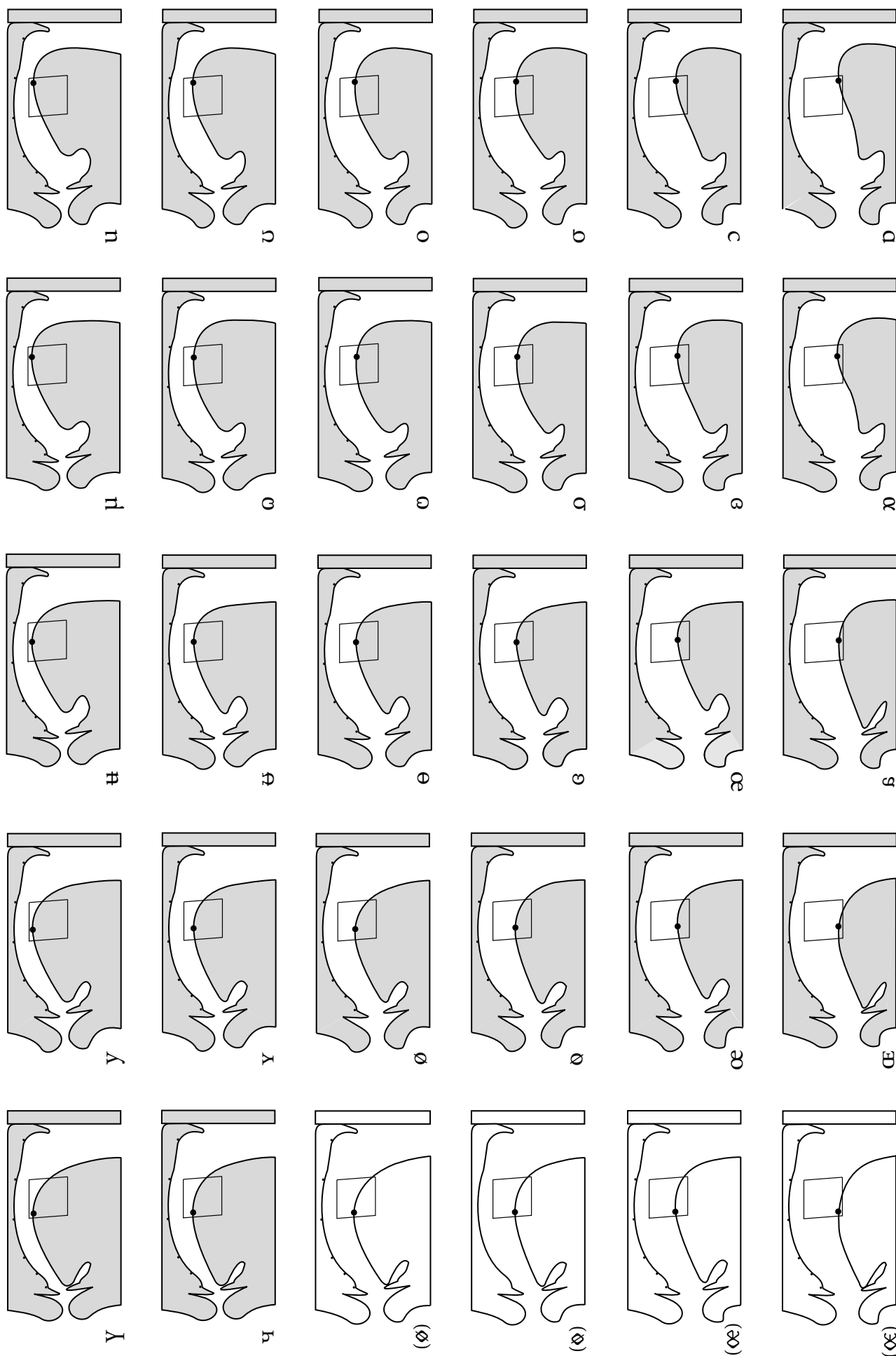


fig 1.4. Comparisons between vocoid lip-positions (including different kinds of rounding).

