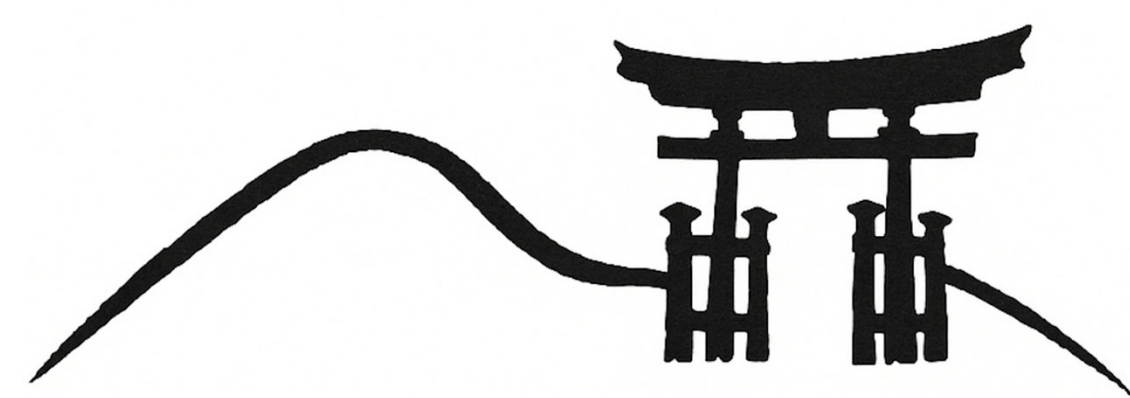




A Voice Quality Chart inspired by the Laryngeal Articulator Model

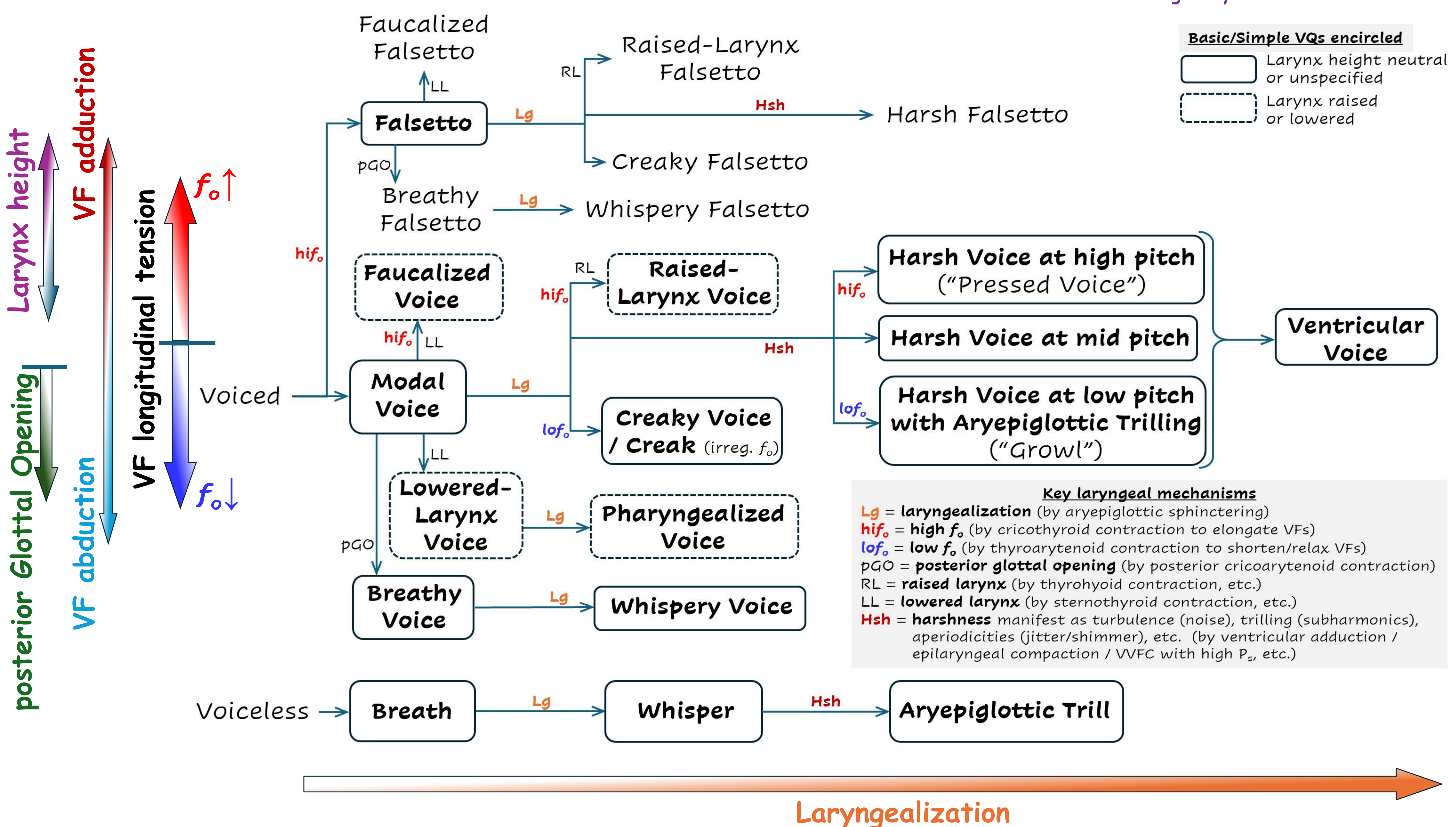
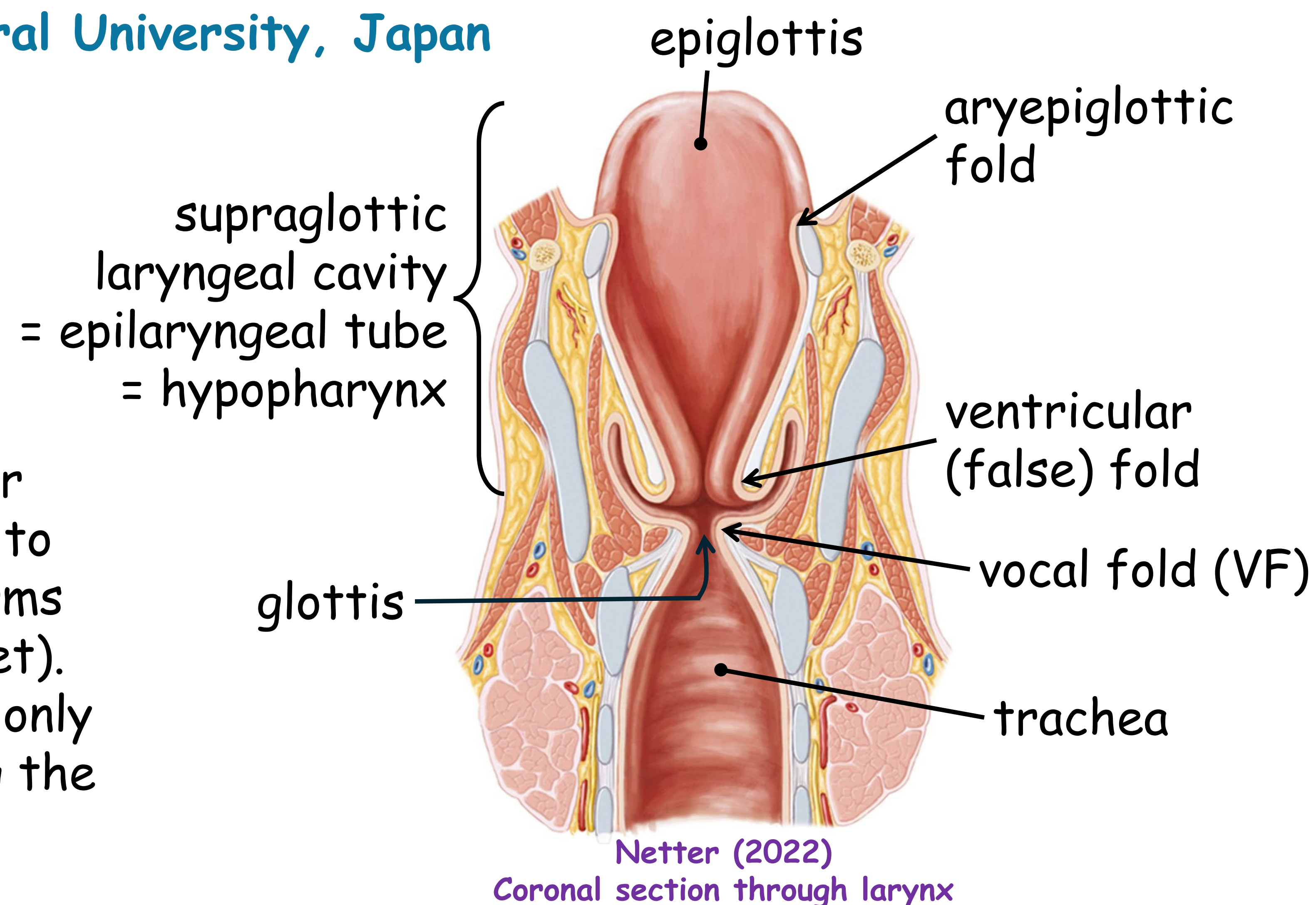
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Voice Quality (VQ) research and education would both benefit from an organized chart, akin to the IPA charts for vowels & consonants.

However currently, even the IPA VQ chart is little more than an unstructured list.

Based on Esling et al.'s (2019) Laryngeal Articulator Model (LAM), here we propose a VQ chart that aims to emphasize interrelationships among categories in terms of key physiological mechanisms (see the chart's inset).

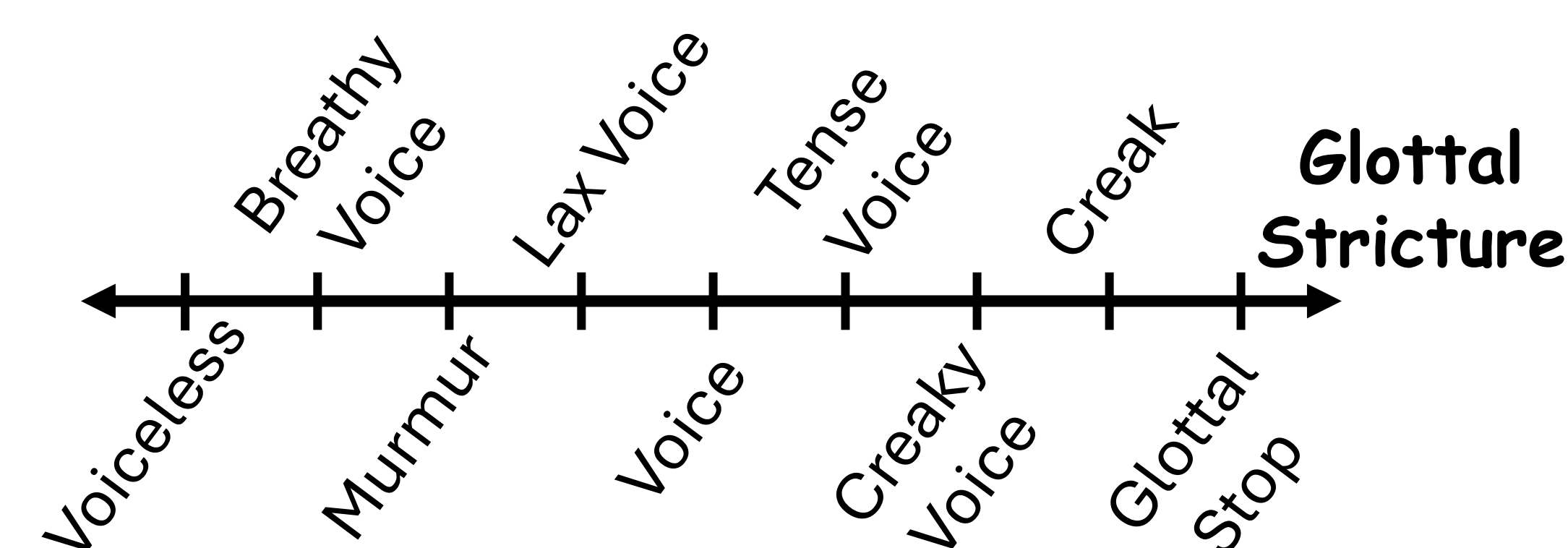
According to LAM, laryngeal VQ is determined not only by the vocal folds, but by the entire larynx including the ventricular and aryepiglottic folds.



Ladefoged (1971) placed laryngeal VQs along a 1-dimensional degree of VF stricture. Laver (1980) expanded this to include adductive tension, medial compression & longitudinal tension, but VQ phonatory settings were still confined to the VFs, as opposed the supra-glottal vocal tract.

Glottis			
adduction ←		→ abduction	
All languages Voice	Indonesian Lax voice	Gujarati Breathy voice	All languages Unvoiced
Korean	Kumam		
	Murmur		
Tense voice			
	Kumam		
Creak	Creaky voice		
Hausa			
Glottal stop		Whispering	
All languages (but not phonemic)			

Lindqvist-Gauffin's (1969, 1972)
2-dimensional conceptualization of VQ



Ladefoged's (1971)
1-dimensional conceptualization of VQ

Alternatively, as pointed out by Lindblom (2009), Gauffin (1969, 1972) had tentatively proposed that glottal adduction/abduction and aryepiglottic folds sphinctering could be independently controlled, leading to his 2-dimensional VQ diagram. This view was consolidated and greatly elaborated in Esling et al.'s (2019) LAM. Accordingly, our proposed chart, while perforce 2-D, emphasizes the multi-dimensional nature of laryngeal VQ.

References

Esling et al. (2019): Voice quality, the laryngeal articulator model. Gauffin (1969 & 1972): in STL-QPSR. Ladefoged (1971): Preliminaries to linguistic phonetics. Laver (1980): The phonetic description of voice quality. Lindblom (2009): in Log. Phon. Vocology. Netter (2022): Atlas of human anatomy.