IRAKURKETA FROGA – UNDERSTANDING PHONETICS

1. STARTING PHONETICS

- Even without training, we have extensive passive knowledge of phonetics in general and of the sound system of our language in particular; this knowledge is an extremely valuable resource.

- We need to cultivate active awareness of both the similarities and the differences between speech and writing.

- When we set out to study phonetics more deliberately, we learn to make conscious this passive knowledge and to describe sounds from the articulatory, acoustic and auditory viewpoints.

- We need to be aware that speakers belong to different speech communities and have different accents. All accents are equal to the phonetician although it is helpful to make descriptions and comparisons against a widely available codified norm when dealing with a specific language.

- Phonetics inputs to phonology. Phonology streamlines all the detailed phonetic data about the pronunciation of a language, grouping variants into phonemes (more abstract units that cause a change of meaning).

2. THE ROLE OF THE LARYNX

- This chapter has addressed the question *what is the larynx?* It has described the larynx structure and identified two crucial speech organs: the vocal folds and the glottis.

- We have explored the concept of voicing, introducing the voiceless/voiced dichotomy and looking at some different phonation types.

- The glottis as a place of articulation was discussed.

- The role of the larnyx in the production of tonal contrasts and intonation (including the relation between measurable frequency and perceptual pitch) was explored.

- The representation of voice in the IPA chart was explained and this was also linked to Voice-Place-Manner labelling of consonants.

3. PLACE OF ARTICULATION

- This chapter outlined the basics with regard to *place of articulation*, introducing the organs of speech in the supra-glottal cavities, identifying the active and passive articulators and specifying the inherent relationships that hold between them.

- Knowledge of the International Phonetic Association's alphabet chart (hereafter, the IPA chart) has been extended to include the horizontal axis of the pulmonic consonant matrix as well as selected diacritics and 'other symbols'.

- Places of articulation were grouped with reference to the active articulator(s) associated with them and the link made with certain phonological features.

- Additional articulatory characteristics associated with place of articulation and the extreme flexibility of the tip and blade of the tongue have been discussed.

4. MANNER OF ARTICULATION

- This chapter has developed our study of the behaviour of the active articulators in speech, describing in detail different manners of articulation, both in terms of the gesture used to make them and the sound effect achieved.

- Knowledge of the IPA chart was expanded with the vertical 'manner' axis of the pulmonic consonant matrix being viewed as a scale of strictures.

- Manner information was integrated with information about voicing and place carried forward from previous chapters and VPM labels constructed for pulmonic consonants.

- Different ways of representing speech sounds were also introduced including waveforms and spectrograms.

5. AIRSTREAM MECHANISMS

- This chapter has looked in detail at the various airstream mechanisms used in speech production – the universal pulmonic egressive mechanism and also the rarer glottalic mechanisms (egressive used in the production of ejectives and ingressive used in the production of implosives) and the velaric ingressive mechanism (used in the production of clicks).

- We saw how these mechanisms increase the number of consonantal sound types or manners.

- A summary was made of some of the most common click 'accompaniments' which give rise to voicing contrasts and different voice qualities as well as the possibility of glottalization.

- The relationship between the phonetic concept of double articulation and the way in which ejectives, implosives and clicks are produced was explored.

6. DESCRIBING VOWELS

- This chapter has outlined the phonetic nature of vowels, comparing them with consonants.
- It has explained and described the Cardinal Vowel system, identifying the three basic parameters of vowel quality variation: the active part of the tongue (front-back), how high in the mouth this rises (open-close) and the accompanying lip position (rounded-unrounded).
- Representation of vowels has been explored in some detail, including the study of waveforms and spectrograms.
- The vowel diagram has also been studied to understand the operation of the back-central-front and open-mid-close parameters and how actual vowel qualities are plotted in this quadrilateral space.
- The chapter explored vowel transcription including the effects of a small range of diacritics and the conversion between vowel labels, plots (diagrammatic representations) and transcriptions.

7. FURTHER PARAMETERS OF VARIATION IN VOWELS

- The chapter took the study of vowels beyond the basic quality values presented in Chapter 6, identifying additional parameters of variation, including suprasegmental characteristics.
- Vowel duration was discussed, including some of the environmental influences affecting this (clipping processes, for example).
- Oral vs nasalized vowels were explored.
- The concept of complexity was introduced (monophthongs, diphthongs and triphthongs) and some of the processes impacting on complexity (smoothing, compression, diphthongization, breaking).
- Lastly, the contribution of the tongue root and tongue tip gestures ([ATR] and r-colouring), fricativization of vowels and phonation differences were introduced and illustrated.

8. FURTHER PARAMETERS OF VARIATION IN CONSONANTS

- Chapter 8 described some more detailed variables of consonant production, beyond the basic VPM characteristics identified in earlier chapters.

- Additional contributions made by vocal fold action were outlined, including voicing behaviour within segments (voicing and devoicing) leading to the introduction of the fortis/lenis dichotomy, VOT and aspiration, and glottalization.

- Secondary articulations were explored in greater depth (palatalization, velarization and pharyngealization).

- Manner variables were expanded, including a range of variation found in the approach, hold and release phases of plosives.

9. CONNECTED SPEECH – SEGMENT DYNAMICS

- This chapter has moved away from the detailed description of individual speech sounds to look more widely at how sounds behave and change in connected speech.

- Using English illustrations, the chapter considered the nature of acoustic cues that allow us to recognize different speech sounds.

- The coarticulatory nature of connected speech was investigated, introducing parametric diagrams.

- The chapter also began to develop your narrow phonetic transcription skills, showing how narrow transcription captures the auditory and articulatory characteristics of the speech continuum.

10. BEYOND THE SEGMENT

- Looking beyond segmental phonetic description, this chapter has discussed the concept of stress, compared word stress with sentence stress, and explored aspects of metricality in languages.

- The relation between stress and accent, and the discussion of tone, together paved the way for an introduction to intonation.

- The chapter concluded this introduction to phonetics by looking briefly at the contribution made by intonation to speech.