

Contents

Acknowledgements	viii
Introduction	i
I BASIC ANALYTIC CONCEPTS	12
1.1 Relations between settings	14
1.2 Relations between settings and segments	20
2 SUPRALARYNGEAL SETTINGS	23
2.1 Longitudinal settings	23
2.1.1 Raised larynx voice	24
2.1.2 Lowered larynx voice	29
2.1.3 Labial protrusion	31
2.1.4 Labiodentalized voice	33
2.2 Latitudinal settings	34
2.2.1 Labial settings	35
2.2.2 Lingual settings	43
2.2.3 Faucal settings	56
2.2.4 Pharyngeal settings	58
2.2.5 Mandibular settings	63
2.3 Velopharyngeal settings	68
3 PHONATORY SETTINGS	93
3.1 Modes of laryngeal vibration in phonatory settings	99
3.1.1 Modal voice	109
3.1.2 Falsetto	118
3.1.3 Whisper	120
3.1.4 Creak	122
3.1.5 Harshness	126
3.1.6 Breathiness	132
3.2 Compound phonation types	135

5	LABELS AND NOTATION FOR PHONETIC SETTINGS	157
5.1	Descriptive phonetic labels for phonetic settings	157
5.2	Scalar conventions for voice quality labels	161
5.3	Notation for settings	162
	References	166
	Index	181

Figures

1	The vocal tract in a neutral setting	24
2	The muscles of the hyoid complex	25
3	The muscles involved in labial protrusion	32
4	The relative frequency of labial settings	36
5	Front view of labial settings	37
6	The labial muscles involved in latitudinal control of interlabial space	40
7	Sagittal section of vocal tract in the neutral setting	45
8	The lingual muscles	52
9	The faecal muscles	57
10	The pharyngeal constrictor muscles	60
11	The mandibular muscles	65
12	The velopharyngeal muscles	71
13	The principal laryngeal cartilages	100
14	The laryngeal muscles connecting the cricoid to the thyroid cartilage	102
14a	Details of the laryngeal muscles connecting the cricoid to the thyroid cartilage	103
15	The laryngeal muscles connecting the arytenoid cartilages	105
16	Geometric relationship between three laryngeal parameters	109
17a	Laryngograms of simple phonation types	112
17b	Laryngograms of compound phonation types	113
17c	Laryngograms of compound phonation types	114
18	Spectrograms of steady-state vowels	115
19a	Spectrograms of the phrase 'its two ends apparently beyond the horizon'	116
19b	Spectrograms of the phrase 'its two ends apparently beyond the horizon'	117