

Contents

Introduction	1
Peter F. Assmann and Geoffrey Stewart Morrison	
Part I VISC Perception	
Static and Dynamic Approaches to Vowel Perception	9
James M. Hillenbrand	
Theories of Vowel Inherent Spectral Change	31
Geoffrey Stewart Morrison	
Vowel Inherent Spectral Change in the Vowels of North American English	49
Terrance M. Nearey	
Dynamic Specification of Coarticulated Vowels	87
Winifred Strange and James J. Jenkins	
Perception of Vowel Sounds Within a Biologically Realistic Model of Efficient Coding	117
Keith R. Kluender, Christian E. Stilp and Michael Kieft	
Part II VISC Production	
Simulation and Identification of Vowels Based on a Time-Varying Model of the Vocal Tract Area Function	155
Brad H. Story and Kate Bunton	

Part III VISC in Different Populations of Speakers

**Cross-Dialectal Differences in Dynamic Formant Patterns
in American English Vowels** 177
Ewa Jacewicz and Robert Allen Fox

**Developmental Patterns in Children’s Speech: Patterns
of Spectral Change in Vowels** 199
Peter F. Assmann, Terrance M. Nearey and Sneha V. Bharadwaj

**Vowel Inherent Spectral Change and the Second-Language
Learner** 231
Catherine L. Rogers, Merete M. Glasbrenner, Teresa M. DeMasi
and Michelle Bianchi

Part IV VISC Applied

Vowel Inherent Spectral Change in Forensic Voice Comparison 263
Geoffrey Stewart Morrison

Index 283