

Contents

1. INTRODUCTION	1
Previous Studies of Fundamental Frequency	2
Linguistic Structure and F_0	2
Speech Production and F_0	5
Anatomy and Physiology of the Larynx	5
Laryngeal Features for Plosive Consonants	12
Acoustics and F_0	17
The Present Study	18
Phenomena	18
Issues	18
Methods	19
Sentence-Reading Procedure	20
Acoustical Measurement of F_0	21
Statistical Analysis	25
Summary	26
Conclusion	26
2. DECLINATION	28
Study 2.1. The F_0 Topline and the Topline Rule	30
Experiments	30
Study 2.2. Topline Rule Invariance and Extensions	52
Experiments	53
Study 2.3. The Domain of F_0 Declination	85
Experiments	87
General Conclusions	95
3. FALL-RISE PATTERNS	101
Study 3.1. Clause Boundaries	103
Experiments	103
Conclusion	117
Study 3.2. Phrase Boundaries	117
Experiments	120
Conclusion	134

Study 3.3. Deletion Sites	134
Experiments	135
Conclusion	141
General Conclusions	142
4. BLOCKING	144
Study 4.1. Stress Blocking	145
Conclusion	148
Study 4.2. Voiced–Voiceless Blocking	148
Experiments	148
General Conclusions	156
5. CONCLUSIONS	158
Consolidation	158
New Directions	160
6. EXTENSIONS	164
Language Development (From Infancy through Adulthood)	164
Pathology	167
Aphasia	167
Speech Training of Hearing-Impaired Children	168
Autism	169
Laryngeal Pathology	170
Global Pathologies	170
Personality and Emotion	171
Perception	172
Memory	175
Speech Synthesis-by-Rule	176
Speech Recognition by Machine	177
Speaker Recognition	178
Animal Communication	179
Other Languages	180
Dialects	180
Tone Languages	180
Conclusion	183
REFERENCES	184
AUTHOR INDEX	203
SUBJECT INDEX	209