

Interfaces

Bydgoszcz Studies in Language,
Mind and Translation

Edited by Anna Bączkowska

Tomasz Ciszewski

The Anatomy of the English Metrical Foot

Acoustics, Perception and Structure



PETER LANG
EDITION

Contents

Acknowledgements	7
Preface	13
1. The foot in phonological theory: an overview	17
1.1 Introduction	17
1.2 Definitional problems	17
1.3 The foot in phonological theory	18
1.3.1 Liberman and Prince (1977) vs. Prince (1983) and Selkirk (1984) ..	19
1.3.2 Halle and Vergnaud (1987)	23
1.3.3 Hayes (1995)	24
1.3.4 Government Phonology	26
1.4 The foot as the locus of phonological regularities	30
1.5 Extralinguistic arguments for the foot	33
1.6 ‘Footless’ analyses of stress and rhythm	36
1.6.1 ‘Pure grid’: stress without the foot?	37
1.6.2 Eurhythmy and the grid	41
1.6.3 Structural analogy: why syllables and not feet?	42
2. Methodological preliminaries and hypotheses	45
2.1. Introduction	45
2.2 Description of the experiment	45
2.2.1 Subjects, data and experimental procedure	45
2.2.2 Measurement criteria	51
2.3 Hypotheses	53
2.4 Some immediate answers	58
3. Duration	59
3.1 Introduction	59
3.2 Durational identity of isolated and phrase-final contexts	60
3.3 Duration of stressed vowels (V_1)	65
3.3.1 V_1 duration in mono-, di- and trisyllables	65
3.3.2 Significance of Pre-Fortis Clipping effects	75

3.4	Durational relations between stressed and unstressed vowels.....	83
3.4.1	$V_1 \sim V_2$ correlations in disyllables	83
3.4.2	$V_1 \sim V_2 \sim V_3$ correlations in trisyllables	86
3.5	Final Lengthening in di- and trisyllabic items	89
3.6	Total vowel duration: isochrony reanalysed.....	94
3.6.1	Earlier studies on isochrony: a critical review	94
3.6.2	Total vowel duration	95
3.6	Conclusion	106
4.	Pitch	107
4.1	Introduction.....	107
4.2	Pitch in isolated vs. phrase-final contexts: a comparison	107
4.3	Pitch of stressed vowels in mono-, di- and trisyllables	108
4.3.1	Mean pitch.....	109
4.3.2	Maximum pitch	111
4.3.3	Minimum pitch.....	114
4.3.4	Interrelations between mean, maximal and minimal pitch	117
4.4	Pitch slope in stressed vowels.....	119
4.5	Intervocalic pitch relations.....	124
4.5.1	Disyllabic items.....	124
4.5.2	Trisyllabic items.....	126
4.6	Intervocalic pitch relations vs. pitch slope	128
4.7	Conclusion	130
5.	Intensity	131
5.1	Introduction.....	131
5.2	Intensity in isolated vs. phrase-final context: a comparison.....	131
5.3	Intensity of stressed vowels in mono-, di- and trisyllables.....	133
5.3.1	Mean intensity.....	133
5.3.2	Maximum intensity	134
5.3.3	Minimum intensity	136
5.3.4	Interrelations between maximal and minimal intensity	137

5.4 Intensity slope in stressed vowels	138
5.5 Intervocalic intensity relations	140
5.5.1 Disyllabic items	140
5.5.2 Trisyllabic items	142
5.6 Conclusion	144
6. Interdependence of acoustic properties: evidence for the foot	145
6.1 Introduction	145
6.2 Intravocalic duration-pitch interdependence	145
6.2.1 Stressed vowels	146
6.2.2 Unstressed vowels	148
6.2.3 Interpretation of results	149
6.3 Intravocalic duration-intensity interdependence	153
6.3.1 Stressed vowels	153
6.3.2 Unstressed vowels	155
6.4 Intravocalic pitch-intensity interdependence	157
6.4.1 Stressed vowels	157
6.4.2 Unstressed vowels	161
6.5 Acoustic evidence for the foot: a synopsis of results	164
6.6 Conclusions: towards the acoustic definition of the foot	172
7. Theoretical implications: the epilogue	175
7.1 Introduction	175
7.2 Implications for Metrical Theory	176
7.3 Implications for Government Phonology	182
Concluding remarks	191
References	193