Contents

Foreword 7

On de Saussure's principle of linearity and visualization of language structures 9

(Jan Andres)

1. Introduction 9
2. Self-similar fractals with given dimension 11
3. Visualization of language structures 16
4. Concluding remarks 24

References 26

On a conjecture about the fractal structure of language 29

(Jan Andres)

1. Introduction 29
2. Three different approaches to fractals 30
3. How many conjectures? 37
4. Concluding remarks 47

References 49

Methodological Note on the Fractal Analysis of Texts 53

(Jan Andres, Martina Benešová, Lubomír Kubáček, Jana Vrbková)

1. Introduction 53
2. Tables and Linguistic Background 56
3. Statistical Analysis 65
4. Numerical Analysis 73

5. Fractal Analysis 75
6. Visualization 78
7. Interpretation in Linguistic Terms 80
References 85
An Application of the Menzerath–Altmann Law to Contemporary Written Chinese 87
(Tereza Motalová, Lenka Spáčilová, Martina Benešová, Ondřej Kučera)
1. Linguistic introduction 87
1.1 Modern written Chinese 87
1.2 The Chinese writing system 88
2. Methodology 91
2.1 Choice of sample texts 91
2.2 Language units 92
2.2.1 Stroke 92
2.2.2 Component 94
2.2.3 Character 96
2.2.4 Parcelate 97
2.2.5 Sentence 98
2.2.6 Paragraph 98
2.3 The Menzerath–Altmann law 99
3. Discussion 101
3.1 Language level L1 101
3.2 Language level L2 106
3.3 Language level L3 108

3.4 Language level L4 113
4. Conclusion 116
References 119
Monographies and articles 119
Internet references 119
Software 120
An Application of the Menzerath–Altmann Law to Contemporary Spoken Chinese 121
(Denisa Schusterová, Jana Ščigulinská, Martina Benešová, Dan Faltýnek, Ondřej Kučera)
1. Methodology 121
2. Segmentation of samples 123
2.1 Problems of transcription and efficiency 123
2.1.1. The contrast between zhe (če), she (še) vs. zhi (č'), shi (š') 123
2.1.2 Initial stop consonants and aspiration 124
2.1.3 Initial affricate consonants 124
2.1.4 Initial consonant q 124
2.1.5 Vowels 124
2.2 Defining the language units 125
3. The Menzerath–Altmann Law (MAL) 127
4. Results 128
4.1 Language Level L1 128
4.2 Language Level L2 132
4.3 Language Level 3 136

5. Conclusion 139
References 140
An application of the Menzerath–Altmann law to a sample produced by an aphasic patient 142
(*Andrea Jašíčková, Martina Benešová, Dan Faltýnek*)
1. Introduction 142
2. Material and methodology 143
3. Segmentation units 147
4. Menzerath–Altmann law (MAL) 151
5. Results 152
5.1 Language level L1 152
5.2 Language level L2 156
5.3 Language level L3 159
6. Conclusion 162
7. Discussion, an outline of possible analyzes for further research 163
References 164
Farewellword 166
Index 168