

Contents

Acknowledgements	IX
List of Figures	XI
List of Tables	XV
Abstract	1
1 Introduction	3
2 Cognitive Linguistics	9
2.1 Origins.....	9
2.2 Major claims in Cognitive Linguistics.....	10
2.3 Empirical grounding.....	13
2.4 Research trends	14
3 Concepts in Cognitive Linguistics	15
3.1 Cognitive Semantics.....	16
3.1.1 Image Schemas	23
3.1.2 Cognitive Representation.....	32
3.1.2.1 Schematic Systems.....	36
3.2 Cognitive Grammar.....	39
3.2.1 Construal	41
3.2.1.1 Specificity.....	42
3.2.1.2 Focus	42
3.2.1.3 Prominence (salience)	45
3.2.1.4 Perspective	47
3.2.2 Word classes in Cognitive Grammar	49
3.2.2.1 Nominal predication.....	50
3.2.2.2 Relational predication.....	54
4 On Number(s)	61
4.1 Counting and natural numbers	61
4.2 Negative numbers and integers	70

4.3 Rational numbers and fractions.....	73
4.4 Real numbers, irrational numbers and infinity	76
5 Linguistic Construal	81
5.1 Construal description	81
5.2 Analytical transfer.....	83
5.3 Evaluation.....	89
6 Research Questions and Hypotheses	99
7 Data Description	103
8 Analysis	107
8.1 Natural numbers	107
8.2 Addition.....	127
8.3 Multiplication.....	138
8.4 Subtraction and integers.....	149
8.5 Rational numbers, division and fractions.....	166
8.6 Equivalence and measurement.....	187
8.7 Irrational, rational and real numbers, and infinity	196
9 Evaluation and Results	213
9.1 The relevance of cognitive linguistic construals for the analysis of the representation of conceptualizations.....	213
9.2 The linguistic construals of mathematical conceptualization	216
9.2.1 Natural numbers	217
9.2.2 Addition.....	221
9.2.3 Multiplication.....	224
9.2.4 Subtraction and integers.....	227
9.2.5 Fractions and rational numbers.....	230
9.2.6 Equivalence and measurement.....	237
9.2.7 Irrational and real numbers and infinity.....	238
9.3 Results	243

9.3.1 Results on the linguistic construal of the NUMBER.....	243
9.3.2 Results on image schemas	251
9.3.3 Results on linguistic construal dimensions	254
10 Conclusion	259
11 Bibliography	267
12 Appendix	271