

Contents

List of figures *xiii*

List of tables *xiv*

List of abbreviations *xvi*

1 Introduction 1

1.1 Rationale: why investigate Chinese words? 1

1.2 The scope of this work 4

2 Defining the word in Chinese 7

2.1 What is a 'word?': different views 7

2.1.1 Orthographic word 7

2.1.2 Sociological word 8

2.1.3 Lexical word 8

2.1.4 Semantic word 9

2.1.5 Phonological word 10

2.1.6 Morphological word 11

2.1.7 Syntactic word 12

2.1.8 Psycholinguistic word 13

2.2 The Chinese concept of 'word' 14

2.2.1 The reality of the 'word' in Chinese 16

2.3 How we will define 'word' in Chinese 18

3 Chinese word components 21

3.1 Describing the components 21

3.1.1 Possible descriptions 21

3.1.1.1 *Relational description* 21

3.1.1.2 *Modification structure description* 22

3.1.1.3 *Semantic description* 25

| | | |
|------------|---|-----------|
| 3.1.1.4 | <i>Syntactic description</i> | 27 |
| 3.1.1.5 | <i>Form class description</i> | 32 |
| 3.2 | Form classes of the components | 34 |
| 3.2.1 | Form class identities within words | 36 |
| 3.3 | Criteria for determining form class of Chinese word components | 64 |
| 3.4 | Morphological analysis of Chinese word components | 67 |
| 3.4.1 | Distinguishing 'free' and 'bound' | 67 |
| 3.4.2 | Distinguishing 'content' and 'function' | 69 |
| 3.4.3 | Morpheme types | 69 |
| 3.4.3.1 | <i>Two types of affix</i> | 70 |
| 3.4.3.2 | <i>Word-forming affixes vs. bound roots</i> | 71 |
| 3.4.4 | Summary and some test cases | 73 |
| 3.4.4.1 | <i>Determiners, classifiers and numerals</i> | 74 |
| 3.4.4.2 | <i>Location morphemes</i> | 75 |
| 3.5 | The nature of the components | 76 |
| 3.5.1 | Affixes as word components | 76 |
| 3.5.2 | Bound roots as word components | 77 |
| 3.5.3 | Free ('root') words as word components | 78 |
| 4 | Gestalt Chinese words | 80 |
| 4.1 | Word types | 80 |
| 4.2 | Nouns | 82 |
| 4.2.1 | Noun types | 82 |
| 4.2.1.1 | <i>Noun compound words</i> | 82 |
| 4.2.1.2 | <i>Noun bound root words</i> | 83 |
| 4.2.1.3 | <i>Noun derived words</i> | 84 |
| 4.2.1.4 | <i>Noun grammatical words</i> | 85 |
| 4.2.2 | N ₁ -N ₂ words: kinds of relations | 85 |
| 4.3 | Verbs | 89 |
| 4.3.1 | Verb types | 89 |
| 4.3.1.1 | <i>Verb compound words</i> | 90 |
| 4.3.1.2 | <i>Verb bound root words</i> | 90 |

- 4.3.1.3 *Verb derived words* 92
- 4.3.1.4 *Verb grammatical words* 93
- 4.3.2 *V₁-V₂: kinds of relations* 93
- 4.3.3 *Resultative verbs* 95
 - 4.3.3.1 *Three classes of resultatives* 98
 - 4.3.3.2 *Lexical resultatives vs. syntactic extent resultatives* 100
 - 4.3.3.3 *Other properties of resultatives* 101
- 4.3.4 *Verb-Object words* 106
 - 4.3.4.1 *The problem* 107
 - 4.3.4.2 *Previous analyses* 109
 - 4.3.4.3 *A proposed solution* 115
 - 4.3.4.3.1 *The underlying lexical identity of V-O forms* 115
 - 4.3.4.3.2 *Lexicalization and phrase criteria* 118
 - 4.3.4.3.2.1 *Construal as either word or phrase* 123
- 4.4 **Nouns and verbs by component form class: statistical tendencies** 125
- 4.5 **Chinese words: special properties** 129
 - 4.5.1 *Other word properties: Y.R. Chao's insights* 132
 - 4.5.1.1 *Versatile-restricted* 132
 - 4.5.1.2 *Positionally free or bound* 132
- 5 X-bar analysis of Chinese words** 134
 - 5.1 **Basic X-bar properties** 134
 - 5.2 **X-bar properties applied to words** 135
 - 5.2.1 *Expectations regarding 'X-bar' notation applied to words* 135
 - 5.3 **X-bar morphology: previous proposals** 136
 - 5.3.1 *Selkirk* 136
 - 5.3.2 *Sadock* 144
 - 5.3.3 *Other proposals* 148

- 5.3.3.1 *Scalise* 148
- 5.3.3.2 *Di Sciullo and Williams* 149
- 5.3.4 Discussion of Selkirk and Sadock 149
 - 5.3.4.1 *Problems with the Selkirk proposal* 153
 - 5.3.4.1.1 The limited role of X^{-1} 153
 - 5.3.4.1.2 Lexical listing of predictable information 156
- 5.3.5 Previous X-bar analyses of Chinese words 157
 - 5.3.5.1 *Tang* 158
 - 5.3.5.2 *Sproat and Shih* 163
- 5.4 An alternative proposal for Chinese X-bar morphology 163**
 - 5.4.1 Classification of primitives 165
 - 5.4.1.1 *Properties of word components* 165
 - 5.4.1.2 *Why list 'bound' and 'free' in the lexicon?* 166
 - 5.4.2 Rules of word formation 168
 - 5.4.3 Limiting lexical productivity: X^{-0} as the sole recursive node 168
 - 5.4.3.1 *A note on universals* 169
 - 5.4.4 Predicted word forms 170
 - 5.4.5 Single and multiple branching structures 173
 - 5.4.5.1 *Single branching* 175
 - 5.4.5.2 *Multiple branching* 177
 - 5.4.5.2.1 Right branching 177
 - 5.4.5.2.2 Left branching 183
 - 5.4.5.2.3 Some examples of multiple embedding 192
- 5.5 The concept of 'head' applied to Chinese words 194**
 - 5.5.1 'Canonical head' vs. 'virtual head' 194
 - 5.5.2 'Semantic head' vs. 'structural head' 195
 - 5.5.3 Headless words 196
- 5.6 The proposed analysis applied to English 196**
 - 5.6.1 Single branching 200
 - 5.6.2 Right branching 202
 - 5.6.3 Left branching 207

- 6 Lexicalization and Chinese words 216**
- 6.1 **Lexicalization and the relation between word and constituent 217**
- 6.1.1 Semantic and grammatical reduction in lexicalization 217
- 6.1.2 Categories of lexicalization 219
- 6.1.2.1 *Conventional lexicalization* 219
- 6.1.2.2 *Metaphorical lexicalization* 220
- 6.1.2.3 *Asemantic lexicalization* 221
- 6.1.2.4 *Agrammatical lexicalization* 221
- 6.1.2.5 *Complete lexicalization* 222
- 6.1.2.6 *Validity of 'degree of lexicalization'* 223
- 6.1.2.7 *Categories of lexicalization and lexical strata* 223
- 6.1.3 Explaining exceptions to the Headedness Principle 225
- 6.1.3.1 *Systematic exceptions* 230
- 6.1.3.1.1 *Phonetic loans* 230
- 6.1.3.1.2 *Neologisms* 231
- 6.1.3.1.3 *Left-modified verbs* 233
- 6.1.3.1.4 *Zero-derived complex nouns* 234
- 6.1.3.1.5 *Induced constituent reanalysis* 235
- 6.1.3.2 *Other exceptions* 236
- 6.2 **Lexicalization and the availability of word-internal information 237**
- 6.2.1 Phonological information 238
- 6.2.2 Morphological information 245
- 6.2.3 Syntactic information: theta roles in complex verbs 250
- 6.2.3.1 *Availability of resultative V₂ argument structure* 250
- 6.2.3.2 *Availability of 'object' theta roles to [V-O]_v verbs* 258
- 6.2.3.3 *A note on non-head opacity* 260
- 6.2.4 Semantic information 260
- 6.3 **Lexicalization and grammaticalization 262**
- 6.4 **Lexicalization and the formation of new words 265**
- 6.4.1 Historical factors 265
- 6.4.2 The modern language 267
- 6.4.2.1 *Abbreviation and combination ('compounding')* 268

- 6.4.3 The creation of new morphemes in Chinese 275
6.4.3.1 *Most new Chinese morphemes are bound roots* 280

7 Chinese words and the lexicon 284

- 7.1 What is 'the lexicon'? 284
7.2 The lexicon and lexical access 285
7.3 Lexical access in Chinese 286
7.3.1 Chinese speech comprehension and the lexicon 287
7.3.2 Chinese speech production and the lexicon 292
7.3.3 Experimental evidence demonstrating whole-word processing 294
7.4 The Chinese lexicon: what is 'listed'? 296
7.4.1 What is 'listed?': a proposal 299
7.5 Chinese characters and the lexicon 304
7.5.1 Character sound and meaning come from the natural speech lexicon 304
7.5.2 How do characters access the lexicon? 305
7.5.3 Is Chinese writing 'ideographic'? 309

8 Chinese words: conclusions 310

- 8.1 What have we discovered about words? 310
8.2 The reality of the 'word' 316

References 318

Index 328