The Grammar Network

Cognitive linguists and psychologists have often argued that language is best understood as an association network; however, while the network view of language has had a significant impact on the study of morphology and lexical semantics, it is only recently that researchers have taken an explicit network approach to the study of syntax. This innovative study presents a dynamic network model of grammar in which all aspects of linguistic structure, including core concepts of syntax (e.g., phrase structure, word classes, grammatical relations), are analyzed in terms of associative connections between different types of linguistic elements. These associations are shaped by domain-general learning processes that are operative in language use and sensitive to frequency of occurrence. Drawing on research from usage-based linguistics and cognitive psychology, the book provides an overview of frequency effects in grammar and analyzes these effects within the framework of a dynamic network model.

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How Linguistic Structure is Shaped by Language Use

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Preface

Cognitive linguists have often argued that language is best understood as an associative network, but while the network view of language has had a significant impact on the study of morphology and lexical semantics, few studies have taken an explicit network approach to the analysis of syntax. This book presents a dynamic network model of grammar in which all aspects of linguistic structure, including core concepts of syntax (e.g., word classes, grammatical relations, constituent structure), are analyzed in terms of associative connections between different aspects of linguistic knowledge. These associations are shaped by domain-general learning processes that are operative in language use and sensitive to frequency of occurrence. A wealth of recent results indicate that frequency affects the activation and processing of lexemes, categories and constructions, which can have long-lasting effects on the development of linguistic structure.

Drawing on research from various subfields of linguistics (e.g., construction grammar, cognitive semantics, historical linguistics, linguistic typology) and cognitive psychology (e.g., language acquisition, sentence processing, structural priming), the book provides an overview of frequency effects in grammar and analyzes these effects in the framework of a dynamic network model.

The book is written for a broad readership, including researchers and graduate students of linguistics, psycholinguistics and cognitive science. It does not presuppose expert knowledge in any research area and approaches the study of grammar from an interdisciplinary perspective. While written as a monograph, the book can also be used as an advanced textbook for a seminar on usage-based linguistics or functional-cognitive grammar.

The idea of writing this book was born during my senior fellowship at the Freiburg Institute for Advanced Studies in 2011, when I also taught a seminar on usage-based grammar at the Graduiertenkolleg (Frequency Effects in Language) of the University of Freiburg. I would like to express my gratitude to the Freiburg linguists for providing me with a very stimulating environment and for many fruitful discussions.

After my visit to the University of Freiburg, it took another four years of reading and preparation before I eventually began to write the first chapters of

the manuscript during my fellowship at the Wissenschaftskolleg in Berlin (WIKO), where I joined an interdisciplinary research group on language evolution. During my stay at the WIKO (2015–2016), I had numerous discussions with language scientists from other disciplines who convinced me that my project would be of interest not only to linguists but also to researchers and students of psychology and cognitive science. As a consequence, I have written this book from an interdisciplinary perspective so that it is accessible to readers from different backgrounds. I am very grateful for the support I received from the Wissenschaftskolleg in Berlin and would like to thank the members of our research group, in particular, Luc Steels and Peter Gärdenfors.

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Abbreviations

1	first person
2	second person
3	third person
A	transitive agent
ACC	accusative
ADJ	adjective
ADV	adverb
AdvP	adverb phrase
A(G)	agent
AGR	agreement
AP	adjective phrase
ART	article
ASP	aspect
ASSOC	associative
ATTR	attribute
AUX	auxiliary verb
CAUS	causative
CC	complement clause
CL	classifier
CLIT	clitic
COMPL	complement
CONJ	conjunction
COP	copular verb
CV	consonant-vowel
DAT	dative
DEM	demonstrative
DET	determiner
DITRANS	ditransitive
DEC	declarative
DOM	differential object marking
DU	dual
DUR	durative

EMPH	emphasis
ERG	ergative
F	feminine
FUT	future
G/GEN	genitive
GER	gerund
IC	immediate constituent
IMPF	imperfective
INCEP	inceptive
IND	indicative
INF	infinitive
INST	instrument
INTER	interjection
INTR	intransitive
IRR	irrealis
L1	first (native) language
L2	second language
LOC	locative
M	masculine
MAIN	main clause
MOD	modal verb
N	noun
NC	noun class
NEG	negation
NML	nominalization
NOM	nominative
NP	noun phrase
NUM	numeral
O/OBJ	object
P	preposition
P(A)	patient
PL	plural
POSS	possessive
PP	prepositional phrase
P.PRO	personal pronoun
PRO	pronoun
PRS	present tense
PST	past tense
PTC	participle
PUNC	punctual
QP	question particle
RC	relative clause

REL	relative pronoun/relative marker
S	clause/sentence
SAI	subject–auxiliary inversion
SBJV	subjunctive
SFP	sentence-final particle
SG/S	singular
S/SUBJ	subject
SUB	subordinate (clause)
TAM	tense–aspect–mood
TH	theme
TOP	topic
TR	transitive
V	verb
VP	verb phrase
WH	question word