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Communicative Efficiency

All living beings try to save effort, and humans are no exception. This groundbreaking book shows how we save time and energy during communication by unconsciously making efficient choices in grammar, lexicon and phonology. It presents a new theory of 'communicative efficiency', the idea that language is designed to be as efficient as possible, as a system of communication. The new framework accounts for the diverse manifestations of communicative efficiency across a typologically broad range of languages, using various corpus-based and statistical approaches to explain speakers' bias towards efficiency. The author's unique interdisciplinary expertise allows her to provide rich evidence from a broad range of language sciences. She integrates diverse insights from over a hundred years of research into this comprehensible new theory, which she presents step-by-step in clear and accessible language. It is essential reading for language scientists, cognitive scientists and anyone interested in language use and communication.

NATALIA LEVSHINA is a postdoctoral researcher at the Neurobiology of Language Department, Max Planck Institute for Psycholinguistics. She is the author of the best-selling book *How to Do Linguistics with R* (2015).

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Communicative Efficiency

Language Structure and Use

Natalia Levshina

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Shaftesbury Road, Cambridge CB2 8EA, United Kingdom

One Liberty Plaza, 20th Floor, New York, NY 10006, USA

477 Williamstown Road, Port Melbourne, VIC 3207, Australia

314–321, 3rd Floor, Plot 3, Splendor Forum, Jasola District Centre,
New Delhi – 110025, India

103 Penang Road, #05–06/07, Visioncrest Commercial, Singapore 238467

Cambridge University Press is part of Cambridge University Press & Assessment, a department of the University of Cambridge.

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www.cambridge.org
Information on this title: www.cambridge.org/9781108840798

DOI: 10.1017/9781108887809

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First published 2023

A catalogue record for this publication is available from the British Library.

ISBN 978-1-108-84079-8 Hardback

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To my teachers

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Preface

This book is a result of two anachronisms. The first one is the old German tradition of writing a postdoctoral thesis. It is part of the habilitation process, which enables a researcher to become a professor. This intention has not materialized yet, but I really enjoyed the process itself when I was writing my habilitation thesis back in 2018. I found that the large format allowed me to put together many different things that I have been thinking about, so I decided to develop the thesis into something better and more comprehensive. And then suddenly came the second anachronism, the pandemic of the dangerous virus, which has been plaguing us since 2020. Never had I thought that such a thing would be possible in the twenty-first century. The shutdown, however, did have the proverbial silver lining, giving me the time and mental space necessary for thinking about the big picture.

Of course, a book may also be an anachronism these days, when important debates happen on Twitter or Facebook. I really hope we are not there yet, but for those who do not have time to read the whole text, the individual chapters should be sufficiently accessible. Some of them provide overviews of specific types of efficiency, while others are centred around a well-known linguistic phenomenon, such as causative constructions or differential case marking.

Thanks to my unconventional career path, or rather, stochastic Markov chain, I have had an opportunity to pursue different research directions and learn about different theories and methods from typology, functional and cognitive linguistics, psycholinguistics, neuroscience and corpus linguistics. I hope that this collection of findings from diverse disciplines will be useful to researchers from different frameworks and backgrounds, and will inspire more (and better) interdisciplinary research in language sciences.

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Acknowledgements

An African proverb says, 'It takes a village to raise a child.' To paraphrase, it takes a research community to do science. This book is inspired by encounters with many brilliant people, face-to-face and more recently on Zoom. I could not possibly do justice to all of them here, to my colleagues and ex-colleagues in Leipzig, Nijmegen and around the world. Still, I must mention Martin Haspelmath, whose generous intellectual and practical support enabled me to start with this project when I was working in his Leipzig lab in 2016–2019. My work on this book has continued at the Max Planck Institute for Psycholinguistics in Nijmegen, where I have been working since 2019. I am particularly grateful to Peter Hagoort, the head of the Neurobiology of Language Department, who has given me a chance to learn about psycholinguistics and neuroscience, which are indispensable for efficiency research, in a very friendly and intellectually stimulating environment.

I have also learned a lot from my interactions with such experts on efficiency and closely related topics as Mira Ariel, Gertraud Fenk-Oczlon, Martin Haspelmath, John Hawkins, members and ex-members of Ted Gibson's lab at the MIT, and many, many others. My special thanks go to all colleagues in the Language in Interaction Consortium, who have helped me to understand better the cognitive processes involved in human communication. Of course, all mistakes in this book are solely mine.

Financially, this research was possible thanks to the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation programme (grant agreement No. 670985) and later thanks to the Dutch Research Foundation NWO (Gravitation grant Language in Interaction, grant number 024.001.006).

I also want to thank my husband Björn for his unfailing faith in me and also for supporting me in my attempts to keep *mens sana in corpore sano*, which has been especially important and challenging in these strange times.

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Abbreviations

1	1st person
2	2nd person
3	3rd person
1+2	1st person plural inclusive
A	grammatical role corresponding to the Agent
ABS	absolutive
ACC	accusative
AGT	agentive
ART	article
ASP	aspect
CAUS	causative
CONV	converb
DAT	dative
DEC/INF	declarative informal
DEF	definite
DIM	diminutive
DIR	directional
ERG	ergative
EXP	experiential aspectual particle
F	feminine
FOC	focus
FUT	future
GEN	genitive
IM.P	immediate past
IND	indicative
INF	infinitive
INTR	intransitive
LOC	locative
M	masculine
NAR	narrative
NOM	nominative
NPST	non-past

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OBJ	object
Q	question particle
P	grammatical role corresponding to the Patient
ℙ	probability
PART	particle
PERF	perfect
PFV	perfective
PL	plural
POSS	possessive
PRES	present
PRO	pronoun
PST	past
REC.P	recent past
S	grammatical role corresponding to the intransitive Subject (in ergative languages)
SBJ	subject
SBJV	subjunctive
SFP	sentence-final particle
SG	singular
SUP	supine
TNS	tense
TR	transitive

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