Data and Evidence in Linguistics

The question of what types of data and evidence can be used is one of the most important topics in linguistics. This book is the first to present comprehensively the methodological problems associated with linguistic data and evidence. Its originality is twofold. First, the authors' approach accounts for a series of unexplained characteristics of linguistic theorising: the uncertainty and diversity of data, the role of evidence in the evaluation of hypotheses, the problem-solving strategies as well as the emergence and resolution of inconsistencies. Second, the findings are obtained by the application of a new model of plausible argumentation which is also of relevance from a general argumentation-theoretical point of view. All concepts and theses are systematically introduced and illustrated by a number of examples from different linguistic theories, and a detailed case-study section shows how the proposed model can be applied to specific linguistic problems.

ANDRÁS KERTÉSZ is Professor of German Linguistics and Director of the Centre for Linguistics and Philosophy at the University of Debrecen. He is also Head of the Research Group for Theoretical Linguistics of the Hungarian Academy of Sciences.

CSILLA RÁKOSI is Senior Research Fellow in the Research Group for Theoretical Linguistics of the Hungarian Academy of Sciences.

Data and Evidence in Linguistics

A Plausible Argumentation Model

András Kertész and Csilla Rákosi

CAMBRIDGE
UNIVERSITY PRESS

CAMBRIDGE UNIVERSITY PRESS
Cambridge, New York, Melbourne, Madrid, Cape Town,
Singapore, São Paulo, Delhi, Tokyo, Mexico City

Cambridge University Press
The Edinburgh Building, Cambridge CB2 8RU, UK

Published in the United States of America by Cambridge University Press,
New York

www.cambridge.org
Information on this title: www.cambridge.org/9781107009240

First published 2012

Printed in the United Kingdom at the University Press, Cambridge

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

Library of Congress Cataloguing in Publication data
Kertész, András.
Data and evidence in linguistics : a plausible argumentation model / András Kertész,
Csilla Rákosi.
p. cm.
Includes bibliographical references and index.
ISBN 978-1-107-00924-0 (hardback)
1. Linguistic analysis (Linguistics) 2. Linguistics – Research – Methodology.
3. Corpora (Linguistics) 4. Computational linguistics. I. Rákosi, Csilla. II. Title.
P126.K43 2012
410.1 – dc23 2011043831

ISBN 978-1-107-00924-0 Hardback

Contents

List of figures and table

Figures

Table

Preface

This book is the latest product of a long-term metalinguistic research programme whose earlier stages have been hallmarked by a series of monographs (e.g. Kertész 1991, 1993, 2004a, b; Rákosi 2005). The idea that linguistic theorising is built on plausible argumentation was put forward in Kertész (1993) and was integrated with other components of the programme in Kertész (2004a). The elaboration of the p-model of plausible argumentation, around which the present book centres, is the accomplishment of the task set out in Part V of Kertész (2004a); thus, it is the direct continuation of this line of the programme.

The implementation of the plan was prepared at two levels in parallel, which have been conjoined in the present book. On the one hand, we elaborated different aspects of the p-model with the help of detailed case studies (Kertész & Rákosi 2005a, b, 2006, 2009a, b). On the other hand, on the basis of thorough and multifaceted analyses of the current literature on linguistic data and evidence, we arrived at conclusions that – besides the findings of Kertész (1993) and (2004a) – clearly motivate the application of the p-model of plausible argumentation to linguistic theorising (Kertész & Rákosi 2008a, b, c, 2009c).

The present book is a research monograph written primarily for linguists. However, it also raises problems of current research in argumentation theory and the philosophy of science. Therefore, as a secondary target group, it also addresses philosophers of science and argumentation theorists. Moreover, since it includes a series of examples which are intended to be simple and illuminating, and which illustrate the methodology of linguistic problem solving, it can also be used as a textbook recommended for students in these fields.

Accordingly, the chapters have been organised in a way which facilitates different readings. The main text should be read by all target groups. The subsections entitled 'Motivation and background' may be skipped by linguists (but consulted if they are interested in the details of the theoretical considerations behind the concepts) and should be read by philosophers of science and argumentation theorists. The examples may be skipped by the latter, but should be read by linguists. Nevertheless, all readers are advised to go through the detailed case study in Part IV which exemplifies how our approach works in practice.

Work on the present book was supported by the Research Group for Theoretical Linguistics of the Hungarian Academy of Sciences at the Universities of Debrecen, Pécs and Szeged. It was also supported by the projects TÁMOP 4.2.1./B-09/1/KONV-2010–0007 and OTKA K 77823. We are very grateful to two anonymous referees for their insightful comments, constructive criticism and useful suggestions. We are also indebted to George Seel for improving our English. Our special thanks are due to Helen Barton at Cambridge University Press for her constant encouragement and help without which the book could not have been published. Finally, we thank the publishers for permission to include revised versions of the following articles in the present book: A. Kertész & Cs. Rákosi, 'Daten und Evidenz in linguistischen Theorien: ein Forschungsüberblick', in A. Kertész & Cs. Rákosi (eds.), *New Approaches to Linguistic Evidence. Pilot Studies/Neue Ansätze zu linguistischer Evidenz. Pilotstudien* (Frankfurt am Main: Lang, 2008), 21–60; A. Kertész & Cs. Rákosi, 'On current approaches to linguistic data and evidence', *Sprachtheorie und germanistische Linguistik* 19(2) (2009), 127–72; Cs. Rákosi, 'Metatheoretical reconstruction of psycholinguistic experiments 1', *Sprachtheorie und germanistische Linguistik* 20(1) (2011), 55–93; Cs. Rákosi, 'Metatheoretical reconstruction of psycholinguistic experiments 2', *Sprachtheorie und germanistische Linguistik* 20(2) (2011), 159–87.

András Kertész
Csilla Rákosi

Abbreviations and central concepts

(CP)	The central problem of the debate on linguistic data and evidence	*page of first occurrence* 1
(MP)	The main problem of the book	2
(E)	The common intuitive core of the different approaches to evidence within the standard view of the analytical philosophy of science	10
(SVAPS)	Basic tenets of the standard view of the analytical philosophy of science	11
(SVLD)	The standard view of linguistic data	13
(2)	Inference	59
(3)	Primary/Secondary relevant characteristic	61
(4)	Deductive inference	61
(5)	Suitable source	64
(6)	Certainly true/Plausible/Implausible/Certainly false statements on the basis of a source	65
(7)	Direct/Indirect source	67
(8), (9)	Certainly true/Plausible/Implausible/Certainly false statements on the basis of a direct/indirect source	67, 69
(10)	The plausibility value of a statement on the basis of a source	70
(11)	The plausibility value of a statement on the basis of a set of sources	76
(12)	Certainly true/Plausible/Implausible/Certainly false statements on the basis of a set of sources	77
(13)	Demonstrative inference	82
(27)	Plausible inference	99
(36)	P-context	122
(38)	P-inconsistency	130
(39)	P-incompleteness	130
(40)	The solution to a p-problem	132
(41)	The resolution of a p-problem	133

Symbols

$\sim p$	the negation of statement p
$\lvert p\rvert_S$	the plausibility value of statement p on the basis of source S
$0 < \lvert p\rvert_S < 1$	statement p is plausible on the basis of source S
$0 \leq \lvert p\rvert_S < 1$	statement p is of neutral plausibility or plausible on the basis of source S
$0 < \lvert p\rvert_S \leq 1$	statement p is plausible or true with certainty on the basis of source S
$0 \leq \lvert p\rvert_S \leq 1$	statement p has a plausibility value on the basis of source S
p & q	the conjunction of statements p and q
$p \rightarrow p'$	transformation of premise p into statement p'
$[p]$	statement p is a latent background assumption
$\min\{a_1, \ldots, a_n\}$	the minimum (lowest value) of $a_1, \ldots, a_n$
$\max\{a_1, \ldots, a_n\}$	the maximum (highest value) of $a_1, \ldots, a_n$
$\sqrt[n]{a_1 \cdot \ldots a_n}$	geometric mean of $a_1, \ldots, a_n$
$\frac{a_1 + \ldots + a_n}{n}$	arithmetic mean of $a_1, \ldots, a_n$