

Models of Language Acquisition

Inductive and Deductive Approaches

EDITED BY

Peter Broeder and Jaap Murre

Models Of Language Acquisition Inductive And Deductive Approaches

Judith F. Kroll, A. M. B. de Groot

Models Of Language Acquisition Inductive And Deductive Approaches:

Models of Language Acquisition Peter Broeder, Jaap Murre, 2000 This book presents recent advances by leading researchers in computational modelling of language acquisition Sophisticated theoretical models can now be tested using simulation techniques and large corpora of linguistic data Renewed interest in learning neural networks and the ability to test new solutions to fundamental problems has fuelled debates in an already very active field The twenty four authors in this collection of new work have been drawn from departments of linguistics cognitive science psychology and computer science The book as a whole shows what light may be thrown on fundamental problems when powerful computational techniques are combined with real data A central question addressed in the book concerns the extent to which linguistic structure is readily available in the environment The authors consider the evidence in relation to word boundaries and phonotactic structure stress patterns text to speech rules and the mapping of lexical semantics one author arguing that a childs own output may serve as a key source of linguistic input Linguistic structure environment relations are central to the debate on the degree to which language learning is inductive or deductive this issue is considered here in studies of the acquisition of pluralization and inflectional morphology The book examines the power and utility of different modeling formalisms for different problems and approaches how far for example can connectionist models be used as models for language acquisition or Simple Recurrent Networks form the basis of a model of language acquisition To what degree can lexical items and categories be used in the construction of neural network models or Markov chains be deployed to investigate the characteristics of a general language learning algorithm Triggering Learning Algorithm This book will appeal to linguists psychologists cognitive scientists working in language acquisition It will also interest those involved in computational modelling in linguistics and behavioural science Experimental Methods in Language Acquisition Research Elma Blom, Sharon Unsworth, 2010 Experimental Methods in Language Acquisition Research provides students and researchers interested in language acquisition with comprehensible and practical information on the most frequently used methods in language acquisition research It includes contributions on first and child adult second language learners language impaired children and on the acquisition of both spoken and signed language Part I discusses specific experimental methods explaining the rationale behind each one and providing an overview of potential participants the procedure and data analysis as well as advantages and disadvantages and dos and don ts Part II focuses on comparisons across groups addressing the theoretical applied and methodological issues involved in such comparative work This book will not only be of use to advanced undergraduate and postgraduate students but also to any scholars wishing to learn more about a particular research method It is suitable as a textbook in postgraduate programs in the fields of linguistics education and psychology The Acquisition of Lexical and Grammatical Aspect Ping Li, Yasuhiro Shirai, 2011-05-03 Language acquisition is a human endeavor par excellence As children all human beings learn to understand and speak at least one language their mother tongue. It is a process that seems to take place without any obvious effort Second language learning particularly among adults causes more difficulty The purpose of this series is to compile a collection of high quality monographs on language acquisition. The series serves the needs of everyone who wants to know more about the problem of language acquisition in general and or about language acquisition in specific contexts Computational Modeling of Human Language Acquisition Afra Alishahi, 2022-06-01 Human language acquisition has been studied for centuries but using computational modeling for such studies is a relatively recent trend However computational approaches to language learning have become increasingly popular mainly due to advances in developing machine learning techniques and the availability of vast collections of experimental data on child language learning and child adult interaction Many of the existing computational models attempt to study the complex task of learning a language under cognitive plausibility criteria such as memory and processing limitations that humans face and to explain the developmental stages observed in children By simulating the process of child language learning computational models can show us which linguistic representations are learnable from the input that children have access to and which mechanisms yield the same patterns of behaviour that children exhibit during this process In doing so computational modeling provides insight into the plausible mechanisms involved in human language acquisition and inspires the development of better language models and techniques This book provides an overview of the main research questions in the field of human language acquisition It reviews the most commonly used computational frameworks methodologies and resources for modeling child language learning and the evaluation techniques used for assessing these computational models The book is aimed at cognitive scientists who want to become familiar with the available computational methods for investigating problems related to human language acquisition as well as computational linguists who are interested in applying their skills to the study of child language acquisition Different aspects of language learning are discussed in separate chapters including the acquisition of the individual words the general regularities which govern word and sentence form and the associations between form and meaning For each of these aspects the challenges of the task are discussed and the relevant empirical findings on children are summarized Furthermore the existing computational models that attempt to simulate the task under study are reviewed and a number of case studies are presented Table of Contents Overview Computational Models of Language Learning Learning Words Putting Words Together Form Meaning Associations Final Handbook of Cognitive Linguistics and Second Language Acquisition Peter Robinson, Nick C. Thoughts Ellis, 2008-03-29 This cutting edge volume describes the implications of Cognitive Linguistics for the study of second language acquisition SLA The first two sections identify theoretical and empirical strands of Cognitive Linguistics presenting them as a coherent whole The third section discusses the relevance of Cognitive Linguistics to SLA and defines a research agenda linking these fields with implications for language instruction Its comprehensive range and tutorial style chapters make this handbook a valuable resource for students and researchers alike Approaches to Bootstrapping Jürgen

Weissenborn, Barbara Höhle, 2001 Volume 1 of Approaches to Bootstrapping focuses on early word learning and syntactic development with special emphasis on the bootstrapping mechanisms by which the child using properties of the speech input enters the native linguistic system Topics discussed in the area of lexical acquisition are cues and mechanisms for isolating words in the input special features of motherese and their role for early word learning the determination of first word meanings memory and related processing capacities in early word learning and understanding and lexical representation and lexical access in early language production The papers on syntactic development deal with the acquisition of grammatical prosodic features for learning language specific syntactic regularities Volume 2 of Approaches to Bootstrapping focuses on the interaction between the development of prosodic and morphosyntactic knowledge as evidenced in the early speech of Dutch English German Portugese Spanish Danish Islandic and Swedish children shedding new light on the relation between universal and language specific aspects of language acquisition Another section of this volume deals with new approaches to language acquisition using ERP techniques The papers discuss in detail the relation between the development of language skills and changes in neurophysiological aspects of the brain The potentials of these techniques for the development of new tools for an early diagnosis of children who are at risque for developmental language disorders are also pointed out The closing section contains a synopsis of interactionist approaches to language acquisition a discussion of the genetic and experiential origin of primitive linguistic elements in acquisition and a discussion of structural and developmental aspects of bird song in comparison to human language The two volumes making up Approaches to Bootstrapping present a state of the art interdisciplinary and cross linguistic overview of recent developments in first language acquisition research

Handbook of Bilingualism Judith F. Kroll, A. M. B. de Groot, 2009 How is language acquired when infants are exposed to multiple language input from birth and when adults are required to learn a second language after early childhood How do adult bilinguals comprehend and produce words and sentences when their two languages are potentially always active and in competition with one another What are the neural mechanisms that underlie proficient bilingualism What are the general consequences of bilingualism for cognition and for language and thought This handbook will be essential reading for cognitive psychologists linguists applied linguists and educators who wish to better understand the cognitive basis of bilingualism and the logic of experimental and formal approaches to language science Grammaticalization and First Language Acquisition Dominique Bassano, Maya Hickmann, 2013-05-29 Grammaticalization and lexicalization are at the heart of first language acquisition Understanding how these processes begin and evolve is a major challenge for current theories and has implications for applications in teaching or clinical contexts This volume examines the relative weight of cognitive and linguistic determinants of acquisition with particular attention to two questions The first one concerns the origins of grammar and the processes underlying its development Is grammatical knowledge innate or constructed by the child Is it modular or does it interact with other capacities How can we account for continuity and discontinuity in development What is

the role of input Second considerable variation is observed in lexical and grammatical development across child languages Is the process of acquisition similar in all children or do language specific factors impact its rhythm and course Do typological factors determine children's reliance on lexical or grammatical means of expression in some domains Originally published in Language Interaction and Acquisition Language Interaction et Acquisition 2 1 2011 The Unaccusativity Puzzle Artemis Alexiadou, Elena Anagnostopoulou, Martin Everaert, 2004 The phenomenon of unaccusativity is a central focus for the study of the complex properties of verb classes This book combines contemporary approaches to the subject with several papers that have achieved a significant status even though formally unpublished **Corpora in Language Acquisition Research** Heike Behrens, 2008-04-09 Corpus research forms the backbone of research on children's language development Leading researchers in the field present a survey on the history of data collection different types of data and the treatment of methodological problems Morphologically and syntactically parsed corpora allow for the concise explorations of formal phenomena the quick retrieval of errors and reliability checks New probabilistic and connectionist computations investigate how children integrate the multiple sources of information available in the input and new statistical methods compute rates of acquisition as well as error rates dependent on sample size Sample analyses show how multi modal corpora are used to investigate the interaction of discourse and linguistic structure how cross linguistic generalizations for acquisition can be formulated and tested and how individual variation can be explored Finally ways in which corpus research interacts with computational linguistics and experimental research are presented

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Table of Contents Models Of Language Acquisition Inductive And Deductive Approaches

- 1. Understanding the eBook Models Of Language Acquisition Inductive And Deductive Approaches
 - The Rise of Digital Reading Models Of Language Acquisition Inductive And Deductive Approaches
 - Advantages of eBooks Over Traditional Books
- 2. Identifying Models Of Language Acquisition Inductive And Deductive Approaches
 - Exploring Different Genres
 - o Considering Fiction vs. Non-Fiction
 - Determining Your Reading Goals
- 3. Choosing the Right eBook Platform
 - Popular eBook Platforms
 - Features to Look for in an Models Of Language Acquisition Inductive And Deductive Approaches
 - User-Friendly Interface
- 4. Exploring eBook Recommendations from Models Of Language Acquisition Inductive And Deductive Approaches
 - Personalized Recommendations
 - Models Of Language Acquisition Inductive And Deductive Approaches User Reviews and Ratings

- Models Of Language Acquisition Inductive And Deductive Approaches and Bestseller Lists
- 5. Accessing Models Of Language Acquisition Inductive And Deductive Approaches Free and Paid eBooks
 - Models Of Language Acquisition Inductive And Deductive Approaches Public Domain eBooks
 - Models Of Language Acquisition Inductive And Deductive Approaches eBook Subscription Services
 - Models Of Language Acquisition Inductive And Deductive Approaches Budget-Friendly Options
- 6. Navigating Models Of Language Acquisition Inductive And Deductive Approaches eBook Formats
 - o ePub, PDF, MOBI, and More
 - Models Of Language Acquisition Inductive And Deductive Approaches Compatibility with Devices
 - Models Of Language Acquisition Inductive And Deductive Approaches Enhanced eBook Features
- 7. Enhancing Your Reading Experience
 - Adjustable Fonts and Text Sizes of Models Of Language Acquisition Inductive And Deductive Approaches
 - Highlighting and Note-Taking Models Of Language Acquisition Inductive And Deductive Approaches
 - Interactive Elements Models Of Language Acquisition Inductive And Deductive Approaches
- 8. Staying Engaged with Models Of Language Acquisition Inductive And Deductive Approaches
 - Joining Online Reading Communities
 - Participating in Virtual Book Clubs
 - Following Authors and Publishers Models Of Language Acquisition Inductive And Deductive Approaches
- 9. Balancing eBooks and Physical Books Models Of Language Acquisition Inductive And Deductive Approaches
 - Benefits of a Digital Library
 - Creating a Diverse Reading Collection Models Of Language Acquisition Inductive And Deductive Approaches
- 10. Overcoming Reading Challenges
 - Dealing with Digital Eye Strain
 - Minimizing Distractions
 - Managing Screen Time
- 11. Cultivating a Reading Routine Models Of Language Acquisition Inductive And Deductive Approaches
 - Setting Reading Goals Models Of Language Acquisition Inductive And Deductive Approaches
 - Carving Out Dedicated Reading Time
- 12. Sourcing Reliable Information of Models Of Language Acquisition Inductive And Deductive Approaches
 - Fact-Checking eBook Content of Models Of Language Acquisition Inductive And Deductive Approaches
 - Distinguishing Credible Sources

- 13. Promoting Lifelong Learning
 - Utilizing eBooks for Skill Development
 - Exploring Educational eBooks
- 14. Embracing eBook Trends
 - Integration of Multimedia Elements
 - Interactive and Gamified eBooks

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