Structure Of The Lexicon Human Vs Machine

One of the few scholarly attempts to reconcile a generatively-based approach to the structure of the lexicon with the cognitive approach of Cognitive Grammar Semantic Relations and the Lexicon explores the many paradigmatic semantic relations between words, such as synonymy, antonymy and hyponymy, and their relevance to the mental organization of our vocabularies. Drawing on a century's research in linguistics, psychology, philosophy, anthropology and computer science, M. Lynne Murphy proposes a pragmatic approach to these relations. Whereas traditional approaches have claimed that paradigmatic relations are part of our lexical knowledge, Dr Murphy argues that they constitute metalinguistic knowledge, which can be derived through a single relational principle, and may also be stored as part of our extra-lexical, conceptual representations of a word. Part I shows how this approach can account for the properties of lexical relations in ways that traditional approaches cannot, and Part II examines particular relations in detail. This book will serve as an informative handbook for all linguists and cognitive scientists interested in the mental representation of vocabulary.

The Natural Origin Of Language

Over the last twenty years a major area of cognitive psychology has developed centred upon research into the issues of how visually presented words are processed so that they can be read and understood. The focus has been on how words are stored in the mental lexicon and retrieved during the reading process. If we possessed no mental lexicon, we would be unable to read. This book dedicates itself to a critical evaluation of the ideas that have emerged from this body of research. The text outlines the major models of lexical processing that have been put forward in the literature, and how they explain the basic empirical findings that have been reported. It then goes on to consider the possible influence that sentential context has on lexical processing, the impact of the pronunciation of a word on its visual processing, and the role played by internal word structure (i.e., syllables and morphemes) in the recognition of a word. A connectionist style model emerges during the course of the evaluation of these issues. This book is suitable for advanced students and researchers, and is intended to serve as a springboard for discussion and an inspiration for empirical research.

In the study of bilingualism, the lexical level of language is of prime importance because, in practical terms, vocabulary acquisition is an essential prerequisite for the development of skill in language use; from a theoretical point of view, the mental lexicon, as a bridge between form and meaning, plays a crucial role in any model of language processing. A central issue in this volume is at which level of the bilingual speaker's lexicon languages share representations and how language-specific representations may be linked. The contributors favor a dynamic, developmental perspective on bilingualism, which takes account of the change of the mental lexicon over time and pays considerable attention to the acquisition phase. Several papers deal with the level of proficiency and its consequences for bilingual lexical processing, as well as the effects of practice. This discussion raises numerous questions about the notion of (lexical) proficiency and how this can be established by objective standards, an area of study that invites collaboration between researchers working from a theoretical and from a practical background.

In this volume, the issue of recursion is tackled from a variety of angles. Some articles cover formal issues regarding the proper characterization or definition of recursion, while others focus on empirical issues by examining the kinds of structure in languages that suggest recursive mechanism in the grammar. Most articles discuss syntactic phenomena, but several involve morphology, the lexicon and phonology. In addition, we find discussions that involve evolutionary notions and language disorders, and the broader cognitive context of recursion.

Recently, there has been a surge of interest in the lexicon. The demand for a fuller and more adequate understanding of lexical meaning required by developments in computational linguistics, artificial intelligence, and cognitive science has stimulated a refocused interest in linguistics, psychology, and philosophy. Different disciplines have studied lexical structure from their own vantage points, and because scholars have only intermittently communicated across disciplines, there has been little recognition that there is a common subject matter. The conference on which this volume is based brought together interested thinkers across the disciplines of linguistics, philosophy, psychology, and computer science to exchange ideas, discuss a range of questions and approaches to the topic, consider alternative research strategies and methodologies, and formulate interdisciplinary hypotheses concerning lexical organization. The essay subjects discussed include: * alternative and complementary conceptions of the structure of the lexicon, * the nature of semantic relations and of polysemy, * the relation between meanings, concepts, and lexical organization, * critiques of truth-semantics and referential theories of meaning, * computational accounts of lexical information and structure, and * the advantages of thinking of the lexicon as ordered.

An accessible introduction to lexical structure and design, and the relation of the lexicon to grammar as a whole. The Lexicon can be used for introductory and advanced courses, and includes a range of exercises and in-class activities designed to engage students, and help them acquire the knowledge and skills they need.

The Structure of the LexiconHuman versus MachineWalter de GruyterConstructing a Lexicon of English VerbsWalter de GruyterWords in the MindAn Introduction to the Mental LexiconJohn Wiley & Sons

"Words in the Mind," is all about words: how we learn them, remember them, understand them, and find the precise ones we wish to use. It also addresses the structure and content of the human word-store - the 'mental lexicon' - with particular reference to the spoken language of native English speakers. Great strides have been made in our understanding of the lexicon since the first three editions of "Words in the Mind" were published, and it has developed into a major interest of study among linguists, psychologists, sociologists, and those who teach English as a second language. In addition to numerous updates and revisions, this latest edition features a wealth of new material, including an all-new chapter focusing exclusively on the brain and language. Enhanced coverage is also provided on lexical corpora - computerized databases - and on lexical change of meaning. Many of the notes and suggestions for further reading are also expanded and updated. Written by a true master of making scholarly concepts accessible, the fourth edition of "Words in the Mind" remains a rich and revealing resource for students and non-specialists alike, presenting the latest insights into the complex relationship between language, words, and the human mind.

From its beginnings, the study of the mental lexicon has been at the crossroads of research and scholarship. This volume presents a polylogue--a textual conversation of many voices. It is designed to capture the excitement within the field and generate a deeper understanding of

key issues and debates for established researchers, students, and readers interested in language and cognition. The first chapter examines how the mental lexicon itself can be seen as a polylogue. In the following six chapters, authors tackle the fundamental questions concerning future research on lexical representation and processing in an interactive structure that presents new perspectives and captures the excitement of the field. The themes include the value of cross-linguistic megastudies, the nature of meaning, how to capture truly natural language, what can be learned from lexical acquisition, the advantages of a functionalist perspective, and the role of schemas in understanding morphology and the lexicon.

The present volume is an edited collection of original contributions which all deal with the issue of recursion in human language(s). All contributions originate as papers that were presented at a conference on the topic of recursion in human language organized by Dan Everett in March 22, 2007. For the purpose of this collection all articles underwent a double-blind peer-review process. The present chapters were written in the course of 2008. Although the 'recursive' nature of linguistic expressions, i.e. the apparent possibility of producing an infinite number of expressions with finite means, has been noted for a long time, no general agreement seems to exist concerning the empirical status as well as mathematical formalization of this 'characteristic' of human languages or of the grammars that lie behind these utterances that make up these languages. Renewed interest in this subject was sparked by recent claims that 'recursion' is perhaps the sole uniquely human and as such universal trait of human language (cf. Chomsky, Hauser and Fitch 2000). In this volume, the issue of recursion is tackled from a variety of angles. Some articles cover formal issues regarding the proper characterization or definition of recursion, while others focus on empirical issues by examining the kinds of structure in languages that suggest recursive mechanism in the grammar. Most articles discuss syntactic phenomena, but several involve morphology, the lexicon and phonology. In addition, we find discussions that involve evolutionary notions and language disorders, and the broader cognitive context of recursion.

The architecture of the human language faculty has been one of the main foci of the linguistic research of the last half century. This branch of linguistics, broadly known as Generative Grammar, is concerned with the formulation of explanatory formal accounts of linguistic phenomena with the ulterior goal of gaining insight into the properties of the 'language organ'. The series comprises high quality monographs and collected volumes that address such issues. The topics in this series range from phonology to semantics, from syntax to information structure, from mathematical linguistics to studies of the lexicon.

The Lexicon provides an introduction to the study of words, their main properties, and how we use them to create meaning. It offers a detailed description of the organizing principles of the lexicon, and of the categories used to classify a wide range of lexical phenomena, including polysemy, meaning variation in composition, and the interplay with ontology, syntax, and pragmatics. Elisabetta Ježek uses empirical data from digitalized corpora and speakers' judgements, combined with the formalisms developed in the field of general and theoretical linguistics, to propose representations for each of these phenomena. The key feature of the book is that it merges theoretical accounts with lexicographic approaches and computational insights. Its clear structure and accessible approach make The Lexicon an ideal textbook for all students of linguistics—theoretical, applied, and computational—and a valuable resource for scholars and students of language in the fields of cognitive science and philosophy.

With all of the news about the Internet and the Y2K problem, it is easy to forget that other areas of computer science still exist. Reading the newspaper or watching the television conveys a very warped view of what is happening in computer science. This conference illustrates how a maturing subdiscipline of computer science can continue to grow and integrate within it both old and new

approaches despite (or perhaps due to) a lack of public awareness. The conceptual graph community has basically existed since the 1984 publication of John Sowa's book, "Conceptual Structures: Information Processing In Mind and Machine." In this book, John Sowa laid the foundations for a knowledge representation model called conceptual graphs based on semantic networks and the existential graphs of C.S. Peirce. Conceptual graphs constitutes a very powerful and expressive knowledge representation scheme, inheriting the benefits of logic and the mathematics of graphs. The expressiveness and formal underpinnings of conceptual graph theory have attracted a large international community of researchers and scholars. The International Conferences on Conceptual Structures, and this is the seventh in the series, is the primary forum for these researchers to report their progress and activities. As in the past, the doors were open to admit alternate representation models and approaches.

The expert contributors to this book explore the range of possibilities for the generation of extensive lexicons. In so doing, they investigate the use of existing on-line dictionaries and thesauri, and explain how lexicons can be acquired from the corpus -- the text under investigation -- itself.

This book is about the mental lexicon and opens an understanding of this aspect of human cognition. The mental lexicon is still a central topic in psycholinguistics and, more generally speaking, in cognitive science. Is it possible to define what is intended by the expression "mental lexicon", a concept coined by Oldfield as early as 1966? Are the terms that the authors have at their disposal still sufficient to discuss this hypothesised mental entity -- the mental lexicon -- which is intended to cover many different aspects of words? The authors propose as a working definition that the mental lexicon corresponds to the mental repository of all representations that are intrinsically related to words. This book extends its research in psycholinguistics and focuses on the word.

Questions about the exact nature of linguistic as opposed to non-linguistic knowledge have been asked for as long as humans have studied language, be it as linguists, philosophers, psychologists, semioticians or cognitive scientists. This work argues both for and against the distinction between lexical knowledge and encyclopedic knowledge.

This volume highlights current theories of the lexicon from the perspective of its use in sentence understanding. It includes work from researchers in psycholinguistic studies on sentence comprehension.

An edited collection focusing on the technology involved in enabling integration between lexical resources and semantic technologies.

Language structure and use are largely shaped by cognitive processes such as categorizing, framing, inferencing, associative (metonymic), and analogical (metaphorical) thinking, and mediated through cognition by bodily experience, emotion, perception, action, social/communicative interaction, culture, and the internal ecology of the linguistic system itself. The contributors to the present volume demonstrate how these language-independent factors motivate grammar

and the lexicon in a variety of languages such as English, German, French, Italian, Hungarian, Russian, Croatian, Japanese, and Korean. The volume will be of great interest to students and scholars in cognitive and functional linguistics." This work offers a survey of methods and techniques for structuring, acquiring and maintaining lexical resources for speech and language processing. The first chapter provides a broad survey of the field of computational lexicography, introducing most of the issues, terms and topics which are addressed in more detail in the rest of the book. The next two chapters focus on the structure and the content of man-made lexicons, concentrating respectively on (morpho-)syntactic and (morpho-)phonological information. Both chapters adopt a declarative constraint-based methodology and pay ample attention to the various ways in which lexical generalizations can be formalized and exploited to enhance the consistency and to reduce the redundancy of lexicons. A complementary perspective is offered in the next two chapters, which present techniques for automatically deriving lexical resources from text corpora. These chapters adopt an inductive data-oriented methodology and focus also on methods for tokenization, lemmatization and shallow parsing. The next three chapters focus on speech synthesis and speech recognition.

The book analyzes and evaluates what major linguistic models say on the interaction of lexicon and syntax in language performance. To check the plausibility of the assumptions, they are compared with what psycholinguists have found out. Moreover, reformulations, situations of speech need, and the use of 'lexical stretches' are analysed for what they can contribute to the discussion, and for one of the main issues also experimental evidence is produced.

The book collects contributions from well-established researchers at the interface between language and cognition. It provides an overview of the latest insights into this interdisciplinary field from the perspectives of natural language processing, computer science, psycholinguistics and cognitive science. One of the pioneers in cognitive natural language processing is Michael Zock, to whom this volume is dedicated. The structure of the book reflects his main research interests: lexicon and lexical analysis, semantics, language and speech generation, reading and writing technologies, language resources and language engineering. The book is a valuable reference work and authoritative information source, giving an overview on the field and describing the state of the art as well as future developments. It is intended for researchers and advanced students interested in the subject. One of the pioneers in cognitive natural language processing is Michael Zock, to whom this volume is dedicated. The structure of the book reflects his main research interests: Lexicon and lexical analysis, semantics, language and speech generation, reading and writing technologies, language resources and language engineering. The book is a valuable reference work and authoritative information source, giving an overview on the field and describing the state of the art as well as future developments. It is intended for researchers and advanced students interested in the subject. One of the pioneers in cognitive natural language processing is Michael Zock, to whom this volume is dedicated. The structure of the book reflects his main research interests: Lexicon and lexical analysis, semantics, language and speech generation, reading and writing technologies, language resources and language engineering. The book is a valuable reference work and authoritative information source, giving an overview on the field and describing the

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In functional grammar, the lexicon plays a central role. Lexical items form the basic building blocks around which the structure of a clause is built. This book examines 5 aspects of the role of the lexicon in functional grammar.

This volume reflects a consensus that the investigation of words in the mind offers a unique opportunity to understand both human language ability and general human cognition. It brings together key perspectives on the fundamental nature of the representation and processing of words in the mind. This thematic volume covers a wide range of views on the fundamental nature of representation and processing of words in the mind and a range of views on the investigative techniques that are most likely to reveal that nature. It provides an overview of issues and developments in the field. It uncovers the processes of word recognition. It develops new models of lexical processing.

This second edition of Syntactic Theory: A Formal Introduction expands and improves upon a truly unique introductory syntax textbook. Like the first edition, its focus is on the development of precisely formulated grammars whose empirical predictions can be directly tested. There is also considerable emphasis on the prediction and evaluation of grammatical hypotheses, as well as on integrating syntactic hypotheses with matters of semantic analysis. The book covers the core areas of English syntax from the last quarter century, including complementation, control, "raising constructions," passives, the auxiliary system, and the analysis of long distance dependency constructions. Syntactic Theory's step-by-step introduction to a consistent grammar in these core areas is complemented by extensive problem sets drawing from a variety of languages. The book's theoretical perspective is presented in the context of current models of language processing, and the practical value of the constraint-based, lexicalist grammatical architecture proposed has already been demonstrated in computer language processing applications. This thoroughly reworked second edition includes revised and extended problem sets, updated analyses, additional examples, and more detailed exposition throughout. Praise for the first edition: "Syntactic Theory sets a new standard for introductory syntax volumes that all future books should be measured against."—Gert Webelhuth, Journal of Linguistics

In order to exchange knowledge, humans need to share a common lexicon of words as well as to access the world models underlying that lexicon. What is a natural process for a human turns out to be an extremely hard task for a machine: computers can't represent knowledge as effectively as humans do, which hampers, for example, meaning disambiguation and communication. Applied ontologies and NLP have been developed to face these challenges. Integrating ontologies with (possibly multilingual) lexical resources is an essential requirement to make human language understandable by machines, and also to enable interoperability and computability across information systems and, ultimately, in the Web. This book explores recent advances in the integration of ontologies and lexical resources, including questions such as building the required infrastructure (e.g., the Semantic Web) and different formalisms, methods and platforms for eliciting, analyzing and encoding knowledge contents (e.g., multimedia, emotions, events, etc.). The contributors look towards next-generation technologies, shifting the focus from the state of the art to the future of Ontologies and Lexical

Resources. This work will be of interest to research scientists, graduate students, and professionals in the fields of knowledge engineering, computational linguistics, and semantic technologies.

A collection of essays introducing the reader to `domain-specificity'.

"One of the most important principles which underlies biolinguistics is that Turing's thesis must be satisfied: the structural design of biological systems obey physical and mathematical laws. Whilst much work has been done to identify the components of language, surprisingly little attention has been paid to examining and understanding the structural design of language itself, and how it satisfies Turing's thesis. The components of language must be somehow inter-structured to meet thresholds of simplicity, generality, naturalness and beauty, as well as of biological and conceptual necessity; but exactly how they do so has thus far been under-articulated. In this book, Stroik and Putnam investigate what this structure looks like, and argue that minimalist syntax has central importance. In so doing, radical new insights emerge into what the language faculty is, how language emerged in the species and how language is acquired by children"--

The aim of this book is to advocate and promote network models of linguistic systems that are both based on thorough mathematical models and substantiated in terms of linguistics. In this way, the book contributes first steps towards establishing a statistical network theory as a theoretical basis of linguistic network analysis the boarder of the natural sciences and the humanities. This book addresses researchers who want to get familiar with theoretical developments, computational models and their empirical evaluation in the field of complex linguistic networks. It is intended to all those who are interested in statistical models of linguistic systems from the point of view of network research. This includes all relevant areas of linguistics ranging from phonological, morphological and lexical networks on the one hand and syntactic, semantic and pragmatic networks on the other. In this sense, the volume concerns readers from many disciplines such as physics, linguistics, computer science and information science. It may also be of interest for the upcoming area of systems biology with which the chapters collected here share the view on systems from the point of view of network analysis.