Cognitive Linguistics Investigations

Edited by June Luchjenbroers

John Benjamins Publishing Company
Cognitive Linguistics Investigations
HUMAN COGNITIVE PROCESSING is a forum for interdisciplinary research on the nature and organization of the cognitive systems and processes involved in speaking and understanding natural language (including sign language), and their relationship to other domains of human cognition, including general conceptual or knowledge systems and processes (the language and thought issue), and other perceptual or behavioral systems such as vision and non-verbal behavior (e.g. gesture). ‘Cognition’ should be taken broadly, not only including the domain of rationality, but also dimensions such as emotion and the unconscious. The series is open to any type of approach to the above questions (methodologically and theoretically) and to research from any discipline, including (but not restricted to) different branches of psychology, artificial intelligence and computer science, cognitive anthropology, linguistics, philosophy and neuroscience. It takes a special interest in research crossing the boundaries of these disciplines.

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Cognitive Linguistics Investigations:
Across languages, fields and philosophical boundaries
Edited by June Luchjenbroers
Cognitive Linguistics
Investigations
Across languages, fields
and philosophical boundaries

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# Table of contents

Preface  ix  
Biographical information  xi  

**CHAPTER 1**  
Introduction: Research issues in cognitive linguistics  1  
  *June Luchjenbroers*  

**Part I. Cultural models and conceptual mappings**  

**CHAPTER 2**  
When does cognitive linguistics become cultural? Case studies  
in Tagalog voice and Shona noun classifiers  13  
  *Gary Palmer*  

**CHAPTER 3**  
Purple persuasion: Deliberative rhetoric and conceptual blending  47  
  *Seana Coulson and Todd Oakley*  

**CHAPTER 4**  
Depicting fictive motion in drawings  67  
  *Teenie Matlock*  

**CHAPTER 5**  
Discourse, gesture, and mental spaces manoeuvres: Inside versus  
outside F-space  87  
  *June Luchjenbroers*
# Table of contents

**Part II. Computational models and conceptual mappings**

**CHAPTER 6**  
In search of meaning: The acquisition of semantic structures and morphological systems  
*Ping Li*  
109

**CHAPTER 7**  
Grammar and language production: Where do function words come from?  
*Joost Schilperoord and Arie Verhagen*  
139

**CHAPTER 8**  
Word recognition and sound merger  
*Paul Warren*  
169

**Part III. Linguistic components and conceptual mappings**

**CHAPTER 9**  
Verbal explication and the place of NSM semantics in cognitive linguistics  
*Cliff Goddard*  
189

**CHAPTER 10**  
“How do you know she’s a woman?”: Features, prototypes and category stress in Turkish *kadin* and *kiz*  
*Robin Turner*  
219

**CHAPTER 11**  
Cross-linguistic polysemy in tactile verbs  
*Iraide Ibarretxe-Antuñano*  
235

**CHAPTER 12**  
How experience structures the conceptualization of causality  
*Maarten Lemmens*  
255

**CHAPTER 13**  
Internal state predicates in Japanese: A cognitive approach  
*Satoshi Uehara*  
271
Table of contents

CHAPTER 14
Figure, ground and connexity: Evidence from Xhosa narrative
   David Gough

CHAPTER 15
Discourse organization and coherence
   Ming-Ming Pu

Name index
Subject index
Preface

The origin of this book was a workshop held at the University of Queensland, during the 4th Australian Linguistics Institute, in July 1998. Researchers from around the world offered papers on a range of research topics of specific interest to the cognitive linguistics paradigm, and a number of those papers have been revised and modified for this volume. Since that workshop several additional papers were also sought from exciting researchers in the field, so that this monograph would capture the diversity of research activity from various parts of the world and across a range of languages, relevant to the Cognitive Linguistics orientation toward language and cognition.

My thanks to the many colleagues who volunteered their time to give Peer reviews of the papers included in this volume (listed below). Without their help this monograph would not have been possible. Also many thanks are due to the contributors themselves, many of whom have tolerated countless delays and innumerable requests; their patience and good humour have made the task of collating this monograph a satisfying experience. Thanks also to the editors of this series and their reviewers; and a final thanks to the Centre for Language & Cognition Groningen (CLCG) Rijks Universiteit Groningen, where this manuscript was finally completed, as well as the Linguistics Department at the University of Wales, Bangor for supporting my visit there.

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Preface

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Biographical information

Seana Coulson – is an associate professor in the Cognitive Science Department at the University of California, San Diego where she heads the Brain & Cognition Laboratory. The author of *Semantic Leaps: Frame-Shifting And Conceptual Blending In Meaning Construction*, her research involves an interdisciplinary approach to the study of communication and conceptual structure.

Cliff Goddard – works primarily in the natural semantic metalanguage (NSM) theory originated by Anna Wierzbicka. He has published widely on cross-linguistic semantics, ethnopragmatics, descriptive linguistics, and language typology. His books include *Semantic Analysis* (OUP, 1998), *Meaning and Universal Grammar* (co-edited with Anna Wierzbicka, Benjamins, 2002) and *The Languages of East and Southeast Asia* (OUP, 2005). He is a full Professor in Linguistics at the University of New England, Australia.

David Gough – is currently Head of the School of English Language at Christchurch Polytechnic Institute of Technology, New Zealand where he has been for the past 5 years. Prior to this, David, a South African, was professor of Linguistics at the University of the Western Cape, Cape Town. He has research interest and has published in African linguistics, pragmatics and language and literacy education.

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Maarten Lemmens – is senior lecturer of English linguistics at the University of Lille, France, where he teaches cognitive and English linguistics and English phonetics. His research centers around three main areas: (i) English lexical causatives and their constructional alternations, (ii) a lexical semantic analysis of posture verbs in Dutch, English and Swedish, and (iii) a typological study of the expression of static location, as a complement to existing research on movement verbs.
Ping Li – is Professor of Psychology and Cognitive Science at the University of Richmond, USA. His main research interests are in the areas of psycholinguistics and cognitive science. He specializes in crosslinguistic studies of language acquisition, bilingual language processing, and neural network modeling of monolingual and bilingual lexical development.

June Luchjenbroers – received her PhD from La Trobe University in 1994, and joined the Linguistics Department at University of Wales, Bangor in 1999 after appointments with the Hong Kong Polytechnic University and the University of Queensland. Her research involves Discourse Analysis from a cognitive linguistics perspective, including gender and gestural analyses of video, discourse data.

Teenie Matlock – is founding faculty in Social and Cognitive Sciences at University of California, Merced, and a visiting scholar in Psychology at Stanford University. An experimental psychologist and cognitive linguist, Matlock has published numerous articles on conceptual structure and imagery in language, especially non-literal spatial language.

Todd Oakley – is associate professor of English and Cognitive Science at Case Western Reserve University in Cleveland, Ohio. His principle areas of scholarship are in rhetoric, linguistics, and cognitive science. His interest in Cognitive Linguistics dates from the early 90’s when he began investigating the conceptual basis of rhetorical effect, a project that drew heavily on Langacker’s Cognitive Grammar and Fauconnier’s Mental Spaces Theory. This project has since expanded to focus on the relationship between attention and meaning construction in general, hence its title, Elements of Attention: Explorations in Mind, Language, and Culture.


Ming-Ming Pu – is an Associate Professor of Linguistics at the University of Maine, Farmington. She obtained her PhD in psycholinguistics from University of Alberta, Canada. Her current research interests include cognitive linguistics, comparative discourse analysis and Chinese linguistics.

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Paul Warren – is Associate Professor in the School of Linguistics and Applied Language Studies at Victoria University of Wellington, New Zealand. Paul’s primary research interests are in psycholinguistics, in particular spoken word recognition and the use of intonation in sentence processing. Since moving to New Zealand in 1994, he has combined these interests with a growing fascination in the development of New Zealand English.
CHAPTER 1

Introduction

Research issues in cognitive linguistics

June Luchjenbroers
University of Wales, Bangor

1. The cognitive linguistics agenda

Linguistics as a discipline aspires to capture the essence of communication, and how language is processed in the human brain. The exact path to achieving this aspiration however, has in past decades split into two major and substantially different approaches: the now, more traditional approach to language processing, referred to as the ‘Formal’ or ‘Orthodox’ approach (cf. Langacker 1988), and the Cognitive Linguistics approach. A significant point of contrast between these two theoretical approaches lies in whether linguistic processes are deemed essentially different from other cognitive processes, or not; and thus whether linguistic phenomena should therefore should be investigated separately (cf. Chomsky 1980; Fodor 1983), or not.

Although the goal of the Formal, generativist paradigm has been to provide cognitively oriented explanations rather than structural taxonomies, linguistics researchers from within the Cognitive Linguistics research community have brought challenge to a range of fundamental elements of the Formalist’s approach to language and cognition. In particular, cognitive linguistics challenges whether the brain is modular, as well as the role of logic and deduction as cognitive strategies for information processing (e.g., Langacker 1987, 1990); whether language in the brain is hardwired, as well as the validity of ‘mentalese’ (the supposed language of the mind, thought to be propositional in structure and possess logical attributes – cf. Fodor 1975; Pylyshyn 1984).

The Formalist paradigm has consistently reinforced the view that the representation of language is best seen as involving basic, symbolic building blocks and rules; and further that those building blocks are also autonomously processed – i.e., grammar is distinct from both the lexicon and semantics (cf. Newmeyer 1986;
Kempson 1991), and that semantics is distinct from pragmatics. However, researchers from within the cognitive linguistics community have repeatedly shown how a full appreciation of individual linguistic units requires the researcher to consider all parts of language analysis (cf. Fauconnier 1994; Lakoff 1987; Lakoff & Johnson 1990; Talmy 1996). The papers of this volume have been collected to illustrate how otherwise separate areas of linguistic concern can present a better clarification of the linguistic distributions in which units are produced in talk; as well as provide a deeper appreciation of the semantic richness of those linguistic units, not captured by Formalist approaches.

The cognitive linguistics agenda is to work toward a cognitively real approach to language processing; and for researchers from within the cognitive linguists community that means making ourselves amenable to research from disciplines outside the linguistics domain, such as psychology, A.I., Anthropology and philosophy, in addition to language related studies done within the linguistics spectrum. The papers in this volume are also drawn from a number of areas from within the cognitive sciences, to provide a more comprehensive appreciation of the multiplicity of the language units under investigation, as predicted and advocated by the cognitive linguistics approach to language and cognition.

However, the full breadth of the cognitive linguistics agenda involves more than identifying the nature of language processing, which in itself includes both language production and comprehension processes, it also presupposes the more primary concern of language categorization and representation in the mind. In this volume a number of papers illustrate how our understanding of grammar units are essentially semantic, and other papers are devoted to specifically clarifying the nature of conceptual structures.

Janda (2000) has also described the cognitive linguistics community as a group of researchers who embrace a concatenation of core concepts and goals, and who are emerged in the empirical observations of language behaviours across languages and disciplines. This does not subsume a single philosophical perspective toward the exact relation between language and mind; instead these core concepts capture the unifying principle that language, as representations in the mind and as the product of cognitive events, reflects the interaction of cultural, psychological, communicative and functional considerations.

2. Outline of this volume

As promised in the title of this collection, the total body of papers presents research across a variety of languages and language groups, as well show how particular elements of linguistic description draw upon otherwise separate aspects (or fields) of linguistic investigation. The languages include European languages – Basque,
Dutch, Spanish and Turkish, as well as different varieties of English (American, Australian, New Zealand, and Old English); Asian languages – Chinese and Japanese; Austronesian Languages – Malay and Tagalog; Bantu languages – Shona and Xhosa; as well as a number of examples drawn from Australian Aboriginal languages and cultures, such as Dyirbal and Western Australian communities. Despite possible differences in philosophical approach to the role of language in cognitive tasks, and differences in the methodology used as an avenue for linguistic investigation, these papers are similar in a fundamental way: they all share a commitment to the view that human categorization involves mental concepts that have fuzzy boundaries and are culturally and situation-based.

The selection of papers within this volume all concern how language comprehension and production involve conceptual mappings between varying domains of cognitive function. The three thematic subsections captured in this collection include (a) conceptual mappings involving cultural models. These involve specific types of knowledge that impact and sculpt the language outputs produced in talk. The second subsection (b), deals with computational models that emulate and hypothesize different features of the cognitive programming dealing with morphology, grammar, and sociolinguistic variation; while the third subsection of papers (c), focuses on specific components of linguistic description: semantics, grammar and discourse.

A very appropriate start to the first subsection, and to this volume, is the paper by Gary Palmer, “When does cognitive linguistics become cultural? Case studies in Tagalog voice and Shona noun classifiers” (Chapter 2). In this paper, Palmer outlines important fieldwork in which important theoretical concerns about grammatical representation and processing are dealt with. He argues for the cognitive and semantic underpinnings of grammatical phenomena in the form of ‘cultural schemas’. Evidence for his argument is provided by cross-linguistic data (from Dyirbal, Tagalog, and Shona), to illustrate how many lexical domains and grammatical constructions link either directly or indirectly to significant cultural models. Well known concepts from the cognitive sciences, such as ‘scenarios’ from Artificial Intelligence and psychology, and ‘Idealized Cognitive Models’ from linguistics, are incorporated in his treatment of grammatical voice and noun classifiers, which are presented as extraordinary polycentric categories that provide the key to understanding the discourse of these language communities.

After Palmer’s consideration of the role of culture (and thus experience) in explaining linguistic structure, the first thematic subsection continues with three other papers dealing with how different linguistic choices are manifest by each speaker’s conceptual representations of the world – Coulson & Oakley; Matlock; and Luchjenbroers. These papers, each drawing on different methodologies (discourse, experiment, and gesture), deal with different aspects of con-
ceptual representation: Coulson & Oakley's paper deals with conceptual blending; Matlock's paper with how information in memory is manifest in lexical retrieval; and Luchjenbroers deals with how cognitive strategies are evident in conversational gesture.

In the chapter by Seana Coulson and Todd Oakley, “Purple persuasion: Deliberative rhetoric and conceptual blending” (Chapter 3), the authors consider semantic structure in the form of ‘Conceptual Integration Theory’ (‘Blending Theory’). In their paper, the authors illustrate how blending is recruited in persuasive discourse. The data used include an email message encouraging people to vote in a US congressional election, and a church letter sent to encourage monetary donations to that church. With excerpts from these data, the authors show how simplified input models are blended to form integrated event scenarios, and how the strategic choice of input frames can provide a writer (or speaker) with the means to encourage a particular construal of events that will likely result in the target action(s). Coulson and Oakley argue that persuasion depends on ‘objects of agreement’, and the strategic choice of inputs to create a convincing blend will promote the perception of such agreement.

The following chapter (4), “Depicting fictive motion in drawings”, by Teenie Matlock, puts Len Talmy’s proposed, ‘fictive motion’ (1996) to the test, and thereby also cognitive theory dealing with conceptual representation and language processing. In this paper Matlock deals with motion verbs, and asks whether fictive motion plays a role in their comprehension. With a number of drawing experiments, she uncovers reliable evidence of a link between motion verbs and the mental simulation of the action conveyed by the verb: a link that involves a mentally simulated traversal or scanning of a trajectory. For example, manner information (such as slow, fast, or neutral) is depicted with longer, thinner or straighter lines for fast verbs than for slow verbs. The results given from three experiments challenge many traditional approaches to lexical representation, and provide strong evidence that comprehension taps into knowledge acquired from embodied experience.

The final paper of this subsection (Chapter 5), “Discourse, gesture, and mental spaces manoeuvers: Inside vs. outside F-space”, by June Luchjenbroers, investigates the dynamics of conversational gesture in terms of the physical space in which they occur during discourse. That space, also called the ‘comfort zone’ or ‘F-space’, is where speakers produce most of their gestures during discourse, and Luchjenbroers argues that speakers convey added meaning, relevant to mental spaces navigations (i.e., movements around conceptual structure), when they choose to locate their gestures inside the boundaries of that space, or when they physically stretch to place a gesture outside it. The examples offered in this paper also illustrate how a speaker’s choice of gesture can amplify, and sometimes supplement information provided by the lexical component; they also show how the loca-
tion of a gesture in relation to a speaker’s F-space conveys role relations relevant to the subject-matter being discussed. As such, a speaker’s gestural F-space can be an important source of information for all discourse participants to establish, navigate and disambiguate the many mental spaces that may be required during discourse.

These chapters are then followed by a new thematic subsection, that brings together research dealing with different computational models of the human cognitive system. These papers discuss different computation models for describing cognitive processes associated with the mental lexicon, in relation to morphology (Li); grammar (Schilperoord & Verhagen); and the phonological system (Warren).

The paper by Ping Li (Chapter 6), “In search of meaning: The acquisition of semantic structures and morphological systems”, presents a very different approach to cognitive processing, in that he utilizes computational models in the form of a connectionist network. In this paper Li challenges the Formalist assumption embraced by many areas in the cognitive sciences that language is best seen as involving basic, symbolic building blocks and rules. Using child language acquisition data, and in particular parental speech from the childes database, Li begins with the observation that young children learn word meanings by exploiting contextual information in the input; thus, lexical categories can be acquired by the computation of statistical regularities involving multiple constraining factors, and meaning is the emergent property of that process. The major part of this paper, however, is his consideration of a puzzle involving a ‘cryptotype’, in the form of the reversive prefix ‘un-’. The un- problem is described as essentially semantic for which there seems to be no regular rule to govern its use – e.g., we can ‘untie’ a bow but not ‘unmove’ a desk. Li’s study illustrates how the semantic features that unite different members of a cryptotype are represented in a complex distributed fashion (where feature overlaps occur across categories); a process that is accessible to native intuition but appears to defy traditional symbolic analysis.

In chapter Seven by Joost Schilperoord and Arie Verhagen, “Grammar and language production: Where do function words come from?”, the authors deal with the characterization of linguistic knowledge, in particular, organizational features of the mental lexicon and mental grammar. The practical application of this bigger picture issue is to ask the question, “how are function words selected during language production?”. In this quest, the authors first offer a theoretical consideration of language production models and the predictions that result from them. This is then followed by a usage based consideration of function words (prepositions and articles) and pauses, as they appear in the production of Dutch, oral dictations of routine business letters. The authors use cognitive linguistic views on the nature of linguistic knowledge to explain the evidence they have obtained regarding function words and how they are cognitively processed. In particular, they call into question assumptions in the literature that function words are stored