



ROUTLEDGE
HANDBOOKS



The Routledge Handbook of Cognitive Linguistics

Edited by Xu Wen and John R. Taylor

THE ROUTLEDGE HANDBOOK OF COGNITIVE LINGUISTICS

The Routledge Handbook of Cognitive Linguistics provides a comprehensive introduction and essential reference work to cognitive linguistics. It encompasses a wide range of perspectives and approaches, covering all the key areas of cognitive linguistics and drawing on interdisciplinary and multidisciplinary research in pragmatics, discourse analysis, biolinguistics, ecolinguistics, evolutionary linguistics, neuroscience, language pedagogy, and translation studies.

The forty-three chapters, written by international specialists in the field, cover four major areas:

- Basic theories and hypotheses, including cognitive semantics, cognitive grammar, construction grammar, frame semantics, natural semantic metalanguage, and word grammar;
- Central topics, including embodiment, image schemas, categorization, metaphor and metonymy, construal, iconicity, motivation, constructionalization, intersubjectivity, grounding, multimodality, cognitive pragmatics, cognitive poetics, humor, and linguistic synaesthesia, among others;
- Interfaces between cognitive linguistics and other areas of linguistic study, including cultural linguistics, linguistic typology, figurative language, signed languages, gesture, language acquisition and pedagogy, translation studies, and digital lexicography;
- New directions in cognitive linguistics, demonstrating the relevance of the approach to social, diachronic, neuroscientific, biological, ecological, multimodal, and quantitative studies.

The Routledge Handbook of Cognitive Linguistics is an indispensable resource for undergraduate and postgraduate students, and for all researchers working in this area.

Xu Wen is Professor of Linguistics and Dean of College of International Studies at Southwest University, China.

John R. Taylor was senior lecturer in Linguistics at the University of Otago, New Zealand.

ROUTLEDGE HANDBOOKS IN LINGUISTICS

Routledge Handbooks in Linguistics provide overviews of a whole subject area or sub-discipline in linguistics, and survey the state of the discipline including emerging and cutting edge areas. Edited by leading scholars, these volumes include contributions from key academics from around the world and are essential reading for both advanced undergraduate and postgraduate students.

The Routledge Handbook of Vocabulary Studies

Edited by Stuart Webb

The Routledge Handbook of North American Languages

Edited by Daniel Siddiqi, Michael Barrie, Carrie Gillon, Jason D. Haugen and Éric Mathieu

The Routledge Handbook of Language and Science

Edited by David R. Gruber and Lynda Walsh

The Routledge Handbook of Language and Emotion

Edited by Sonya E. Pritzker, Janina Fenigsen, and James M. Wilce

The Routledge Handbook of Language Contact

Edited by Evangelia Adamou and Yaron Matras

The Routledge Handbook of Pidgin and Creole Languages

Edited by Umberto Ansaldi and Miriam Meyerhoff

The Routledge Handbook of Cognitive Linguistics

Edited by Xu Wen and John R. Taylor

The Routledge Handbook of Theoretical and Experimental Sign Language Research

Edited by Josep Quer, Roland Pfau, and Annika Herrmann

Further titles in this series can be found online at www.routledge.com/series/RHIL

THE ROUTLEDGE HANDBOOK OF COGNITIVE LINGUISTICS

Edited by Xu Wen and John R. Taylor

First published 2021
by Routledge
52 Vanderbilt Avenue, New York, NY 10017

and by Routledge
2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN

Routledge is an imprint of the Taylor & Francis Group, an informa business

© 2021 Taylor & Francis

The right of Xu Wen and John R. Taylor to be identified as the authors
of the editorial material, and of the authors for their individual chapters,
has been asserted in accordance with sections 77 and 78 of the Copyright,
Designs and Patents Act 1988.

All rights reserved. No part of this book may be reprinted or reproduced or utilised
in any form or by any electronic, mechanical, or other means, now known or
hereafter invented, including photocopying and recording, or in any information
storage or retrieval system, without permission in writing from the publishers.

Trademark notice: Product or corporate names may be trademarks or registered trademarks,
and are used only for identification and explanation without intent to infringe.

Library of Congress Cataloging-in-Publication Data

A catalog record for this title has been requested

ISBN: 978-1-138-49071-0 (hbk)

ISBN: 978-0-367-64159-7 (pbk)

ISBN: 978-1-351-03470-8 (ebk)

Typeset in Times New Roman
by Newgen Publishing UK

CONTENTS

<i>List of Figures</i>	<i>ix</i>
<i>List of Tables</i>	<i>xii</i>
<i>List of Contributors</i>	<i>xiii</i>
<i>Acknowledgements</i>	<i>xx</i>
 Introduction: Cognitive Linguistics: Retrospect and Prospect <i>Xu Wen and John R. Taylor</i>	 1
 PART I Basic Theories and Hypotheses	 17
1 Cognitive Semantics <i>Dirk Geeraerts</i>	19
2 Cognitive Grammar <i>Cristiano Broccias</i>	30
3 Construction Grammar and Frame Semantics <i>Hans C. Boas</i>	43
4 Multimodal Construction Grammar: From Multimodal Constructs to Multimodal Constructions <i>Thomas Hoffmann</i>	78
5 Natural Semantic Metalanguage <i>Cliff Goddard</i>	93
6 Word Grammar <i>Richard Hudson</i>	111

7	The Creativity of Negation: On Default Metaphorical, Sarcastic, and Metaphorically Sarcastic Constructions <i>Rachel Giora</i>	127
PART II		
	Central Topics in Cognitive Linguistics	143
8	Embodiment <i>Xu Wen and Canzhong Jiang</i>	145
9	Image Schemas <i>Dennis Tay</i>	161
10	Categorization <i>Xu Wen and Zhengling Fu</i>	173
11	Standard and Extended Conceptual Metaphor Theory <i>Zoltán Kövecses</i>	191
12	Conceptual Metonymy Theory Revisited: Some Definitional and Taxonomic Issues <i>Francisco José Ruiz de Mendoza Ibáñez</i>	204
13	Force Dynamics <i>Walter De Mulder</i>	228
14	Construal <i>Zeki Hamawand</i>	242
15	Concepts and Conceptualization <i>Canzhong Jiang and Kun Yang</i>	255
16	Iconicity <i>Günter Radden</i>	268
17	Motivation <i>Klaus-Uwe Panther</i>	297
18	Grammaticalization, Lexicalization, and Constructionalization <i>Renata Enghels and Mar Garachana Camarero</i>	314
19	Intersubjectivity and Intersubjectification <i>Lieselotte Brems</i>	333

20	Grounding <i>Frank Brisard</i>	344
21	Humor and Cognitive Linguistics <i>Salvatore Attardo</i>	359
22	Linguistic Synaesthesia <i>Francesca Strik Lievers, Chu-Ren Huang, and Jiajuan Xiong</i>	372
PART III		
	Interface between Cognitive Linguistics and Other Fields or Disciplines	385
23	Culture in Language and Cognition <i>Chris Sinha</i>	387
24	Cognitive Linguistics and Figurative Language <i>Herbert L. Colston</i>	408
25	Qualifying Conceptualizations <i>Jan Nuyts</i>	421
26	Cognitive Pragmatics <i>Marco Mazzone</i>	433
27	Cognitive Poetics and the Problem of Metaphor <i>Jeroen Vandaele</i>	450
28	Cognitive Linguistics and Discourse Studies <i>Ulrike Schröder</i>	484
29	Signed Languages and Cognitive Linguistics <i>Sherman Wilcox and Rocío Martínez</i>	500
30	Cognitive Linguistics and Gesture <i>Julius Hassemer and Vito Evola</i>	512
31	Cognitive Linguistics and Translation Studies <i>Kairong Xiao</i>	526
32	Cognitive Linguistics and Language Pedagogy <i>Dilin Liu and Tzung-Hung Tsai</i>	543
33	Cognitive Linguistics and Second Language Acquisition <i>Han Luo</i>	556

34	Cognitive Linguistics and Digital Lexicography <i>Esra 'M. Abdelzaher</i>	568
35	Cognitive Linguistics and Phytonymic Lexicon <i>Nataliya Panasenko</i>	585
36	Cognitive Linguistics and Proverbs <i>Sadia Belkhir</i>	599
PART IV		
	New Directions in Cognitive Linguistics	613
37	Cognitive Neuroscience of Language <i>Rutvik H. Desai and Nicholas Riccardi</i>	615
38	Cognitive Linguistics and Language Evolution <i>Gábor Györi</i>	643
39	Diachronic Construction Grammar <i>Dirk Noël and Timothy Coleman</i>	662
40	Multimodality <i>Charles Forceville</i>	676
41	Foundational Issues in Biolinguistics <i>Kleanthes K. Grohmann and Maria Kambanaros</i>	688
42	Thinking on Behalf of the World: Radical Embodied Ecolinguistics <i>Sune Vork Steffensen and Stephen J. Cowley</i>	723
43	Cognitive Linguistics and Linguistic Typology <i>Yuzhi Shi</i>	737
	<i>Index</i>	753

15

CONCEPTS AND CONCEPTUALIZATION

Canzhong Jiang and Kun Yang

1. Introduction

Cognitive Linguistics benefited from neighboring disciplines such as cognitive sciences, psychology, and philosophy at the very beginning of the cognitive linguistic enterprise in the late 1970s and the early 1980s by availing itself of many terminologies from these disciplines. Of those borrowed terminologies, concept and conceptualization are most frequently invoked by cognitive linguists. They are inevitable theoretical constructs in Cognitive Linguistics, thus still being extensively used nowadays in cognitive linguistic studies. In addition to these two terminologies, such relevant notions as conceptual structure, conceptual system, metaphorical conceptualization, metonymic conceptualization, linguistic conceptualization, and cultural conceptualization are also readily at cognitive linguists' disposal. These terminologies more often than not are utilized tacitly amongst cognitive linguists themselves as if they were transparent and self-evident. There is basically no controversy as to "concept", but the term "conceptualization" has been interpreted quite differently by different scholars—even the same scholar's definition may evolve over time (see section 3). Although cognitive linguists have implicitly indicated their stances on relevant issues concerning concept in the description of semantic structure and conceptual structure, and dealt with some related content under the rubric of conceptualization (e.g., Lakoff 1987; Geiger & Rudzka-Ostyn 1993, Nuyts & Pederson 1997; Lakoff & Johnson 1999; Langacker 1999; Sharifian 2011, 2017), a systematic ontological elaboration of these two terminologies *per se* seems to have escaped their attention and this chapter is committed to such a mission.

This chapter is organized as follows. Section 2 presents an explication of cognitive linguistic perspective on concept which is thought to "structure what we perceive, how we get around in the world and how we relate to other people" (Lakoff & Johnson 1980: 3) and probably governs our conceptualization. Section 3 offers an overview of the definitions of conceptualization and attempts to characterize it in terms of six parameters: non-insularity, interactivity, dynamicity, imaginativeness, subjectivity, and embodiedness. Section 4 outlines two critical issues, the psychological issue and the sociological issue, in the investigation of conceptualization and expositis how they are addressed in Cognitive Linguistics. Section 5 concludes this chapter and points out future directions to uncover the mystery of conceptualization.

2. Concepts

Concepts as building blocks of thought and cornerstones of human cognition play a vital role in our mental life. This is perhaps the only relatively uncontroversial argument amongst scholars from a wide range of disciplines such as philosophy, cognitive science, psychology, linguistics, etc. But a considerable number of other issues concerning concept are still the subject of much debate due, at least in part, to divergent theoretical orientations adopted in studies of mind, language, philosophy, psychology, and so on. It is far beyond the scope of this short section to offer a complete overview of relevant studies. Therefore, this chapter will confine itself to the cognitive linguistic stances on concept by focusing on the following issues.

The first issue is about the ontological status of concept. Concepts are of crucial importance to cognitive scientists, philosophers, psychologists, and linguists as well. However, their ontological status is still elusive. According to Margolis and Laurence (2019), three main proposals have been made, that concepts are identified with mental representations, with abilities, and with abstract objects. Cognitive Linguistics, arising in the broad context of the inception of cognitive science and development of cognitive psychology, has primarily borrowed the terminology of concept from these two disciplines in which concepts are primarily taken as mental representations. Therefore, cognitive linguists have not bothered themselves so much with this ontological issue but tend to align themselves with cognitive scientists and cognitive psychologists as is evidenced by the “Cognitive Commitment”.

The second issue concerns the structure of concepts, lexical concepts in particular. Following Margolis and Laurence (2019), all theories regarding the structure of concepts are developments of, or reactions to, the classical theory of concepts. According to the classic theory, a concept is a conceptual symbol or mental image with definitional structure and is structured upon a set of componential features which are atomic symbols or images themselves serving as sufficient and necessary conditions. For example, a symbol or image must satisfy a set of features including HUMAN, ADULT, FEMALE, etc., to be applicable as the concept WOMAN. The classic theory of concepts dates back to antiquity in Plato’s age and it was not confronted with serious challenges until the 1950s and the 1970s when philosophy and psychology both made revolutionary advances (a detailed summary of criticisms on the classic theory can be found in Laurence & Margolis 1999). During this period, a new perspective on the structure of concepts, the prototype theory of concepts, was initiated. According to the prototype theory, concepts are structured in a fashion with central or typical members of a category and less typical or peripheral members. For example, ROBIN and SPARROW are typical members of the concept BIRD whereas OSTRICH and PENGUIN are atypical ones. The most typical member or the central prototype of a concept is theorized either as an abstraction consisting of a set of characteristic features, or as an exemplar represented in the memory. A concept in this sense is taken as a category manifesting typicality effect and all members, whether typical or not, cluster into the same concept based on family resemblance, with the typicality of each member determined by the degree of family resemblance—the features it shares with other members in the same category. Different concepts may impinge on each other and the boundaries between them are blurred. However, the prototype theory of concepts does not go unchallenged when faced with the problem of prototypical primes, the problem of ignorance and error, the missing prototypes problem, and the problem of compositionality (Evans 2019).

Cognitive Linguistics lines up with the prototype theory of concepts but takes a step further to resolve the above-mentioned problems. As is proposed by Lakoff (1987), concepts are not structured by prototypes in the sense of abstractions composed of a set of characteristic features or exemplars in the memory, but instead in terms of Idealized Cognitive Models (ICMs). ICMs are “relatively stable mental representations that represent theories about the world” (Evans 2019: 287). They are abstracted from a wide range of experiences rather than all possible real-world situations, which results in the fact that they “do not necessarily fit the external world ‘correctly’” (Lakoff 1987: 125),

and renders them idealized as theories about the world. A classic example is the concept MOTHER. According to Lakoff (1987: 74–75), the concept MOTHER is itself a cluster ICM structured by a matrix of ICMs including the BIRTH MODEL which defines a mother as the person who gives birth, the GENETIC MODEL which defines a mother as the female who contributes the genetic material, the NURTURANCE MODEL which defines a mother as the female adult who nurtures and raises a child, the MARITAL MODEL which defines a mother as the wife of the father, and the GENEALOGICAL MODEL which defines a mother as closest female ancestor. Different ICMs for the concept MOTHER may be invoked in the actual use of this concept as is exemplified in (1) which gives primacy to the BIRTH MODEL. When one of the ICMs in the matrix is conceived as primary, typicality effects arise. In addition to cluster models, Lakoff (1987) also pointed out that typicality effects can be explained by mismatch between ICMs, metonymy, and radial ICMs. As an illustration, the Pope is a less typical example of the concept BACHELOR because there is a mismatch or conflict between the MARRIAGE ICM and the CATHOLIC CHURCH ICM in which marriage of a member of the clergy is prohibited. When one subcategory of MOTHER, for example the HOUSEWIFE stereotype, stands for the whole, other examples of MOTHER are evaluated and assessed as less typical by reference to this ICM. Furthermore, the cluster model for MOTHER and the metonymic HOUSEWIFE stereotype can be combined to contribute to a composite prototype for MOTHER from which further models, ADOPTIVE MOTHER, FOSTER MOTHER, BIRTH MOTHER, and SURROGATE MOTHER for example, can be derived in the process of combination, and together they form a radial ICM giving rise to typicality effect.

- (1) I was adopted and I don't know who my real mother is.

The third issue pertains to the origin of concepts. Cognitive scientists diverge as to this issue and generally two prevalent orientations are identified, i.e., the innate view and the embodied view, based on which generation cognitive scientists fall into. The first generation cognitive scientists harbor a disembodied view making a principled distinction between concepts and experience, or, more generally, between mind and body, and claim that concepts are basically innate, whereas the second generation cognitive scientists maintain an embodied view arguing for the embodied mind, and hold that concepts arise directly from bodily experience, both perceptual and interceptive experiences including sensorimotor experiences and affective states (Lakoff & Johnson 1999; Evans 2015, 2019).

Cognitive linguists belong to the second generation cognitive scientists and endorse the view that concepts are basically embodied. This thesis of embodied concepts has received empirical support from both behavioral and neurological experiments. As is concluded in Evans (2015, 2019), on the one hand, the human sensorimotor system is automatically activated during conceptual processing, and on the other, the use of language and thereby concepts primes language users for such behaviors as they are engaged in corresponding sensorimotor activities, both of which have been demonstrated by the deployment of a wide range of methodologies including functional neuroimaging, transcranial magnetic stimulation (TMS), electroencephalography (EEG), neurophysiological recordings, kinematic analyses, etc. According to the thesis, the concept CAT is not a disembodied conceptual symbol or image mirroring a cat in the real world comprising a set of sufficient and necessary features, but a mental representation directly grounded in our perceptual, sensory, and affective experiences with a real-world cat. Besides a simple concrete concept like CAT, more complex concepts like image schemas are also directly motivated by embodied experiences. For example, the image schema SOURCE-PATH-GOAL results from our recurring bodily experiences of moving from one place to another along a certain route. But how can abstract concepts like LOVE be embodied? The answer is metaphorical conceptualization. That is, they are embodied in terms of concrete concepts and other rudimental concepts such as image schemas. As an illustration, LOVE is conceptualized through metaphorical mappings from those directly

embodied concepts like a concrete concept ROSE in *My love is like a red, red rose* or an underlying SOURCE-PATH-GOAL schema in *Their relationship hit a dead-end street*.

The fourth issue dwells on the relation between language and concept, or more generally, language and thought, that is, whether our thought and specifically the concepts we possess are structured by the language we speak. This issue is also referred to as linguistic relativity or the “Sapir-Whorf Hypothesis”. There are two versions of linguistic relativity. The strong version, also called linguistic determinism, holds that language determines our thought in the sense that our concepts are conditioned by the structure of language. However, few linguists accept linguistic determinism because it is severely undermined by findings from other disciplines such as ethology, developmental psychology, cognitive psychology, anthropological linguistics, and language acquisition. For instance, pre-linguistic infants are capable of such thought processes as basic arithmetic operations, and other species without human-like language also exhibit likewise the capability of rudimentary thought processes (Evans 2014). Cognitive linguists assume the weak version of linguistic relativity which advocates that language influences our thought. More specifically, language reflects the conceptual system and thinking patterns. Experiments have found that participants are observed through motion trackers leaning backwards when thinking about the past whereas forwards when thinking about the future under the condition that the future is expressed as being ahead while the past as being behind in their language (Miles et al. 2010), and that if their language encodes emotion in terms of vertical spatial axis, the locations of positive events tend to be shifted upward whereas those of negative ones are shifted downward when they are asked to recall where positive and negative incidents occurred on a map (Brunyé et al. 2012), and the result is in accord with the conceptual metaphor “HAPPY IS UP” and “SAD IS DOWN”.

3. Conceptualization: Definitions and Characterization

Cognitive Linguistics prioritizes meaning and has revolutionized semantics by attaching unprecedented importance to human conceptualization. The root of this revolution is attributed to changing views on concepts and the relation between concepts, meaning, and language, as is illustrated in section 2, and a reaction against the traditional philosophical and linguistic perspectives on semantics which equate meaning either with reference or truth condition as in objectivist semantics, or with ideation or image as in the ideational theory of semantics, or with the composition of semantic primitives as in compositional semantics, or with emergent process as in the radical interactive approach to semantics. Cognitive linguists contend that meaning is conceptualization (Langacker 1987; Croft & Cruse 2004; Evens & Green 2006) and this semantic principle has been regarded as one of the basic tenets in the cognitive approach to semantics. However, the term conceptualization adopted by cognitive linguists is elusive and very few if any explicit and revealing definitions have been provided.

Lakoff (1987: 280–281) argued that conceptualization or, in his term, conceptualizing capability consists in the ability to form symbolic structures, the ability of metaphorical projection, and the ability to form complex concepts and general categories. In other words, conceptualization is conceived as cognitive abilities to establish symbolic relations between everyday pre-conceptual experience and basic-level and image-schematic concepts, to map structures in the physical domain onto those in the abstract domain, and to structure complex concepts and general categories upon image schemas. Langacker (1987) was among the first to equate meaning with conceptualization and interpret conceptualization as cognitive processing. Later, he explained that conceptualization in the broadest sense encompasses any facet of mental experience including both novel and fixed concepts; sensory, kinesthetic, and emotive experience; recognition of the immediate context (social, physical, and linguistic), and so on (Langacker 1991: 2); and then subsumed “conceptions that develop and unfold through processing time (rather than being simultaneously manifested)”

under conceptualization (Langacker 2008: 30, 2013: 30). Evans and Green (2006: 162) defined conceptualization as “a dynamic process whereby linguistic units serve as prompts for an array of conceptual operations and the recruitment of background knowledge” and a similar view was found in Evans (2007). Evans (2019: 7) redefined it as “the ways in which we construe or ‘see’ the range of sensations, experiences, reflections and so on, that make up our mental life”, although he was not always consistent in that he sporadically identified conceptualization with simulation. This tendency to parallel conceptualization to construal operations was supported by Croft and Cruse (2004). Complementary to the “procedural interpretation” of conceptualization mentioned above, Sharifian (2011: 3) put forward a “product interpretation”—“products of human cognition collectively as conceptualizations”—and conceptualization thus extends to cover such fundamental cognitive processes as schematization, categorization, metaphors, etc.

Langacker (2008: 31) has made a rather pertinent comment that there are no definite answers to the following questions: What is meant by conceptualization? What is its general nature and specific properties? How to investigate it? And how to describe it? In this chapter we are consonant with the procedural reading of conceptualization and assume that it is a general cognitive processing on the one hand, and on the other a local dynamic processing for linguistic meaning construction. We further identify two levels of conceptualization: primary conceptualization and secondary conceptualization. By primary conceptualization is meant conceptualizations involving schematization, basic-level categorization, construal operations, etc., which are directly embodied thus giving rise to concepts and conceptual structures in the physical domain. In contrast, secondary conceptualization functions on the basis of primary conceptualization involving complex categorization, metaphorical mapping, metonymic mapping, conceptual blending, etc., consequently resulting in more complex concepts and conceptual structures in the abstract domain. With reference to Langacker (2008), it is then proposed that conceptualization can be characterized by, at least, the following six parameters: non-insularity, interactivity, dynamicity, imaginativeness, subjectivity, and embodiedness.

Conceptualization is non-insular, which is explicable from the following two aspects. On the one hand, conceptualization bridges the physical world, the mental world, and the linguistic world. Previously, meaning was thought to be out there in the physical world according to objectivist semantics, that is, the meaning of a linguistic expression is what it refers to (referential theory of meaning), or the condition of its being true (truth-conditional semantics), or the behaviors it triggers (behaviorist theory of meaning) in the physical world. Or meaning is a matter of rule-based composition of semantic primitives within the linguistic world according to compositional semantics. Or meaning exists or is constructed in the mental world as specified in the ideational theory that linguistic meaning is the ideation or image represented by an expression, or in the radical interactive approach that meaning emerges during the process of interaction. However, these approaches to meaning have been impaired by semantic paradoxes and criticized for their biases against some semantic issues and for not being psychologically real, which indicates that these three worlds are not necessarily in isolation. Cognitive Linguistics approaches meaning by attempting to link these three worlds through conceptualization. In line with the cognitive linguistic perspective, the physical world is represented in the mental world and then projected onto the linguistic world through the agent’s conceptualization, and in turn, the linguistic world exerts an influence on the mental world and thus constrains, to some degree, the agent’s conceptualization of the psychical world. More succinctly, conceptualization cannot go without the object being conceptualized in the physical world, (the mental world of) the conceptualizer, and the carrier of conceptualizations in the linguistic world. In this sense, conceptualization is not insular. On the other hand, conceptualization is not a conceptualizer’s simple mental process for the conceptualized localized in a certain faculty, but complicated cognitive processing involving various cognitive faculties occurring in distributed contexts such as bodily experience, sociocultural contexts, social interaction, etc.

Linguistic conceptualization, for instance, not only invokes concepts and conceptual structures relevant to linguistic behaviors, but also the totality of conceptual system underlying all human behaviors. In other words, linguistic conceptualization is not a module isolated from general cognitive processing. In this sense, it is also non-insular. This aspect of non-insularity is coherent with the cognitive linguistic assumption of non-modularity and embodies the “Cognitive Commitment” of Cognitive Linguistics.

Relating to the non-insularity of conceptualization is its interactive nature, by which is meant that conceptualization, although occurring in an individual conceptualizer’s mind, is realized through interactions between conceptualizers, between the conceptualizer and the conceptualized, and between the conceptualizer and language. Interactions between conceptualizers primarily resort to language and are essentially based on successful exchanges of meaning whereas meaning is constructed through negotiation in the process of interaction. Or rather, linguistic conceptualization is built upon interactive negotiations between conceptualizers under specific linguistic, physical, social, and cultural contexts. This is also the underlying motivation for the interactivist view that meaning emerges during the process of interaction. The claim is partly true but it ignores other aspects of interactions, i.e., interactions between the conceptualizer and the conceptualized, and between the conceptualizer and language. Interactions between the conceptualizer and the conceptualized exist because the conceptualized as the basis for conceptualization is not mechanically mirrored in the conceptualizer’s mind but the conceptualizer takes his/her subjective initiative to represent it. This aspect of interactivity has resulted in variations of conceptualization when the same object is conceptualized by different conceptualizers or the same conceptualizer in different cognitive contexts. For example, “banana” is by default conceptualized as a member of the FRUIT category, but variations may arise as to its prototypicality in this category due to the conceptualizers’ different personal experiences. Specifically, it is the prototype for communities where bananas are planted and consumed on a large scale while it may not be for others where this fruit is not local. Such variations are not only observed in primary conceptualization like categorization exemplified above, but also in secondary conceptualization like metaphorical mapping. Cross-cultural metaphorical studies (e.g., Yu 1998; Kövecses 2005, 2015) have demonstrated that source domains vary cross-culturally to a considerable degree in metaphorical conceptualization of the same target domain. These variations are also attributable to difference in interactions between the conceptualizer and the conceptualized. Interactivity of conceptualization with regard to interactions between the conceptualizer and language lies in the fact that the conceptualizer encodes conceptualization in language and conceptualization itself is further influenced by language. On the one hand, conceptualization is encoded in language, or to put it another way it resides in language to the extent that language is considered by cognitive linguists as part of the conceptualizer’s general cognition. Any differences in linguistic expressions will necessarily reveal differences in conceptualization. This has been one of the basic tenets advocated in cognitive approaches to grammar, particularly in Construction Grammar as is manifested by the Principle of No Synonymy (Goldberg 1995). According to this principle, the so-called alternation between (2a) and (2b) in fact conveys trivial differences in conceptualization in that (2b) implies that the truck is entirely affected by the hay compared with (2a). The encoding of conceptualizations with trivial differences through diversified linguistic devices within the same language and cross-linguistically has led to syntactic complexity and typological variations. On the other hand, the conceptualizer’s conceptualization may be influenced by language. Casasanto (2017), for example, pointed out that linguistic metaphors not only reflect but also modify and even create new ways of conceptualizing abstract concepts. This aspect of interactivity is closely tied to linguistic relativity mentioned in section 2.

- (2) a. I loaded the hay onto the truck.
b. I loaded the truck with the hay.

Conceptualization is dynamic and its dynamicity is reflected in the procedural nature of mental experience, temporal nature of cognitive processing, and diachronic development. Conceptualization involves dynamic mental procedures, in particular mental scanning. Example (3) describes a static situation but evokes a mental procedure in which the conceptualizer mentally scans along the stretching of the Great Wall from where the conceptualizer stands to the direction afar. Thus, it encodes a dynamic conceptualization of the situation. This respect of dynamicity contributes to the subtle semantic distinction between (4a) and (4b) which characterizes the same objective situation but activates distinct conceptualizations in terms of the directionality of scanning.

- (3) The Great Wall winds its way along the mountain.
- (4) a. A line of trees extends from the highway to the river.
b. A line of trees extends from the river to the highway.

As a way of cognitive processing, conceptualization unfolds through processing time. Langacker (2008: 79) has made it clear that “every conceptualization requires some span of processing time for its occurrence”, even the simplest one that is usually experienced as instantaneous and beyond our consciousness, and with more elaborate ones their temporal progressions are more likely subject to awareness. This is quite evident in linguistic conceptualization because meaning construction is not achieved instantaneously but by a temporal process of spreading activation. In the case of a very simple word, *menu*, in *move the mouse pointer to the menu*, its conceptualization as a list of options available to a computer user, vis-à-vis a list of dishes available at a restaurant, requires a prior activation of the COMPUTER domain by the phrase *the mouse pointer* which provides mental access to the target. As for the conceptualization of a complex sentence like *We are seeking to find out what local people want, because they must own the work themselves*, our physiological and psychological limitations in vision, memory, and other aspects as well, render impossible a simultaneous activation and accessibility of all facets of the sentence. This process proceeds construction by construction and clause by clause, and a statement-explanation relation is only available when all constructions within each clause and both clauses are active and accessible. The aspect of dynamicity of conceptualization has been one of the fundamental parameters underlying behavioral, psychological, and neurological experiments on language processing.

Dynamicity of conceptualization with regard to mental experience and cognitive processing is mostly synchronic. Conceptualization is dynamic in diachrony too from both ontogenetic and phylogenetic perspectives. In an ontogenetic timeline, such as in the process of children’s language development, conceptualization is not always constant. A case in point is children’s development in categorization. It is observed that children are apt to make categorization mistakes in their early stage of language development, for example, referring to various four-legged animals as ‘dog’ or addressing all men as ‘Daddy’ (Clark 2009; Bloom 2000), but these mis-conceptualizations will be avoided later. In a phylogenetic timeline, given the evolution of human language, conceptualization may evolve accordingly. This is sufficiently demonstrated in dynamic categorization, or the dynamic nature of categories, which is in turn instantiated by lexical semantic change. For example, ‘dog’ contemporarily refers to all breeds of dogs and thus denotes a basic-level category but it once referred only to a specific strong and powerful breed of dog and merely denoted a subordinate category. That is, the meaning of ‘dog’ has been generalized along with the re-conceptualization of the category DOG.

Conceptualization is not a straightforward reflection of the world, or a direct or autonomous derivation of any objective situation, but relies extensively on imaginative abilities instead. In this sense, it is imaginative. Take the conceptualization of imagined entities in the fictive world for example. “Dragon” as a totem of Chinese culture is not a real animal in the physical world and it thus cannot be conceptualized directly through bodily experiences. Its conceptualization is established by imaginative devices such as mental space construction and conceptual blending. Specifically,

mental spaces of DEER, CAMEL, RABBIT, SNAKE, FISH, EAGLE, TIGER, CATTLE derivable from immediate bodily experiences are constructed first and then conceptual elements including ANTLER in DEER, HEAD in CAMEL, EYE in RABBIT, NECK in SNAKE, SCALE in FISH, TALON in EAGLE, and EAR in CATTLE respectively are projected and blended in a blended space. This blended mental representation with emergent structures differing from any of those in input spaces is the Chinese conceptualization of imagined animal dragon. In addition, conceptualization of abstract entities also resorts quite frequently to such imaginative devices as conceptual metaphor and mental space construction, and these imaginative phenomena are extremely pervasive as is illustrated by conceptualizations of abstract entities such as LIFE, LOVE, EMOTION, IDEA (see Lakoff & Johnson 1980; Lakoff & Turner 1989; Kövecses 2005; Wen & Yang 2016, etc.). Even the conceptualization of basic concepts like spatial relations is not immune to imagination. Take the spatial preposition *in* as an illustration. The spatial relation encoded by this preposition is conceptualized through the complex act of imaginative perception in which the conceptualizer conjures up a three-dimensional container with an interior and exterior, and locates a figure relative to the background, i.e., the container itself. As is echoed by Lakoff and Johnson (1999: 31), these kinds of complex acts of imaginative perception are performed “during every moment of our waking lives”.

“The mind is inherently embodied” (Lakoff & Johnson 1999: 3), so is conceptualization operating within the mind. Lakoff and Johnson (1999) have offered sufficient evidence to the argument that color concepts, basic-level concepts, spatial relations concepts, body action concepts, general structure of actions and events (or aspect), etc., arise and are understood directly through perceptual and motor capacities. In other words, conceptualization of these concepts involving basic-level categorization, schematization, construal operations, and other cognitive processing, what we call “primary conceptualization”, is undoubtedly embodied. Conceptualization of abstract, imagined, or complex concepts relies more on imagination which may seem to intuitively collide with the embodied thesis. However, imagination is not trumped up from nothing. Rather, it is essentially motivated by bodily experiences. Conceptual metaphorical research has verified that abstract concepts are mostly conceptualized via metaphorical mapping from directly embodied concepts. Even the conceptualization of imagined concepts like DRAGON via conceptual blending is based on mental spaces that are constructed on concepts directly derived from perceptual experiences with real-world animals like deer, camel, rabbit, snake, fish, eagle, tiger, and cattle. Thus, conceptualization involving these kinds of imaginative capabilities including metaphorical mapping, conceptual blending and complex categorization, and metonymic mapping as well, is embodied because it is rooted in primary conceptualization. This is also the reason why it is identified as secondary conceptualization.

The embodied nature of conceptualization is the underlying motivation for linguistic universals and variations. Human beings are born with similar physiological structures, equipped with similar neural structures, endowed with the same perceptual and motor capacities, and confronted with a similar physical world. These common properties determine that we behave, perceive, and conceive the world in quite a similar way, which will necessarily give rise to similar conceptualizations, and ensuing similar conceptual structures or semantic structures. In expounding the universalities of emotional metaphors, Kövecses (2010) found that the conceptualization of ANGER in terms of the PRESSURIZED CONTAINER metaphor (e.g., *You make my blood **boil***) is universal due to shared physiological processes including body heat, internal pressure, and redness in the neck and face area, and he drew the conclusion that universals of emotional metaphors are attributable to universality of bodily experience. In spite of the universality of embodiment, many other factors including physical and sociocultural contexts may bring about divergence in embodiment, thus breeding variations in conceptualization and consequently conceptual structures or semantic structures. A very clear example is the variations of metaphorical conceptualization of nature between Dutch and Afrikaans (a derivative language of Dutch in Southern Africa). Dirven (1994) compared common metaphors

in Dutch and Afrikaans, and found that Afrikaans conceptualization of nature is pervasively based on metaphors of various kinds of animals whereas such nature metaphors are almost completely unavailable to the Dutch although these two languages are genetically linked. This is caused by differences in embodiment. In particular, Afrikaans people enjoy many more opportunities to gain experience with animals than Dutch people do because of their differences in natural and physical environment.

Conceptualization always conveys the conceptualizer's subjectivity and is therefore characterized by subjectivity. The subjectivity of conceptualization can be described in terms of the asymmetrical relation between the conceptualizer and the conceptualized, and the conceptualizer's manipulation of such relation. On the one hand, there exists an asymmetrical relation between the conceptualizer and the conceptualized whereby the conceptualizer is considered as the default reference point. Consequently, any conceptualization will unavoidably presuppose the conceptualizer's perspective with his/her individual-specific affective experience, subjective belief state, or attitude. In this sense, the same concept, e.g., FAMILY, may be conceptualized with difference marked by the conceptualizer's positive or negative affection. On the other hand, the conceptualizer has complete control over the relation between the conceptualizer and the conceptualized especially in terms of vantage point arrangement and mental scanning imposed on a situation. The same objective situation where a ball A is in a horizontal relation to a ball B can be conceptualized as either A is in front of B when the vantage point is arranged such that A intervenes in the line of sight (assuming that A, B, and vantage point are in alignment), or B is in front of A when the vantage point is such that B intervenes in the line of sight. Similarly, the same activity can either be conceptualized as "she entered the cave" when sequential scanning is adopted or "her entrance to the cave" when summary scanning is adopted.

Although a complete characterization of conceptualization still seems to be inaccessible, we have attempted to provide a set of parameters, including non-insularity, interactivity, dynamicity, imaginativeness, subjectivity, and embodiedness, for an elaboration of what conceptualization would be. This set of parameters may be non-exhaustive but it does shed much light on the nature and properties of conceptualization.

4. Critical Issues concerning Conceptualization

Cognitive Linguistics is primarily concerned with meaning and the tenet of "Meaning is conceptualization" serves as a working hypothesis for Cognitive Linguistics that is manifested in almost all areas of cognitive linguistic studies including categorization, construal, conceptual metaphor and metonymy, mental space, conceptual blending, conceptual structures, Cognitive Grammar, and Construction Grammar, etc. Although not all of the areas of Cognitive Linguistics listed above explicitly claim to be engaged with conceptualization, they have been essentially dealing with two key issues concerning conceptualization, i.e., the psychological issue and the sociological issue.

The psychological issue concerning conceptualization is about what is happening in the mind and brain during the cognitive processing of conceptualization. It focuses on mental experience. Langacker (2008: 31) proposed that this issue can be probed from either a phenomenological or a processing standpoint. The phenomenological standpoint attempts to characterize the mental experience *per se*. Cognitive semantics and a great many other researches in Cognitive Linguistics have adopted this standpoint and been devoted to the characterization of mental experience via linguistic evidence, e.g., what the lexicon reveals about categorization, linguistic linearization about conceptual structuring, linguistic metaphors or metonymies about conceptual mappings, grammatical structure about conceptual structure, linguistic paraphrases and alternations about construal. This linguistic evidence makes the phenomenology of conceptualization more readily accessible and amenable to investigation (Langacker 2008).

The processing standpoint is based on the phenomenology of conceptualization and tries to fathom the processing activity constituting the mental experience. The processing activity is observable by recourse to various methodological means including psycholinguistic experiment, clinical research, neurological imaging, and computer modeling (Langacker 2008). Cognitive Linguistics has benefited quite a lot from this standpoint. Its very advent has been possible due to psychological findings of processing activities in categorization and gestalt through behavioral experiments. Recent years have witnessed a quantitative turn in Cognitive Linguistics (Janda 2013, 2017) and more advanced experimental technologies such as eye-tracking, ERPs, and fMRI in psychology have been introduced into cognitive linguistic research. Currently, most cognitive linguistic research on processing activities of conceptualization has been confined to the processing of figurative language, especially metaphors. For example, Coulson and Patten (2002) discussed the processing of metaphors through ERPs technology and found that the understanding of metaphors requires more cognitive effort than literal language does, but both metaphors and non-metaphorical language are understood through the same cognitive mechanism. They further demonstrated that metaphorical conceptualization involves conceptual integration. Citron, Güsten, Michaelis, and Goldberg (2016) were also attracted by the processing of metaphor but their experiment was conducted through the technology of fMRI, and they were interested in how metaphor processing is related to other processing activities. It is observed in their experiment that brain regions relating to processing of emotions are simultaneously activated during the processing of metaphor, which indicates a significant correlation between metaphoricity and emotion. Their experiment further validates that metaphorical conceptualization and linguistic conceptualization in general are inseparable from other cognitive processing, which in turn offers solid proof for the “Cognitive Commitment” in Cognitive Linguistics. Cognitive linguistic studies on conceptualization from the processing standpoint are conducive not only to unveiling the myth of processing activities constituting the mental experience, but also provide converging evidence for theoretical hypotheses and assumptions shared by practitioners of Cognitive Linguistics which will definitely promote the development of the cognitive linguistic enterprise.

The sociological issue concerning conceptualization is about how conceptualization is distributed among the society. It focuses on the sociocultural experience. This issue has been extensively addressed by research on sociocultural universality and variations. Although cognitive linguists were already aware of cross-cultural universality and variations of conceptualization at the very beginning when Cognitive Linguistics grew out of research on conceptualization of color concepts in different societies which forms the basis for the prototype theory of categorization, the sociological issue of conceptualization did not receive due attention until the social turn of Cognitive Linguistics (Harder 2010) and the emergence of Cognitive Sociolinguistics (Kristiansen & Dirven 2008; Geeraerts et al. 2010; Pütz et al. 2014; Frank et al. 2008). Cognitive linguists have invested most of their energy and passion in exploring universality and variations of metaphors and metonymies (e.g., Kövecses 2005, 2015; Sharifian 2011, 2017; Sharifian et al. 2008; Sharifian & Palmer 2007; Zhang 2016) when tackling this issue. Gijssels and Casasanto (2017) examined the conceptualization of TIME by focusing on the metaphorical mapping between TIME and SPACE through cross-linguistic data collected from a series of experiments, and found that cultural practices and artifacts and cultural attitudes can influence the conceptualization of TIME in terms of SPACE. Kövecses (2005) carried out more systematic studies on metaphors across cultures and attributed universality of metaphorical conceptualization to universal bodily experience and its variations to differences in any of the following components that compose metaphors: source domain, target domain, experiential basis, neural structures corresponding to the source and the target in the brain, relationships between the source and the target, metaphorical linguistic expressions, mappings, entailments, blends, non-linguistic realizations, and cultural models. He explained further that variations in metaphorical conceptualization are deeply rooted in factors

including differential experience and differential cognitive preferences or styles. Zhang (2016) did a quantitative study on metonymy for PERSON from a cross-linguistic perspective, and analyzed metonymic variations between Chinese and English. She identified three main kinds of metonymic variations, namely, variation in patterns for PERSON in general, variation in patterns for PERSON of specific kinds, and variation in sources of a pattern, and argued that these variations are caused by culture elements including paragon, clothing, and location notions, etc. A glimpse of research on universality and variations of metaphorical and metonymic conceptualization has cast important light upon the sociological issue concerning conceptualization.

In summary, we have outlined two critical issues concerning conceptualization in this section: the psychological issue, and the sociological issue, with the former approaching conceptualization from within, and the latter from outside, and we have briefly introduced how Cognitive Linguistics has contributed to the elucidation of these two issues. It is worth noting that by focusing on the relationship between language and cognition, Cognitive Linguistics provides a most accessible way for the investigation of conceptualization, and in turn research on conceptualization from other fields and within Cognitive Linguistics as well has benefited and will surely benefit the cognitive linguistic enterprise a lot.

5. Future Directions

Cognitive Linguistics has borrowed many terms from cognitive science, psychology, and other neighboring disciplines, but many of these terms are left unelaborated and thus give rise to considerable terminological chaos and misunderstandings, such as the terms “concept” and “conceptualization”. This chapter attempts to offer a relatively systematic elaboration of these two terms. It first explained the cognitive linguistic stance on four critical issues concerning concept, i.e., its ontological status, structure, origins, and relation to language, arguing that concepts in Cognitive Linguistics are mental representations structured upon prototypes with prototypical effects arising basically from embodiment and influenced by language. Six parameters of conceptualization are put forward in this chapter including non-insularity, interactivity, dynamicity, imaginativeness, subjectivity, and embodiedness, and it then concludes that conceptualization can be investigated from both within and outside with regard to two critical issues, i.e., the psychological issue and the sociological issue, and it briefly reviewed how cognitive linguistic research has handled these two issues.

However, it is foreseeable that Cognitive Linguistics has much more to offer to the investigation of conceptualization. In the future, more efforts are expected to be made in at least the following two directions in the context of the quantitative turn and social turn in Cognitive Linguistics. The first direction is the disclosure of processing activities constituting the mental experience of conceptualization. As most attention of cognitive linguists has been directed at the phenomenology of conceptualization, much has been learned about mental experience. But the processing activities constituting the mental experience still remain mysterious, even if some research has been done on the processing of figurative languages. The area is expected to prosper in the future with the development of methodological technologies and their introduction into Cognitive Linguistics. The second direction is to investigate the sociological distribution of conceptualization in addition to its universality and variations. Although much work has been done in Cognitive Linguistics, especially in terms of universality and variations of metaphorical and metonymic conceptualization, we have merely caught a first glimpse of how conceptualization is distributed among society and there are still large areas untrod. Wen (2019) initiated another subfield of Cognitive Linguistics, namely, Sociocognitive Linguistics, as supplementary to Cognitive Sociolinguistics proposed by Geeraerts (Marín-Arrese 2007), to which most of the current cognitive linguistic research on sociological distribution of conceptualization belongs, and stated that Sociocognitive Linguistics seeks to uncover the particular relation between language and social cognition. What role social cognition assumes

and how it is related to social cognition from a sociocognitive linguistic perspective remain to be answered.

Further Reading

- Margolis & Laurence (2019). Offers a systematic literature review of philosophical perspectives on the following five issues concerning concept: (i) the ontology of concepts, (ii) the structure of concepts, (iii) empiricism and nativism about concepts, (iv) concepts and natural language, and (v) concepts and conceptual analysis.
- Langacker (1999). Focuses on the relation between grammar and meaning, i.e., conceptualization, and points out the dynamicity of conceptualization in the last chapter.

Related Topics

embodiment; image schemas; categorization; standard and extended conceptual metaphor theory; conceptual metonymy theory revisited: some definitional and taxonomic issues; construal; qualifying conceptualizations

References

- Bloom, P. (2000). *How children learn the meanings of words*. Cambridge, MA: MIT Press.
- Brunyé, T. T., Gardony, A., Mahoney, C. R., & Taylor, H. A. (2012). Body-specific representations of spatial location. *Cognition*, 23(2), 229–239.
- Citron, F. M. M., Güsten, J., Michaelis, N., & Goldberg, A. E. (2016). Conventional metaphors in longer passages evoke an affective fMRI response. *NeuroImage*, 139, 218–230.
- Clark, E. V. (2009). *First language acquisition* (2nd ed.). Cambridge: Cambridge University Press.
- Coulson, S., & Patten, V. (2002). Conceptual integration and metaphor: An event-related potential study. *Memory and Cognition*, 30(6), 958–968.
- Croft, W., & Cruse, D. A. (2004). *Cognitive Linguistics*. Cambridge: Cambridge University Press.
- Dirven, R. (1994). *Metaphor and nation: Metaphors Afrikaners live by*. Frankfurt am Main: Peter Lang.
- Evans, V. (2007). *A glossary of Cognitive Linguistics*. Edinburgh: Edinburgh University Press.
- Evans, V. (2014). *The language myth: Why language is not an instinct*. Cambridge: Cambridge University Press.
- Evans, V. (2015). *The crucible of language: How language and mind create meaning*. Cambridge: Cambridge University Press.
- Evans, V. (2019). *Cognitive Linguistics: A complete guide*. Edinburgh: Edinburgh University Press.
- Evans, V., & Green, M. (2006). *Cognitive Linguistics: An introduction*. Edinburgh: Edinburgh University Press.
- Frank, R. M., Dirven, R., Ziemke, T., & Bernárdez, E. (2008). *Body, language and mind. Vol. II: Sociocultural situatedness*. Berlin/New York: Mouton de Gruyter.
- Geeraerts, D., Kristiansen, G., & Peirsman, Y. (2010). *Advances in Cognitive Sociolinguistics*. Berlin: Mouton de Gruyter.
- Geiger, R. A., & Rudzka-Ostyn, B. (1993). *Conceptualizations and mental processing in language*. Berlin: Mouton de Gruyter.
- Gijssels, T., & Casasanto, D. (2017). Conceptualizing time in terms of space: Experimental evidence. In B. Dancygier (Ed.), *The Cambridge handbook of Cognitive Linguistics* (pp. 651–668). Cambridge: Cambridge University Press.
- Goldberg, A. E. (1995). *Constructions: A construction grammar approach to argument structure*. Chicago/London: University of Chicago Press.
- Harder, P. (2010). *Meaning in mind and society: A functional contribution to the social turn in Cognitive Linguistics*. Berlin: Mouton de Gruyter.
- Janda, L. A. (2013). *Cognitive Linguistics: The quantitative turn*. Berlin: De Gruyter Mouton.
- Janda, L. A. (2017). The quantitative turn. In B. Dancygier (Ed.), *The Cambridge handbook of Cognitive Linguistics* (pp. 496–514). Cambridge: Cambridge University Press.
- Kövecses, Z. (2005). *Metaphor in culture: Universality and variation*. Cambridge: Cambridge University Press.
- Kövecses, Z. (2010). *Metaphor: A practical guide* (2nd ed.). Oxford: Oxford University Press.
- Kövecses, Z. (2015). *Where metaphors come from: Reconsidering context in metaphor*. Oxford: Oxford University Press.
- Kristiansen, G., & Dirven, D. (2008). *Cognitive Sociolinguistics: Language variation, cultural models, social systems*. Berlin/New York: Mouton de Gruyter.

- Lakoff, G. (1987). *Women, fire, and dangerous things: What categories reveal about the mind*. Chicago: University of Chicago Press.
- Lakoff, G., & Johnson, M. (1980). *Metaphors we live by*. Chicago/London: University of Chicago Press.
- Lakoff, G., & Johnson, M. (1999). *Philosophy in the flesh: The embodied mind and its challenge to Western thought*. New York: Basic Books.
- Lakoff, G., & Turner, M. (1989). *More than cool reason*. Chicago/London: University of Chicago Press.
- Langacker, R. W. (1987). *Foundations of cognitive grammar. Vol. I: Theoretical prerequisites*. Berlin: Mouton de Gruyter.
- Langacker, R. W. (1991). *Concept, image, and symbol: The cognitive basis of grammar*. Berlin: Mouton de Gruyter.
- Langacker, R. W. (1999). *Grammar and conceptualization*. Berlin: Mouton de Gruyter.
- Langacker, R. W. (2008). *Cognitive Grammar: A basic introduction*. Oxford: Oxford University Press.
- Langacker, R. W. (2013). *Essentials of Cognitive Grammar*. Oxford: Oxford University Press.
- Laurence, S., & Margolis, E. (1999). *Concepts: Core readings*. Cambridge, MA: MIT Press.
- Margolis, E., & Laurence, S. (2019). Concepts. In E. N. Zalta (Ed.), *The Stanford encyclopedia of philosophy* (Summer 2019 ed.). <https://plato.stanford.edu/archives/sum2019/entries/concepts/>.
- Marín-Arrese, J. I. (2007). Dirk Geeraerts: Cognitive sociolinguistics and the sociology of Cognitive Linguistics. *Annual Review of Cognitive Linguistics*, 5(1), 289–305.
- Miles, L. K., Nind, L. K., & Macrae, C. N. (2010). Moving through time. *Psychological Science*, 21(2), 222–223.
- Nuyts, J., & Pederson, E. (1997). *Language and conceptualization*. Cambridge: Cambridge University Press.
- Pütz, M., Robinson, J. A., & Reif, M. (2014). *Cognitive sociolinguistics: Social and cultural variation in cognition and language use*. Amsterdam/Philadelphia: John Benjamins.
- Sharifian, F. (2011). *Cultural conceptualisations and language*. Amsterdam: John Benjamins.
- Sharifian, F. (2017). *Advances in cultural linguistics*. Singapore: Springer.
- Sharifian, F., Dirven, R., Yu, N., & Niemeier, S. 2008. *Culture, body, and language: Conceptualizations of internal body organs across cultures and languages*. Berlin/New York: Mouton de Gruyter.
- Sharifian, F., & Palmer, G. B. (2007). *Applied cultural linguistics: Implications for second language learning and intercultural communication*. Amsterdam: John Benjamins.
- Wen, X. (2019). Sociocognitive Linguistics based on social cognition. *Modern Foreign Languages*, 3, 239–305.
- Wen, X., & Yang, K. (2016). Systematicity and complexity of IDEA metaphors in Chinese. *Metaphor and Symbol*, 31(4), 230–249.
- Yu, N. (1998). *The contemporary theory of metaphor: A perspective from Chinese*. Amsterdam: John Benjamins.
- Zhang, W. (2016). *Variation in metonymy*. Berlin: Mouton de Gruyter.