

Construction Grammar

Introduction

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(Historical) Background and Overview

Over the last four decades, Construction Grammar has developed into a rich, robust conceptual framework for analyzing language in its entirety, based on the crucial assumption that language by its nature is a complex and ever-adapting and adaptable system designed for communication. The starting point was Charles J. Fillmore's vision for an approach that would allow us to analyze grammatical organization of (any) language in such a way that we could answer the broad question of what it means to *know* one's language and to use its grammatical resources with native-like fluency by individual speakers within a given language community. Put differently, this framing aims for generalizations that will naturally include systematic observations about meaning and conditions of language use as integral parts of grammatical descriptions.

The novelty and fundamental attractiveness of this vision, with its ambitious aim at grounding linguistic structure in communicative practice and, ultimately, gaining insights into the nature of human cognitive capacities, clearly struck a chord and quickly inspired new research questions motivated by a wide range of perspectives. As a result, Construction Grammar is now vigorously pursued in numerous variants, bringing along and developing diverse points of emphasis, new methodological refinements, ever-widening areas of application, as well as an expanding reach to other disciplines inside and outside of linguistics. The outcome is a coherent analytic and methodological approach, with wide acceptance within the broader domain of cognitively and functionally oriented linguistic scholarship, and the contributions in this handbook attest to all these points. They show that Construction Grammar offers a very complex and analytically sophisticated tool for conceptualizing, describing, and motivating linguistic

This work was supported in part by the Cooperatio Program funded by Charles University, research area Linguistics, implemented at the Faculty of Arts of Charles University.

structure well beyond the original focus on synchronic description of (mostly English) syntax. In this respect, it bears noting that many of the contributions demonstrate also the framework's viability for addressing issues found in a diverse range of genetically unrelated and geographically widely distributed languages.

All in all, Construction Grammar is presented as a powerful framework that keeps in focus the cognitive and functional grounding of linguistic structure and provides tools for capturing the richness of detail in speakers' linguistic and interactional behavior, while also allowing for the articulation of generalization at various levels of abstraction.

The contributions in this volume are all consistent with the basic conceptual and architectural foundations of Construction Grammar, which derive from several basic assumptions:

- (1) Speakers' grammatical knowledge, as observed in actual language use, is gathered in complex, multi-dimensional units, 'constructions', in which form (whether syntactic, morphological, phonic, gestural, or a combination of any of these) is indivisible from its meaning or usage function.
- (2) As cognitive objects, constructions represent – more or less explicitly articulated – generalizations and hypotheses about speakers' experientially based linguistic knowledge. The generalizations are to be taken as prototypes ('blueprints') which allow individual (clusters of) features to stretch out of the prototype under various contextual and/or expressive pressures, thereby also allowing for grammatical change.
- (3) Speakers' constructional knowledge is organized in intricate multidimensional networks of constructions ('constructicons') structured through various kinds of property-sharing relations.
- (4) Constructions have internal structure of varying degrees of complexity that reflects the interplay between the 'external/constructional' (sometimes also referred to as 'holistic') characteristics of a given pattern and the smaller units (lexical, syntactic, morphological, phonic, gestural) that constitute the pattern's internal make-up.
- (5) Lexicon and grammar form a continuum. This allows for a unified conceptual and analytic apparatus for analyzing patterns at various degrees of abstractness, from fully schematic to fully substantive ('lexical' in traditional terminology) constructions at the extreme ends.

In a very simplified schematization, we can visualize point (4) as shown in Figure 0.1, using the hallmark boxes-within-boxes notation. The inside boxes represent the internal composition of a construction, that is, its constituents, their mutual relations, and whatever idiosyncratic restrictions might be associated with any or all of them. The outer box specifies the conditions – whether formal, semantic, functional, or a combination – that identify everything that "is relevant to the larger syntactic contexts in which it [= the construction] is welcome" (Fillmore 1988: 36). The two-way arrow in the figure is included redundantly, only in order to explicitly mark the fact that the external and

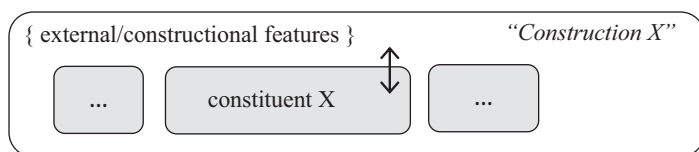


Figure 0.1 Simplified schematization of a constructional representation

internal layers are always in a particular mutual relationship, which need not always be in full harmony.

We are fully aware that the breadth of interests and differences in focus may make it somewhat difficult for a novice to readily identify the fundamental unifying concepts, to contrast them with non-constructional approaches, to grasp the analytic potential of Construction Grammar for all areas of language research, and of course to spot and understand various conceptual controversies present in the existing work. In spite of all the underlying compatibility and internal coherence of the framework, there are various conceptual and methodological issues that are – and no doubt will continue to be – debated within the community, and some of the present contributions explicitly relate to such concerns as well. Prominent among these appear to be minimally the following.

Meaning and (Non-)compositionality

Fillmore's (1988: 36) formulation makes it clear that constructions are by definition non-compositional: A construction is "any syntactic pattern which is assigned one or more conventional functions in a language, together with whatever is conventionalized about its contribution to *the meaning or the use* [emphasis added] of structures containing it." Put differently, a construction as a distinct grammatical entity is "dedicated to a particular function in the creation of meaningful utterances in the language" (Fillmore 1989: 18). It follows that constructions are not necessarily expected to have a meaning in the sense of specific semantic content (although some do), but their conventional character includes also abstract grammatical meanings, functions, or relations, as well as all sorts of non-propositional meanings related to pragmatic and discourse functions. It is precisely in this spirit that we interpret Fillmore's intentions and phrasing in his treatment of the English Subject-Auxiliary-Inversion construction (Fillmore 1999). His analysis cannot really count as evidence (occasionally suggested as such in the constructional literature and certainly surfacing in informal discussions among some construction grammarians) that there might be constructions without 'meaning'; the inversion construction still serves conventionally a very specific function, namely, to encode non-copular polar questions, thus fitting quite smoothly the definition in Fillmore (1989: 18) quoted above. It remains, then, to be argued convincingly that there truly are 'meaningless' constructions.

Grammar vs. Knowledge

It is clear that speakers in their verbal interactions rely on a whole array of clues that motivate linguistic patterning, such as frequency, understanding of cultural norms, contextual settings, role of gestures (facial, bodily, eye movement), etc., but it is less clear to what extent we can or wish to argue that any or all of such knowledge is indeed part of grammar. In other words, Construction Grammar is faced with a fundamental theoretical question concerning the *scope* of grammar vis-à-vis speakers' knowledge, and this has also practical consequences for articulating (and formalizing) constructional representations. The skeletal template (Figure 0.1) that goes back to the constructional beginnings can be and has been adjusted in various ways depending on different researchers' aims, levels of descriptive detail, even perhaps type of construction; there is no a priori prescribed one and only way of formulating specific generalizations. This gives Construction Grammar its welcome flexibility, but at the same time it leaves it wholly open what and on what basis should or should not be properly included in 'grammatical' descriptions; some opinions on the scope of grammar vs. knowledge can be encountered especially in Chapters 15 and 20 (explicitly) and 11 (more implicitly).

Status of Interactional Context

One of the unresolved questions that is partially related to the scope-of-grammar issue is the way in which grammatical constructions can or should integrate information about what speakers know about the socio-cultural and interactional contexts for felicitous usage, and what kinds of interactionally relevant categories can or should be entertained as valid parts of constructional generalizations (Chapters 19, 20, 24). For example, should we conceive of grammatical constructions as 'embedded' in broader interactional schemas (whether conceptualized as Fillmore's 'interactional frames' or as other sociopragmatically defined entities)? This would amount to placing the schema in Figure 0.1 inside a larger schema that would contain the speakers' understanding of the sociocultural context for the construction's felicitous use. Or, conversely, should we think of the sociocultural knowledge only pertaining to individual grammatical constructions, that is, as residing inside the outer box of Figure 0.1? And similar questions are now being introduced concerning the phonic nature (Chapters 13 and 14) and gestural aspects (Chapter 15) of spoken interaction: Now that we have the data sources and tools to systematically examine recurrent multimodal features of spontaneously produced interaction, the question of integrating this layer of speakers' knowledge and communicative practice into the constructional enterprise becomes a new challenge, never before truly part of Construction Grammar.

Individual vs. Community-Level Grammar

Finally, in this limited sample of open questions, it is important to mention another salient topic that has only recently become very visible in constructional research (see for example Dąbrowska 2015), namely, moving from the traditional focus on an ‘idealized’ individual speaker toward accounting for the *shared* nature of linguistic organization (Chapters 19 and 20; also Chapter 21 from a computational perspective in the context of language acquisition and social media). This shift, which is naturally in keeping with the usage-based character of Construction Grammar, necessarily brings forward the social and communicative grounding of language and can only strengthen the framework’s usage-based aspirations, while highlighting the need for new, more refined methodologies.

Construction Grammar in the Present Volume

This handbook can be viewed as complementary to the *Oxford Handbook of Construction Grammar* (Hoffmann & Trousdale 2013): While it offers the state of the art in some of the themes that are covered in the Oxford handbook (primarily as concerns specific methodological advances and the development of the different branches of Construction Grammar), the main focus of the present volume is on themes and topics that were completely left out of the Oxford handbook (see below). Also, a number of new developments have taken place within the last decade or so and our goal thus is to contribute toward capturing the ever-growing thematic and methodological reach of the state of the art in constructional scholarship. The handbook provides a comprehensive presentation of the newly developing extensions of constructional research, while also relating them to the framework’s intellectual origins, with explicit attention to areas that have been present in Fillmore’s vision from early on.

For example, calling for the inclusion of *textual* features in the grammatical generalizations, Fillmore (1981/1974) suggested that in addition to ‘interpretive’ or ‘semantic’ frames, we also need the notion of ‘interactional frames’, as schematizations of speakers’ understanding of the principles that guide our shared communicative behavior (see also Chapter 1). For a while, these concerns became somewhat overshadowed by other interests that gradually emerged within the constructional community as new areas of focus, including extensions into diachrony, and that are amply represented in Hoffmann and Trousdale (2013). We thus wish to emphasize the issues of *meaning*, broadly conceived, as a foundational component of the constructional enterprise and draw attention to the *communicative* aspects of constructional analyses. The latter have been gaining in prominence in recent research, showing renewed interest in the cognitively grounded sociopragmatic and interactional motivations of grammatical patterning observed in language use, including spontaneously produced conversational interactions with their own analytic and conceptual challenges.

Accordingly, the overall goal of the present handbook can be summarized as follows. Collectively, the contributions aim at (i) reviewing the fundamental notions of Construction Grammar, its conceptual origins, and the basic ideas that unite its various branches (esp. Chapter 10, also Chapters 1 and 2), including constructional morphology (Chapter 4) and elaborations on the nature of constructional semantics (Chapter 5); (ii) emphasizing solid empirical grounding and the usage-based character of Construction Grammar (Chapters 6 and 8) as well as affinities with corpus linguistics (esp. Chapters 3 and 7); and (iii) presenting the diverse perspectives and areas of focus in constructional research, highlighting especially its advances in discourse-related topics and variation of various kinds (esp. Part V). Part and parcel of this general framing are applications in fast-evolving domains including multimodal communication (Part IV), language learning and teaching (Chapter 23), computational issues (esp. Chapters 21 and 22), or forays into analyzing the language of literary texts (Chapter 24). All of this leads toward formulating new theoretical and methodological questions, discovering new analytic domains and categories, and searching for more sophisticated accounts of the interaction between constructions (Chapters 2, 9, and 11).

Part I: Constructional Foundations

Given the breadth of topics and analytic focus within the existing constructional variants, it is useful to address explicitly the foundational conceptual issues of the constructional enterprise, reminding the reader of the origins of Construction Grammar and its ‘sister theory’ of Frame Semantics. The presentation of this dual source of constructional thinking is essential to a full understanding of the unique nature of the constructional approach. In addition to reviewing the early work in (English) syntax, which has generally held the most visible position in constructional research, it is important to keep in mind that the role of lexical meaning in describing various kinds of grammatical patterning presented an equally indispensable layer in Fillmore’s original conception of the notion of grammatical construction. The contribution of Part I is thus twofold. Starting with succinct reviews of both these theoretical sources of Construction Grammar, the remaining chapters present major areas of research that have developed out of them and highlight their continuing interconnection: the extension of frame-semantic analyses into projects known as *framenets*, the nature of the constructional repositories known as *constructicons*, a comprehensive approach to constructionally based morphology, and also the open and not often addressed question of the relationship between constructions and metaphoric meaning.

The chapter by **Yoshiko Matsumoto** reviews and carefully explicates the seminal ideas of Frame Semantics, which Fillmore (1982) referred to as “semantics of understanding,” in contradistinction to “truth-semantics,” and

their role in gradually establishing the notion of construction. The author walks the reader through the main analytic concepts, particularly the various types of the notion ‘frame’ (cognitive, interactional, linguistic) as the cognitive structures in which language users store their schematized understanding of meaning. In order to elucidate how linguistic meaning and grammatical patterning are grounded in speakers’ encyclopedic knowledge and everyday communicative experience, the author brings up analyses from two case studies: the German binomial expressions and the Japanese noun-modifying clausal constructions. Both of these illustrate the inherently semantic and pragmatic motivations for their shape and usage, thus showcasing the connections between frames and constructions. The author closes by highlighting the potential of frame-based analyses for advancing our understanding of meaning-making and interlocutors’ interpretive tasks in spoken interaction.

The chapter by **Hans C. Boas** contextualizes the central concepts of constructional syntax by reviewing the origins of constructional thinking in Fillmore’s seminal exposition on ‘case frames’ in his 1968 paper “The case for case,” and then by detailing their further development into full-fledged Construction Grammar. The author traces differences and convergences between two Berkeley-based strands, labeled Berkeley Construction Grammar and Cognitive Construction Grammar, including basic presentation of their respective formalisms. The chapter focuses on a number of issues that revolve around our understanding of how constructions interact in the process of licensing actual linguistic expressions. It is pointed out that this fundamental and decidedly non-trivial aspect of constructional syntax has so far received little, if any, systematic attention in existing syntactic studies but is becoming more urgent with the advent of constructicography (Chapter 3). Finally, the chapter outlines an empirical methodology for discovering, describing, and analyzing constructions, thereby contributing to the corpus-based creation of new construction entries that can then be used to systematically study constructional interactions as a well-defined topic.

Frame Semantics and Construction Grammar provide the underlying theoretical basis for the two specific descriptive resources introduced in the chapter by **Lars Borin** and **Benjamin Lyngfelt**. The chapter provides a concise introduction to the nature of ‘framenets’, which are onomasiological databases compiled for individual languages; ‘constructicons’, which are envisioned as mental repositories of constructions (see also Chapters 2 and 9) in a given language; and the relationships between the two. Besides presenting the basic principles of building up these resources, with reference to their instantiations in various languages and also in contrast to WordNet (e.g., Vossen & Fellbaum 2009), the chapter highlights the fact that neither resource is merely a formalization of frame-based or constructional analyses. Framenets serve as a strong empirical test for the basic ideas underlying Frame Semantics and their transparent applicability across different languages, while constructicons provide the basis for the newly emerging and rapidly developing field of

constructicography, which will test the basic constructional concepts, including the ways in which constructional networks can be formed and organized. The chapter closes with a critical reflection of NLP as practiced today vis-à-vis linguistically informed analyses.

Explorations of the constructional potential in capturing the nature of morphological structure present a relatively new domain in constructional research, compared to the construction grammarians' focus on syntax. As the chapter by **Ray Jackendoff** and **Jenny Audring** demonstrates, it now constitutes a richly developed field that highlights a natural fit between morphology and basic concepts underlying constructional thinking. Through a very accessible, carefully argued, and empirically documented exposition, the authors lay out the contribution of two mutually compatible construction-based approaches to morphological analysis: Construction Morphology and Relational Morphology. In addition to addressing conceptual and analytic challenges inherent in the grammar of words, covering both inflectional and derivational issues and including well-known idiosyncrasies associated with morphological patterning, the authors also walk the reader through and justify the sophisticated formalism needed for representing the complex relationships between the layers involved: morphological form, semantic contribution of morphemes, phonological requirements, and, in some cases, orthographic idiosyncrasies. The chapter extends beyond morphology and shows that the grammar of words has a lot to say about broader theoretical issues relevant to and debated in Construction Grammar in general: questions of productivity, non-compositionality, relations across constructions, and organization of constructional networks.

Not surprisingly, the question of meaning as a definitional feature of constructions arises also in relation to metaphoric language. The chapter by **Karen Sullivan** addresses this topic, reflecting upon the role of conceptual metaphor in constructional semantics and upon the role of constructions in communicating metaphoric meaning. The exposition is framed by the crucial basic observation that metaphors are *not* constructions and highlights the claim that the relationship between constructions and metaphor cannot be explained by more general semantic principles that apply in the same way to both metaphoric and non-metaphoric uses of constructions. The chapter reviews the basics of the Conceptual Metaphor Theory and makes a point of drawing a distinction between conceptual metaphor and metaphor-like 'blends', with reference to the prototype-based organization and inherent gradience of conceptual metaphor and related concepts. Using Langacker's notions of 'conceptual autonomy' and 'conceptual dependence' as explanatory tools for modeling metaphoric meaning vis-à-vis constructional semantics, the author shows on specific examples (syntactic and morphological) how the metaphoric use of a given construction can be accounted for through reference to the underlying autonomy-dependence relations.

Part II: Empirical and Methodological Grounding

The chapters in Part II lay out the methodological basis and tools for all constructional work as well as the ensuing empirical foundations of constructional research in all versions of the constructional paradigm; in this respect, they present an indispensable background for the chapters in the present volume and for all constructionally oriented analyses. But they do more than that; in clear and precise language, they spell out the motivation, advantages, and potential of the proposed methodologies against their limitations and drawbacks, offering readers both a substantial introduction to the topic and the benefits of received wisdom. Concepts like frequency, priming, and constructional networks are addressed in more than one chapter in Part II from different angles and to different purposes, thus providing a well-rounded introduction to foundational concepts and methodologies.

The chapter by **Martin Hilpert** addresses the role of frequency in Construction Grammar and its methodological and psychological implications. In a step-by-step fashion and drawing on studies as illustrative examples, the author outlines the increasing impact of frequency-based factors on the shaping of the theory and presents the increasingly sophisticated frequency measurements currently employed in constructional research, including token frequency, type frequency, relative frequency, co-occurrence frequency (see also Chapter 7), and dispersion. The chapter also highlights the close relationship between frequency on the one hand and language processing and production on the other, discussing frequency effects on entrenchment, structural priming, and the processing of specialized meanings, as well as the relevance of all of these to constructional networks. The author concludes with important caveats, notably the need for simultaneously including all aspects of frequency in an analysis and for looking at frequency vis-à-vis other factors that impact the strength of linguistic representations in the mind.

The increasing reliance of Construction Grammar on corpora and corpus-linguistic methods (including frequency-based ones) is explored in the chapter by **Stefan Th. Gries**, which emphasizes the huge difference between constructional analyses in the 1990s, when the most influential constructional work did not rely on the corpus, and current times when it is legitimate to talk about a “productive category of ‘corpus-based CxG.’” The author discusses an array of studies ranging from mostly qualitative corpus approaches to studies based on frequencies and probabilities as well as studies focusing on association strengths (see also Chapter 6), and finally to statistical and machine-learning studies, the latter further explored in more detail in Chapters 21 and 22. Importantly, such work is discussed in relation to its contribution to constructional theory and its relevance in addressing criticism to constructional, and more generally cognitive, approaches. As the author concludes, corpus-based Construction Grammar relies less and less on introspection: Corpus data are increasingly integrated into experimental work and computational simulation;

statistical and machine-learning models support hypothesis-testing; and different kinds of corpus-based research help address issues of individual and social variation.

The chapter by **Florent Perek** completes the theme concerning empirical evidence for Construction Grammar, by looking at behavioral sources typically in the form of controlled experiments. A wealth of experimental studies are reviewed, providing evidence for three major constructional tenets: that constructional meaning exists independently of the meaning of lexical items; that constructions may prime each other on the basis of both meaning and form; and that grammar consists of a network of related constructions of varying degrees of abstractness. This last point makes for a natural transition to Chapter 9, which reviews in detail the different kinds of constructional networks and the methodology of setting them up. Important conclusions laid out by the author include the need to extend the experimental work to other kinds of constructions besides argument-structure ones (in line with the constructional commitment to the entirety of language) and more systematically to other (than English) languages. The possible reinterpretation of classical psycholinguistic literature in favor of constructional theory further points to the benefits of a ‘constructionist psycholinguistics’, whose central piece will be the construction.

As noted, the chapter by **Lotte Sommerer** and **Freek Van de Velde** deals with the network organization of constructions in the constructicons, a topic on which opinions still diverge widely and no single set of organizing relations is unanimously accepted across the board. The authors both embed constructional networks in a language-independent, domain-general theory of networks and distinguish them from other linguistic network models (e.g., Connectionism and models of sociolinguistic propagation). After reviewing the various types of connections and links between constructions in the literature, a two-way division between vertical and horizontal links is introduced, since this is a distinction underlying most network-related work. The different subtypes of vertical (i.e., the different kinds of inheritance) and horizontal (mostly differential oppositions and allostructions) connections are then exemplified, highlighting the relevance of the network organization for all levels of analysis including morphology (see also Chapter 4; Jackendoff & Audring 2016; Audring 2019), syntax, and pragmatics. As the authors suggest in conclusion, there is a clear need for integrating into Construction Grammar the quantitative investigation of network properties (a theme partly addressed also in Chapters 6, 7, and 8), and this is an area where a lot remains to be done.

Part III: Constructional Analyses in Practice

The contributions in Part III are intended as concrete illustrations of analytic questions that can be encountered when addressing specific linguistic issues in actual constructional work. The three chapters can of course represent only