Constructionist views on Construction Grammar

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1. Introduction

Since its inception at UC Berkeley in the 1980s, Construction Grammar (C×G) has come a long way. It has spread from English to a wealth of different languages, and from lexicogrammar to a great variety of different language phenomena, ranging from phonology to discourse. It is being applied to different research areas such as computational linguistics, language pedagogy, sociolinguistics, and psycholinguistics, and is employed to explore a wide range of perspectives on language, including language acquisition, language change, language processing, multilingualism, and, not least, language use. It has also grown into a quite diverse field, including different constructionist approaches such as Berkeley C×G, Cognitive C×G, Radical C×G, Fluid C×G, Sign-Based C×G, etc. (for an overview, see Hoffmann & Trousdale 2013; Fried & Nikiforidou in press).

Hence, almost four decades later seems to be an opportune time for metareflection: to take stock of the field and ask where we are, where we are going, and where we wish to be going as construction grammarians. To this end, the present theme issue consists of five papers in which leading C×G researchers in different areas present their respective views on the current state and future prospects of C×G. These authors are William Croft, Adele E. Goldberg, Martin Hilpert, Laura A. Michaelis, and Remi van Trijp. There are a few questions that all of them have been asked to address (see Section 6 below), but apart from that they have been given free hands to present their views of the status and potential of C×G in whatever way they find suitable.

Other recent meta-theoretically oriented papers on C×G include Ungerer & Hartmann (2023) and a special issue of the online journal *Constructions* (Sommerer & Hartmann 2023). In spring 2021, we conducted an online questionnaire among construction grammarians about their views and opinions about C×G, followed by a roundtable discussion at ICCG11 in Antwerp in August 2021.

Section 2 presents a brief overview of the main themes that emerged from the questionnaire and the roundtable discussion. In light of the opinions expressed in the questionnaire and the roundtable, we reflect on $C \times G$ as a framework in Section 3. Finally, in Section 4, we turn to the papers in this theme issue, and we present the overall setting and the questions that all the authors were asked to address.

2. $C \times G$ in the eyes of the community

The online questionnaire was designed to get a better picture of what construction grammarians think about C×G. In its final form, after two rounds of pilots, it consisted of three different sections. The first section elicited background information about the respondents (e.g., age, gender, current level of academic seniority, primary fields of research interest, level of interest in C×G). The second section consisted of 13 Likert-scale questions about different aspects of C×G, each followed by the option to provide further input in a text box. The third section consisted of 7 text questions eliciting specific thoughts and opinions about various aspects of C×G. At the end of the questionnaire respondents were given the opportunity to provide their names and contact information, in case they wanted to be personally identified. These different sets of questions were identified on the basis of our review of the constructionist literature and our ensuing discussions.¹ It was sent out to the participants of the three latest installments of ICCG, all in all about 700 people, who were asked to provide their views on different sets of questions surrounding constructional research.² We received 189 replies.

2.1 Emergent views – a quantitative illustration

The online questionnaire elicited four types of data:

- quantitative results from the Likert scale questions;
- qualitative results from open comments to the Likert scale questions;
- qualitative results from the open-ended questions;
- metadata about the respondents.

^{1.} We would like to thank the following colleagues for providing helpful feedback on the first two drafts of the online questionnaire: Bert Cappelle, Bill Croft, Francisco Gonzálvez García, Yoko Hasegawa, Martin Hilpert, Steffen Höder, Thomas Hoffmann, Laura Janda, Kiki Nikoforidou, Oda Røste Odden, Kyoko Ohara, Florent Perek, Peter Petré, and Tiago Torrent.

^{2.} We are very grateful to Todd Krause of the Linguistics Research Center at the University of Texas at Austin for his help with administering the online Qualtrics questionnaire. He also gave us useful feedback on the design and content of the first two draft questionnaires.

Here, we present a quantitative overview of the results from the Likert-scale questions, ordered by degree of agreement (as measured by standard deviation). We illustrate the emerging themes by sample comments from the questionnaire and by some of the open-ended questions.

The questions with the highest degree of agreement are presented in Table 1:

Table 1. Questions on which there is mostly agreement*

		1	2	3	4	5	Av.	St.D
5.	Languages consist of networks of constructions.	70	22	5	2	1	1.45	0.77
4.	Constructions are cognitively real.	46	32	18	3	1	1.82	0.87
10.	How important a role does frequency play in your own constructional research?	53	37	2	5	2	1.65	0.9
6.	The meanings of constructions should be represented in terms of Frame Semantics.	13	33	36	15	3	2.64	0.99

^{*} In this table and the following tables, the statements are to be interpreted as follows: 1=strongly agree; 2=somewhat agree; 3=neither agree nor disagree; 4=somewhat disagree; 5=strongly disagree Importance questions: 1=very important; 2=somewhat important; 3=neither important nor unimportant; 4=somewhat unimportant; 5=totally unimportant; Numbers in 1-5 indicate percentages.

As shown in Table 1, the respondents mostly agree on the assumptions that languages consist of networks of constructions (Q_5) and that constructions are cognitively real (Q_4). They also mostly agree that frequency plays an important role in their constructional research (Q_{10}) and they have largely similar views on the role of Frame Semantics (Q_6). However, even where there is almost consensus on general issues there is still an interesting variety of views on particular matters. This is illustrated in (1) by a few sample comments to the network assumption (Q_5).

- (1) a. I'm not fully sure if the network(s) of Constructions is/are everything that make up a language, but they are certainly part of it.
 - b. Networks of constructions are idealized among people. It varies from person to person.
 - c. If constructions are defined as any kind of pairing between form and meaning, sure.

This kind of variety is neither surprising nor problematic. Rather, it forms a base for discussions that drive the field forward, and the issue of construction networks is currently a vibrantly discussed topic in C×G (see, e.g., Diessel 2019, 2023; Moretti 2021; Desagulier 2022; Ungerer 2022, 2024).

The question of Frame Semantics (Q6) diverges from the other questions in Table 1 by its average value (and by a slightly higher standard deviation). Whereas the other "consensus" issues all lean towards the agreement end of the scale, Q6 rather converges around the middle. This is also reflected in the comments to this question, as illustrated in (2):

- (2) a. Yes, but frame semantics is not enough. There are meanings that cannot be captured by frames.
 - b. Frame Semantics can help to capture, with a higher level of precision, the meaning of constructions, especially argument structure constructions.
 - c. Different representations are possible, especially when it comes to different types of constructions.
 - d. I believe Frame Semantics is one possible and really nice and insightful tool for representing the meaning of constructions but not the only one.

That said, the majority of respondents agree with the general idea that C×G should integrate frame-semantic insights, and only very few strongly disagree. However, not everyone seems to think of it as a sufficient toolbox for constructional semantics and some are looking for other ways of representing meaning in C×G (for a discussion, see Boas & Ziem 2022; Willich 2022).

The wide consensus about the importance of frequency (Q10) reflects the increasing role of quantitative methodology in construction-based research (see, e.g., Diessel 2019; Gries 2022; Hilpert in press). As for Q4, the verbal comments about cognitive reality indicate that, while construction grammarians tend to view constructions as cognitively real, they are not ready to make very strong claims backed up by hard evidence at present, as exemplified in (3):

- (3) a. I don't know what kind of evidence ensures the cognitive reality of constructions, but I'm wondering if less schematic constructions are more cognitively real.
 - b. That is the big question that has yet to be answered.
 - c. I do not know what is meant by "cognitively real". Things are either real or not real. I consider constructions to be real.
 - d. I believe this is so, but the notion is yet to receive empirical support.

Next, consider the answers to the mid-group of our questions, on which there is somewhat less agreement, in Table 2.

Table 2 shows a greater variety of opinions, although still mainly in the 1-3 range. Notably, there are very few responses in column 5 (strongly disagree / totally unimportant). The comments in (4) highlight some of the opinions about Q9:

		1	2	3	4	5	Av.	St.D
9	C×G should be a full model of language as a whole rather than primarily a model of just grammar.	45	25	21	8	1	1.93	1.01
3	It's my impression that results from one flavor of C×G can be "translated" into other flavors of C×G.	11	47	20	19	3	2.59	1.02
11	How important a role should compositional semantics play in constructional research?	26	31	29	10	3	2.33	1.08
1	It's my impression that Construction Grammar is a coherent field of inquiry.	25	41	11	21	2	2.33	1.13

Table 2. Questions on which there is less agreement

- (4) a. It's about form-meaning pairings, how could it be about 'grammar' only?
 - b. Makes sense, but that's a tall order. Where do we start? How do we avoid scattering in ever diverging research?
 - c. "Full model" is just too much of a claim.
 - d. Although I agree with this I think in practice this is not yet the case.
 - e. The primary object of study in C×G is the linguistic sign, units without meaning such as phones and syllables do not fall under this definition.

One (admittedly somewhat superficial) interpretation of the comments is that on the one hand, construction grammarians do want C×G to be a model of language, rather than merely grammar, but there is variation in their replies to Q9 because not everyone finds that a realistic goal, or one that C×G in its current state could claim to actually reach for.

Q1 and Q3, regarding coherence and compatibility (or "translatability") between different constructionist approaches, are both thematically related and received quite similar response patterns, clustering around "somewhat agree". The comments in (5) illustrate the replies to Q1:

- (5) a. I perceive C×G as a cover for many different approaches that brings together different researchers for fruitful discussion.
 - b. I work in usage-based/cognitive C×G, but I'm aware that there are other varieties which I have little contact with.
 - c. The basic tenets are clear, but not many people seem to be working in the core of construction grammar today.
 - d. Not all constructional approaches share the same basic principles, such as, for example, that the use of language shapes grammar.
 - e. Despite I have been interested in C×G and wrote couple of papers about it, it is due to the field incoherency that I decided to pick up different notation and go on with dependency structures.

The third and final group of Likert-scale responses consist of those issues on which there is a higher degree of disagreement among the respondents of the questionnaire, as shown in Table 3.

Table 3. Questions on which there is disagreement

		1	2	3	4	5	Av.	St.D
8	C×G should use an exact formalism to represent its findings.	11	24	27	24	15	3.07	1.22
13	There are constructions without meaning.	5	18	11	26	39	3.74	1.29
2	It's my impression that all flavors of C×G are usage-based.	22	30	12	22	13	2.77	1.37
12	There is a qualitative difference between constructions and words.	15	18	15	28	24	3.31	1.39
7	C×G should distinguish between 'semantic' and 'pragmatic' types of meaning.	21	24	15	24	17	2.89	1.41

The picture in Table 3 is not that of a divided field, but one with a large variety of opinions, with a fair amount of responses all across the 5-point scale.³ We will focus on Q8 and Q2, since the comments to these questions relate to each other in interesting ways; they also relate to Q1 and Q3 above.⁴ The range of opinions regarding Q8 is illustrated by the examples in (6):

- (6) a. I agree with this statement, but I think each strand of C×G should develop its own consistent method of formalism, especially CC×G.
 - b. I think it depends on the focus of the particular research. Sometimes formalisms are helpful, other times they do more harm than good.
 - c. It's not essential, but some more effort towards a shared formalism would be beneficial to the field.
 - d. There is not enough interest for formalisms in the field.

^{3.} There is an exception to this in Q13 where only five percent responded "strongly agree". This is particularly interesting since allegedly meaningless constructions have been proposed by Fillmore himself (e.g., 1999).

^{4.} Note that the issue yielding the highest standard deviation (Q7) is not a particular $C\times G$ problem but a highly controversial topic in linguistics in general. Therefore, we chose not to focus on it here, but the treatment of meaning remains a central matter in $C\times G$ and was one of the topics addressed in the roundtable discussion at ICCG11 in Antwerp (see Section 2.3 below).

e. I honestly don't know what we gain from this, unless it's for a specific application in computational linguistics. I follow Dryer in thinking that functionalists have little to gain from playing formalist games.

Formalization in general is a rather controversial topic among construction grammarians (as well as cognitive linguists more generally). Not only is there disagreement with regard to the necessity of formalizing findings, as shown by the distribution of replies to Q8, but there is also skepticism as to what extent the various properties of holistic constructions can be formalized (at least in a single formalism) to begin with. Furthermore, several quite different formalisms have been suggested for C×G, and there is, if not disagreement, at least varying tastes with regard to their mutual superiority and suitability for capturing different phenomena.

Turning to Q2, the replies, as shown in Table 3, display a full spectrum of disagreement. The variety of views is reflected in the verbal comments, as shown in (7).

- (7) a. That is one feature I like about $C \times G$.
 - b. I wish more of it were usage-based. Hooray for usage-based.
 - c. Some seem to be more usage based/driven than others.
 - d. To my knowledge, there are variants of C×G which are not necessarily usage based, e.g., SBCG or Linebacker's Cognitive Grammar.
 - e. Original Berkeley C×G, SBCG are not usage-based; is fluid cxg usage-based?
 - f. [...] many theories on the more formal side do not have a very explicit model of this that would be founded on usage-based assumptions.

Judging by the verbal comments, the C×G community takes a strongly positive view to the usage-based approach, even though there is disagreement about whether C×G in its current form(s) conforms to that approach. Notably, the usage-based nature of the more formalization-oriented variants of C×G (especially SBCG and Berkeley C×G, and also Fluid C×G) is questioned by many. We will return to this issue in Section 3.

All in all, there are a number of common ideas that construction grammarians agree upon, but also a number of points where there is variation, to varying degrees. Whether the overall picture is to be interpreted as one of unity or disunity is hard to tell, since there is nothing to compare these numbers with, and no "right" amount of agreement/disagreement. We now turn to a brief overview of the opinions expressed in some of the replies to the open-ended questions of our questionnaire.

2.2 Themes and reflections – a qualitative illustration

The following seven open-ended questions allowed us to explore several qualitative reflections that were common among the respondents:

- 1. What do you like most about C×G today? (Q14)
- 2. What do you not like about C×G today? (Q15)
- 3. What are the most pressing issues in C×G that need to be resolved in the near future? (Q16)
- 4. On the variety of construction grammars: is $C \times G$ so flexible that the label has almost lost its meaning? Or is that flexibility rather a strength? (Q17)
- 5. What are the limits of C×G? Are there linguistic phenomena that C×G cannot or should not handle? (For instance: Phonology? Morphology? Discourse? Pragmatics?) (Q18)
- 6. What's the role of formalism and formalization in C×G? (Q19)
- 7. What other big questions remain to be answered by construction grammarians in the future? (Q20)

In the following, we will present some of the replies to the first three of these questions (Q14–16). Most of the others relate to some of the Likert-scale questions and/or the roundtable discussion (which is the topic of Section 2.3 below). The final question (Q20) provided an opportunity to raise issues that were not captured by the other questions.

Replies to Q14 present a picture of a happy community whose members very much appreciate the foundations and the present state of $C \times G$ – to the extent that they specifically point out that the community itself is a crucial asset of $C \times G$.

- (8) a. The nice people.
 - b. An open-minded research community.
 - c. The community and its common spirit despite or due to the different flavors.
 - d. I like that we are a community of usage-based linguists who are interested in all areas of language analysis, including formal and non-formal approaches, without getting bogged down with nativism.

Several themes receive repeated mentions in the data. These include the usage-based nature and the cognitive plausibility of C×G discussed above with regard to Q2 and Q4, respectively, as the following replies illustrate.

- (9) a. Data-drivenness and usage-basedness
 - b. Empirical work, no bullshitting about UG
 - c. It's cognitively plausible and describes a large range of empirical phenomena accurately

Other recurring themes include the flexibility, coverage, and holistic nature of C×G and its suitability (and ample applications) to diachronic linguistics, as the following replies illustrate.

- (10) a. I like its flexibility and dynamics in explaining grammar.
 - b. The breadth of phenomena that can be explained using the same cognitively plausible overarching model.
 - c. It is a coherent framework for language as a whole.
 - d. The diachronic aspect.

The positive comments even spill over to Q15, the polar opposite of Q14, which prompted a significant number of replies to the effect that there is nothing the respondents do not like about C×G, as the following examples illustrate.

- (11) a. Honestly, I don't know. Nothing comes to mind right now.
 - b. Not sure I dislike anything per se.
 - c. What's not to like?

These uncritical replies aside, there are several recurring points of criticism in the replies to the questionnaire. The most frequent one can be seen as the opposite of the flexibility pointed out in (10) above. More specifically, numerous respondents point out that there is too much diversity in the different varieties (or, "flavors") of C×G, and that the practitioners of the different varieties do not seem to communicate enough with one another, as illustrated in (12).

- (12) a. I do not like the fragmentation. I would need some manual or I would even say a "bible" that I could easily follow.
 - b. The incoherency in approaches. There are so many flavors in C×G that the impression arises that some of these approaches are not constructional at all anymore.
 - c. Too many approaches that still try to overemphasize little differences between each other.

Furthermore, the perceived lack of theory formation is mentioned several times as a potential downside of C×G. As shown in (13), it seems that many members of the constructionist community hope C×G to go deeper rather than broader, and especially in a more uniform and mutually comprehensible way.

- (13) a. The lack of theory formation.
 - b. Few people seem to be working in the core of $C \times G$ i.e. further developing the framework and developing new ideas that push the state of the art.
 - c. (1) Need more groundwork on typology and C×G (2) Need more formalization (3) Need more discovery of distributional semantics and constructions for NLP purposes.

Another frequent point of criticism is vagueness, either regarding the definition of the notion of *construction* or vagueness in some other sense as it relates to specific concepts, ideas, or the framework more generally. The selected replies in (14) reflect what the group of respondents appears to think as a whole about the perceived lack of theory formation.

- (14) a. Too much hand-waving, over-use of the term 'construction' to cover everything.
 - b. Everything seems to fit into C×G so that no clear predictions can be made and no falsification criteria are available.
 - c. Although constructions are defined as pairs of form and meaning, form is not clearly defined.

The following set of replies (15) shows that C×G is also criticized (from within) for an English language bias, too much or too little (!) focus on the semantics vs. pragmatics distinction, and repetitiveness through giving too much attention to a narrow set of "favorite" constructions.

- (15) a. English-bias: too much emphasis on English (and some major Indo-European languages).
 - b. The disparity of the field and the neglect/ignorance of the semantics/pragmatics distinction.
 - c. That it keeps discussing the same constructions over and over (e.g., ditransitives), with subtle theoretical differences, rather than turning to constructions that have been studied less.
 - d. Too much focus on pet topics, like English ditransitive constructions and their ilk.

The responses to the final question Q16, about the most pressing issues in $C\times G$, show some thematic overlap with what people dislike: the need for a (more) unified formalism, questions of the definition of the concept of *construction*, the semantics vs. pragmatics distinction, and the diversity of different varieties of $C\times G$ for instance. In addition, as exemplified in (16), several of the responses to Q16 also concern other matters.

- (16) a. The cognitive reality of constructions.
 - b. Connection to psycho-/neurolinguistics.
 - c. The relationship between grammar and discourse.
 - d. To me very clearly, investigating dialect constructions and modeling sociolinguistics in C \times G.
 - e. To include spoken language in a better way, e.g. to include gesture.
 - f. Principles of comparing constructions with roughly the same meaning across languages.

Many respondents also express the need for a perspective that looks at the grammar/construction as a complex system, rather than merely analyzing individual constructions, and some respondents call for computational implementations of $C\times G$, as exemplified in (17).

- (17) a. The nature of the constructional network: What role do horizontal and vertical links play? Is this a question for theory or empirical study?
 - b. The operationalization and testing of the connections between constructions and aspects of constructions.
 - c. Development of a dynamic network model (implemented in a computational model)
 - d. We need to build really large constructions for more languages so that we can see cross-linguistic patterns.

Overall, there is more variation in the replies to Q16 than in the replies to Q15. Different researchers seem to find different issues the most pressing ones to pursue. In our view, this is, in fact, a major strength in that there is a lot of hope (we hope) that they will indeed proceed to pursue those issues in their research, and thereby take C×G forward on many fronts.

2.3 Themes from the roundtable discussion at ICCG11 in Antwerp

Some of the issues addressed in the questionnaire were also raised in an hour and a half long roundtable discussion titled *The current state of Construction Grammar*, which took place at ICCG11 in Antwerp in August of 2021.⁵ The roundtable was conducted in hybrid format and included about 100 people in the room and perhaps 150 online participants (with parallel discussions going on simultaneously orally and in the online chat).

The roundtable discussion was organized around the following four topics (which were each illustrated by sample responses from the questionnaire): the framework problem, the meaning problem, usage and cognition issues, and "where do we go from here?". The first three topics were chosen because they were the ones which generated the most (and the most diverse) comments in the replies to the online questionnaire. The fourth one was meant to bring together all the topics, including matters besides the previous three, towards a discussion of future prospects for C×G. Many different opinions were expressed, but for reasons of space we can only provide a rough overview here.

^{5.} We are grateful to the organizers of ICCG11, and to Peter Petré in particular, for giving us the opportunity to carry out this roundtable discussion and for helping us with various associated practical matters.

The first topic under discussion, the framework problem, generated a broad variety of different opinions. Some colleagues expressed their reservations regarding the status of formalism(s) in C×G. While some participants argued strongly in favor of a precise formalism, there was also the realization that "different formalisms have different conceptions of what counts as a construction" and that sometimes formalisms may create obstacles when it comes to capturing complex linguistic situations. To this end, several participants suggested that one should be open towards an evolving framework that may change over time. Taken together, these opinions seem to suggest that not all constructionists agree on the exact formulation of a number of key concepts of C×G.

The second topic under discussion, *the meaning problem*, showed that participants seemed to all agree that all types of meanings should be analyzed in C×G. However, several participants pointed out that there does not seem to be a clear path for analyzing different types of meaning.

Regarding the third topic, *usage and cognition issues*, the discussion during the roundtable zoomed in on one particular question: "What do we mean by usage-based?" (direct quote from the oral discussion). Several different views on this were voiced both in the oral discussion and the online chat. Some of these comments pertained to 'usage-based' as a framework or even an ideology. The majority, however, were concerned with what aspects of usage to take into account in a usage-based approach – or, put differently, which aspects of usage were allegedly *not* taken into account sufficiently (e.g., one participant noted in the chat that "Usage-based approaches has to take all aspects of context serious.").

The fourth and final topic of the roundtable was *Where do we go from here?* In the first part of this discussion, the question was raised what it would take for us to abandon C×G, to which the replies included suggestions of evidence from neuroscience, as well as the view that we might not know until we see it. On this note, it was also mentioned that we should relate more to cognitive science, philosophy of language, and other relevant fields of research.

The rest of the discussion pointed out two major areas in need of exploration. As the first of these, it was proposed that we need to do more research on the combination of constructions. On the one hand, it was mentioned that we have to address the larger picture of how different *kinds* of constructions interact; on the other, that we should go beyond combination (or 'unification' or 'merge') and also study other ways of interaction between constructions. In the last part of the discussion, there were pleas for more attention on different modalities of language, as well as multimodal approaches. In particular, in response to the prevalence of corpus studies of written material, it was stressed that we need more focus on spontaneous, spoken language.

One recurring theme that stands out in both the questionnaire and the roundtable discussion is the question of whether or not we should aim towards a unified theory or framework, or at least a more unified one than at present. Views were expressed both in favor and against such an aim, and this appears to be the question on which the opinions differ the most. We will therefore focus on this topic in the following section, where we present our own views on the matter.

3. Construction grammar as a framework

What is a linguistic theory, or a framework? On the one hand, it is (based on) a set of assumptions and axioms, often along with associated empirical and methodological commitments. On the other hand, it is typically characterized by a shared descriptive apparatus, such as a formalism or other kind of metalanguage in which analyses within the framework are represented.

As for C×G, the shared theoretical assumptions are certainly there, but arguably not the shared descriptive apparatus. The original C×G model, which was later dubbed Berkeley Construction Grammar (Fillmore 2013), includes a formalism (e.g., Fillmore & Kay 1995), but for various reasons (see Michaelis this issue) the Berkeley C×G coursebook never got published and the boxed notation formalism pioneered by Fillmore and Kay never became general practice throughout the gradually more widespread constructionist community. Other approaches have been proposed, such as Radical C×G (Croft 2001) and Sign-Based C×G (Boas & Sag 2012), but neither has been adopted by the broader C×G community.⁶ Also, notably, their potential as analytical tools is relatively unexplored. As few people use these flavors of C×G, they have only been applied to limited sets of linguistic phenomena. Therefore, they have not really been put to the test or developed much beyond the original proposals.

Constructionist approaches have been successfully applied to various kinds of linguistic phenomena and addressed linguistic behavior from a wealth of different perspectives. Thus, constructionist ideas have been applied to a great variety of approaches and C×G has developed into a quite diverse field of study (see, e.g., Sag et al. 2012; Hoffmann & Trousdale 2013). Arguably, however, the blessings of this diversity have come at the cost of decreasing coherence between different kinds of constructionist approaches, as pointed out by a significant number of questionnaire respondents (see Section 2 above).

^{6.} For a more general discussion of the similarities and differences between different functional, cognitivist, and constructionist models, see Butler & Gonzálvez-García (2014).

Is this lack of coherence a problem? This depends on one's perspective. In our view, it matters if you take C×G to be a theory of language as a whole. C×G is often claimed to be a theory of *all* of language, and one of its main tenets is that language *in toto* consists of a network of constructions (e.g., Goldberg 2013; Diessel 2019). The support for such an idea depends on the analyses of different constructions within that network to actually fit together. As it is, however, the descriptive coverage of C×G is so far quite unevenly distributed when considering the many different types of constructions in a language, and it is not obvious to what extent different constructionist approaches are compatible with each other.

At the same time, we need to keep in mind that unevenly distributed coverage is nothing unique to C×G. On the contrary, it is more the rule than the exception that linguistic frameworks are more concerned with some parts of language than with others. What is noteworthy, apart from the C×G ambition to account for all of language, is where the gaps (or understudied areas) are. C×G excels in its treatment of specific and semi-general patterns that combine lexical and grammatical properties, i.e., precisely the area typically neglected in most other frameworks. It also offers a rich body of work on argument structure constructions, in particular the argument structure of verbs, following the influential work of Goldberg (1995) and others. There is, however, precious little C×G work on general syntactic structures such as clausal and phrasal patterns, at least regarding other languages than English,⁷ and even less on how different kinds of constructions may be combined into utterances (a notable exception is Fluid Construction Grammar; see van Trijp this issue). Thus, the weaker areas are precisely what most other frameworks consider their main priority. This is arguably fine to the extent that different theoretical perspectives account for different aspects of language. It is, however, problematic for a view of C×G as a model of language as a whole, since accounting for these areas, which would be central in the overall construction network, is key to accounting for the entirety of a coherent language system.

Hence, C×G is sometimes criticized as a theory focusing primarily on the "periphery", as opposed to the "core" (Leiss 2009; Haider 2018), despite its refusal to make such a distinction and despite its ambition to account for all of language. It appears to us, given the obvious versatility of constructionist ideas, that C×G has the potential to live up to this ambition, i.e., it should treat both "core" and "periphery" within the same framework. Arguably, it already does, but there is still some work to do on how to connect them.

^{7.} See, e.g., Fillmore & Kay (1995), Sag (2012), Hoffmann (2022), Kim & Michaelis (2022) for C×G accounts of English syntax/grammar. For a cross-linguistically oriented model, see Croft (2022).

As for the compatibility of different constructionist approaches, the main divide appears to exist between what some researchers regard as usage-based and allegedly non usage-based approaches. As noted in both the questionnaire and the roundtable discussion, however, it is not always obvious what is meant by 'usage-based'. Minimally, it entails a commitment to base your analyses on actual usage data. Maximally, it means collapsing the distinction between grammar and usage, by grounding linguistic generalizations in actual usage events, and taking both cognitive and social contextual factors into account (Langacker 2000; Diessel 2019; Schmid 2020, among others). In actual practice, most work falls somewhere in between, for example corpus studies that account for frequency effects at the cost of abstracting away from contextual factors. Given the C×G commitment to account for actual linguistic patterns, one may say that all work on C×G is more or less usage-based. Also, importantly, it appears to us that most, if not all, C×G practitioners sympathize with a usage-based view of language.

Thus, the difference between more or less usage-based C×G approaches would seem to be a difference in degree, or orientation, rather than a difference in opinion. In a system-oriented approach to language, it is a main priority to account for language as a coherent system and fit the different parts together. Such an aim requires a degree of abstraction and leaves less room for delving into all of the details of particular usage events. In contrast, a usage-oriented approach is more focused on grounding linguistic structure in actual usage events together with their socio-cognitive conditions, and thereby tends to put the overall system in the background. We believe that C×G not only has room for the whole scale from system-oriented to usage-oriented linguistic perspectives, it obviously has, but that it also has the potential to accommodate these perspectives within the same coherent framework. That would require, however, less focus of the differences and more on the commonalities.

In the early days of C×G during the late 1980s and 1990s, it was called *Construction Grammar*, partly since it had not yet developed into today's variety of different versions (or flavors) of the theory, partly since it was intended as a coherent approach to language as a whole. The grammar part may thus be seen as a reflection of the system-oriented aspects of the theory. Later, the C×G enterprise in general has come to be labeled 'constructionist approaches' (e.g., Goldberg 2013; Ungerer & Hartmann 2023), highlighting the diversity as well as the shared assumptions. May the whole range of constructionist approaches be accommodated within – or at least translatable in terms of – the same construction grammar?

^{8.} van Trijp (this issue) makes a related distinction between *aggregate* (cf. system-oriented) and *population* (cf. usage-oriented) perspectives on language.

4. The papers in this theme issue

In the five articles of this theme issue, questions such as the ones raised here and other major concerns for $C \times G$ are discussed by five influential researchers in the field. To some extent they represent different research areas, but mostly they only represent themselves. For the most part the authors were given free rein to address the state of $C \times G$ in whatever way they find relevant from their point of view.

To also get some degree of comparability, however, they were all asked to answer the following three questions:

- Is Construction Grammar best considered a coherent theoretical framework or rather a flexible toolbox for linguistic analysis?
 This is not intended as an either/or question, but the reply may very well amount to some sort of combination – or perhaps something entirely different.
- 2. What's in a construction?
 What kind(s) of information is, and is not, included in a construction, and in a proper description of a construction?
- 3. How could a constructionist approach address a sentence like the following: Wasn't it rather McIlroy who seemed never to be outdriven when playing in contention?⁹
 - You are not expected to provide a full analysis of all the constructions in the sentence and their interaction, but rather an outline of what would be required for such an account.

Thus, the three questions consist of one very general question about C×G as a whole, one particular question with far-reaching theoretical implications, and finally one question about how to analyze an example sentence. This example displays a quite complex (although by no means extreme) combination of constructions: a negated cleft polarity question containing subject raising, passive, adjunct control, two different cases of incorporation (*wasn't* and *outdriven*), textual inference (*rather*), etc. It is meant to inspire a discussion of how to handle interplay between different kinds of constructions. We also wanted at least one of the questions, in an otherwise quite theoretical setting, to be based on a concrete language example.

^{9.} Contextual information about the example: Rory McIlroy is one of the top golf players in the world and also renowned as a long-hitter. To 'outdrive' someone in golf is to shoot the ball farther than them on your tee shot, which is typically executed with the driver (the longest hitting golf club). You are 'playing in contention' when, on the last day of a tournament, you are among the players with a reasonable chance of winning.

William Croft's paper, Philosophical reflections on the future of construction grammar (or, Confessions of a Radical Construction Grammarian), focuses primarily on the representation of constructions. Croft characterizes language not merely as usage-based but, rather, as a complex adaptive system. He presents linguistic units and phenomena as lineages, entities which exist in time, with a beginning and an end, held together by not only static convention but crucially also dynamic and repeated replication. He even describes C×G as such a historical entity, and addresses what we have called "the framework problem". He points out that there is no simple answer to what is and what is not Construction Grammar, but rather than considering this a problem, he points out that the variability and open-endedness of C×G is both welcoming for new researchers and usefully versatile for a wide range of research topics and approaches. Croft answers our question "What's in a construction? What kind(s) of information is, and is not, included in a construction, and in a proper description of a construction?" in a detailed and intriguing way, touching upon such themes as semantic maps, conceptual space, information packaging, phenomenology, and embodiment.

Adele Goldberg's paper A Chat about constructionist approaches and LLMs first presents an overview of features which make up, or at least are common to, constructionist approaches. Goldberg then discusses the usage-based view of language, stressing the importance of (vast but imperfect) associative memory in the organization of language. She points out that the usage-based view provides (and the usage-based nature of language requires) explanatory power which symbolic, feature-based approaches tend to lack. Most of her paper is devoted to Large Language Models (LLMs) which, as she points out, have very significant parallels to the usage-based view, to say the least. She lists and discusses six remarkable parallels: lossy compression and interpolation, conforming to conventions, organization of language (or information) as a complex dynamic network of constructions at varying levels of abstraction and complexity, context-dependent interpretation of input, semantic relationships among discontinuous elements, and the goal of being helpful to people/humans. She illustrates the capabilities of LLMs (or, specifically, GPT-4) to respond to a variety of prompts and problems and makes the point that even though LLMs make obvious mistakes, especially in the way that they handle language, they massively outperform all of their predecessors. She briefly presents her views on the future of C×G and concludes with what is perhaps best described as a pair of blends: GPT4's thoughts of the usage-based approach to language in the style of Ovid, and in the style of Dr. Seuss.

Martin Hilpert's paper *The road head for Construction Grammar* offers some reflections about the future of Construction Grammar by discussing the research of junior colleagues who have just recently completed their Ph.D. dissertations. In Hilpert's view, these recently completed dissertations offer some insights into

the types of questions that will be the center of constructional research in years to come, which leads him to propose that "the future of Construction Grammar is in very capable hands indeed. More specifically, Hilpert discusses (a) Willich's (2022) account of the relation of constructions and semantic frames; (b) Busso's (2018) research on coercion and valency; (c) Ungerer's (2022) results from syntactic priming studies that can be used to gain insights into the architecture of the constructional network; (d) Lester (2018), who shows how the syntactic distribution of English nouns affects how they are processed; (e) Moretti's (2021) research on how new nodes emerge in the network of constructions in language change, and how different existing constructions can contribute to that process; and (f) Anthonissen (2020), who views change over time through the lens of individual speakers and the cognitive and social mechanisms that influence their linguistic behavior. Discussing the results of the research of these junior scholars leads Hilpert to the conclusion that "it is fair to conclude that the Construction Grammar community is extremely fortunate to have young members who are taking established ideas into new directions".

Laura Michaelis, in her paper Staying terminologically rigid, conceptually open and socially cohesive: How to make room for the next generation of construction grammarians, addresses the topics of this special issue from the viewpoint of Sign-Based Construction Grammar (SBCG, e.g., Boas & Sag 2012; Michaelis 2013). Outlining the development from Berkeley Construction Grammar (BCG) to SBCG, she tells the story of the "underground classic" Construction Grammar Coursebook (Fillmore & Kay, e.g., 1995), which for a long time was considered something of standard manual of C×G despite not being generally available. Turning to the three questions above, Michaelis emphasizes the importance of not confusing theory with formalism. She relates some of the ideas and observations behind C×G, highlighting the correlations between constructions and words, and then presents key assumptions in SBCG in particular, partly in the form of an FAQ section. After also providing an SBCB analysis of the given example sentence, Michaelis concludes her paper by looking at C×G and linguistics from the larger perspective of the current state of the world.

In *Nostalgia for the future of Construction Grammar*, Remi van Trijp offers his views about the current state and possible future developments of C×G. Discussing the various "flavors" of C×G, van Trijp proposes that Construction Grammar is "a family of approaches that share the idea that constructions are the primitive units of linguistics analysis", rather than a coherent theoretical framework. In his view, the existence of these various flavors of C×G is advantageous, because it "is a clear sign of a tolerant community where diversity of analysis is encouraged". After discussing some of the key concepts shared by adherents of different flavors of C×G, van Trijp compares different views of language as

a complex system. He juxtaposes the so-called aggregate perspective, embraced by traditional mainstream linguistics, i.e., the structuralist-generativist tradition, with the population perspective, which signals a clear break with the competenceperformance tradition espoused by the aggregate perspective. According to the population perspective, van Trijp proposes, the emphasis is put on how languages are used in locally situated, socio-cultural, communicative interactions between language users. This alternative view, which treats language as a complex adaptive system in which individual and collective behavior may spontaneously change and self-organize based on new circumstances, greatly emphasizes processes and interactions. In the remainder of his paper, van Trijp discusses the implications of a population perspective for a broader view of C×G. More specifically, he shows that constructions should be seen as schemas that assist the language user in production and comprehension and he discusses the relevance of Frame Semantics for C×G. Finally, van Trijp offers his own constructional analysis of the sentence Wasn't it rather McIlroy who seemed never to be outdriven when playing in contention?.

Taken together, the papers in this theme issue present both similar and different views on the current state of $C\times G$ and its future prospects. Our intention behind the compilation of this theme issue is to spark further discussions among constructionists about $C\times G$ and to show that despite the perceived lack of coherence there is actually a whole lot of agreement about a large set of core issues. We think that this is a strong indicator of the vitality of $C\times G$.

Funding

Open Access publication of this article was funded through a Transformative Agreement with University of Gothenburg.

Acknowledgements

We wish to thank Francesca Masini and Bracha Nir, the editors of *Constructions and Frames*, for giving us the opportunity to do this special issue and for their help, support, and patience along the way. We are also grateful to Bill Croft, Adele Goldberg, Martin Hilpert, Laura Michaelis, and Remi van Trijp for their inspiring and thought-provoking contributions and for constructive feedback on an earlier version of this introduction.

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Publication history

Date received: 13 November 2023 Date accepted: 5 May 2024 Published online: 15 August 2024