Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company’s public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.
Allostructions revisited

Hilde De Vaere a, *, Julia Kolkmann b, Thomas Belligh a

a Department of Linguistics, Section General Linguistics, Ghent University, Blandijnberg 2, 9000 Gent, Belgium
b Department of Language and Linguistic Science, University of York, Heslington, York YO10 5DD, United Kingdom

Article info

Article history:
Received 27 January 2020
Received in revised form 2 August 2020
Accepted 15 August 2020
Available online 4 September 2020

Keywords:
Allostructions
Alternating constructions
Semantics-pragmatics interface
Genitive alternation
Ditransitive alternation
General construction

Abstract

An important recent innovation in Construction Grammar (CxG) has been to assume the existence of a general underspecified construction underlying two or more alternating constructions, which themselves are considered to be formally and functionally related allostructions of the general construction. Despite this novel proposal, the meaning side of the general construction has either been neglected or couched in a single-layered view of meaning that does not adequately distinguish semantics from pragmatics. Building on state-of-the-art developments at the semantics-pragmatics interface, this article proposes an account whereby the distinction between the meaning of the general construction and the meaning of the allostructions aligns with the distinction between encoded (semantic) and inferred (pragmatic) meaning. We argue in favor of an allostructional account for two grammatical alternations which have previously been treated as an epiphenomenon of two underlying independent constructions: the German ditransitive alternation and the English genitive alternation. While demonstrating the fruitfulness of an allostructional analysis for these two new cases, we also provide critical observations about the wider applicability of allostructional analyses. In particular, we argue that an allostructional analysis proves to be trivial for Lambrechtian ‘allosentences’.

© 2020 Elsevier B.V. All rights reserved.

1. Introduction

Cappelle’s (2006) study of the variability in English particle placement was a major innovation for research on alternating constructions within Construction Grammar (CxG). In response to CxG’s predominant view that an alternation has no independent status and that the constructions involved should be studied in their own right (e.g. Goldberg, 2002), Cappelle suggested that it is useful to postulate a single general construction at the basis of two or more formally and functionally related constructions that alternate in a given language. In this spirit, he proposed the existence of a general verb-particle construction underlying the two particle placement structures in English, as instantiated by the following (Cappelle, 2006: 21):

(1) a. He put on his shoes and left.
   b. He put his shoes on and left.

* Corresponding author.
E-mail addresses: hilde.devaere@ugent.be (H. De Vaere), julia.kolkmann@york.ac.uk (J. Kolkmann), thomas.belligh@ugent.be (T. Belligh).

1 The following abbreviations are used throughout the article: CxG: Construction Grammar; IOC: Indirect Object Construction; DOC: Double Object Construction; POC: Prepositional Object Construction; NP: Noun Phrase; PP: Prepositional Phrase; V: Verb; ATG: AGENT-THEME-GOAL Construction; SVO: Subject-Verb-Object; NGP: neo-Gricean pragmatics; RT: Relevance Theory; IL: Integral Linguistics.

https://doi.org/10.1016/j.pragma.2020.08.016
0378-2166/ © 2020 Elsevier B.V. All rights reserved.
According to Cappelle, the variants in (1a) and (1b) constitute so-called *allostructions*; that is, contextually realized variants of an underspecified verb-particle construction. Following Cappelle, various other authors working within CxG have demonstrated the viability of the allostruclural analysis by applying it to numerous other alternations, e.g. the dative alternation and the locative alternation in present-day English (Perek, 2015), as well as the dative alternation in Middle English (Zehentner, 2016, 2018) and the ditransitive alternation in present-day German (De Vaere et al., 2018, 2021; Willems et al., 2019).

While Cappelle (2006) made a convincing case for assuming the existence of a general construction at the basis of two allostructions, he only addressed its formal characteristics. As far as the meaning of the general construction and how this relates to the meaning of the allostructions are concerned, he provided no elaboration. However, given that CxG is a sign-based approach to language, it is paramount to address not just the formal, but also the meaning side of any constructional analysis. In particular, it is necessary to determine both the meaning of the postulated general construction, the meaning of the allostructions and the relation that holds between them.

Perek (2015) filled this gap to a large extent by proposing an account of the meaning of both the general construction and the allostructions. However, he conforms to the classic tenets of CxG by couching his analysis in terms of schemacity and without differentiating between qualitatively different kinds of meaning. This is out of sync with current developments at the semantics-pragmatics interface, where semantic (or encoded) meaning is differentiated from pragmatic (or inferred) meaning.

In this article, our aim is to further explore the meaning side of the general underspecified construction and its allostructions. In contrast to previous accounts, we find it necessary to distinguish between two kinds of meaning - encoded meaning and inferred meaning - and thereby seek to apply a well-established conception of the semantics–pragmatics divide to the study of meaning in CxG. Our article not only contributes to the growing literature on the various pragmatic aspects of the meaning of constructions (see Cappelle, 2017 for a first overview, and the recent contributions in Finkbeiner, 2019), but also furthers the application of allostruclural analysis to alternating constructions. We do so by positing a new conception of the general construction, which in our view is paired with a semantically encoded meaning, and the two allostructions, which are paired with pragmatically inferred senses. We evidence the viability of this novel analysis by applying it to the German ditransitive alternation and the English genitive alternation, both of which have hitherto been treated as surface phenomena involving independent constructions.

The article is structured as follows. In Section 2, we provide the necessary background for our study by summarizing the standard treatment of alternating constructions in CxG (Section 2.1) and outlining Cappelle’s proposal (Section 2.2). In Section 3, we establish the absence of a full-fledged account for the meaning-side of the construction as a shortcoming of Cappelle’s proposal (Section 3.1) and put forward a possible solution based on recent theoretical developments on the semantics-pragmatics interface (Sections 3.2 and 3.3). Section 4 begins with a note on constructionhood (Section 4.1), we illustrate the value of our approach through two case studies, the German ditransitive alternation (Section 4.2) and the English genitive alternation (Section 4.3). In Section 5, we delimit the applicability of the allostruclural approach to only a subset of alternating constructions. Section 6 concludes.

2. Alternating constructions in CxG and the idea of allostructions

2.1. The traditional CxG approach

In CxG accounts (Fillmore et al., 1988; Goldberg, 1995, 2002, 2006; 2019; Hoffmann and Trousdale, 2013; Hilpert, 2014), a construction is conceptualized as a form–meaning pairing that may vary in size and complexity. According to the traditional narrow definition (Goldberg, 1995), constructions are form–meaning pairings that have non-predictable formal characteristics and/or non-compositional meanings. According to newer and broader definitions of constructionhood, structures can qualify as constructions also if they are sufficiently frequently attested (Goldberg, 2006: 5, 2019; Hilpert, 2014: 22).

Constructions are related to each other in a large constructional network by inheritance links; they inherit formal and semantic properties from overlying schemata. Fully schematic constructions such as ‘the transitive construction’ are at the top of the constructional network (cf. Van de Velde, 2014: 146 for Dutch). The partially filled constructions, e.g. *face OBJ* as well as the fully filled constructions, e.g. *face the music* (examples from Hilpert, 2014: 58), inherit formal and semantic properties from the more abstract schematic ones. It is a notable trend in CxG that most inheritance relations are conceived of as vertical, and less attention is paid to horizontal relations between constructions.² Even though the vertical inheritance links suggest some form of hierarchy between the constructions, there is no qualitative difference in status between the various kinds of constructions, or between their meanings.

Alternating variants of the kind illustrated in (1) above as well as in (2) below are considered to be constructions in their own right, each with their own construction-specific meaning (Goldberg, 1995, 2002, 2006, 2019). More specifically, (2a), known as the Ditransitive Construction or Double Object Construction (DOC), is said to have a ‘Caused Possession’ meaning, whereas (2b), known as the Prepositional Object Construction (POC), is said to have a ‘Transfer Caused Motion’ meaning.

² However, Goldberg (1995: 107) acknowledges that some constructions may (partially) overlap in their syntax, semantics or pragmatics.
because it is similar in form to (2c), a POC with the ‘Caused Motion’ meaning. Because (2b) expresses the transfer meaning of the Double Object Construction (2a), it is said to instantiate the ‘Transfer Caused Motion’ meaning by virtue of the metaphor ‘Transfer of Ownership as Physical Transfer’ (Goldberg, 1995: 90).

(2) a. He gives Mary the book.
   b. He gives the book to Mary.
   c. He throws the ball to Mary.

Traditional CxG links similar constructional meanings to each other in a single-layered network of horizontally related meanings, or a family of “related senses”, as defined by Lakoff (1987). This network is often centered around a central, prototypical sense which is considered to be the most basic. For the Ditransitive Construction or DOC, the network of related meanings also starts from a central, prototypical sense. Goldberg (1995: 33, 2019: 21) considers concrete senses (such as conveying the concrete handing over of an object to a recipient, as in (2a)), as the most basic ones, both diachronically and synchronically. Emanating from the central sense ‘AGENT successfully causes RECIPIENT to receive PATIENT’, instantiated by verbs such as give, throw, bring and take (Goldberg, 1995: 38), are polysemy links to the other senses, e.g. ‘AGENT enables RECIPIENT to receive PATIENT’ (with verbs such as permit and allow) or ‘AGENT causes RECIPIENT not to receive PATIENT’ (instantiated by verbs such as refuse and deny) (Ibid.). In this kind of analysis, the metaphorical extensions usually take the central sense as their source domain. For the so-called “prepositional paraphrase” of the ditransitive (Goldberg, 1995: 90), e.g. (2b), it is the very metaphor ‘Transfer of Ownership as Physical Transfer’ that allows the construction to encode the transfer of possession. Consequently, under a traditional CxG account, (2b) should be conceived of as a metaphorical extension of (2c).

In sum, the general stance taken in CxG is that alternating syntactic variants should be viewed as constructions in their own right, and hence alternations are considered to be epiphenomena resulting from the meanings of various independent constructions. Alternations, in essence, lack any independent theoretical status (Perek, 2015: 148).

2.2. The idea of allustrations

The standard justification for treating grammatical variants as distinct constructions is the fact that they are not usually interchangeable in all contexts of use. As noted by Stefanowitsch (2003: 413):

“...unless they are in free variation, there seem to be two main possibilities: either the two constructions differ in their discourse-functional properties [...] or they differ in their semantics”

As ‘semantics’ (intended in this case to refer to conceptual and truth-conditional) differences go, a number of constructions have been shown to differ slightly in their truth-conditional import or in which lexical items they can contain. For example, Stefanowitsch (2003) argues for the English genitive alternation that, because not all s- and of-genitives alternate (e.g. a dress of silk vs. *the silk’s dress), it must be the case that the two constructions differ with respect to what kind of relations they assign to their two nominals. Thus, the s-genitive construction, e.g. Mary’s book, assigns the conceptual roles of ‘possessor-possessee’ to its nominals, while of-genitive construction, e.g. the father of Mary, assigns the conceptual roles of ‘entity’-‘intrinsic entity’.

For the English dative alternation, various CxG analyses (e.g. Goldberg, 1995, 2006, 2019; Hilpert, 2014) argue that DOC and POC are conceptually different in that DOC is considered to always express the ‘Caused Possession’ meaning, whereas POC expresses the ‘Caused Motion’ meaning. As such, they are considered constructions in their own right which pair a distinct meaning with a distinct form. In case there is truth-conditional synonymy, e.g. between ‘Caused Possession’ in DOC and in POC expressing the ‘Transfer Caused Motion’ Construction, the principle of no synonymy (Goldberg, 1995: 91) predicts that there must be a non-truth-conditional difference, e.g. whether the RECIPIENT is in focus/profiled or not.

Similarly, it is well known that a number of discourse-functional factors often render one variant favorable over the other, a tendency which seems to hold cross-linguistically. In the English genitive alternation, for example, shorter possessors prefer the s-genitive over longer and heavier possessors, which are probabilistically more closely associated with the of-genitive (e.g. Jucker, 1993; Rosenbach, 2002, 2014; Hinrichs and Szmracsanyi, 2007; Graffmiller, 2014). Because of this, Mary’s book is favorable over the book of Mary, while the book of the woman with the dark hair and the green eyes is favorable over the woman with the dark hair and the green eyes’ book. A similar example comes from the German ditransitive alternation, where the Prepositional Object Construction (POC) is preferred when given, short pronounal themes such as es ‘it’ in (3) combine with non-given, long(er) recipients such as einen Präparator ‘a taxidermist’ (De Vaere et al., 2018).

(3) Der Jagdpächter, der das Tier im Juli im Mecklenheider Forst getroffen hat, hat es an einen Präparator gegeben.
   ‘The hunter, who shot the animal in the Mecklenheider forest in June, gave it to a taxidermist.’

These factors are probabilistic in nature; they constrain the realization of either of the two variants, but don’t render the less preferred variant ungrammatical. In other words, while the book of Mary may sound less natural than Mary’s book, it is still

---

3 The term ‘semantics’ in this quote by Stefanowitsch is used to differentiate truth-conditional and conceptual kinds of meaning from discourse-functional and procedural kinds of meaning. As will be discussed further in the article, ‘semantics’-’pragmatics’ can also refer to an orthogonal distinction between encoded and inferred meaning.
in principle a grammatical way to express a relation between Mary and a salient book. The locus of their different distributions is instead related to information flow. Nevertheless, the two constructions are considered to be meaning-equivalent in principle. This stands in stark contrast with some of the assumptions made by the aforementioned constructionist approaches, as seen in Goldberg (1995) and Stefanowitsch (2003), where a difference in form necessarily goes hand in hand with a difference in function or meaning.

An alternative position which recognizes close links between alternating constructions and at the same time acknowledges that superficially related constructions may come with their own constraints was first proposed by Cappelle (2006), who posited the existence of *allostructions*. Similar to allophones, which represent different physical realizations of an underlying abstract phoneme, Cappelle (2006: 18) defines allostructions as “variant structural realizations of a construction that is left partially underspecified”. This underspecified construction is referred to as the *constructeme*, in analogy with the notion of phoneme. Using the verb–particle alternation as an example, he observes that it may be realized in either of two ways, e.g. *pick the book up and pick up the book*, without any change in meaning, and on that basis posits the existence of a general transitive verb–particle construction which leaves the word order partially unspecified: (see Fig. 1)

![Fig. 1. The transitive verb-particle construction with its two allostructions (from Cappelle, 2006: 18).](image)

Form-wise, this general construction captures the similar syntactic configurations of the two allostructions but does not specify their linear order. The allostructions, by contrast, are fully specified with regard to their form, which amounts to a concrete instantiation of the general construction’s word order. Importantly, allostructions are neither in complementary distribution nor in free variation: discourse-functional factors like those mentioned above have a bearing on which of two or more alternating constructions is realized in context.

On a theoretical level, the notion of allostructions is then reconcilable with both the frequent interchangeability of constructional variants and its sensitivity to discourse-functional factors. The central idea is that allostructions are sufficiently, though not completely, equivalent. Compared to traditional CxG approaches, the allostrucational approach assumes that the alternation does have independent status (Zehentner, 2018: 169). Even though this approach has increasingly been adopted in constructionist research (Perek, 2012, 2015; Zehentner, 2016, 2018; De Vaere et al., 2018, 2021; Willems et al., 2019) many open questions remain. We will focus here on questions regarding the meaning side of the constructional sign, the details of which we turn to next.

3. Revisiting allostructions

3.1. The meaning side of the constructional sign

While discussing many of the formal characteristics of both the general construction and its allostructions (Section 2.2), Cappelle (2006) does not deal with the meaning of the allostructions or the kind of meaning that should be attributed to the more general construction, nor does he provide an account of the relation between them. However, CxG is a sign-based approach to grammar that generally only considers constructions to be full-fledged when both their form and meaning are sufficiently delineated (Fillmore et al., 1988; Goldberg, 1995, 2006; Hoffmann and Trousdale, 2013). It therefore stands to reason that for the theory of allostructions to gain a strong foothold in CxG, the meaning side of both the general construction and the allostructions should be addressed.

Perek (2015) elaborates on Cappelle’s (2006) account by explicitly addressing the meaning of the general construction, its allostructions and their relationship. According to Perek, the meaning of the general construction is composed of a general event schema that is shared by the two allostructions. The allostructions have more specific meanings, which include information that is inherited from the general construction.

He develops this account for the English dative alternation and the English locative alternation, e.g. *John sprayed paint onto the wall vs. John sprayed the wall with paint*. He proposes ‘transfer of possession’ or ‘X CAUSE Y TO HAVE Z’ as the meaning of the general dative construction (2015: 156), with the allostructions being influenced by the properties of *Recipient* and *Theme* arguments, more specifically their discourse accessibility. In the case of the locative alternation, he puts forward ‘caused change of location’ or ‘X CAUSE Y TO GO Z’ as the meaning of the general locative construction (2015: 160), and ‘X ACT ON Y’ and ‘X ACT ON Z’ as the meanings of the respective allostructions (2015: 162).

While Perek does address the relationship between the meaning of the general construction and the allostructions, his analysis remains couched in a single-layered level of meaning analysis typical of CxG (Section 2.1). This means that, even though the meaning of the general construction is more schematic and abstract than the meaning of the allostructions, it does not have a qualitatively different status. We maintain that it is potentially more fruitful to regard the meaning of the
allostructions and the meaning of the general construction as qualitatively different kinds of meaning. In order to provide the necessary background for this proposal, we briefly introduce a number of concepts pertaining to the semantics-pragmatics interface in the next section.

3.2. The semantics-pragmatics interface

Historically, the distinction between semantics and pragmatics has been drawn in various ways, e.g. in terms of truth-conditionality, context-dependence and the code-inference distinction (Carston, 2002; Ariel, 2008, 2010). Not only are these criteria different qua intention, they also delineate different fields qua extension. For example, using the code-inference distinction to distinguish between semantics and pragmatics yields different results than using the criterion of truth-conditionality/non-truth-conditionality to differentiate between them. The distinction between semantics and pragmatics in terms of code and inference is therefore in principle orthogonal to the distinction between semantics and pragmatics in terms of truth-conditionality and non-truth-conditionality, and the two concepts should be neatly separated (Carston, 2002; Ariel, 2008, 2010).

In this article, we adopt the now fairly established position that, terminologically, the difference between semantic and pragmatic meaning equates to the difference between encoded and inferred meaning (Carston, 2002, 2008; Ariel, 2008, 2010). According to this view, encoded meaning is contained within the linguistic code itself, whereas inferred meaning is meaning which supplements this code and is added via inference by language users in the process of utterance interpretation.

The necessity of distinguishing between encoded and inferred meaning has been argued for by various linguistic theories and frameworks. In the analytic tradition, the distinction was first offered by Grice (1989), who suggested that the encoded meaning of words and sentences largely amounts to truth-conditional meaning, while inferred meaning constitutes extra, often non-truth-conditional and defeasible meaning. Grice’s central account was later developed into a number of more fine-grained accounts by various scholars working within neo-Gricean pragmatics (henceforth NGP) (e.g. Atlas, 1989, 2005; Horn, 1989; Bach, 1994; Levinson, 2000; Geurts, 2010) and post-Gricean frameworks, including Relevance Theory (henceforth RT) (Sperber and Wilson 1986, 1988, 2002; Carston, 2002, 2012; Wilson and Carston, 2007; Ariel, 2008, 2010; Falkum and Vicente, 2015). One of the central insights of post-Gricean pragmatics is that pragmatic inference is necessary to a far greater extent than previously assumed to render an utterance truth-conditional. A set of similar, though not identical, distinctions pertaining to various kinds of meaning was developed even earlier within European structuralism, most notably by Coseriu and his school of Integral Linguistics (henceforth IL) (Coseriu, 1974 [1958], 1975 [1962], 1985, 1987, 1992, 2000 [1990], 2007; Willems, 1994, 1997, 2011; Coene and Willems, 2006; Van der Gucht et al., 2007; De Cuypere 2013).

While all of these approaches converge on the idea that the specific meaning contained in the linguistic code can and should be distinguished from meaning that arises as a result of inferential processes, there are also considerable differences between them (see Belligh and Willems, 2021 for discussion). For the purpose of our analysis, we adopt the following positions regarding the delineation of the code-inference distinction and specify which of the aforementioned frameworks they are compatible with.

1. The encoded meaning of both words and larger constructions is radically underspecified and is to be considered schematic and sub-propositional, in contrast to full-fledged concepts and complete propositions (Carston’s RT, Levinson’s and Atlas’ NGP, IL).
2. The encoded meaning of words and constructions is in principle language-specific and non-universal in nature (Levinson’s NGP, IL).
3. The criterion to distinguish between encoded and inferred meaning is defeasibility or cancellability (Levinson’s NGP, IL).
4. The distinctions between encoded and inferred meaning and truth-conditional and non-truth-conditional content are orthogonal. Full truth-conditional content can often only be found in the inferential domain and linguistic expressions can also semantically encode procedural, non-truth-conditional meanings (Atlas' and Levinson's NGP, IL, RT).
5. It is meaningful to distinguish terminologically between inferential processes that give rise to propositions as a result of pragmatically developing linguistically encoded meaning, i.e. ‘explicatures’ or ‘implicitures’, and those that add an extra layer of meaning that is unrelated to the compositional form of the utterance, i.e. ‘implicatures’ (Bach’s NGP, RT).
6. Within the domain of inferred meaning it is meaningful to distinguish between inferences that are drawn ‘by default’ and inferences that are only drawn in specific contexts (Geurts’ NGP, Levinson’s NGP, IL).5
7. Various accounts have been put forward regarding the maxims and heuristics that can guide language users from encoded meaning to inferred meaning. For our purposes, it is not necessary to pick sides in the debate between NGP and RT regarding the number of maxims involved in linguistic communication. We maintain that our account is in principle compatible with each of the specific proposals that have been outlined in the extensive literature on RT and NGP.

---

4 A number of frameworks make heterogeneous claims about different aspects of the code-inference distinction (Belligh and Willems, 2021). If this is the case the name of a specific author is added, e.g. “Carston’s RT” and “Levinson’s NGP”.

5 While we maintain that it is useful to distinguish between recurrent uses and nonce interpretations, we refrain from the theoretically more loaded claim that these recurrent uses would constitute a specific phenomenon in its own right that is radically different qua process from the ad hoc interpretations, which is a position defended in, for example, Levinson (2000).
3.3. Applying the semantics-pragmatics distinction to allostructions

Building on the conceptual apparatus outlined in the previous section, we put forward a possible way to address how the general construction and the allostructions relate to one another with respect to the meaning side of the constructional sign. Our central proposal is to align the distinction between the meaning of the general construction and the meanings of the allostructions with the distinction between encoded meaning and inferred meaning. In this kind of scenario, the general construction has an underspecified encoded semantics which cannot be cancelled and is therefore non-defeasible. This encoded semantics is an abstract, language-specific constructional meaning that underpins the more specific meanings associated with the allostructions. The allostructions, in turn, are linked with meanings that are pragmatic in nature, i.e. inferential. Some of these meanings occur frequently with a specific allostruction and can therefore be taken to arise by default, without however being instances of encoded meaning. The factors governing an alternation of two or more allostructions are considered as operating on the level of pragmatics. Both the propositions that result from pragmatically developing linguistically encoded meaning, i.e. explicatures or implicatures, and those that add an extra layer of meaning that is unrelated to the compositional form of the utterance, i.e. implicatures, are developed on the level of the allostructions. In the next section, we illustrate the feasibility and advantages of our proposal.

Prior to this, it is worthwhile stressing that the orthogonal nature of the relation between the semantics-pragmatics distinction in terms of truth-conditional and non-truth-conditional meaning and the semantics-pragmatics distinction in terms of encoded and inferred meaning has several consequences. First, it entails that the general construction can encode both truth-conditional and non-truth-conditional meaning, and that the inferred meaning connected to the allostructions can contribute to the determination of truth-conditions. If we wish to equate the semantics-pragmatics divide with the distinction between the general construction and the allostructions, it is only in the specific sense of semantics as encoded meaning and pragmatics as inferred meaning. If pragmatics is intended to cover only non-truth-conditional aspects of meaning, it should be thought of as contributing to both the general construction and the allostructions, and as an indispensible part of constructional meaning altogether. In fact, constructions have always been known to convey not only truth-conditional and context-insensitive content, but also non-truth-conditional and context-sensitive content (Fillmore et al., 1988; Langacker, 1987; Goldberg, 1995).

Second, it entails that our proposal cannot be considered as directly building on Goldberg’s (1995) seminal analysis of the English dative alternation, where she posits a link of “Semantic synonymy” between the variants of the dative alternation, and explains that the variants differ only in their “Pragmatic meaning”. In fact, Goldberg adheres to a single-layered view of linguistic meaning and distinguishes semantics from pragmatics only in the sense of truth-conditional vs. non-truth-conditionality, rather than in the sense of encoded vs. inferred meaning. In particular, Goldberg proposes “pragmatic” differences that pertain to information structure between the two constructions. From the perspective proposed in this article, information structure phenomena are not necessarily pragmatic, but can be semantic, i.e. encoded, or pragmatic, i.e. inferred, depending on the specific construction under scrutiny (Belligh, 2018, 2020, accepted).

Our theoretical claims align with many aspects of more recent proposals regarding the pragmatics of constructions, in particular those put forward by Cappelle (2017). However, our proposals diverge when it comes to encoded and inferred aspects of constructional meaning. Cappelle claims that many of the meanings that could in principle be inferred, and are therefore to be situated outside the encoded semantics of constructions, should in fact be considered part of the encoded meaning of the construction. Under this view, any meaning or function that has a somewhat conventional status should be incorporated into the encoded meaning of constructions. While we argue for an underspecified code that does not contain any defeasible material (see also Levinson’s and Atlas’ NGP and IL), Cappelle argues for a bulkier semantics that includes large amounts of information, including, for example, default implicatures. In other words, while our conception of the semantics-pragmatics interface distinguishes non-defeasible encoded meaning from recurrent implicatures that have some flavor of conventionality, Cappelle’s (2017) conception of the code conflates the level of non-defeasible encoded meaning with the level of generalized language use and default interpretations.

4. Case studies

4.1. A note on constructionhood

It should be noted from the outset that our analysis of the two case studies will consistently apply the “narrow” definition of constructionhood. A construction will be considered a form-meaning pairing in its own right if and only if its meaning is not compositionally derivable from the meaning of the lexical items that instantiate it (Goldberg, 1995: 4). In a number of recent developments of CxG (Goldberg, 2006, 2019), a broader definition of what constitutes a construction has been proposed which grants constructionhood to any structure that occurs “sufficiently frequently” with a certain meaning or function to be “cognitively entrenched”. While we acknowledge these recent developments, we stick to the narrow definition for two main reasons. First, following Stefanowitsch (2011), we maintain that criteria such as “occurring sufficiently frequently” or “being cognitively entrenched” remain to a large extent arbitrary, vague and not clearly defined. They therefore do not allow constructionhood to be determined in a rigorous and empirically viable manner. Second, the criterion of cognitive entrenchment makes the CxG enterprise dependent on a number of highly contentious commitments typical of Cognitive Linguistics. We maintain that constructional analyses of linguistic data can be conducted without having to rely on...
speculative assumptions pertaining to the psychological reality of constructions (cf. Belligh, accepted). We therefore decided to avoid adopting criteria that make CxG dependent on assumptions of this kind, especially in the light of more rigorous linguistic criteria that come with the narrow definition of constructionhood.

4.2. The German AGENT-THEME-GOAL construction at the basis of the German ditransitive alternation

The German ditransitive\(^6\) alternation concerns two variants that are expressed as follows. The idea of an AGENT transferring a THEME to a RECIPIENT is either expressed via the Indirect Object construction (IOC) where the RECIPIENT-like argument is coded in the dative case (4), or via the Prepositional Object Construction (POC), where it is coded by the preposition an\(^7\) and a NP in the accusative case (5).

\[(4)\] Diese Abteilungen schicken der Klinik die meisten Patienten.  
'These departments send the clinic the most patients.'

\[(5)\] Der behandelnde Arzt schickt Röntgenaufnahmen an die Universitätsklinik.  
'The attending physician sends x-rays to the university hospital.'

Traditionally, their English counterparts, the Double Object Construction (DOC) (e.g. He gives Mary the book) and the Prepositional Object Construction (POC) (e.g. He gives the book to Mary), have been treated as form-meaning pairings in their own right, each with their own form and meaning, i.e. NP V NP NP and ‘Caused Possession’ vs. NP V NP PP and ‘(Transfer) Caused Motion’. For German, we argue that IOC and POC are not to be considered constructions in their own right, but instead constitute allostructions of a more general Transfer Construction encoded in the German grammar.

We adduced evidence for an allostructural analysis of the German ditransitive alternation on the basis of an empirical investigation of 3990 naturally occurring sentences with the German trivalent verbs geben (‘give’), schicken (‘send’), and senden (‘send’) drawn from DeReKo (Deutsches Referenzkorpus, IDS Mannheim). The aim of the study was to establish whether IOC and POC (an-POC as well as zu-POC) are candidates for constructionhood (cf. De Vaere et al., 2018, 2021).

From the outset, benefactive IOC attestations were not subsumed under the ditransitive alternation, because BENEFICIARIES, in contradistinction to RECIPIENTS, need to be considered as extra arguments which can be added to intransitive, monotransitive and ditransitive structures alike, and even occur with impersonal verbs as in (6) (cf. Malchukov et al., 2010: 2). Moreover, the presence of BENEFICIARIES is never required by the verb’s valency (Kittilä, 2005: 276). BENEFICIARY realizations such as (7), although arguably ambiguous as to whether the father can also be analyzed as a RECIPIENT, are therefore not considered to be part of the German ditransitive alternation.

\[(6)\] Es regnet mir ins Gesicht.  
'It is raining into my face.'

\[(7)\] Er schickt seinem Vater die Pflanzen nach Amerika.  
'He sends the plants to America for his father.'

Although they may occasionally fill the RECIPIENT slot, BENEFICIARIES are not part of the semantics of the Ditransitive Construction (Kittilä p.c., for whom the Ditransitive Construction corresponds to only DOC). Consequently, in accordance with the typological literature, we do not consider BENEFICIARIES as GOALS (cf. Bickel, 2011: 402). Furthermore, purely directional realizations such as (8) and (9) can instantiate the general transfer construction but are left undiscussed here because they do not partake in the alternation between POC and IOC, and hence are not considered to be ditransitive.

\[(8)\] Er schickt die Truppen an den Rhein.  
'He sends the troops to the river Rhine.'

\[(9)\] Sie schickt die Kinder nach Paris.  
'She sends the children to Paris.'

Finally, idiomatic chunks in POC such as (10) were excluded from our dataset because they do not alternate at all.

\[(10)\] Das Management schickt seine Parteibasis kurzerhand zum Teufel, samt Schuldenberg.  
'The management sends its party’s base to hell, including a mountain of debt.'

\(^6\) Unlike other analyses in CxG (e.g. Goldberg, 1995, 2006; Croft et al., 2001; Colleman, 2009), in which only the DOC is considered to be ditransitive, we apply the term ditransitive to both IOC and POC. We concur with Malchukov et al. (2010: 1) that "the formal manifestation of the arguments is not relevant".

\(^7\) Note that in German, alternation of IOC and POC with the preposition zu (+dative) is also possible with e.g. schicken and senden, especially when persons are being sent to other persons, e.g. Einen kranken Bürgermeister schickt man nicht zum Amtssitz. ‘You do not send an ill mayor to the medical officer’. To avoid unnecessary complexity, these cases are left undiscussed here.
The aforementioned dataset was annotated for 27 factors (De Vaere et al., 2018, 2021) mainly pertaining to traits of the agent, theme or recipient, e.g. animacy, definiteness, givenness, propernounhood, etc. For the purposes of an analysis in terms of semantics and pragmatics, the factor 'Transfer sense of the sentence verb', which refers to the denotational class of the verb, turned out to be particularly relevant to prove that the alternants are not two constructions in their own right, because this factor applies to the constructional meaning and all three arguments at the same time. For the 'Transfer Sense of the sentence verb', our analysis distinguished three senses, namely 'abstract' (as in Es sandte mir das Schicksal frühen Schlaf 'Fate sent me early sleep.'), 'concrete' (as in Schickt uns eure Zeichnungen bitte bis Samstag, 25. November 'Please send us your drawings before Saturday, 25th November.') and 'propositional' (=conveying linguistic information, as in Er gab die Anweisung an einen Zimmermann 'He gave the instruction to a carpenter.' ). When considering the different senses that the alternating variants can convey, our analysis not only revealed that the factor 'Transfer sense of the sentence verb' is not connected to either variant for the verbs geben, schicken and senden, but also that both IOC and POC occur with all three senses (abstract, concrete, propositional), so that neither of the two variants can be said to be associated with a particular contrasting meaning. Concrete transfer sense occurs both with IOC (11) and with POC (12), and so do the abstract and propositional transfer senses.

(11)  
Gib mir die Brieftasche!  
'Give me the wallet.'

(12)  
Sie können die CD dann an die Schulen geben.  
'They can then give the CD to the schools.'

Therefore, we argue that in German, IOC and POC are not two constructions in their own right with their own encoded semantics but form two variants of one and the same general ditransitive construction, or constructeme in Perek's (2015) sense. In this constructeme, the goal slot is left underspecified as to whether it will be formally realized in the dative or with a prepositional phrase in the accusative, and as to whether it will be realized as a recipient (or as an addressee\(^8\)) on the meaning side.

We refer to this encoded general construction as the agent-theme-goal (ATG) construction and assign to it a general 'ATG-transfer' meaning that can be paraphrased as follows: 'AGENT transfers THEME to GOAL'. Because this ATG-transfer meaning is semantically encoded, it is non-defeasible and was found in all of the 3990 instantiated cases. Conversely, the meanings 'Caused Possession' and 'Caused Motion', which are usually cited as the constructional meanings of the respective corresponding constructions DOC and POC in English, are not always instantiated by the German forms IOC and POC, respectively. Rather, they are recurrent pragmatic uses of the ATG in the respective allostructions. We did find that POC preferentially expresses 'Caused Motion' and that there is a strong tendency for IOC to express 'Caused Possession', but these senses are not to be considered as encoded meanings, because they remain defeasible.

Furthermore, because in German IOC can also be used to express a beneficiary\(^9\) as in (13) and an external possessor as in (14), IOC cannot be assigned the status of a unique, encoded form-meaning pairing.

(13)  
Vera mahnt dem Opa den Rasen.  
'Vera mows the lawn for her grandfather.'

(14)  
Man hörte ihr ihre Enttäuschung an.  
'One could hear her disappointment in her voice.'

In German, POC does not encode 'Caused Motion' as a unique form-meaning pairing either, see (15) and (16) in which the third argument is a kind of interlocutor or presents some form of motivation:

(15)  
Er verriet ihn an seine Feinde.  
'He betrayed him to his enemies.'

(16)  
Die Sendung regt die Zuschauer zum Nachdenken an.  
'The broadcast encourages the spectators to reflect.'

Finally, in German, 'Caused Possession' can also appear in other patterns than just IOC, cf. (17), and 'Caused Motion' in other patterns than POC, cf. (18):

(17)  
Der Nikolaus beschenkte die Kinder mit Süßigkeiten.  
'Santa Claus handed out candy to the children.'

(18)  
Der Springbrunnen versprüht das Wasser.  
'The fountain sprinkles the water.'

\(^8\) Following the scholarly tradition in the study of the German ditransitive alternation, we specifically reserve the term addressee for recipients of schicken/senden verbs. The term is well suited for cases in which the destination of a schicken/senden action is also conceived of as its receiver: e.g. Sie schickt die Kinder zu ihrer Oma, er schickt Briefe an seine Schule. We do not restrict the term addressee to ‘communication’, as is common practice in e.g. CxG.

\(^9\) The cases that were explicitly excluded from the dataset do not instantiate the ATG constructeme, but are to be considered as other, apparently homonymous, constructions which, on closer examination, have another valency.
Given this variation in the meanings of IOC and POC, we conclude that in German ‘Caused Possession’ and ‘Caused Motion’ are senses of a more general construction rather than semantically encoded meanings.

On the basis of the semantics-pragmatics model outlined in Section 3.2, it can be explained how pragmatic senses, such as ‘concrete transfer’ and ‘propositional transfer’, are constructed out of the general encoded meaning of ‘ATG transfer’. Example (19) evokes a different sense according to the context in which it is used. On the basis of context and language users’ inferential processes, it is possible to construct the explicature that the sending only amounts to a specific action that someone undertakes, for example repressing a rebellion, which is then symbolically interpreted by other dictators, resulting in a propositional sense.

(19) Er sendet ein Signal an andere Diktatoren der Welt.
‘He sends a signal to other dictators in the world.’

The conclusion that IOC and POC are not constructions in their own right, but rather variants of a single overarching constructeme is corroborated by typological evidence (Malchukov et al., 2010; Bickel, 2011; Haspelmath, 2013). In English, the Double Object Construction has neutral alignment, meaning that both the RECIPIENT and THEME argument are coded in the same way as the PATIENT in a monotransitive sentence (compare *He gives Mary the book* with *He sees Mary* and *He sees the book*). The POC has indirective alignment, meaning that the RECIPIENT is coded differently from the THEME and from the PATIENT in a monotransitive sentence (compare *He gives the book to Mary* with *He sees Mary*) (Malchukov et al., 2010: 3). English DOC and POC are therefore more amenable, from a formal point of view, to an analysis in terms of two constructions in their own right. By contrast, in German, both IOC and POC have indirective alignment, which further corroborates our analysis that they originate in one and the same ATG-construction and that IOC and POC are no constructions in their own right.

4.3. The English abstract genitive construction at the basis of the English genitive alternation

A second alternation which has received much attention in the constructionist literature is that between s-genitives, e.g. John’s parents, and of-genitives, e.g. the parents of John, better known as the English genitive alternation (e.g. Rosenbach, 2002, 2014; Hinrichs and Szmyrecsanyi, 2007; Borjars et al., 2013; Grafmiller, 2014). Like the German ditransitive alternation, it is subject to a number of discourse-functional factors which have been shown to correlate with one variant rather than another (cf. Section 2.2).

Despite their frequent interchangeability, it has been observed that not all s- and of-genitive NPs alternate. This is because the set of conceptual relations expressible by the of-genitive construction is supposedly a superset of those expressible by the s-genitive construction (Payne and Huddleston, 2002: 473–478). Stefanowitsch (2003) cites the following examples as evidence for non-interchangeable relations, cf. Table 1:

| Semantic relation                  | s-genitive                      | of-genitive                      |
|-----------------------------------|---------------------------------|----------------------------------|
| Possessee-Possessor               | Kate’s shoes                    | *the shoes of Kate               |
|                                   | John’s train                    | *the train of John               |
|                                   | the University’s budget         | the budget of the University     |
|                                   | our company’s assets            | the assets of our company        |
| Interpersonal relations           | your Emily                      | *the Emily of Diane              |
|                                   | Kate’s girl                     | *the girl of Kate                |
|                                   | Jody’s son                      | the son of my neighbour          |
| Thing-Constituent Material       | *the/a silk’s dress             | a dress of silk                  |
|                                   | *isolation’s sense              | a sense of isolation             |
| Subcategory-Category             | *the wood’s dark kind           | a dark kind of wood              |
|                                   | (his sort)                      | this sort of person              |
|                                   | *the population’s 50%           | 50% of the population            |
|                                   | *the company’s big chunk        | a big chunk of the company       |
| Subpart-Whole                    | *the water’s glass              | a glass of water                 |
|                                   | *the oranges’ bowl              | a bowl of oranges                |
| Depiction-Depicted               | (Lisa’s picture)                | a picture of Lisa                |
|                                   | ??the table’s picture           | a picture of the table           |
|                                   | *the riot’s footage             | the footage of the riot           |
According to Stefanowitsch, both constructions encode a reference-point mechanism whereby the possessor referent is made accessible via its relationship to the possessor referent (e.g. Langacker, 1993, 1995). Where they differ is in the semantic roles they assign to their two nominals: the nominals in the s-genitive construction encode the ‘possessor’–‘possessee’ relation, while those in the of-genitive construction encode the ‘entity’–‘intrinsic entity’ relation. The non-alternation of the NPs in Table 1 can be explained by the fact that certain semantic relations are incompatible with the semantic roles encoded by the construction in question.

For example, the ownership relation expressed by Kate’s shoes and John’s train is compatible with the possessor–possessee relation encoded by the s-genitive construction, but incompatible with the entity-intrinsic entity relation encoded by the of-genitive construction, barring the realization of the shoes of Kate and the train of John. Relational nouns such as budget and assets are different in that they evoke a relation as part of their semantics, which can override the entity-intrinsic entity relation encoded by the of-genitive, resulting in an ownership interpretation of the budget of the University and the assets of our company. Furthermore, there are a number of relations (subcategory-category, subpart-whole and thing-constituent material) that cannot be realized by the s-genitive construction. On the basis of these observations, Stefanowitsch (2003) concludes that we are dealing with two semantically distinct constructions.

We take issue with this argument for a number of reasons. Firstly, the evidence in Table 1 is based on intuition rather than empirical data. As will become apparent, a simple corpus and Google search reveals that there are numerous counterexamples invalidating Stefanowitsch’s judgements and show that the variation is not as restricted as previously claimed. Secondly, Stefanowitsch’s account fails to differentiate adequately between semantic and pragmatic meaning. We will argue that, once these two aspects of the meaning of s- and of-genitives are adequately delineated, it becomes possible to assume semantic meaning equivalence between the two constructions (Kolkmann, 2019).

The first issue concerns the fact that Stefanowitsch (2003) uses purely intuitive grammatical judgements to delineate which semantic relations are expressible by which construction. As evidenced by a BNC and Google search, numerous relations that according to Stefanowitsch are restricted to being expressible by only one construction and/or with certain types of nouns do behave very differently in practice. For example, the possessee–possessor relation as expressed by Kate’s shoes is not incompatible with the of-genitive construction when the possessee noun is non-relational, cf. (20):

(20) The Station Chief pointed between the trousered legs and the shoes of the Greek police and security officials. (BNC CLD52)

Similarly, interpersonal relations as expressed by Kate’s girl are also expressible by the of-genitive construction, especially when the possessor NP is long and heavy, cf. (21) and (22):

(21) The Duke of Cambridge, when talking about the birth of the brand new baby boy of Meghan Markle and Prince Harry, aka the Duke and Duchess of Sussex, said …

(22) The five-month-old baby girl of a New York City firefighter has died of coronavirus.

Lastly, the depiction-depicted relation is not restricted to of-genitives, cf. (23) and (24):

(23) Following Rahm Emanuel’s fumbling around the fatal shooting of LaQuan McDonald by Chicago police in 2014 and the year it took to release the incident’s footage, Cook County State’s Attorney Anita Alvarez says everything was handled just fine.

(24) The insertion of the riot’s footage in Blue Sky form Pain shows us children seizing access, however improbably, however briefly, to the scene of appearance, thanks to the solidarity of others.

The other semantic relations in Table 1 expressed by of-genitives, i.e. thing-constituent material (e.g. a dress of silk), subcategory-category (e.g. a dark kind of wood) and subpart-whole (e.g. a big chunk of the company), which according to Stefanowitsch (2003: 429) cannot be encoded by the s-genitive, have been argued to be associated with different constructions altogether. According to Peters and Westerståhl (2013), not all post-nominal prepositional NPs that on the surface resemble of-genitives are “true” possessives. A distinguishing feature of true possessives which exists for both s- and of-genitives is what Peters and Westerståhl call freedom of the possessive relation. Freedom means that the semantic relation expressed by any genitive NP is not semantically predetermined but has to be worked out pragmatically in context, making the term semantic relation in fact a misnomer. Under this conception, the notion of freedom is incompatible with

---

10 Stefanowitsch (2003: 430) defines an intrinsic relation as “the relation between an entity and the smaller entities which it consists of or the larger entity which it is a part of, e.g. a wall made out of bricks”. He goes on to say that “[g]iven this definition, the of-genitive can be characterized as a construction encoding a reference-point relation between one entity and another entity which is intrinsically related to the first entity.”

11 https://www.ababynonboard.com/rules-of-the-sleep-deprivation-society-for-meghan-harry-royal-baby/.

12 https://www.dailymail.co.uk/news/article-8250635/Five-month-old-baby-girl-NY-firefighter-dies-coronavirus.html.

13 https://jezebel.com/cook-county-states-attorney-thinks-laquan-mcdonalds-sho-1757351879.

14 https://read.dukepress.edu/critical-times/article/2/3/435/149397/Humanitarian-Detention-and-Figures-of-Persistence.
Stefanowitsch’s account, which locates the different relations genitive NPs are able to express on the level of semantically encoded meaning.

To illustrate the context-dependence of the possessive relation, Peters and Westerståhl (2013: 734) observe that

John’s book, for example, can be the book that John uses to prop open his door on hot days, or the one he was assigned to write a report on, or the one he named as his choice if stranded on a desert island, or any one of a plethora of other relations that have no intrinsic connection whatsoever to any part of the sentence

John’s book is “War and Peace”.

As evidenced by (25) and (26) (from Peters and Westerståhl, 2013: 734), this interpretational flexibility is not limited to non-relational nouns such as book, which have been argued to receive a greater range of possessive interpretations than relational nouns such as mother and father (e.g. Partee, 1983/1997; Barker, 1995):

(25) John’s mothers are always wandering off.
(26) As a young lawyer, I was really learning to do cases from fathers of mine around the country.

In (25), John’s mothers could refer to the mothers John is assigned to guide in an outing. As (26) shows, freedom holds for of-genitives too: here, fathers of mine could refer to fathers represented by the lawyer in court. The crucial point is that, contrary to fathers of mine, which is a token of the of-genitive construction proper, the of-genitive-like NPs cited by Stefanowitsch that do not alternate with their s-genitive counterparts do not exhibit freedom of the possessive relation: a dress made of silk, a dark kind of wood, a bowl of oranges and similar kinds of NPs all receive fixed interpretations (‘a dress made of silk’, ‘wood that has a dark color’, ‘a bowl containing oranges’) and are not amenable to other pragmatically determined interpretations. What is more, these of-phrases allow for indefinite syntax, while the s-genitive construction codes definiteness (see e.g. Rosenbach, 2002 and many others), and are thus not considered to be real alternating variants. The allostructural account put forward here does therefore not subsume of-phrases of the above kind, nor does it include other phrases that on the surface resemble determining genitives, such as partitives (e.g. two of my friends) or classifying genitives (e.g. a driver’s license, a bird’s nest).

Under this account, then, only of-genitive NPs which exhibit freedom of the possessive relation are considered tokens of the of-genitive construction proper. Given that Stefanowitsch’s examples do not exhibit freedom, they are not considered of-genitives in the first place, which avoids the issue of non-alternation for the semantic relations in question. What is more, those of-genitive NPs that do exhibit freedom are interchangeable with their s-genitive counterparts. This combined with the attested examples testifying to the variation between the other semantic relations which have hitherto been claimed not to alternate suggests that in practice, all s-genitives and of-genitives so defined have the potential to alternate. From here, it is not a far leap to assume meaning equivalence between the two constructions. As we will argue next, this assumption becomes tenable once semantic and pragmatic aspects of possessive interpretations are teased apart.

The second issue with Stefanowitsch’s account lies in the fact that he does not differentiate between semantic and pragmatic aspects of possessive interpretations. As we have established, the two genitive constructions display differences at a) the discourse-functional level and b) the truth-conditional level, resulting from the fact that the semantic relation which holds between the two nominals is context-dependent (qua freedom). We assume in line with previous constructionist approaches (including Stefanowitsch, 2003) that discourse-functional differences fall within the remit of stylistic variation. Contrary to Stefanowitsch, however, we argue that the differences displayed by s- and of-genitives at the truth-conditional level - that is, in terms of the different relations they can express - do not result from differences in semantic meaning. Rather, they are to be situated on the level of pragmatics, thereby circumventing the need to stipulate two semantically distinct constructions.

We thus assume in line with the approach outlined in Section 3.2 that the truth-conditional level of utterance interpretation requires pragmatic inference. For genitive NPs this means that, in order to yield a truth-evaluable proposition, they have to undergo a mandatory pragmatic process called saturation (Recanati, 2004, 2010), which fills empty slots in the logical form of referring expressions. To give an example, an addressee interpreting an utterance containing the NP Kate’s shoes would be required to saturate the relation between Kate and the shoes, e.g. the shoes owned by Kate, the shoes sold by Kate, the shoes Kate is dreaming about, etc., and it is only then that the expression as a whole can be evaluated for its truth (e.g. Gutzmann, 2010; Gutzmann and Schuhmacher, 2018). This goes for s- and of-genitives alike (see Kolkmann, 2019 for a detailed account).

Given their similarities and differences, we argue that s- and of-genitives do not constitute distinct form-meaning pairings but are better viewed as allostructions of an abstract genitive constructeme which is underspecified in both form and meaning. Form-wise, the realization of either the N(P)’s N frame or the the N of N(P) frame depends on well-established discourse-functional factors such as animacy and length of the possessor, the presence or absence of a final sibilant, and others (see Section 2.2). Meaning-wise, the precise truth-conditional relation between the two nominals depends on the context of the utterance, the speaker’s intentions, etc. and constitutes part of the explicit content of the utterance containing
the genitive NP in question. Semantically, the constructeme specifies a general underspecified possessive relation \( R \) between the two nominals, paraphrasable as ‘the N2 which stands in some possessive relation to N1’. The specifics of which are fleshed out in context. Importantly, the truth-conditional meaning of any genitive NP is defeasible and may be cancelled in context, which is a hallmark of pragmatic meaning.

The value of differentiating between semantic and pragmatic meaning for genitive NPs lies in the fact that it avoids the need to stipulate two semantically distinct constructions. As we have argued here, s- and of-genitives are semantically equivalent in that both encode an underspecified possessive relation \( R \) between two nominals, which in turn is resolved pragmatically. The differences that have been observed for both constructions at the discourse-functional and truth-conditional level are located on the level of pragmatics, and can be accommodated in our adapted allostructural model.

5. The limits of allostructions

In addition to proposing an allostructural analysis for the English particle placement construction, which constitutes a phrase-level construction, Cappelle (2006) suggests that this approach can also be applied to the analysis of constructions on the morphological, phonological and sentential level. Regarding the sentential level, Cappelle (2006: 21) states:

We can likewise extend the general concept of allostructions to what Lambrecht (1994: 6) [...] refers to as “allo-sentences”: "semantically equivalent but formally and pragmatically divergent sentence pairs, such as active vs. passive, canonical vs. topicalized, canonical vs. clefted or dislocated, subject-accented vs. predicate-accented sentences, etc.

We agree that the allostructural analysis is applicable to various types of constructions, including the English particle placement constructions, the German ditransitive constructions and the English genitive constructions (see Sections 4.2 and 4.3). However, we think it is questionable to what degree the analysis is applicable to allosentences in Lambrecht’s (1994) sense.

The adequacy of the allostructural analysis for the three aforementioned cases stems from the fact that the two allostructions are closely related both formally and in terms of their meaning. On the formal side, it is possible to postulate a general construction that is underspecified with regard to word order and case assignment in the broad sense. At the same time, it is specified with regard to many other formal aspects. For example, the general English particle placement construction is formally characterized by the presence of a subject NP, a verb, a particle, and an object NP. The general German ditransitive construction is formally characterized by its two object arguments, a theme-like argument in the accusative case and an underspecified recipient-like argument, in addition to an agent-like subject argument in the nominative case. The general English genitive construction is formally characterized by its two nominals and an underspecified possessive marker, instantiated by ‘s or of, indicating a relationship between them.

On the meaning side, an encoded, non-defeasible semantics can be determined for the general constructions which underpins the various pragmatic uses associated with the allostructions. In the case of the German ditransitive constructions, a general encoded meaning of ‘ATG Transfer’ underlies the various pragmatic uses of its allostructions, such as ‘Caused Possession’ and ‘Caused Motion’. In the case of the English genitive constructions, a general encoded meaning of ‘Possession’ underlies the various pragmatic uses of its allostructions, such as ‘ownership’, ‘kinship’, and ‘part-whole’. In sum, given the relatedness on both the form and the meaning side in both cases, it is viable to determine a general construction underlying the two allostructions.

Coming back now to the allosentences described by Lambrecht (1994), there seems to be no reason to assume an underlying general construction, neither on formal nor on meaning grounds. This is because the amount of variability among allosentences does not warrant it. Consider the following Italian sentences, which truth-conditionally all convey the fact that ‘Giovanni ate the strawberries’. They would all qualify as examples of allosentences in Lambrecht’s (1994) terminology:

(27) Giovanni ha mangiato le fragole.
(28) È Giovanni che ha mangiato le fragole.
(29) Le fragole, le ha mangiato Giovanni.
(30) C’è Giovanni che ha mangiato le fragole.
(31) Ha mangiato le fragole, Giovanni.
(32) GIOVANNI ha mangiato le fragole.
(33) Giovanni ha MANGIATO le fragole.
(34) Giovanni ha mangiato LE FRAGOLE.

The formal variation among these sentential structures is considerable, including so-called canonical sentences (27), prototypical clefted sentences (28), topicalized sentences (29), non-prototypical clefted sentences (30), sentences with right dislocated constituents (31), subject-accented sentences (32) and predicate-accented sentences (33 & 34). Given this ample morphosyntactic and prosodic formal variation, it is questionable whether it is meaningful to determine a constructional

---

15 The umbrella term ‘possessions’ subsumes, aside from legal ownership, numerous other relations such as kinship (John’s brother), locations (Germany’s capital), temporal relations (yesterday’s meeting) and further associative relationships between two entities.
template that would underlie these formally radically different constructions. A template that would be broad enough to cover all of these various structures is bound to be so vacuous that it can serve as a template for any construction in the language and is hence bound to lose its status as a template altogether. While the canonical sentence (27) and, arguably, the prosodically marked constructions (32), (33) and (34) can be said to instantiate a transitive construction template SVO, this is not the case for the clefted constructions (28) and (30), and the topicalized sentences (29) and (31), which have a different syntactic structure.

The diversity of Lambrecht’s allosentences is already considerable on the formal side, and this is even more evident on the meaning side. Lambrecht (1994) explains at great length how allosentences are radically different when it comes to various aspects of information structure, such as topic-comment structure, focus-background articulation and referential givenness. Information structure is a somewhat special type of linguistic meaning that has been referred to in the literature as procedural meaning (Blakemore, 2002; Carston, 2016), non-propositional meaning (Lambrecht, 1994) and textual metafunction (Halliday and Matthiessen, 2014), in contrast with the more prototypical kinds of (constructional) meaning we have focused on in this paper, which themselves are often referred to as conceptual meaning (Blakemore, 2002; Carston, 2016), propositional meaning (Lambrecht, 1994) and ideational metafunction (Halliday and Matthiessen, 2014). Procedural and textual meaning are nevertheless part and parcel of linguistic meaning (Belligh, 2018, 2020, accepted) and information structure constructions are as much form-meaning pairings as other constructions (Lambrecht, 1994; Leino, 2013).

Lambrecht’s claim that allosentences would be “semantically equivalent” should be understood here merely in terms of equal truth-conditions and not in terms of semantically encoded meaning. As argued above, linguistic meaning is far broader and richer than truth-conditional content, and it can be concluded that allosentences have radically different (procedural) meanings. This includes the difference between conveying argument-focus, predicate-focus or sentence-focus (Lambrecht, 1994), the difference between conveying thetic and categorical judgments (Sasse, 2006) and the difference between being activated and being believed (Dryer, 1996). Furthermore, it is doubtful whether allosentences are in fact “semantically equivalent” even in the narrow truth-conditional sense, given that focus articulation can interact to some degree with truth-conditions via the interpretation of focus particles (Krifka, 2008).

When it comes to procedural meaning, Lambrecht’s allosentences thus have radically different meanings. Of course, many of the constructions we consider to be allostructions can also differ to some extent in procedural meaning, especially when it comes to topic-comment and focus-background structure. However, in those cases it is possible to determine a shared encoded conceptual or ideational meaning, as illustrated in our case studies for the German ditransitive alternation and the English genitive alternation. For a general construction that would underlie all the various allosentences, on the other hand, it seems impossible to determine an encoded conceptual or ideational meaning. In fact, very little conceptual meaning can be determined on the level of a skeletal, lexically non-filled clausal construction that would underlie the various allosentences. The conceptual and truth-conditional building blocks of a sentence are normally only traceable if at least some information about the sentential structure is specified, or if the lexical elements that can fill a constructional template are at least partially present. Therefore, there seems to be no reason to postulate a general form-meaning pairing underlying such allosentences, since no coherent encoded meaning, either conceptual or procedural, can be determined.

We maintain that an analysis in terms of allostructions is only meaningful if it is reserved for those cases where two or more constructions are closely related, both formally and content-wise. Only when these criteria are met does it become meaningful to determine a general construction which serves as the underspecified formal template for the more specified allostructions, and which has an encoded meaning that lies at the basis of the various uses realizable by the various allostructions. By reserving the allostructional analysis for those alternations which warrant it, Cappelle’s (2006) proposal can be considered a viable alternative to traditional constructional analyses where each construction is studied in its own right (cf. Section 2.1).

6. Conclusion

In this article, we revisited the concept of allostructions, introduced by Cappelle (2006) as a new way of analyzing alternating constructions within CxG. Although Cappelle’s proposal has inspired a number of other studies to apply an allostructional analysis, this innovation has hitherto been applied rather scarcely. A first contribution of this article was to argue in favor of an allostructional account for two alternations that have previously been treated as an epiphenomenon of two underlying independent constructions: the German ditransitive alternation and the English genitive alternation. For both, we determined a general construction, or constructeme, with an underspecified form and meaning and related this to the allostructions that instantiate it.

A second contribution of our article was a theoretical elaboration of the concept of allostructions. Although the idea of allostructional analysis has been a major innovation in CxG, we believe that some aspects of the concept have remained underdeveloped. In particular, we argued that the meaning side of the general construction was not fully developed in Cappelle’s (2006) original proposal and that Perek’s (2015) proposal was couched in a single-layered view of meaning that does not adequately distinguish between qualitatively different kinds of meaning. Given that CxG is a sign-based approach to language, we maintain that form and meaning should receive at least equal attention and that the meaning of the general construction needed to be further explored.

We have aimed here to fill this gap by proposing an account whereby the distinction between the meaning of the general construction and the meaning of the allostructions aligns with the distinction between semantics and pragmatics. We
equated the semantics-pragmatics distinction with the distinction between encoded and inferred meaning, respectively. Building on work conducted in Neo-Gricean Pragmatics, Relevance Theory and Integral Linguistics, we proposed a number of specific positions that state our view on the semantics-pragmatics interface. We subsequently applied these insights to the analysis of the German ditransitive alternation and the English genitive alternation. Specifically, we argued for an encoded semantics of ‘ATG transfer’ for the general construction underlying the German ditransitive alternation and an encoded semantics of ‘General relation of possession’ for the general construction underlying the English genitive alternation, with all other senses and uses belonging to the domain of inferred pragmatics.

While demonstrating the possibility and fruitfulness of an allostructional analysis for two new pairs of alternating constructions, we also made a number of critical observations about the wider applicability of allostructional analyses. In particular, we argued that for allsentences as defined in Lambrecht (1994), an allostructional analysis would prove to be rather trivial and useless. Allostructural analyses for alternating constructions are therefore only advantageous and profitable in certain cases. In many other cases, the traditional constructional analysis in terms of independent constructions remains a more valid and effective way to study alternating constructions.

In sum, we hope to have fruitfully revisited the notion of allostructions by presenting a more refined account which demonstrates its applicability to two new pairs of alternating constructions, while simultaneously drawing out its limits.

References

Ariel, Mira, 2008. Pragmatics and Grammar. Cambridge University Press, Cambridge.
Ariel, Mira, 2010. Defining Pragmatics. Cambridge University Press, Cambridge.
Atlas, David, 1989. Philosophy without Ambiguity. Clarendon Press, Oxford.
Atlas, David, 2005. Logic, Meaning, and Conversation: Semantical Undeterminedness, Implication, and Their Interface. Oxford University Press, Oxford.
Bach, Kent, 1994. Conversational implicature. Mind Lang. 9 (2), 124–162.
Barker, Chris, 1995. Possessive Descriptions. CSLI Publications, Stanford, CA.
Belligh, Thomas. Accepted. Dutch thetic and sentence-focus constructions on the semantics-pragmatics interface: a case study. Stud. Lang.
Belligh, Thomas, 2018. The role of referential givens in Dutch alternating presentational constructions. Belgian J. Linguist. 32, 21–52. https://doi.org/10.1075/bjl.018bel.
Belligh, Thomas, 2020. Are theticity and sentence-focus encoded grammatical categories in Dutch? In: Abraham, Werner, Leis, Elisabeth, Fujinawa, Yasuhiro (Eds.), Linguistik Aktuell/Linguistics Today: Theoretical and Categorical. John Benjamins, Amsterdam, pp. 34–68. https://doi.org/10.1075/la.262.02bel.
Belligh, Thomas, Willems, Klaas, 2021. What’s in a code? The code-inference distinction in Neo-Gricean Pragmatics, Relevance Theory, and Integral Linguistics. Lang. Sci. 83 (1) https://doi.org/10.1016/j.langsci.2020.101310.
Bickel, Balthasar, 2011. Grammatical relations typology. In: Jung Song, Jae (Ed.), The Oxford Handbook of Linguistic Typology. Oxford University Press, Oxford, pp. 399–444.
Blakemore, Diane, 2002. Relevance and Linguistic Meaning: the Semantics and Pragmatics of Discourse Markers. Cambridge University Press, Cambridge.
Börjars, Kersti, Denison, David, Krajewski, Grzegorz, Scott, Alan K., 2013. Expression of possession in English: the significance of the right edge. In: Börjars, Kersti, Denison, David, Scott, Alan K. (Eds.), Morphosyntactic Categories and the Expression of Possession 1213–1148: John Benjamins, Amsterdam.
Cappelle, Bert, 2014. Variation in English genitives across modality and genres. Engl. Lang. Ling. 18 (3), 471–496.
Cappelle, Bert, 2006. Particle placement and the case for semantics of analysis of the German ditransitive alternation and the English genitive alternation. Speci
Cappelle, Bert, 2009. Verb disposition in argument structure alternations. A corpus study of the Dutch dative alternation. Lang. Sci. 31, 593–623.
Carston, Robyn, 2016. The heterogeneity of procedural meaning. Lingua 175, 154–166.
Carston, Robyn, 2008. Linguistic communication and the semantics/pragmatics distinction. Synthese 165, 321–345.
Carston, Robyn, 2002. Thoughts and Utterances: the Pragmatics of Explicit Communication. Blackwell, Malden.
Coseriu, Eugenio, 2000 [1990]. Structural semantics and ‘cognitive’ semantics. Logos Lang. I (1), 19.
Coseriu, Eugenio, 2007. Sprachkompetenz. Grundzüge der Theorie des Sprechens. Gunter Narr Verlag, Tübingen.
Coseriu, Eugenio, 2008. Einführung in die Allgemeine Sprachwissenschaft. Francke Verlag, Tübingen.
Coseriu, Eugenio, 1992. Formen und Funktionen: Studien zur Grammatik. Max Niemeyer Verlag, Tübingen.
Coseriu, Eugenio, 1987. Sprachkompetenz: Grundzüge der Theorie des Sprechens. Gunter Narr Verlag, Tübingen.
Coseriu, Eugenio, 1985. Linguistic Competence: what is it really? Mod. Lang. Rev. 80 (4), 345–362.
Coseriu, Eugenio, 1987. Formen und Funktionen: Studien zur Grammatik. Max Niemeyer Verlag, Tübingen.
Coseriu, Eugenio, 1992. Einführung in die Allgemeine Sprachwissenschaft. Francke Verlag, Tübingen.
Coseriu, Eugenio, 1990 [1990]. Structural semantics and ‘cognitive’ semantics. Logos Lang. I (1), 19–42.
Coseriu, Eugenio, 2007. Sprachkompetenz. Grundzüge der Theorie des Sprechens. Gunter Narr Verlag, Tübingen.
Croft, William, Bardal, Johanna, Hollmann, Willem, Nielsen, Maaike, Sotirova, Violeta, Taoka, Chiaki, 2001. Discriminating verb meanings: the case of transfer verbs. Paper presented at the LAGB Autumn Meeting, Reading.
De Cuyper, Ludovic, 2013. Debiasing semantic analysis: the English preposition to. Lang. Sci. 31, 593–611.
De Cuyper, Ludovic, 2013. Making Pragmatics: A Constructive Grammar Approach to Argument Structure. The University of Chicago Press, London & Chicago.
De Cuyper, Ludovic, 2005. Linguist Theory. https://doi.org/10.1515/cllt-2017-0072.
De Vaere, Hilde, De Cuyper, Ludovic, Willems, Klaas, 2011. Alternating constructions with ditransitive geben in present-day German. Corpus Linguist.
De Vaere, Hilde, De Cuyper, Ludovic, Willems, Klaas, 2021. Constructional variation with two near-synonymous verbs: the case of schicken and senden in present-day German. Lang. Sci. 83 (1) https://doi.org/10.1016/j.langsci.2020.101313.
Dryer, Matthew S., 1996. Focus, pragmatic presupposition, and activated propositions. J. Pragmat. 26 (4), 475–523.
Falkum, Ingrid, Vicente, Agustín, 2015. Polysemic: current perspectives and approaches. Lingua 157, 1–16.
Ferreiro, Charles J., Kay, Paul, O’Connor, Mary Catherine, 1988. Regularity and idiomacity in grammatical constructions: the case of let alone. Language 64 (3), 501–538.
Finkbeiner, Rita, 2019. On the role of pragmatics in construction grammar. Construction and Frames: Special Issue 11 (2).
Geurts, Bart, 2010. Quantity Implicatures. Cambridge University Press, Cambridge.
Goldberg, Adele E., 1995. Constructions: A Construction Grammar Approach to Argument Structure. The University of Chicago Press, London & Chicago.
Goldberg, Adele E., 2002. Surface Generalisations: an alternative to alternative analyses. Cognit. Ling. 13 (4), 327–356.
Goldberg, Adele E., 2006. Constructions at Work: the Nature of Generalization in Language. Oxford University Press, Oxford.
Goldberg, Adele E., 2019. Explain Me This: Creativity, Competition, and the Partial Productivity of Constructions. Princeton University Press, Princeton.
Grafmiller, Jason, 2014. Variation in English genitives across modality and genres. Engl. Lang. Ling. 18 (3), 471–496.
Julia Kolkmann is a lecturer in English Language and Linguistics at the University of York. Her research focuses on the semantics and pragmatics of the present-day English noun phrase. First and foremost, she is interested in the methodological challenges presented by context-sensitive language and seeks to inform pragmatic theory by means of novel empirical findings. She has a PhD in English Language from the University of Manchester.

Thomas Belligh is a PhD student in General Linguistics at the Department of Linguistics of Ghent University. He obtained a master's degree in Linguistics and Literature (Ghent University), a bachelor's degree in Law (Ghent University) and is currently pursuing a bachelor's degree in Theoretical and Experimental Psychology (Ghent University). His main fields of research are information structure theory, the semantics-pragmatics interface, the relation between linguistics and psychology, and the epistemology of the language sciences. Currently his research is focused on the study of alternating thetic and sentence-focus constructions in contemporary Dutch and Italian.