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A constructionist analysis of gapping against the background of generative analyses

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Abstract: The present contribution starts from Goldberg and Perek's (2019) analysis of gapping within a constructionist framework. The authors promote their analysis as surpassing non-constructionist takes on gapping and ellipsis more generally. In particular, they claim predictive power. That this is not the whole truth is explained in detail in this contribution. It is shown which predictions can be made from their perspective versus from a generative perspective and it is discussed whether they are borne out. Furthermore, I highlight how the predictions relate to the fundamentals of the respective theories and, as a consequence, how they differ in kind.

Keywords: ellipsis; gapping; generative grammar; formal semantics; construction grammar; predictions

1 Introduction

Ellipsis phenomena have been extensively treated in the generative literature (for a fairly recent survey cf. Aelbrecht 2015, note also the composition of Craenenbroeck and Temmerman 2019). At the same time, ellipsis has received comparatively little attention from explicitly functional perspectives. An exception is Goldberg and Perek (2019) from a constructionist-functional point of view. Interestingly, the authors point out repeatedly that their account is capable of making predictions (Goldberg and Perek 2019: 188, 192, 194, 195, 198, 204). Predictive power, however, is something that is standardly associated with generative accounts rather than with constructionist ones. Thus, the question arises whether and how constructionist and generative predictions might differ from each other. This is the question addressed by the present paper.

When comparing predictive power of generative versus constructionist approaches, ellipsis is well suited as an example. Not only is there the prompt by Goldberg and Perek (2019), but ellipsis also provides an extreme test case for the

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respective analyses underlying the predictions: both approaches struggle with incompleteness, each in its own way. This will be shown when presenting the approaches in Sections 2.2 and 2.3. Then Section 2.4 compares the two approaches with respect to predictivity. In sum, this paper elaborates for syntax on a point that has been made for morphology in Reiner (2022: 155): the kind of prediction hinges on the kind of theory.

By default, I will use the term *ellipsis* in the following sense:

> ellipsis = a structure that lacks grammatically obligatory parts but is robustly judged well formed by native speakers and conveys a complete predication – notably without signalling omission *as such* (e.g., by intonation)[1]

This definition more or less mirrors the ones provided by recent handbook entries from a generative syntax (Aelbrecht 2015) or formal semantics (Reich 2011) perspective (I will treat formal semantics as a close ally of generative syntax in the present paper). Constructionists, on the other hand, do not initially need a general notion of ellipsis, as will become apparent from the discussion in Section 2. However, the definition excludes the extreme view that all utterances are elliptical in the sense that they are not maximally specified semantically (sketched and refuted by Tschauder 1986: 464). So, in sum, the definition above is narrow but not too narrow. Moreover, it makes explicit what is so special about ellipsis: incomplete sentences can seem as if they were complete.

For practical reasons, the focus will be on one type of ellipsis, viz. gapping. This phenomenon will first be presented in theory-neutral terms, thereby proving that such translation is possible even when starting from the distinct terminology of generative frameworks. I consider this step crucial in comparing theories since otherwise any dialogue might end abruptly by stating that "The phenomena […] are all framed within the theoretical framework of […]" (Fortuin 2021: 49, commenting on D'Alessandro 2021). In fact, generative labels for ellipsis types represent an easy case of translation. Despite the opaque terminology (cf. *gapping*, *pseudogapping*, *sluicing*, *stripping*, *right node raising* etc.[2]), the terms can be readily transferred to theory-neutral parlance as long as constituents are accepted as building blocks of syntax. This assumption should be consensual among a broad range of linguists even though they may entertain quite different notions of syntax and have different views on how basic constituents are.

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1 This is not to say that prosody plays no role in ellipsis. The point of excluding prosody from the definition of ellipsis is merely excluding aposiopesis, i.e. consciously breaking-off an utterance. To the extent that this is accompanied by signals of omission *as such*, it is excluded by the definition, cf. Hoffmann (2006: 92–93), Imo (2013: 305–314), Zifonun (2017: 46–47).

2 For an overview, cf. Reich (2011), Aelbrecht (2015).

2 Gapping

2.1 The phenomenon

Gapping is defined for languages that require a morphosyntactically finite verb in every full clause. With respect to these languages, the term refers to the absence of at least the finite verb in such a way that the definition of ellipsis given above is met; in particular the relevant sentence as a whole is judged well formed despite its incompleteness and there is no signal of omission as such, prosodic or otherwise. As a result of omitting the finite verb, typically two constituents remain. Since these are not (perceptibly) linked by a finite verb, there seems to be a gap between them – hierarchically and often also linearly. This might have motivated the term *gapping* (cf. Klein 1993: 777). (1) represents a standard example.

(1) *Gonzo ate the peas, and/but Lola the carrots.*
(Aelbrecht 2015: 569)[3]

In (1), two independent clauses are conjoined, where the second one lacks a finite verb so that the conjunction is followed by no more than the subject and the object. For interpretation, the lacking part is in some way or other obtained from the first conjunct, which makes (2) a more explicit version of (1).

(2) *Gonzo ate the peas, and/but Lola* [*ate*] *the carrots.*

Apart from the definitional properties, gapping is observed to be restricted to the second conjunct of coordinations in English, cf. (3) and (4).

(3) * *Gonzo the peas, and/because Lola ate the carrots.*
(Aelbrecht 2015: 569)

(4) * *Gonzo ate the peas, although/because Lola the carrots.*
(Aelbrecht 2015: 569)

The present contribution will focus on the "English" type represented by (1) above. For an example of gapping in the first conjunct of a coordination, coming from a verb-final language, cf. Ross (1970: 258).

As to the sources of the definition and observations laid out above, the core, i.e. the absence of the finite verb, seems to be presupposed in most of the literature and is explicitly stated for example in Repp (2009b: 5). The same holds for the restriction to the second conjunct of coordinations, which can be traced back at least

3 In examples adopted from the literature, punctuation before connectives follows the original examples.

as far as Jackendoff (1971: 21). In contrast, the remaining of two constituents is from Aelbrecht (2015: 569).[4] In addition, her definition requires the remnants to be contrasted with their syntactic equivalents from the first clause. I prefer to remain agnostic as to whether these properties – the remaining of exactly (or at least) two constituents as well as the requirement of contrast – should be part of the definition or of the empirical observations.

As a last step in presenting the phenomenon of gapping, please recall that the above definition of gapping is restricted to languages that require a morpho-syntactically finite verb in every full clause. Nothing is said on whether all such languages in fact exhibit gapping or whether the notion of gapping can be extended to yet other languages (for discussion cf. Ross 1970 and subsequent literature). This uncertainty means that the theory-neutral definition at the beginning of this section comes at the price of losing immediate reference to universal grammar (UG).

Having been defined in a theory-neutral way, gapping can be viewed through different theoretical lenses in the following sections. I will first present the constructionist-functional approach offered by Goldberg and Perek (2019), then contrast it with generative approaches to gapping, and finally compare the two perspectives.

2.2 A constructionist-functional analysis

2.2.1 The analysis as such

Goldberg and Perek (2019) provide an analysis of gapping within the framework of construction grammar. This theory can be said to have a functional orientation in that it puts an emphasis on both form *and* semantic-pragmatic meaning (Goldberg 2013: 30); in particular, it regards many linguistic phenomena as motivated by communicative needs (e.g., Goldberg 2013: 23–25; Goldberg and Perek 2019: 188). Moreover, it contrasts with generative grammar in that it is ostentatiously non-generative (Goldberg 2013).

The fact that constructionists deal with ellipsis seems surprising in the first place. After all, the notion of ellipsis presupposes a notion of incompleteness, hence also a notion of completeness. This does not seem to fit well with the tenet that the primary unit of description is the construction, i.e. a learned form-meaning pair of virtually any size or type (Goldberg 2013: 17). Potential internal structure is

4 There, it reads as a part of the definition. Indeed, defining gapping (and also stripping) via the remnants rather than via the missing parts comes with the potential advantage that the definitions of ellipsis types refer to (maximal) constituents only.

secondary. For example, although the proverb *An eye for an eye and a tooth for a tooth* does not include a finite verb, it counts as a construction just like a canonical sentence does since the form is associated with a meaning ('retaliation in kind is the appropriate way to deal with an offence or crime'). Similarly, certain bound morphemes are constructions, e.g., *pre-* (Goldberg 2006: 5). In other words: constructions are inherently complete. However, it will be shown below in which sense there is (in)completeness even in construction grammar. This will be part of presenting the constructionist notion of gapping in the following paragraphs.

The constructionist notion of gapping, as offered by Goldberg and Perek (2019), is summarized in their formula below.

GAPPING (+ argument cluster conjunction) construction	
Register:	formal
Form:	overtly expressed: [P(X, Y, Z*)], [<conjunction> [**X'**, **Y'**]]
Function:	P(X, Y, Z*) <conjunction> P(X'_{focus}, Y'_{focus}, Z'*) X' ≠ X; Y' ≠ Y; Z' ≈ Z Determine second use of P using POINTER function to a recently uttered simple or compound verb including tense, aspect, and voice. X, Y, Z: arguments or adjuncts. Underlining is used to indicate form as opposed to interpretation. **Boldface** indicates lexical stress (here, on X' and Y')[5] Constituents are indicated by brackets. *: 0 or more. (Goldberg and Perek 2019: 194)[6]

The gapping construction appears to be quite straightforward and this is not the place to study the formula line by line (reference to the lines is for clarity only). Instead, I will merely explain its most basic aspects, to be taken up in the following sections.

The first line of the actual formula specifies the register where the construction tends to appear. From a constructionist perspective, this is not just a statistical observation but an integral part of the language user's knowledge about the function of the form (Goldberg and Perek 2019: 188). In particular, an elliptical construction might differ in overall pragmatic function from its full-fledged counterpart (Goldberg and Perek 2019: 196). Imagine, for instance, that (2) is pronounced fully in planned speech (e.g., *Gonzo ate the peas and Lola ate the carrots*). Given the option of

5 A reviewer remarks that the remnants rather bear focal stress. Presumably, Goldberg and Perek mean the same thing because stating that an English word form or one of its syllables bears lexical stress would be quite uninformative, cf. Gut (2013: 244).

6 The authors do not spell out the abbreviation "P" within the formula but shortly afterwards when discussing an example; it stands for 'predicate' (Goldberg and Perek 2019: 194).

gapping, the realization of the second verb violates Grice's (1975: 45–46) second maxim of quantity – or Horn's (1984: 13) R-principle or Levinson's (2000: 37–38) I-principle. The violation, being obvious to the hearer, invites implicatures like the one that Lola does not normally just eat (for example because of gastric gavage).

The next line specifies the form of the construction in a quite unsurprising way. After that, the next three lines give the function of the form just specified. This is the step that turns the whole thing into a potential construction: a form paired with a meaning. To be a true construction, however, the pair must also be stored holistically rather than composed on demand (Goldberg 2006: 5). Little is said in Goldberg and Perek (2019) on why gapping should be non-compositional. At most, the authors suggest the following argument: languages vary so wildly in precisely which elliptical structures they allow that there can be no organizing principle at work (Goldberg and Perek 2019: 198).

For now, I focus on the first line of the functional specification. Within the first part of the utterance (plus the conjunction), every formal unit corresponds to a functional unit. The second part, however, is enriched in such a way that it conveys a full predication too. Within this predication, the meanings of the contrasting arguments or adjuncts (X', Y') are focused while the meanings of potential further arguments or adjuncts from the first part (Z'*) simply reappear, more or less as they stand. In particular, adjuncts from the first part are understood in the second part as well. Consider, for instance, a variant of (1), i.e., (5).

(5) *Gonzo ate the peas for lunch, and Lola the carrots.* (constructed, T.R.)

Following the gapping construction formula, the meaning 'for lunch' (Z) simply reappears in the semantics of the second part. This is indeed the most natural reading according to my native speaker informant.[7] Thus, the gapping construction formula captures the fact that non-obligatory material may figure in the interpretation of the second conjunct. Surprisingly, this asset is not particularly emphasized by the authors.

More generally, the formula does not differentiate between arguments and adjuncts or between obligatory and non-obligatory material. This might raise the question whether the gapping construction instantiates ellipsis at all: recall that ellipsis was defined as the accepted absence of *obligatory* parts (Section 1). The answer is simple. As long as the finite verb is missing and as long as we take the finite verb to be obligatory, we are dealing with ellipsis in the sense of the present paper (cf. the definition of gapping in Section 2.1). I am of course speaking from an outside perspective here; from a constructionist (inside) perspective, the finite verb is not obligatory per se in every kind of clause. Rather, the individual construction

7 I thank Hannes Warcup (8 February 2022, 21 February 2023).

determines its slots and which of them have to be filled. This means that construction grammar does not need a general notion of ellipsis but can nonetheless devise constructions like the gapping construction, which do instantiate ellipsis from an external point of view.

As an interim summary, the actual function of the second conjunct is an expansion of its expressed function in that it (a) constitutes a full predication and (b) includes potential further arguments or adjuncts from the first conjunct. It was shown above how this enrichment is achieved with respect to arguments and adjuncts.

The question remains how the enrichment is achieved with respect to the finite verb. As to this, the gapping construction formula states in a separate line: "Determine second use of P using POINTER function to a recently uttered simple or compound verb including tense, aspect, and voice". The pointer function is introduced by the authors as a psychological mechanism that is required in describing language use also beyond ellipsis: expressions like *respectively*, *vice versa*, or *ditto* cannot be understood but by referring back to some previous linguistic expression (Goldberg and Perek 2019: 190–191). Likewise, [<conjunction> [**X'**, **Y'**]] prompts the hearer (and is intended in this way by the speaker) to recall a recently uttered verb that is specified for tense, aspect, and voice. I would add: it is *the* most recently uttered verb with the required specifications, i.e., the one from the first conjunct. Note that these specifications include neither agreement nor negation, which is important to keep in mind for later discussion (Section 2.2.2).

For present purposes, the most important point to note is that a notion of incompleteness has surfaced: the manifestly expressed function of the second conjunct is an incomplete version of its actual function. For example, the mere form codes 'and entity entity' while the meaning specifies 'and entity acts on entity'. This answers the question in which sense there can be incompleteness within a constructionist framework. To this end, not even the framework's dedication to surface form as opposed to underlying form has to be abandoned: all that is compared are two functions. Goldberg and Perek (2019: 189) call this relationship the "SAME-EXCEPT relationship", where the "SAME" is specified by the pointer mechanism introduced above.

Interestingly, the pointer points to form, not function (Goldberg and Perek 2019: 192). This rather conservative view, i.e. assuming memories of form rather than function, might constitute a missed opportunity: gapping is known to tolerate morphosyntactic but not morphosemantic mismatches (Reich 2011: 1859–1860). This fact would have been nicely captured by a pointer mechanism that is restricted to function. Maybe Goldberg and Perek refrained from imposing such a restriction because voice mismatches (which *are* generally disallowed by gapping) would then have to be classified as semantic rather than syntactic.

In sum, the gapping construction is characterized by the following properties, which have been rearranged here:

- It is independent of any general notion of ellipsis.
- It is not compositional.
- The predicate for the second part is retrieved from the first part by a psychological pointer-mechanism.
- Arguments and adjuncts are treated alike.
- In the register where it can be expected, it differs pragmatically from its full-fledged counterpart.

Having laid out and discussed the gapping construction formula, the next section highlights one of its potential assets: making predictions on novel data. The focus will be on how the predictions are arrived at, not yet on how far-reaching they are. Furthermore, one of the predictions will be examined critically.

2.2.2 Predictions

From Goldberg and Perek's (2019: 194–197) exposition it becomes quite clear that construction grammar can do what is usually considered the hallmark of formal accounts, i.e. predicting novel data (cf., e.g., D'Alessandro 2021: 54–58). Indeed, the gapping construction formula makes at least five correct predictions. Four of them are hidden in the properties already listed above, the fifth derives from a tiny detail of the formula that has not yet been addressed. Furthermore, only the third and fifth prediction are particularly emphasized by the authors while detecting the other ones as they stand is left to the reader.

First prediction: in less formal registers, the formal realization of the enriched function (i.e., no gapping) invites other or no implicatures compared to formal speech. If we equate formal speech with planned speech, this prediction is borne out by the discussion of (2) above: while its full version appears plausible as a spontaneous description of an observed scene, it appears over-explicit in planned speech, inviting implicatures.

Second prediction: the hearer/reader may enrich the second conjunct by (versions of) all non-contrasting arguments and adjuncts from the first conjunct. This prediction is borne out by (5) above and other examples can be imagined easily.

Third prediction: since the pointer points to tense, aspect, and voice, voice mismatches are predicted to be impossible in gapping. This prediction is borne out by (6) and (7).

(6) ?? *She ate ice cream, and string beans by him.*
intended: 'She ate ice cream, and string beans were eaten by him.'
(Goldberg and Perek 2019: 195)

(7) ?? *The duck was struck by a car, and a truck the goose.*
intended: 'The duck was struck by a car, and a truck struck the goose.'
(Goldberg and Perek 2019: 195)

Fourth prediction: to the extent that the pointer points to tense, aspect, and voice only, agreement mismatches are predicted or at least not excluded. Put differently, the pointer mechanism is sufficiently underspecified to allow for agreement mismatches. This prediction is borne out by the standard observation that gapping tolerates mismatches related to morphosyntax, including agreement (Reich 2011: 1859–1860). Reich's handbook example shows that the mismatch may even involve suppletive forms, cf. (8).

(8) German

…weil	*ich*	*alt*	*bin*	*und*	*er*	*jung.*
since	I	old	am	and	he	young

'… since I am old and he is young.'
['weil ich alt **bin** und er jung **ist**']
(Reich 2011: 1860)

Fifth prediction: there are so-called sloppy readings. The defining characteristic of sloppy readings is that, in some way or other, a pronoun is understood in an elliptical clause which, however, differs from its antecedent in reference (Reich 2011: 1865). This phenomenon is predicted to occur in gapping by Goldberg and Perek's formula to the extent that any arguments or adjuncts functionally reoccurring in the second part are not required to be strictly identical to their antecedents (Z ≈ Z'). This prediction is borne out by (9).[8]

(9) A: *You made me what I am today.*
B: *And you me.* ['And you made me what I am today.']
(Goldberg and Perek 2019: 194)

The argument functionally reoccurring in the second part (Z) is the caused object *what I am today*. So, in some way or other, there is an *I* in both turns but the first one refers to A whereas the second one refers to B. This is a sloppy reading in the sense specified above.

8 It has to be noted that this example represents one of the rare cases where sloppy (as opposed to strict) readings are obligatory (apparently due to turn-taking).

However, I will argue that the condition "Z ≈ Z'" does more harm than good. First, the ≈-sign does not specify which other kinds of non-strict identity are allowed (if any). Second, it remains unclear whether strict identity is an option, too (it certainly should be). Third, sloppy readings would be predicted by Z = Z just as well. The reason is that the notion of function does not distinguish between concept and referent (cf. the semantic triangle by Ogden and Richards 1923: 11). In fact, it is the *same* concept that occurs in both parts of a gapping structure like (9). This becomes clear from the paraphrases in (10).

(10) A: *Current addressee made current speaker what current speaker is today.*
B: *And current addressee current made speaker what current speaker is today.*[9]

In both turns, the relevant concept is 'current speaker', irrespective of the fact that it relates to different referents. So I dare to conclude that sloppy readings are not sloppy at all. Therefore, I will not treat them further in the present paper.

To round off the present section, Goldberg and Perek's constructionist-functional account of gapping makes several correct predictions, as advertised by the authors. Some of them might seem to be trivial in deriving directly from the definition. This point, among others, will be addressed in Section 2.3.2., when comparing the constructionist-functional approach to generative/formal semantic ones. Before that, I introduce the latter in the following section.

2.3 Generative and formal semantic analyses

There is no shortage of generative analyses of gapping (to name just a few: Bîlbîie and La Fuente 2021; Broekhuis 2018; Carlson et al. 2005, Féry and Hartmann 2005; Johnson 2009; Repp 2009a, 2009b). Likewise, there is no shortage of such analyses of ellipsis generally (overviews in Aelbrecht 2015; Reich 2011). In order to set the constructionist analysis above against this wealth of generative and formal semantic analyses, I will focus on the list of properties at the end of Section 2.2.1. There, gapping was characterized from a constructionist point of view as: independent of any general notion of ellipsis, non-compositional, working with a psychological pointer mechanism

9 Standard examples of sloppy readings, where the sloppy reading is optional, can also be rendered this way, cf. (i) versus (ii).

(i) *John scratched his arm and Bill did, too* (VP-ellipsis, Reich 2011: 1865)
(ii) *John scratched some male person's arm and Bill scratched some male person's arm, too.*

for retrieval, blind to the argument-adjunct distinction, and heavily dependent on pragmatics. These properties contrast with standard properties of generative and formal semantic approaches.

2.3.1 Characteristics of the analyses

2.3.1.1 Ellipsis as a notional problem

Elliptical structures per se appear to combine two traits that are actually incompatible from a generative perspective: they are at the same time grammatical and incomplete. In order to solve this paradox, one usually tries to restore completeness by copy or deletion accounts of retrieval (cf. the overview in Aelbrecht 2015).

Even more fundamentally, incompleteness has its own problems. By incompleteness I mean the absence of obligatory material (cf. the definition in Section 1). This is also something that Reich (2011: 1850) emphasizes in delimiting ellipsis. For example, (11) is not ellipsis according to Reich.

(11) *She ate for hours.*
(Reich 2011: 1850)

The reason is that the theme argument of *eat* does not have to be realized anyway. As a consequence, however, (12) is not ellipsis either since the missing material is not obligatory.

(12) *She ate and he drank for hours.*
(meaning that both activities lasted for hours)

In contrast, (13) would be an example of Reich's leftward deletion (traditionally known as right node raising), which is a type of ellipsis. This is due to the fact that the patient arguments of *pat* and *stroke* usually must be realized.

(13) *She patted and he stroked the cat.*

By the same reasoning, (14) below qualifies as ellipsis but only because of the missing argument not because of the missing adjunct.

(14) *She patted and he stroked the cat for hours.*
(meaning that both activities lasted for hours)

This means that, strictly speaking, the retrieval of adjuncts can only be discussed with respect to sentences that lack an argument as well – an undesirable situation. Alternatively, the definition of ellipsis may be loosened so as to include lacking parts which are not obligatory otherwise. Then, however, the question arises in which sense the parts are lacking at all. Perhaps they are lacking in comparison to the hearer's interpretation. This way out would be reminiscent of the gapping

construction formula and is discussed below in the subsection titled "Variable role of the argument-adjunct distinction".

2.3.1.2 Compositionality

Copy or deletion accounts of retrieval also serve to rescue the standard assumption of compositionality. That is, if the precise mechanisms at work in ellipsis can be stated, together with their triggers, then elliptical structures arise in a compositional way like all other structures. This seems to be easiest if the missing parts are conceived of as being somehow "there" after all. Exactly how they are "there" is the topic of the next section.

2.3.1.3 Retrieval by copy or deletion

One way for a missing element to be actually present in the analysis is that it is syntactically represented by an empty pronoun. This form then receives its interpretation either like an overt pronoun or via copying from the antecedent (Aelbrecht 2015: 573–575). In both cases, the presence of the empty pronoun instead of the full structure has to be licenced in some way or other. Approaches that assume such a pronoun will be subsumed under "copy" approaches in the following. Another way for a missing element to be actually present is that it has not arrived at spell-out (Aelbrecht 2015: 575–576). What must be licenced here is the deletion of the element before it can be pronounced. I will call these approaches "deletion" approaches in the following.

From a language processing perspective, the hearer recognizes the licencing conditions for ellipsis (or a given type of ellipsis) and is prompted to reconstruct or reactivate the missing material. Whether reconstruction or reactivation is the psychologically correct option is still open to debate. A recent psycholinguistic contribution in favour of reactivation is Paape (2017), discussing VP-ellipsis, sluicing, and stripping. Kim et al. (2020) investigated gapping and found indications of reconstruction under certain conditions. Thus, the question whether ellipsis is processed in terms of reconstruction or reactivation may ultimately depend on the type of ellipsis. In this case, the general pointer mechanism invoked by Goldberg and Perek would be too general: pointing, as a holistic process, can only correspond to reactivation, not reconstruction.

2.3.1.4 Variable role of the argument-adjunct distinction

As to the question what exactly is retrieved, we saw above (Section 2.3.1) that the question cannot even be reasonably posed with respect to sentences like (12) if the definition of ellipsis is too narrow. Alternatively, a broader definition was envisaged

(otherwise retaining the characteristics from the initial definition) and is spelled-out now: ellipsis is the invariable presence of meaning that does not correspond to overt material. This is exactly the path that Aelbrecht (2010: 1, 2015: 563) takes, working within a deletion approach. Therefore, she is in a position to discuss at some length which adjuncts are retrieved in Dutch modal complement ellipsis (Aelbrecht 2010: 51–59).

Similarly, Repp (2009b), working more or less within a copy approach, appears to start from a sufficiently broad notion of ellipsis. Gapping is then analysed as follows: certain obligatory material, always including the finite verb, is silently copied from the first part to the second. Semantically, what is copied is the anchoring of the situation to the factual world. This analysis (very briefly summarized here) permits several correct predictions, to be presented in Section 2.3.2. However, it cannot directly generate the retrieval of non-obligatory material, in particular the retrieval of adjuncts. For example, it cannot – on its own – generate (5) above, repeated here for convenience.

(15) *Gonzo ate the peas for lunch, and Lola the carrots.*
(meaning that Lola had the carrots for lunch)

So there must be another way to generate the retrieval of adjuncts (or what looks like it). Indeed, the intended reading derives from Repp's (2009b: 83) *principle of balanced contrast*: "the two conjuncts of a gapping coordination must make the same kind of contribution to an overarching discourse topic". In (15), the first conjunct sets lunch choices as the discourse topic and the second conjunct can only make the same kind of contribution to this topic (kind of vegetable/food) if it is also about lunch. This means that, strictly speaking, the adjunct is not retrieved but its function is transferred pragmatically. The test case for this account versus the wholesale reactivation of adjuncts in Goldberg and Perek (2019) would be one where the broader context sets a discourse topic beyond the meaning of the adjunct. For example, 'for lunch' should not be understood in the second conjunct if (15) is an answer to the question *Has every child eaten at least one type of vegetable during the day?*. If it is understood all the same, this would indicate that Goldberg and Perek's wholesale reactivation of adjuncts is on the right track.

2.3.1.5 Pragmatics secondary

In the last section, a pragmatic principle was invoked in order to complement the syntactic-semantic analysis. Similarly, when differences between elliptical sentences and their full counterparts are discussed, the focus is on semantic differences rather than genuinely pragmatic ones. One of the classic examples even involves a

sentential meaning that is pragmatically unplausible. Compare the so-called parallel reading of VP-ellipsis (16) to the non-parallel reading of its full version (17).

(16) *The chickens are ready to eat and the children are, too.*
(Reich 2011: 1864)[10]

(17) *The chickens are ready to eat and the children are ready to eat, too.*

The elliptical version (16) is usually said to convey either that both the chickens and the children are done or that both the chickens and the children are waiting for the food to be served. Both scenarios are utterly unlikely, judging from world knowledge. In contrast, the non-elliptical version (17) allows for the more natural reading that the chickens are done and the children are waiting for the food to be served. A concise overview on parallel readings in VP-ellipsis can be found in Duffield and Matsuo (2009: 93–101).

However, pragmatic-only differences like the ones discussed by Goldberg and Perek (cf. Section 2.2) seem to play a minor role in generative or formal semantic accounts of ellipsis. In this regard, the constructionist account nicely complements the generative and formal semantic accounts.

Summing up, several characteristics of generative analyses of gapping and other ellipsis types were laid out and contrasted with the constructionist-functional account of gapping presented above. Metaphorically speaking, generativists must rescue completeness while constructionists get completeness for free. Along the way, some predictions of the accounts were discussed. There are, however, more, especially those following from the account by Repp. This is the topic of the next section.

2.3.2 Predictions

I will focus here on three predictions by Repp (2009a, 2009b) on gapping because they represent core properties of generative predictions to be discussed in Section 2.4. To repeat her analysis: certain obligatory material, always including the finite verb, is silently copied from the first part to the second. Semantically, what is copied is the anchoring of the situation to the factual world.

First prediction (Repp 2009a: 245–246): if the second part is a subordinate clause, the copying is blocked by a certain incompatibility. That is, the copy of the finite verb from the first part would introduce into the second part an independent anchoring of

10 The example goes back to Lakoff's (1968: 63) pronominal version *The children are ready to eat and so are the chickens.*

the situation to the factual world while the exact same situation is already anchored (dependently) by the complementizer. So gapping should not be possible here. This prediction is borne out by examples like (4) above and the standard observation that gapping is restricted to coordination at least in English.

Note that things might be different with respect to backward gapping. Personally, I tend to accept sentences like (18), which, however, did not receive high acceptability rates in an online survey (Tauber 2021).

(18) German
Wenn ihrem Sohn ein Hemd, kauft Katharina ihrer Tochter
if to.her son a button shirt buys Katharina to.her daughter
auch ein Kleid.
also a dress
'If Katharina buys a button shirt for her son, she also buys a dress for her daughter.' (intended)
(Tauber 2021)

Second prediction (Repp 2009b: 229): gapping is perfectly fine in coordinations *within* a subordinate clause but the second complementizer (subjunction) must not be realized. The reason is that complementizers are, semantically, one way of anchoring (see above) and thus, syntactically, get copied from the first conjunct. As a consequence, the position that the realized complementizer tries to occupy is already filled. Put another way, two dependent anchors of the same kind are too much. This prediction is borne out by (19); for examples from additional languages, cf. Repp (2009b, Chapter 5).

(19) English
I believe that Peter will travel with his wife to India and (**that*) *Martin with his colleagues to Switzerland.*
(Repp 2009b: 210)

Recently, it has been shown that this structure is, in fact, permitted in Spanish, with the degree of acceptability depending on the type of embedding verb (Bonke and Repp 2022). The authors argue that the relevant property is assertion embedding. Against this background, the Spanish data do not militate against Repp's original account since any additional assertion needs an additional anchor.

Third prediction (Repp 2009b, Chapter 2): if negation is copied from the first conjunct to the second, it must be part of the obligatory material for building clauses in the respective language. This predicts correctly that so-called distributed readings, cf. (20), are possible in languages like English, where negation is a head, hence obligatory, but not in languages like German, where negation is an adjunct, hence non-obligatory, cf. (21).

(20) *Max didn't read the book and Martha the magazine.*
(¬A) ∧ (¬B)
(Repp 2009b: 42)

(21) German[11]
?? *Max hat das Buch nicht gelesen und Martha die Zeitschrift.*
Max has the book not read and Martha the magazine
intended: 'Max did not read the book and Martha did not read the magazine.',
i.e. (¬A) ∧ (¬B)
(Repp 2009b: 42)

Please note that the account does not state that *all* obligatory material is copied, so the prediction is not that obligatory negation must be copied, merely that it can be copied. In fact, Repp shows already in the introduction to her monograph that other examples from English allow other readings (Repp 2009b: 2).

Beyond these specific predictions, it should also be noted that Repp's account does not at first glance require the presence of an explicit conjunction. This is different from Goldberg and Perek's gapping construction, which evidently does require a conjunction. However, Repp (2009b: 72) assumes that a coordination head like *and* is needed to complete the numeration of the second conjunct. Depending on what exactly may instantiate a conjunction/coordination head (a mere comma intonation?), both accounts do not seem to capture asyndetic gapping like in (22).

(22) German

Wir	*machen*	*Deine*	*Fotos,*	*Du*	*Karriere.*
we	make	your	photos	you	career

'We take your photos, you make it to the top.'
['Wir **machen** Deine Fotos, Du **machst** Karriere.']
(https://milled.com/studioline/wir-machen-deine-fotos-du-karriere-GNLjjCVRntt3N84W, accessed 7 March 2022)

Since asyndetic gapping appears to be an under-researched topic generally, I will not treat it any further in the present contribution but leave it as a topic to future research.

In sum, the predictions by Goldberg and Perek's constructionist-functional account (Section 2.2.2) appear to work very differently from predictions in generative

11 A reviewer remarks that the same holds for the Scandinavian languages and gives the following Swedish version of (21): **Max har inte läst boken och Märta tidskriften.*

accounts (present section). Exactly what is at the heart of this difference is laid out in the following section.

2.4 Comparison: predictive power

Before the predictions as well as their nature are compared between the two perspectives, let me add a word on coverage. Goldberg and Perek entitle their formula: "Gapping (+ argument cluster conjunction) construction" (Section 2.2.1). The latter term refers to cases of gapping (or at least prima facie cases of gapping) where the missing verb in the second conjunct would not intervene between the two remaining constituents (Goldberg and Perek 2019: 195). The authors cite the following example.

(23) *We visited Jan on Monday and* [*we visited*] *Yo on Tuesday.*
(Beavers and Sag 2004: 49)

According to Goldberg and Perek (2019: 195), such cases are covered by their own definition of gapping but not by "the derivational account". If by this they refer to the discussion they cite, i.e. Beavers and Sag (2004), it should be noted that Beavers and Sag argue against capturing examples like (23) by a very specific derivational account, i.e. by combinatory categorial grammar. These authors do not touch upon more widespread derivational frameworks like those coming from the generative tradition, i.e. government and binding or minimalism (if the latter counts as a framework rather than just as a programme). In fact, Aelbrecht, working in a minimalist context, chooses as her introductory handbook example of gapping one that is exactly parallel to (23) with respect to the location of the gap, cf. (24).

(24) *Lola gave her brother strawberries and* [*Lola gave*] *her sister cherries.*
(Aelbrecht 2015: 569)

Accordingly, her general definition of gapping does not depend on the gap being located between the remaining constituents (Aelbrecht 2015: 569).[12] In this sense, Goldberg and Perek's gapping construction formula does not, as its title suggests, cover more kinds of data than a common generative notion of gapping.

Coming back to the predictions, the first question to be asked is whether all the predictions from one theoretical perspective can also be made from the other perspective. Partly, this question has already been answered in the preceding sections. The following list summarizes and complements these findings.

12 Nor does the one used in the present paper (this is the same for the narrow and the loosened version).

1. Pragmatic differences between elliptical sentences and their full versions are predicted by the gapping construction but are of secondary interest from a generative perspective.
2. The retrieval of adjuncts in gapping is predicted as mandatory by the gapping construction but hinges on pragmatic considerations in at least Repp's generative account.
3. Voice mismatches in gapping are predicted to be impossible by both accounts: either via the pointer that points, among other things, to voice or via copying the finite verb, which has already been specified for voice.
4. Agreement mismatches in gapping are predicted to be possible by the gapping construction and, at closer inspection, also by Repp's account: since the copying takes place at the level of logical form, agreement is invisible (Repp 2009b: 19).
5. The restriction of gapping to coordination is included in the gapping construction (if "conjunction" is to be read as 'coordinating conjunction', excluding subordinators) and also follows from Repp's analysis of gapping.
6. The ban of the second complementizer (where the coordination as a whole is subordinated) does not seem to be derivable from the gapping construction whereas it falls out naturally from Repp's account.
7. The availability of distributed readings of negation in English but not German likewise does not seem to be derivable whereas it follows from Repp' analysis.

Thus, with respect to Predictions 1 to 5, there is, metaphorically speaking, virtually a tie. The question remains as to how a constructionist account could accommodate Predictions 6 and 7. This question directly leads to a fundamental difference between the two sorts of predictions. A construction is not supposed to predict anything beyond its own obvious content. The observations behind Predictions 6 and 7 would be stated as empirical generalizations, which in turn might then be shown to follow from general cognitive principles. Or at least, general cognitive principles are invoked to make the observations plausible. This is what Goldberg and Perek (2019) do with respect to other observations involving ellipsis (also cf. Goldberg 2013: 15–16). With respect to the two predictions at hand, however, it appears hard to see how these could relate to general cognitive principles. Regarding 7, however, there is a way out: devise a separate construction, perhaps called "Distributed negation in gapping", specify its usage conditions and attach it to the original gapping construction within an inheritance hierarchy (Goldberg 2013: 21–23). More precisely, the new construction would be a daughter of the older one in being more specific. Like the old construction, the new one does not predict anything beyond its obvious content.

Put differently, constructions are first and foremost descriptions of language facts whereas the assumption of specific structural mechanisms usually generates a

range of structures, all of which are predicted to exist. Constructionist predictions are obvious, generative predictions are hidden.

What has been said about the treatment of different structures by constructionist versus generativist approaches transfers, to a certain extent, to their treatment of different languages and the structures therein. A cross-linguistic difference already mentioned is the scope of negation in ellipsis; other well-known examples include the availability of backward gapping or VP-ellipsis. Constructionists are not surprised by the finding that there are incomplete structures in a range of languages since all of these structures fulfil the function of communicating efficiently; likewise differences between languages are expected as a product of conventionalization and learning (Goldberg and Perek 2019: 198). It should be noted, however, that these statements lack, in contrast to a single language's constructional network, any predictive power. For the only prediction that can be derived from them would be this: languages are structured in such a way that they can be learned, can be conventionalized, and can serve efficient communication. The first two points are trivially true while the third hinges on a precise notion of efficient communication (including its conditions), which to my knowledge is absent in the constructionist literature. Predicting the availability of specific structures is out of reach. Please note that this point of criticism also applies beyond ellipsis.

Generative approaches, in contrast, start from a different basis. Even if UG is assumed to be relatively poor (e.g., Haider 1993: 7–8), generative linguists are forced to give a structural account of any inter-language difference they might find. This is so by definition since all structures in all languages have to be derivable from UG in some way or other, e.g., by parameter settings. Adhering to this ideal, though, is difficult to the extent that parameter theory continues to be one of the big unsolved issues in the generative enterprise (cf. Roberts 2019). Later minimalist investigations like the one just cited even rely heavily on so-called third factors, which appear to be equivalent to constructionists' general cognitive principles: they „represent general cognitive optimization strategies which may well apply in other areas of cognition" (Roberts 2019: 6–7). Thus, there is a certain convergence of theories with respect to the overall developments. This, however, does not alter the fact that generativists are obliged to predict specific structures cross-linguistically.

In sum, constructionist accounts provide single language predictions, given that the constructional network for the language at hand is reasonably complete. In contrast, generative predictions are, at least in principle, inherently cross-linguistic. For the rest, constructionists maintain the general expectation that language as a whole has evolved via communicative pressures plus conventionalization, which is, as stated above, a prediction so broad that it is vacuous. In sum, the two approaches only compete within a small domain: anticipation of novel data in well-described languages.

3 Conclusions

A constructionist-functional approach to gapping was compared with generative approaches to gapping and ellipsis more generally. The focus was on the content and kind of predictions made. With respect to content, five out of seven predictions could directly be made from both perspectives. Among these was the retrieval of adjuncts. It remains to be seen whether the wholesale retrieval as predicted by Goldberg and Perek is empirically correct or rather a more nuanced view. The two additional predictions from a generative perspective (ban of the second complementizer, distributed scope of negation) could not so easily be transferred into a constructionist framework. With respect to the kind of prediction, it was argued that constructions, organized in networks, make predictions for individual languages that are sufficiently well described. Constructionist cross-linguistic predictions, however, were shown to be so broad that they are vacuous.

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