

Ellipsis in natural language

Theoretical and empirical perspectives

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1 Introduction

Natural language abounds in elliptical expressions, i.e. expressions that seem to leave certain aspects of their meaning unexpressed. Consider a random sample in (1):

- (1) a. Ed invited someone to his furniture shop, but I don't know who.
- b. [doctor to nurse during surgery:] Scalpel!
- c. [diary entry:] Got up late again today.
- d. Philip ate more carrots than you did zucchinis.
- e. [text on a sign:] Caution: wet floor.
- f. A: Do you want an extra piece of cake?
 B: Do I?!

What all of these examples have in common is the fact that they feel incomplete in some sense. For instance, the intended meaning of (1a) is 'Ed invited someone to his furniture shop, but I don't know who *Ed invited to his furniture shop*', but the final portion of this sentence is missing. Similarly, even though a surgeon saying (1b) only utters the noun *scalpel*, she conveys a directive to the effect that she be handed a scalpel. Similar observations can be made for the data in (1c)-(1f).

This discrepancy between what is overtly expressed and what is intended poses great challenges for theories of sound-meaning correspondence. According to the principle of compositionality usually attributed to Frege, the meaning of a complex utterance is a function of the meaning of its subparts and the way they are combined. In ellipsis, this principle appears to break down. For instance, the meaning of the surgeon's utterance in (1b) cannot simply be said to be a function of its subparts: there is meaning, but there is no corresponding sound. Given that ellipsis raises such fundamental questions about language in particular and cognition in general, it should come as no surprise that it has garnered considerable linguistic and philosophical interest over the years.

At the same time, the examples listed in (1) already suggest that ellipsis is by no means a unified phenomenon. To illustrate, while constructions such as those in (1a), (1d), and (1f) can occur fairly freely in both written and spoken discourse, the remaining elliptical expressions are highly context and/or register dependent. For instance, an example like (1c), in which the subject of the sentence (typically 'I') is left unexpressed, is only allowed in very specific registers of English, of which diary entries are a prime example. Moreover, variation in elliptical constructions is not only attested within but also across languages. Consider as a case in point the English elliptical example in (2)—where the verbal predicate *read War and Peace* is missing from the second clause—and its close correlates from Dutch, French and German in (3a), (3b), and (3c), respectively.

- (2) Susan has read *War and Peace*, but Maria hasn't.
- (3) a. *Susan heeft *Oorlog en Vrede* gelezen, maar Maria heeft niet.
 Susan has war and peace read but Maria has not
- b. *Susan a lu *La Guerre et la Paix*, mais Maria n' a pas.
 Susan has read the war and the peace but Maria not has not
- c. *Susan hat *Krieg und Frieden* gelesen, aber Maria hat nicht.
 Susan has war and peace read but Maria has not

While (2) is perfectly acceptable in English, attempts at a word-for-word translation of this elliptical sentence in closely related languages lead to ungrammaticality, showing how ellipsis is subject to crosslinguistic variation. It is observations such as these that have led to very detailed investigations of specific elliptical phenomena in the linguistic literature in recent years.

Summing up, ellipsis is a topic that on the one hand raises general and fundamental questions about the workings of grammar and cognition, while on the other it is a veritable treasure trove of detailed and fine-grained points of inter- and intralinguistic variation. It is against this dual backdrop that the current *Oxford Handbook of Ellipsis* should be situated. As we make clear in the remainder of this introductory chapter, the handbook devotes attention both to fundamental theoretical questions and analyses surrounding elliptical phenomena and to the empirical richness of this domain. This chapter is organized as follows. We first outline the general structure of the handbook and elaborate on (the rationale behind) its subdivision into four parts (section 2). Next, in section 3, we highlight some of the main results and generalizations that emerge from the contributions to the handbook, and in section 4 we conclude and provide a brief outlook on future research on ellipsis.

2 Structure of the handbook

This handbook is subdivided into four parts, each of which highlights a specific aspect of the linguistic study of ellipsis. The first part (discussed in subsection 2.1) focuses on the theory of ellipsis, and explores the analytical approach taken towards ellipsis both in various linguistic theoretical frameworks and in a number of subfields of linguistics. In the second part (subsection 2.2) the perspective is reversed, and ellipsis is construed not as the object but as the instrument of inquiry. The central question in the chapters of Part II is to what extent the study of ellipsis can shed new light on other research domains within linguistics. Part III (subsection 2.3) focuses on the traditional taxonomy of elliptical constructions known from the literature and explores the state of the art for each of them. Finally, Part IV (subsection 2.4) contains eleven case studies, each of which explores the elliptical inventory of a single language (or a set of closely related languages or language varieties), thus bearing witness to the empirical richness surrounding the phenomenon of ellipsis.

2.1 Part I: The theory of ellipsis

The chapters making up the first part of the handbook can be divided into three sets. The first is the singleton consisting of the contribution by Jason Merchant entitled “Ellipsis: a survey of analytical approaches” (chapter 2). This chapter lays the groundwork for the rest of Part I: it defines the phenomena under investigation, lays out the central research questions, presents a taxonomy of approaches based on how they address those research questions, and weighs some of the evidence presented in favor of and against the various perspectives. The second set consists of chapters 3–10. These eight chapters discuss the analytical approach taken towards ellipsis in a specific theoretical framework. The frameworks in question are Transformational Grammar (chapter 3, Howard Lasnik and Kenshi Funakoshi), Head-Driven Phrase Structure Grammar (chapter 4, Jonathan Ginzburg and Philip Miller), Categorical Grammar (chapter 5, Pauline Jacobson), Dependency Grammar (chapter 6, Timothy Osborne), Simpler Syntax (chapter 7, Peter W. Culicover and Ray Jackendoff), Construction Grammar (chapter 8, Adele E. Goldberg and Florent Perek), Dynamic Syntax (chapter 9, Ruth Kempson, Eleni Gregoromichelaki, Arash Eshghi, and Julian Hough), and Inquisitive Semantics (chapter 10, Scott AnderBois). The third and final set of Part I is composed of chapters 11–15. These explore the theory of ellipsis not from the point of a view of a linguistic framework, but with respect to a specific subfield or subdiscipline of linguistics. The areas covered in these five chapters are psycholinguistics (chapter 11, Lyn Frazier), acquisition (chapter 12, Tom Roeper), discourse (chapter 13, Andrew Kehler), computational linguistics (chapter 14, Daniel Hardt), and prosody (chapter 15, Susanne Winkler).

While ellipsis frequently surfaces as a topic of investigation in all of these frameworks and subfields of linguistics, only very rarely does this lead to an explicit comparison or evaluation of the various assumptions, arguments, and analyses. The current handbook wants to remedy this, and to this end we asked all authors of the chapters in Part I to focus on the same three theoretical issues. On the one hand, this

ensures a high degree of thematic consistency across these chapters, while on the other it allows for a direct form of inter-chapter comparison. The three issues under investigation are (i) the abstract structure of the ellipsis site, (ii) recoverability/ellipsis identity, and (iii) licensing. We now briefly introduce each of these topics (see also chapter 2 for further, more detailed, discussion).

The conundrum regarding the sound-meaning correspondence in ellipsis raised earlier (see above, section 1) can be paraphrased as a tension between semantics (meaning) on the one hand and phonology (sound) on the other. A central question in the study of ellipsis concerns the role of syntax in this dichotomy: to what extent does an ellipsis site contain (unpronounced) syntactic structure? This is an issue of great contention in the literature: hypotheses range from the position that there is no ('hidden') structure whatsoever (e.g. Culicover and Jackendoff (2005)) all the way to the other extreme, i.e. that there is full-fledged syntactic structure in an ellipsis site (e.g. Merchant (2001)). From the latter point of view, the only difference between an elliptical sentence and a non-elliptical one is the lack of pronunciation of part of the former. Given that different theoretical frameworks and subdisciplines take radically opposing positions in this debate, the topic of "abstract structure of the ellipsis site" is ideally suited for comparison and evaluation across frameworks and subdisciplines.

The second recurring topic in all chapters of Part I is recoverability, which concerns the question of how an ellipsis site gets its meaning, or more specifically, ellipsis identity, which concerns the question of the identity relation between an ellipsis site and its antecedent. Consider again the example in (1a), repeated below as (4). It is clear that we interpret the missing part of this sentence as 'Ed invited to his furniture shop' because the first half of this example contains exactly these words. Put differently, the meaning of an ellipsis site is recovered by virtue of an antecedent, with which it stands in a certain identity relation. However, the question of whether this identity relation is syntactic, semantic, morphological, pragmatic, etc., is far from settled, and one could even point to examples such as (1b), (1c) or (1e) (repeated below as (5a), (5b), and (5c), respectively) to question the very assumption that an antecedent is required in the first place. Once again, the literature on ellipsis contains many different answers to these questions, and the first part of the handbook provides a clear picture of the various arguments and positions.

- (4) Ed invited someone to his furniture shop, but I don't know who.
- (5) a. [doctor to nurse during surgery:] Scalpel!
 b. [diary entry:] Got up late again today.
 c. [text on a sign:] Caution: wet floor.

The third central theme for the chapters of Part I is licensing, a cover term referring to restrictions on ellipsis (typically syntactic in nature) that are not related to recoverability or ellipsis identity. Consider for instance the following ungrammatical English example:

- (6) *John bought a blue bike and Mary bought a green.

In the second part of this sentence the noun *bike* is left unpronounced. Although it is abundantly clear from the context what the sentence should mean—i.e. there is no problem of recoverability—the instance of ellipsis illustrated here is ruled out in English. As shown in (7), though, the Dutch analogue of (6) is perfectly acceptable. This shows that there are restrictions on ellipsis (within and across languages) above and beyond those related to recoverability or ellipsis identity. These restrictions typically go under the rubric of 'licensing' in the ellipsis literature.

- (7) Jan kocht een blauwe fiets en Marie kocht een groene.
 Jan bought a blue bike and Marie bought a green
 'John bought a blue bike and Mary bought a green one.'

Although the issue of licensing should be addressed in any comprehensive theory of ellipsis, only rarely does it explicitly feature in the discussion (notable exceptions are Lobeck (1995) and Aelbrecht (2010)). By adding licensing to the list of topics that every chapter in Part I addresses, the handbook aspires to put this theoretical notion firmly on the research agenda.

2.2 Part II: Ellipsis as a diagnostic tool

The study of ellipsis is not only interesting in and of itself. Anyone who has ever taken an intro class in general linguistics, more specifically in constituency, knows that elliptical constructions can be used as a diagnostic tool to answer non-ellipsis related research questions (in this simple case: the question of whether or not a string of words forms a constituent). Part II of the handbook takes precisely this reversed perspective: ellipsis is now no longer (or at least not exclusively) the object of study, but rather the means or the tool through which this study is carried out. The topics under investigation in this manner are movement and islands (chapter 16, Klaus Abels), aphasia and acquisition (chapter 17, Yosef Grodzinsky, Isabelle Deschamps, and Lewis P. Shapiro), parsing strategies (chapter 18, Masaya Yoshida), and codeswitching (chapter 19, Kay González-Vilbazo and Sergio E. Ramos).

Each of these topics represents an active research area where elliptical phenomena have the potential of shedding important new light on the central research questions. For instance, certain types of ellipsis seem to bleed island effects. In Transformational Grammar, one of the central issues surrounding islands is whether these phenomena should be located at the conceptual-intentional or the articulatory-perceptual interface of the language module. The bleeding of island effects by ellipsis has been taken as an argument in favor of the latter position. Processing-based accounts, on the other hand, use island effects in ellipsis to examine the interplay between the syntactic and the discourse processor. Based on the lack of island effects in certain elliptical sentences, it is concluded that only the latter type of processor may violate islands. Similarly, the ability of aphasia patients to comprehend elliptical, i.e. incomplete, sentences can lead to a deeper understanding of the nature of their language deficit. These two examples are representative of the line of thinking that is developed in the chapters of Part II: in each case, the central research question does not concern ellipsis *per se*, but the study of elliptical phenomena brings us closer to answering that question.

2.3 Part III: Elliptical constructions

The third part of the handbook is devoted to detailed studies of specific elliptical constructions. Generally speaking, ellipses appear to group at the clausal, predicate, and nominal level, corresponding to, respectively, clausal ellipsis, predicate ellipsis, and nominal ellipsis. Part III of the handbook starts off from this trichotomy, discussing first the most well-known and best-investigated representative of clausal ellipsis, i.e. sluicing (chapter 20, Luis Vicente), (8), followed by predicate ellipsis (chapter 21, Lobke Aelbrecht and William Harwood), (9), and nominal ellipsis (chapter 22, Andrés Saab), (10).

- (8) Tyrion Lannister: Listen to me! Sometimes, possession is an abstract concept. (*Mord hits him.*)
When they captured me, they took my purse, but the gold is still mine!
Mord: Where? (*Game of Thrones, Season 1 Episode 6*)
- (9) Frank Underwood: You've got this wrong, Marty. There is no "you" and "I" in education. (begins to backtrack) "Well, I mean, yes, there's the letters "U" and "I" in the word "education". But "Education" with a capital E, you know what I'm talking about!"
Marty Spinella (looking confused): "I don't think I do." (*House of Cards, Season 1 Episode 6*)
- (10) Frank Underwood: In Gaffney, we had our own brand of diplomacy. Shake with your right hand, but hold a rock in your left. (*House of Cards, Season 2 Episode 3*)

The remaining five chapters of this part of the handbook cover the following subtypes: gapping and stripping (chapter 23, Kyle Johnson), fragments (chapter 24, Alison Hall), comparative deletion (chapter 25, Winfried Lechner), null complement anaphora (chapter 26, Marcela Depiante), and conjunction reduction and right node raising (chapter 27, Chris Wilder).

Each chapter thus zooms in on one particular subtype—or very often, family of subtypes—of ellipsis, and provides a systematic and detailed overview of its basic properties and distinctive characteristics. In addition to covering the central empirical generalizations, each chapter presents a survey of the main theoretical concerns these elliptical constructions raise and discusses different theoretical approaches to them. As such, this part of the handbook is meant to serve as a reference work for anyone interested in a particular subtype of ellipsis.

2.4 Part IV: Case studies

The fourth and final part of the handbook presents case studies of ellipsis in specific languages. The languages under investigation are: Dutch (chapter 28, Norbert Corver and Marjo van Koppen), Finnish Sign Language (chapter 29, Tommi Jantunen), French (chapter 30, Anne Dagnac), Hungarian (chapter 31, Anikó Lipták), Indonesian (chapter 32, Catherine Fortin), Japanese (chapter 33, Teruhiko Fukaya), Kiswahili and Shingazidja (chapter 34, Cédric Patin and Sophie Manus), Persian (chapter 35, Maziar Toosarvandani), Polish (chapter 36, Joanna Nykiel), Russian (chapter 37, John Fredrick Bailyn and Tatiana Bondarenko), and varieties of English (chapter 38, Gary Thoms). These languages were selected on the basis of two criteria: (a) the fact that they exhibit elliptical phenomena that were previously unattested and/or that shed new light on some of the more mainstream generalizations and theories, and (to a lesser extent) (b) typological spread.

All of the chapters in Part IV have a double orientation. Firstly, they inventory which of the elliptical phenomena discussed in Part III are attested in the language and which aren't, and they describe their properties. This provides typological depth to the chapters in Part III. Moreover, it offers ample opportunities for inter-chapter comparison in Part IV: these language-specific studies contribute meaningfully to our understanding of the ways in which the elliptical phenomena under scrutiny manifest themselves cross-linguistically, and they open the door to formulating a more systematic cross-linguistic theory of the distribution of ellipsis types.

Secondly, the chapters in Part IV focus on facts and observations that are new, previously undiscussed and/or off the beaten track, and that therefore question or put in a different light the hypotheses and theories based on better-known languages. To name but a few concrete examples: (i) Chapter 29 considers the role that gesture and mime play in elliptical phenomena in Finnish Sign Language; (ii) Chapter 33 shows that in many Japanese ellipsis phenomena (including sluicing, fragments, and stripping), the presence or absence of a case-marker on the ellipsis remnant plays a crucial role, with case-marked and non-case-marked fragments being analyzed as instances of surface and deep anaphora, respectively; and (iii) Chapter 32 considers in detail the fact that Indonesian permits prepositions to be omitted in certain elliptical contexts, despite preposition stranding being otherwise prohibited in the language. This is unexpected in light of the cross-linguistically robust generalization that preposition omission under ellipsis tracks preposition stranding in non-elliptical contexts (Merchant 2001).

3 Results & generalizations

In this section we highlight some of the main results and generalizations that emerge from the contributions to this handbook. Needless to say, it is neither realistic nor feasible to do full justice to a 1,000-page volume in an introductory chapter, so we needed to be selective in what we present in this section. The common thread throughout the discussion is the question to what extent the structure and goals set out for the handbook (as described in section 2 above) have yielded interesting results and generalizations. Accordingly, this section is structured parallel to the preceding one, with one subsection devoted to each part of the handbook.

3.1 Part I: The theory of ellipsis

Given that the chapters in Part I all address the same three theoretical questions (abstract structure, recoverability/ellipsis identity, and licensing, see subsection 2.1), it speaks to reason to use these three as the structuring principle for a summarizing overview of those chapters. Table 1 lists for each chapter (a) whether or not it assumes that there is abstract syntactic structure in the ellipsis site, (b) which linguistic submodule is responsible for providing an elliptical expression with an interpretation, or more specifically, which module of the grammar is relevant for defining the identity relation between an ellipsis site and its antecedent (recoverability/ellipsis identity), and (c) what mechanism licenses ellipsis beyond the issue of recoverability. Before turning to the table in more detail, let us make explicit three ground rules we adhered to in creating this overview table. First, the values listed in the cells represent the approach favored by the authors in these chapters. As such, they do not necessarily represent the views of the

theoretical framework or linguistic subdiscipline as a whole.¹ Very often, the authors point out that even within a certain framework or discipline there is disagreement with respect to these three issues, but they then proceed to express a preference for a particular position in the debate. It is this position that is represented in Table 1. Second, a “yes” in the column *abstract structure* is meant to cover both accounts that assume ellipsis sites contain a fully-fledged syntactic representation, and analyses that assume only a minimal instantiation of such structure (typically represented as a pro-form). Finally, note that the first chapter of Part I, Chapter 2, is missing from this table: given that it is a survey chapter that is explicitly intended to transcend individual analyses and approaches, we did not include it here.

chapter	abstract structure	recoverability	licensing
3 Lasnik and Funakoshi	yes	syntactic/semantic	local structural relation with licensing head
4 Ginzburg and Miller	no ¹	discourse semantic ²	QUD-based, supplemented with construction-specific restrictions
5 Jacobson	no	discourse semantic	type-shifting rule ³
6 Osborne	yes	syntactic/semantic	only catenae can be elided
7 Culicover and Jackendoff	no	semantic	construction-specific restrictions
8 Goldberg and Perek	no	semantic	construction-specific restrictions
9 Kempson, Gregoromichelaki, Eshghi, and Hough	mixed ⁴	syntactic/semantic	morphosyntactic constraints imposed by ellipsis remnants
10 AnderBois	yes	syntactic/semantic	no framework-specific constraints
11 Frazier	yes	syntactic	constraints on establishing discourse coherence
12 Roeper	yes	syntactic/semantic	local structural relation with licensing head
13 Kehler	yes	syntactic/semantic	constraints on establishing discourse coherence
14 Hardt	agnostic ⁵	syntactic/semantic	[not directly addressed in the computational literature]
15 Winkler	yes	syntactic/semantic/prosodic	contrastive accent on remnants and deaccenting of given material

¹ An exception is made for certain varieties of left- and right-peripheral ellipsis (including Right Node Raising), where full structure is present, but partly unpronounced.

² The term “discourse semantic” is meant to refer to approaches where the ellipsis antecedent is located in the discourse context.

³ This does not apply to fragment answers, which are licensed by being a part of a Qu(estion)-Ans(wer) unit.

⁴ This chapter adopts multiple mechanisms to derive ellipsis, only some of which generate structure inside an ellipsis site.

⁵ This chapter presents two main computational approaches, one of which assumes abstract structure, and one of which does not.

Table 1: Overview of Part I of the handbook: abstract structure, recoverability, and licensing

What can we learn from this table? With respect to the first question—the presence or absence of abstract syntactic structure—it is clear that this issue remains, to this day, a very contentious one. Proponents of the ‘no structure’-approach often adopt an Occam’s razor-style position, which is backed up by cases where elliptical remnants fail to show connectivity effects with their purported syntactically fully represented source. Compare and contrast in this respect the elliptical reply in (11) with the non-elliptical example in (12) (both examples are from Ginzburg and Miller (This volume)).

- (11) A: Who appeared to be the cause of [John and Mary]₁’s problems?
B: Each other₁.

- (12) *Each other₁ appeared to be the cause of [John and Mary]₁’s problems.

¹This is also why we represent the chapters by their author names in Table 1, rather than referring to the theoretical framework or linguistic subdiscipline that is discussed in the chapter.

If B's elliptical reply in (11) contained (an abstract version of) the non-elliptical utterance in (12), it should be as ungrammatical as that example, *quod non*. Hence, adopting abstract syntactic structure in the case of (11) makes incorrect predictions and should be avoided. On the other hand, proponents of the structural approach also make use of connectivity effects in their argumentation, but they cite different types of data, such as the sluicing example in (13) (from Lasnik and Funakoshi (This volume), but originally from Ross (1969)).

- (13) Er will jemandem schmeicheln, aber sie wissen nicht { *wen / wem }.
 he want someone.DAT flatter but they know not who.ACC who.DAT
 'He wants to praise someone, but they don't know who.' (German)

The fact that the sluiced *wh*-phrase necessarily bears dative case—rather than, for example, the accusative that would be assigned by the immediately governing verb *wissen* 'to know'—is argued to show that there must be an unpronounced copy of the dative-assigning verb *schmeicheln* 'to flatter' inside the ellipsis site, i.e. there must be abstract syntactic structure.

The contrast between (11)/(12) on the one hand and (13) on the other shows that the standoff between structural and non-structural approaches to ellipsis largely boils down to which set of data should be given primacy to. It seems, then, that more systematic and extensive data inventories are needed before this issue can be settled. The chapters in Part I of the handbook can be seen as a first step in that direction.

The next column in Table 1 concerns recoverability, and more specifically which module of the grammar is relevant for defining the identity relation between an ellipsis site and its antecedent (ellipsis identity). Contrary to the previous issue, there is a greater degree of agreement regarding this second question, in that there seems to be a (near-)general consensus that there is at least a semantic component to recoverability, above and beyond any morphosyntactic or lexical requirements there might be. For the 'no structure'-analyses, this position is a logical necessity (as is also pointed out by Merchant (This volume)), in that the absence of syntactic structure inside an ellipsis site makes it impossible to compare that structure to that of the antecedent. For the other accounts, though, it should be pointed out that the label "syntactic/semantic" used in Table 1 hides a fair amount of variation that exists between the individual accounts. While some authors (Lasnik and Funakoshi, AnderBois, Winkler) argue that recoverability intrinsically has both a syntactic and a semantic component, others claim that the recoverability mechanism can be more (or exclusively) semantic in some cases and more (or exclusively) syntactic in others, depending on the type of elliptical construction (Osborne), the stage in the acquisition process (Roeper), or the type of mechanism used to derive ellipsis (Kempson et al., Kehler, Hardt).

Finally, we turn to the issue of licensing. As was pointed out in subsection 2.1, licensing is a relative newcomer to the stage of theoretical ellipsis research. This is reflected in the final column of Table 1: several frameworks and subdisciplines either make no specific claims with respect to this issue, or they lack a general, overarching licensing mechanism. Several chapters even—implicitly or explicitly—question the need for such an overarching theory, arguing instead that licensing is inherently construction-specific and hence *sui generis* for each individual ellipsis phenomenon (Ginzburg and Miller, Culicover and Jackendoff, Goldberg and Perek, Kempson et al.). The point is well-taken: to what extent is it possible to reduce the great diversity of elliptical constructions—recall also the sample in (1) in section 1—to a single licensing mechanism? Another issue that emerges from the chapters in Part I is that contrary to what is commonly proposed in the literature (see in particular Lobeck (1995), Aelbrecht (2010)), licensing is not necessarily strictly syntactic in nature. Ginzburg and Miller (This volume) propose that ellipsis is licensed when it provides an answer to the Q(uestion) U(nder) D(iscussion) (see also AnderBois (This volume), though for him it is part of recoverability/ellipsis identity), while both Frazier (This volume) and Kehler (This volume) discuss constraints on establishing discourse coherence under the rubric of licensing. In short, licensing is by no means a side character in the study of ellipsis, and we expect it will grow into a full-fledged research track of its own.

3.2 Part II: Ellipsis as a diagnostic tool

Recall the starting point of Part II of the handbook: to what extent can ellipsis be used as a tool or instrument in the study of other linguistic phenomena? Before reflecting on this part in more general terms,

we first provide a brief overview of each individual chapter. Abels (This volume) discusses the interaction between ellipsis on the one hand and movement and islands on the other. As was first discovered by Ross (1969), sluicing can ameliorate island effects. That is, an A' -dependency that is illicit because it crosses an island boundary can become licit when the offending structure is elided. This fact, when taken at face value, can provide valuable insight into the nature of island constraints: if simply not pronouncing an island can bleed its effect, whatever is causing that effect must be of a phonological nature (i.e. operative at the PF-interface). As Abels points out, however, once one looks more closely at the facts, they are much more complicated than they seem to be at first sight. He concludes that while ellipsis certainly has the potential of leading to new insights regarding islands (and movement, the second topic of the chapter), it cannot yet live up to that potential. Grodzinsky et al. (This volume) focus on comprehension of VP-ellipsis in speakers with an incomplete language faculty, among others patients with Broca's aphasia. The fact that patients with Broca's aphasia are relatively successful in comprehending sentences with VP-ellipsis suggests that Broca's aphasia is not a general failure of working memory, i.e. a difficulty of dealing with "syntactically complex" structures, but that it is a much more specific impairment, possibly one that specifically targets movement dependencies. This in turn might have repercussions for the proper analysis of ellipsis, Grodzinsky et al. argue, in that a movement-based approach towards VP-ellipsis (see e.g. Johnson (2001)) seems unlikely. Yoshida (This volume) uses psycholinguistic experiments involving elliptical constructions to gain more insight into the nature of the human parser. He ends up concluding that "the parsing strategies that the human parser employs achieve incremental, rapid and grammatically detailed structure building", which is in line with the results of sentence processing studies in other domains. Conversely, the evidence he discusses also suggests that ellipsis sites contain abstract syntactic structure, in that the parser builds the structure of ellipsis sites by copying the structure of the antecedent site. Finally, González-Vilbazo and Ramos (This volume) review the interaction between ellipsis and codeswitching. They argue, on the basis of German-Spanish elliptical codeswitching data, in favor of a constraint-free theory of codeswitching, i.e. a theory without codeswitching-specific rules. At the same time, their data is also very informative about the theory of ellipsis itself: given that it is possible to codeswitch inside an ellipsis site, such facts can shed important new light on the nature of the identity relation between the ellipsis site and its antecedent (see above, subsections 2.1 and 3.1).

Overlooking the four chapters that make up Part II of the handbook, it becomes clear that the dichotomy we started out with about ellipsis being the object or the instrument of inquiry is to a certain extent a false one. All four chapters make clear that there is a fruitful two-way interaction between the theory of ellipsis on the one hand, and that of whatever other phenomenon is under investigation on the other. It is only based on a specific theory of ellipsis that one can draw conclusions about other domains of grammar and vice versa. At the same time, though, we believe the approach developed in this second part is a potentially very fruitful one, and hence one that should be continued to be explored in future research. In particular, there are various other domains where we can see the study of ellipsis having a real impact, from constituency (Depiante and Hankamer (2005), Sailor and Thoms (2014)), over the proper definition of the QUD (Kehler (This volume)), to the workings of memory (Martin and McElree (2009)).

3.3 Part III: Elliptical constructions

As pointed out above (subsection 2.3), in structuring Part III of the handbook, we started out from a taxonomy that is quite common in the ellipsis literature. Needless to say, such an approach—like any attempt at categorization—risks not capturing phenomena that sit in between different categories in the taxonomy and thus fall between the cracks. Indeed, as noted by Merchant (This volume): "There are many other kinds of phenomena that go under the rubric of ellipsis as well, some better investigated than others, including argument drop, article drop, haplology, diary language and headlines, subjectless infinitivals, copula drop, situational ellipses, small clauses, and many more; some are context-sensitive, and some are not. For various (and still incomplete) taxonomies of the missing, see Klein 1985 and Hennig 2013:447f." (and see McShane (2005) for a similarly broad view of what qualifies as ellipsis). Interestingly, though, when taking a look at the chapters (in all four parts) of this handbook, one is struck by the fact that some of these 'non-conventional' types of ellipsis have found their way into one or more chapters, while others remain unmentioned. Two notable examples of the former type are argument drop (or pro-drop) and copula drop, which are discussed in several chapters of this handbook. Highly context-dependent types

such as diary language or headlines, however, have not made their way in. This might suggest that there is, after all, a natural subdivision of elliptical phenomena into meaningful subgroups (see also Merchant (2014) for related discussion).

A partially related observation is that in the chapters of this handbook, the boundaries between the various (sub)types of ellipsis are becoming increasingly blurred. For instance, when considering both the empirical descriptions and the theoretical approaches to sluicing and fragments in different chapters (and even different parts) of this handbook, one can raise the question whether we need to consider these to be separate types of ellipsis rather than instantiations of one and the same elliptical phenomenon (as suggested, for instance, by van Craenenbroeck and Lipták (2006, 2013), and Temmerman (2013)). Similarly, it becomes apparent in a number of chapters (both in Part III and in Part IV) that distinguishing between nominal ellipsis and argument drop (pro-drop)—or even between argument drop and (verb-stranding) VP-ellipsis—is not a trivial (and therefore, perhaps an unnecessary) task (cf. also Ginzburg and Miller (This volume) for similar remarks). We find such developments promising, given that they steer us away from the focus on individual constructions, a line of thinking that is reminiscent of the early construction-specific days of generative grammar (see also Johnson (2008:3)). It seems fruitful to us to not think of specific elliptical (sub)types as construction-specific phenomena, but rather, to try and formulate empirical and theoretical generalizations that transcend the traditional taxonomy.

3.4 Part IV: Case studies

The language-specific chapters of Part IV inventory which of the elliptical phenomena discussed in Part III are attested (and which ones are not) in the language and describe their properties. Table 2 presents an overview of the different languages and elliptical phenomena under scrutiny. Before discussing the contents of the table, let us first make two observations about how it came about. First off, it should be noted that this overview is crucially based on surface patterns: whether a given construction can or should be analysed as involving ellipsis or not—a matter discussed in detail in most of the chapters of Part IV—is not taken into account here. For example, a pattern such as the Persian one in (14) (taken from Toosarvandani (This volume)) leads to the value “yes” in the *SL*-column for Persian because it displays the relevant surface pattern (a constituent question reduced to its *wh*-phrase). Secondly, the use of gray shading indicates that these particular elliptical phenomena are not discussed in the relevant chapters.

- (14) Râmin ye chiz-i xarid. Hads be-zan chi.
 Ramin one thing-IND buy.PAST.3SG guess SUBJ-hit what
 ‘Ramin bought something. Guess what.’ (Persian)

One thing that jumps out from this table is that (surface patterns of) elliptical constructions are cross-linguistically widespread: most if not all of the ellipsis phenomena are attested in each of the twelve languages studied.² While this is an interesting observation in and of itself, it might also be partly illusion, caused by the fairly coarse granularity of the phenomena listed in the table (as well as the criteria used to describe the phenomena, i.e. our reliance on surface patterns). This suspicion seems to be confirmed once we increase the level of detail in our overview. Table 3 takes one phenomenon from our first table—the most intensively studied one, predicate ellipsis—and splits it up into five subtypes. The resulting picture is considerably more varied than could be gleaned from Table 2.

Predicate ellipsis is a cover term for several types of ellipsis targeting the (verbal) predicate. Different instantiations include auxiliary-stranding VP-ellipsis, modal-stranding VP-ellipsis and main verb-stranding VP-ellipsis. Table 3 clearly shows that the 12 languages studied in this part of the handbook do not all behave similarly. At first glance, the following picture seems to emerge:

- When a language exhibits AuxVPE, it also has ModVPE (but not vice versa).³
- When a language exhibits AuxVPE (and hence also ModVPE), it is possible that it also has VVPE (as in Hungarian), but this is by no means required (see English and Indonesian).

²Comparative Deletion might be the odd one out: although data is lacking from 4 of our 12 languages, 2 of the remaining 8 lack this elliptical construction.

³Note that we cannot be sure of this generalization for Polish, as chapter 36 does not contain an example of ModVPE.

language	SL	PE	G	STR	FR	NPE	CD	NCA	CR ¹	RNR
Dutch	yes	yes	yes	yes	yes	yes	yes	yes ²	yes	yes
English ³	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Finnish Sign Language	yes	yes	yes	yes	yes	yes			yes	
French	yes	yes	yes	yes	yes	yes		yes	yes	yes
Hungarian	yes	yes	yes	yes	yes	yes	yes	yes		yes
Indonesian	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes? ⁴
Japanese	yes	yes	yes	yes	yes	yes				yes
Kiswahili	yes	yes	yes	yes	yes	yes		yes	yes	yes ⁵
Persian	yes	yes	yes	yes	yes	yes	no	yes	yes	yes
Polish	yes	yes	yes	yes	yes	yes	yes		yes	yes
Russian	yes	yes	yes	yes	yes	yes	yes			yes
Shingazidja	yes	yes	yes	yes	yes	yes	no	yes	yes	yes

Abbreviations: SL = sluicing, PE = predicate ellipsis, G = gapping, STR = stripping, FR = fragments, NPE = noun phrase ellipsis, CD = comparative deletion, CR = conjunction reduction, RNR = right node raising

¹ We include in CR the phenomenon sometimes referred to as non-constituent coordination, e.g. *John gave a book to Mary and a car to Bill.*

² The set of verbs that can occur in this pattern seems to be very limited.

³ We have broadened the scope of Chapter 38 from "Varieties of English" to English in general. Thoms (This volume) mostly focuses on predicate ellipsis, pointing out that little is known about dialectal variation in the domain of clausal or nominal ellipsis. However, the standard English facts in these domains are well-known from the literature.

⁴ Whether Indonesian exhibits RNR is somewhat controversial. Moreover, there seems to be speaker variation.

⁵ Only marginally possible, subject to speaker variation.

Table 2: Overview of Part IV of the handbook: cross-linguistic distribution of the main ellipsis types

language	AuxVPE	VVPE	ModVPE	PG	ACD
Dutch	no ¹	no	yes	no ¹	
English	yes	no	yes	yes	yes
Finnish Sign Language			yes ²		
French	no	no	yes	no	yes
Hungarian	yes	yes	yes	yes	yes
Indonesian	yes	no	yes	yes ²	
Japanese	no	yes	no	no	
Kiswahili	no	yes	no	no	yes
Persian	no	yes	no	no	
Polish	yes	yes		no	yes
Russian	yes	yes			
Shingazidja	no	yes	no	no	no

Abbreviations: AuxVPE = auxiliary-stranding VP-ellipsis, VVPE = main verb-stranding VP-ellipsis, ModVPE = modal-stranding VP-ellipsis, PG = pseudogapping, ACD = antecedent-contained deletion

¹ Marginally possible in comparatives.

² Single example, judgments unclear.

Table 3: Overview of the cross-linguistic distribution of various subtypes of predicate ellipsis

- A language can exhibit only ModVPE (as in Dutch or French), or only VVPE (as in Persian).

In addition to these three types of VP-ellipsis, there is also pseudogapping and Antecedent-Contained Deletion (ACD), two elliptical subtypes which also do not show a uniform cross-linguistic distribution. It is not straightforward to come up with a generalization that describes the (non-)occurrence of pseudogapping or ACD in a given language. For instance, the possible generalisation that languages that allow

AuxVPE also exhibit pseudogapping (cf. Hungarian, English, and Indonesian) is contradicted by the fact that Polish has AuxVPE, but does not exhibit pseudogapping. It could be the case, then, that AuxVPE is a necessary, but not a sufficient condition for pseudogapping.

Adding to the variation in Table 3 is the fact that several languages exhibit predicate ellipsis phenomena that seem to be *sui generis*, i.e. that are specific to a single language (usually because it is dependent on other material that is specific to that language). For example, Hungarian also exhibits preverb-stranding VP-ellipsis, British English has a type of predicate ellipsis that looks identical to VP-ellipsis save for the addition of a non-finite form of the verb *do* (known as British English *do*), and verb-stranding VPE in Persian is actually *v*-stranding VPE.

The contrast between (the second column of) Table 2 and Table 3 suggests that, were one to do the same exercise for, say, sluicing or nominal ellipsis, similar patterns of variation would emerge. Possible sources of variation that come to mind are (i) the different licensors of nominal ellipsis across languages (determiners, demonstratives, adjectives, possessives, etc.—recall the contrast between (6) and (7)), (ii) the cross-linguistic distribution of different types of sluicing (sprouting, swiping, spading, multiple sluicing, etc.), (iii) the cross-linguistic distribution of polarity ellipsis, (iv) variation in the number of remnants allowed by gapping,⁴ and (v) variation in connectivity effects in elliptical constructions (islands, preposition stranding, case-marking, ...).

In short, the empirical picture is complex and nuanced, leading to the all too familiar tension between empirical coverage and theoretical parsimony: to what extent is it feasible and/or desirable to try and construct a general, overarching theory of ellipsis? Given that this very same issue has cropped up in the previous subsections as well, it seems to us that this is one of *the* central questions in the linguistic study of ellipsis.

4 Conclusion

Taken together, the four parts of this handbook present a comprehensive, in-depth and balanced discussion of the phenomenon of ellipsis in natural language. They devote space to well-established theories of and generalizations about ellipsis, but at the same time leave room for cutting-edge research that broadens the scope of the investigations, opening up exciting new prospects, empirically as well as theoretically. One example of the latter is the role the notion of Question-Under-Discussion (QUD) plays in much current ellipsis research, as is evidenced by the fact that it shows up in a number of chapters, across different theoretical frameworks and across the different parts of the handbook. With respect to the empirical study of elliptical phenomena, it is clear that more work is needed, not only on more constructions in more languages and in more detail and depth, but also on more types of data (see for example the role played by corpus material in Ginzburg and Miller (This volume)). In short, the work is far from done, but the future of the linguistic study of ellipsis looks very bright: it is a thriving subfield of linguistics that offers exciting prospects for new discoveries and breakthrough developments, both empirically and theoretically. It seems only fitting that we would end this chapter on an elliptical note, and so we are.

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⁴See for instance Patin and Manus (This volume), who show that Kiswahili allows for gapping with multiple remnants, while in the closely related Bantu language Shingazidja there is an upper limit of two gapping remnants.

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