4 Understanding Lexemes
The Role of the Linguistic Co-Text

Combining insights from CxG and RT might seem quite daunting for those working in the two frameworks since, in spite of their common interest in understanding human communication, they focus on different aspects of it. On the one hand, the main aim of construction grammarians is to understand language as a system and to pin down exactly what makes up linguistic knowledge. The central claim of the theory is that speakers primarily know constructions, i.e. form–meaning pairs. Goldberg (2003: 223) specifically argues that it is "constructions all the way down." On the other hand, relevance theorists mostly try to account for the cognitive principles that, in addition to the linguistic system, guarantee successful communication. This pragmatic approach to (linguistic) communication is essentially based on the observation that language alone often fails to provide us with the speaker's intended interpretation. Carston (2002a: 360) asserts that "it is linguistic underdeterminacy all the way down." It should therefore be clear that the two theories make radically different predictions concerning how much knowledge an individual actually has, and how this knowledge contributes to the interpretation of an utterance. In the case of CxG, individuals are credited with much more knowledge than in RT, and this knowledge is believed to play a greater role in comprehension than is assumed in RT. Contrary to what one might think, however, these two perspectives are not incompatible. We saw in the previous chapter, for instance, that understanding a lexeme is a multifaceted process that involves a complex interaction between semantics and pragmatics whereby lexemes give access to rich conceptual networks that are exploited differently in different contexts in accordance with one's expectations of relevance. The term *lexically regulated saturation* was used precisely to capture the observation that understanding a lexeme is neither just a semantic nor just a pragmatic process but in fact results from the interaction of semantics and pragmatics.

The aim of this chapter is to broaden the approach to lexical semantics–pragmatics. Further insights from CxG and RT will be integrated to arrive at a more encompassing view. It might have occurred to the reader that the approach adopted in the previous chapter remains relatively lexeme-centered. Beyond the extra-linguistic environment in which lexemes are used, little attention has been given to the linguistic co-text in which they can be found

and how it affects the interpretation of lexemes. Yet one of the very reasons I decided to write this book in the first place was also to assess lexemes in the broader linguistic and non-linguistic contexts and to show how this interaction affects our understanding of lexical items. (Indeed, CxG and RT focus almost exclusively either on the linguistic environment of a lexeme or on extra-linguistic factors.) The goal of this chapter is to show that an adequate appreciation of lexical semantics–pragmatics necessarily has to take into account the larger linguistic structures in which lexemes are embedded. It is divided into three sections. In Sections 4.1 and 4.2, two concepts will be discussed: the notion of *coercion* discussed in CxG (see Section 2.1.3) and that of *procedural meaning* introduced in RT (see Section 2.2.3.2). In Section 4.1, I will address the notion of coercion and show that the morphosyntactic environment in which lexemes occur directly affects their interpretation. At the same time, the pragmatic roots of coercion will be highlighted. In Section 4.2, I will investigate the notion of procedural meaning introduced in RT. The main aim is to try and spell out exactly what procedures consist of and to identify the types of unit that encode such (procedural) semantics. Eventually, a link will be drawn between the two notions and I will suggest that they are intimately related: constructions that have a coercive force have procedural meaning, the specific nature of which will be redefined. In Section 4.3, I will focus on more idiomatic (in the CxG sense of lexically fixed) patterns in which lexemes are found and which contribute in their own way to the interpretation of an utterance. It will be shown that while interpreting a lexeme often depends on the recognition of such sequences, the interpretation process of idiomatic patterns is also achieved pragmatically. In the end, a link will be drawn between the process of lexically regulated saturation and all of the concepts discussed in this chapter. This will enable me to show that it is lexically regulated saturation all the way down.

4.1 Coercion

The idea that understanding the meaning of a lexeme depends crucially on its morphosyntactic environment is a central assumption in CxG. It is assumed that the interpretation of a lexical construction is (almost) always a function of the larger constructions in which it occurs. Relevance theorists most probably agree with this approach. Yet, as mentioned before, there is a clear tendency in RT to focus on lexemes only when doing lexical semantics–pragmatics. As a result, the same set of sentences may be analyzed completely differently in CxG and RT. Take, for instance, the sentences in (66) and (67). In these two sentences, a lexical item receives an interpretation which includes aspects of meaning that are not originally part of its semantics. In the sentence in (66), for instance, the verb *behave* receives an unusual metaphorical ‘manner of motion’

interpretation. In the sentence in (67), the denominal verb *carrier pigeon* is interpreted in terms of a transfer.

(66) You can't talk your way out of something you *behaved* your way into. You have to *behave* your way out of it. (Twitter, @DougConant, 9 jan. 2016)

(67) They *carrier pigeoned* me an invite this morning. (Twitter, @KyleShoreBBCAN, 3 jul. 2014)

In the two frameworks, however, the origin of these interpretations is located at two different levels. According to relevance theorists, these examples represent two cases of lexical adjustment, the pragmatic nature of which leads to the derivation of a context-specific ad hoc concept. In this approach, the (re)interpretation of these lexemes is argued to be pragmatically motivated by one's expectations of relevance. On the constructionist account, however, the (re)interpretation process is primarily semantically motivated. It is argued that the specific interpretation of the lexemes is due to their being used in a larger construction the meaning of which is coerced onto that of the lexical item, hence the term 'coercion' (cf. Lauwers and Willems, 2011: 1219). In (66) and (67), it is the WAY construction and the DITRANSITIVE construction, respectively, that determine the meaning of the lexemes *behave* and *carrier pigeon* (see below).

These contrasting analyses naturally have to be interpreted within the framework of each theory. The aim of this section is to look more deeply into the notion of coercion as well as to investigate the possibility of a more comprehensive understanding of the concept.[77] It will become clear that the main difficulty is to pin down the nature of the process involved (semantic or pragmatic). In Sections 4.1.1 to 4.1.3, I will consider the RT approach and the CxG approach and will discuss their respective limits. It will eventually be argued, in Section 4.1.4, that the combination of the two theories provides interesting insights into coercion, which will be discussed in terms of a semantically constrained pragmatic process.

4.1.1 Relevance Theory and 'Free' Pragmatic Enrichment

Relevance theorists look at examples that constructionists have treated in terms of coercion, but the term *coercion* itself is not used in the relevance-theoretic literature.[78] As will become clear, relevance theorists generally do not distinguish examples of coercion from other cases of lexical adjustment, all of which they analyze in terms of a single process of pragmatic enrichment. Before looking exactly at what the term coercion is meant to capture in CxG, I briefly

[77] Parts of this section were published in Leclercq (2019).
[78] A noticeable exception is Escandell-Vidal and Leonetti (2002, 2011). See Section 4.2.2.

want to discuss again the relevance-theoretic approach. Consider the sentences in (68) to (69).

(68) Buying a house is easy if you've got *money.* (Wilson and Carston, 2007: 235)

(69) I have a terrible cold, I need a *Kleenex*. (Sperber and Wilson, 2005: 370)

The sentences in (68) and (69) include a lexical item that receives an interpretation which is either narrower or broader than the encoded concept. In the sentence in (68), *money* has to be understood in the narrow sense of 'suitable amount of money'. *Kleenex*, in (69), is used in the broader sense to refer to any disposable tissue. In Relevance Theory, these specific concepts are referred to as ad hoc concepts, and are differentiated from the original (encoded) concept by marking them with an asterisk: MONEY*, KLEENEX* (Clark, 2013a: 249). What is important for our discussion is that the derivation of these ad hoc concepts is argued to be not linguistically but pragmatically motivated. That is, it is not the linguistic items that motivate this adjustment. Rather, they are created online by the hearer only to satisfy their expectations of (optimal) relevance. These concepts are therefore said to result from an inferential process of "free" pragmatic enrichment since they are the outcome of an optional process of enrichment.[79]

In this framework, examples that are treated in CxG in terms of *coercion* are analyzed in the same way as those in (68) to (69). In fact, they are generally included among other examples illustrating ad hoc concept creation, such as those in (70) to (72).

(70) Federer is the new *Sampras*. (Wilson, 2003: 276)

(71) He *Houdinied* his way out of the closet. (Wilson, 2003: 277)

(72) The boy *porched* the newspaper. (Wilson and Carston, 2007: 238)

Sampras is used in the sentence in (70) not to refer specifically to the tennis player, but more generally to the category of good (or best) tennis players, to which both Roger Federer and Pete Sampras belong. In this case, it is argued that the original concept SAMPRAS made accessible by the noun is broadened and the ad hoc concept SAMPRAS* is inferentially derived by the hearer to meet their expectations of relevance. Similarly, in (71) and (72), the interpretations of the two denominal verbs *Houdinied* and *porched* are said to involve the creation of the ad hoc concepts HOUDINI* and PORCH*, where both the manner of motion interpretation of *Houdinied* in (71) and the action of throwing the newspaper to the porch in (72) are assumed to be entirely pragmatically inferred.

Within Relevance Theory, therefore, the interpretation process of the sentences in (70) to (72) is no different from that of the sentences in (68) to (69). In

[79] See Chapters 2 and 3 for a critical discussion of this view.

both cases it is considered to be an inferential process that is pragmatically motivated by the need for the hearer to arrive at a relevant interpretation, i.e. to arrive at an interpretation that provides enough cognitive effects to justify their processing effort. In CxG, however, the sentences in (70) to (72) receive a different treatment from those in (68) and (69). It is argued that the interpretation of the different lexemes is not pragmatically but linguistically motivated by the larger constructions in which they occur, their meanings being coerced onto the lexemes.[80]

4.1.2 Construction Grammar: Coercion

A central assumption in CxG is that it is not only morphemes, words or idioms that have construction status (i.e. conventionally associate a form with a meaning), but also the larger 'syntactic' structures in which they occur, which have their own semantic or discourse functions (see Section 2.1.1). Construction grammarians have in particular (but not only) focused on the construction status of argument structures. It is argued, for instance, that the sentences in (73) and (74) instantiate (among others) two specific constructions: respectively the CAUSED-MOTION construction (see Goldberg, 1995: 152) and the WAY construction (see Israel, 1996: 218).

(73) a. She put the plate in front of him. (BNC, written)
b. A child threw a stone at the horse, which bolted. (BNC, written)
c. I moved them into a tank of their own. (BNC, written)

(74) a. Craig made his way to the attic. (BNC, written)
b. Annabel wormed her way into the circle around Kezia with a plate of smoked salmon sandwiches. (BNC, written)
c. How do you navigate your way through a forest, especially if you're in a wheelchair? (BNC, written)

From this perspective, the meaning 'X causes Y to move Z' in the sentences in (73) is supposedly associated with the form [SUBJ V OBJ OBL], which together form the CAUSED-MOTION construction. Similarly, it is argued that the manner of motion meaning identified in the sentences in (74) is associated with the form [SUBJ V *one's way* OBL], which together form the WAY construction (see Chapter 1, Section 2.1.1). It is these two constructions that explain how the verb *push*, a prototypical use of which can be found in (75a), actually expresses caused-motion in the sentence in (75b) or manner of motion in (75c).

(75) a. Excuse me, did you just *push* me? (BNC, spoken)
b. The lieutenant *pushed* the box across the table. (BNC, written)
c. Mike *pushed* his way into the canteen. (BNC, written)

[80] See Section 4.1.5 for a comparison between the RT and CxG treatments.

These interpretations follow from the use of the verb in the CAUSED-MOTION construction and the WAY construction, the respective meanings of which contribute to the understanding of *push*. In this case, given that *push* encodes a meaning similar to that of the two constructions in which it occurs (i.e. the verb *push* also semantically involves the notion of motion), it is argued that the lexeme is semantically compatible with the constructions and easily combines (or fuses) with each of them (Yoon, 2012: 3).

However, lexemes and constructions are not always semantically compatible. Sometimes the semantics of a particular lexical item does not fit the semantics of the construction in which it occurs. In the sentence in (71) for instance (repeated here in (76)), the proper noun *Houdini* is far from the prototypical manner-of-motion verb that we expect to find in that position in the WAY construction.

(76) He *Houdinied* his way out of the closet. (Wilson, 2003: 277)

There is a semantic (and morphosyntactic) mismatch that needs to be resolved. And in this case, it is argued that the lexeme *Houdini* will be reinterpreted in accordance with the semantics of the WAY construction.[81] From this perspective, there is little overlap between the constructionist and the relevance-theoretic accounts. According to constructionists, the 'manner of motion' meaning identified in (76) is not pragmatically inferred to meet the hearer's expectation of relevance, but is provided by the WAY construction in which the noun *Houdini* occurs. That is, it is already semantically specified. The reinterpretation of the lexeme is linguistically required to solve the mismatch between the lexeme and the construction. This is where coercion occurs: in case of a semantic (and morphosyntactic) mismatch, the meaning of the construction is coerced onto the meaning of the lexeme.

As mentioned in Section 2.1.3, the term *coercion* was used in other fields of research before CxG adopted it. In those different frameworks, the notion is used to describe slightly different phenomena. Nevertheless, CxG shares with them the view that coercion is concerned with the resolution of an incompatibility between a selector (e.g. argument structure constructions) and a selected (e.g. lexemes) whereby the latter adapts to the former. In CxG, this observation has been worded by Michaelis (2004) in terms of the override principle, which

[81] A reviewer pointed out that examples such as in (76) might go against a CxG account since *way* doesn't seem to be crucial and can easily be replaced by *himself* (as in *He Houdinied himself out of the closet*). This example does not challenge the CxG approach, however, since it belongs to the same family of RESULTATIVE constructions as that exemplified by the example with *himself* (cf. Peña Cervel, 2017). The semantic similarity between the two examples is therefore to be expected given the respective constructions used.

states that the meaning of a lexeme accommodates to that of its morphosyntactic environment in case of a mismatch between the two (Michaelis, 2004: 25).

In the next sections, I will discuss some of the weaknesses that reduce the explanatory power of each of the two theories, and I will propose a more comprehensive understanding of coercion which merges them. In particular, the aim is to pin down the exact origin (semantic or pragmatic) of this phenomenon. Before doing so, I will illustrate the constructionist approach with a couple of other examples:

(77) The people swarming around were clamoring for more beer, but the owner was intransigent: every three beers you had to order a *rice* with fried fish. (COCA, written)

(78) I think Ph.D. is the new *masters*. (V. Fung, p.c., 12 dec. 2016)[82]

(79) Ed *hammered* the metal flat. (Boas, 2011: 1272)

In each of these sentences, a lexical item receives an interpretation with which it is not conventionally associated. In the sentence in (77), *rice* receives an unusual countable interpretation. In the sentence in (78), *masters* is used metonymically to refer to the type of degree that one needs to hold in order to stand out in the job market. In (79), the denominal verb *hammered* refers to the action of using a hammer in such a way as to make the metal become flat. From the relevance-theoretic standpoint, one might want to argue that the interpretation of those lexemes involves the pragmatic derivation of the ad hoc concepts RICE*, MASTERS* and HAMMER*. From the constructionist perspective, however, their interpretation largely depends on the function of the larger constructions in which they occur. In the case of *rice*, for instance, the countable interpretation results from its being used in the INDEFINITE DETERMINATION construction (Michaelis, 2004: 27), further instances of which can be found in (80).

(80) INDEFINITE DETERMINATION construction – [*a* NOUN]
a. We may even rent **a hall**. (COCA, spoken)
b. Buffer is **a word**. (COCA, spoken)
c. Ninety-five percent of what the President says is not **a lie**. (COCA, spoken)

It is clear from these examples that this (partially schematic) construction usually selects countable nouns. Michaelis (2004: 27) argues that countability is inherent in the semantics of the construction. From this perspective, the countable interpretation of *rice* in (77) in terms of a serving of rice simply

[82] This sentence was used during a conversation on whether holding a masters degree still made a difference in the UK, especially in terms of attractiveness on the job market.

follows from the fact that it occurs in the INDEFINITE DETERMINATION construction, the semantics of which is coerced onto the lexeme. A similar explanation in terms of coercion holds for the examples in (78) and (79). The metonymic interpretation of *masters* in (78), for instance, takes its root in the X *is the new* Y construction (cf. Dancygier and Sweetser, 2014: 154).

(81) X *is the new* Y construction
  a. **The garden is the new kitchen**. (COCA, written)
  b. There was a time when raising your voice was considered okay for parents to do, but now **screaming is the new spanking**. (COCA, written)
  c. In case you didn't get the message, **texting is the new talking**. (COCA, written)

The examples in (81) are typical instances of the X *is the new* Y construction. In this construction, the X and Y elements are systematically interpreted metonymically in relation to some larger category. In (81a), *garden* and *kitchen* are used to refer to that part of our houses in which we are ready to invest a lot of money. In (81b), *screaming* and *spanking* refer to parenting methods that are judged unacceptable. Finally, in (81c), *texting* and *talking* are used to talk about the main channel of communication teenagers use. The metonymic interpretation of the X and Y elements is argued to be part of the semantics of the X *is the new* Y construction (Dancygier and Sweetser, 2014: 154). From the constructionist standpoint, the interpretation of *masters* in example (78) above therefore follows from its being used inside this construction from which the (metonymic) interpretation is coerced.[83]

It is also coercion that can explain the use of *hammer* in (79), *Ed hammered the metal flat*. In this case, *hammer* is used in the RESULTATIVE construction, and it is the semantics of this construction that (in part) explains the interpretation of the lexeme in terms of causality. Consider the following examples:

(82) RESULTATIVE construction – [SUBJ V OBJ RESP]
  a. **He licks the plate clean** and looks up at us. (COCA, written)
  b. **These people drive me crazy**. (COCA, written)
  c. **My mother shook my father awake**. (COCA, written)

In all of these examples, the form [SUBJ V OBJ RESP] is associated with a particular resultative (or 'cause to become') interpretation which together form the RESULTATIVE construction (see Boas, 2003). For instance, in the sentence in (82c), we understand that 'my mother' is the reason for 'my father' to be awake as a result of her having shaken him. It is the semantics of this

[83] Naturally, although the metonymic framing is part of the construction's semantics, the exact category that the items in the X and Y positions actually refer to has to "be supplied by the hearer from accessible knowledge or context" (Dancygier and Sweetser, 2014: 154). The pragmatic roots of coercion will be discussed more fully in the next sections.

construction which provides (part of) the interpretation of *hammer* in (79) above. The particular resultative interpretation of the lexeme comes from the semantics of the construction in which it occurs. That is, the meaning of the lexeme accommodates to that of the construction (i.e. coercion). Its interpretation here is therefore not (solely) pragmatically motivated.

4.1.3 Creation of Ad Hoc Concepts or Mismatch Resolution: Respective Limits

CxG and RT contribute differently to the understanding of lexical semantics–pragmatics. The main challenge is to understand how to analyze sentences for which they provide contrasting analyses, such as those we just saw in the case of coercion. The aim of this section is to try and understand whether a more comprehensive understanding of this notion is possible. In order to do so, I will first discuss some of the weaknesses of CxG and RT. It will be shown that the respective limits of each theory actually represent the strength of the other.

The relevance-theoretic analysis, I want to argue, suffers from not distinguishing between coercion and other cases of meaning adjustment, as is done (although not explicitly) in CxG. For instance, it is argued that in all of the sentences in (83) and (84) the interpretation of the lexeme in italics involves the derivation of an ad hoc concept which is pragmatically inferred by the hearer in order to meet their expectations of relevance (i.e. the derivation of these ad hoc concepts is argued to be entirely pragmatically motivated by the search for relevance).

(83) Either you become a *human being* or you leave the group. (Wilson and Carston, 2007: 242)

(84) a. Federer is the new *Sampras*. (Wilson, 2003: 276)
b. Handguns are the new *flick-knives*. (Wilson and Carston, 2007: 237)
c. Ironing is the new *yoga*. (Wilson and Carston, 2007: 237)

This unitary approach can be easily explained by looking at the general scope of the theory. Within the relevance-theoretic framework, meaning is (almost) systematically discussed in relation to lexemes only. This is most probably due to one of the major aims of the theory, namely to explain the nature of lexical concepts (see Chapter 3). Comparatively little attention is given to morphemes, idioms or larger constructions, and in particular to how they interact with one another. It follows quite naturally from this perspective that the specific interpretations of (83) and (84) should receive the same analysis since in both cases the interpretation of the highlighted lexemes requires more than accessing their semantic content (see underdeterminacy thesis in Section 2.2.2).

From a constructionist point of view, however, different factors affect the interpretation of the sentences in (83) and (84). Both these factors are external

to the lexemes used but are of a different nature. While for (83), constructionists might agree that the interpretation of *human being* (in terms of an educated, well-behaved person) is derived pragmatically,[84] they would not agree that this is also the case for the lexemes identified in (84). In the sentences in (84), the lexemes *Sampras*, *flick-knives* and *yoga* are all understood as metonymically referring to a more generic category they stand for (respectively here, that of good tennis players, favorite weapons of choice and anti-stress activities). Constructionists readily recognize that this particular meaning is not part of the semantics of the lexemes themselves. Nevertheless, they do not fully attribute it to pragmatics either. Rather, they consider that this meaning (i.e. the reference to a larger, representative category) belongs to the X *is the new* Y construction in which these lexemes occur (see previous section). That is, this meaning is not entirely derived pragmatically, but it actually belongs to the particular construction in which the lexemes occur. In other words, the meaning is already linguistically (i.e. semantically) provided by the construction before being coerced onto the lexeme that occurs within it.

As will become clear in the following paragraphs, one of the challenges is to understand exactly how coercion operates, i.e. how the meaning of the construction becomes part of the meaning of the lexeme. First, however, it is important to underline that this view clearly contradicts the unitary treatment given in Relevance Theory, that is, solely in terms of pragmatics. And more specifically, it invites proponents of the relevance-theoretic tradition to reconsider their analysis of sentences like those in (84), in particular by acknowledging the construction status of (among other) argument structures, and the semantic origin of the reinterpretation of the lexemes that occur inside them. After all, these constructions have been given a lot of attention both within and outside CxG, from both theoretical and empirical perspectives (see Section 2.1.1 for references). Note that relevance theorists do not explicitly reject the possibility that larger, more abstract constructions might exist and be used. In fact, they most probably would agree there are such constructions. But there is a clear lack of identification of these patterns by relevance theorists, who prefer to play the 'all-pragmatics' card which, outside the pragmatics literature, many find unattractive. As I see it, it is essential to actually integrate larger constructions into a relevance-theoretic analysis and accept that not all meaning adjustment can be explained via pragmatics only. Such a move will strengthen the relevance-theoretic approach both at the descriptive and the theoretical levels and will thus enhance its explanatory potential.[85]

[84] In CxG, the interpretation of *human being* results from a conceptual mapping with the THING-FOR-PROPERTY-OF-THE-THING-metonymy, a cognitive process which is performed pragmatically (cf. Panther and Thornburg, 2003, 2007; see also Langacker, 2008: 40–42).

[85] Recently, such a move was made by Padilla Cruz (2022) when he points out that the interpretation of lexical items is not solely the result of pragmatic inferencing (i.e. of 'free' pragmatic

Perhaps the main difficulty for RT is to understand what type of semantics is encoded by those constructions and how exactly they contribute to the interpretation of the lexemes that occur within them. This will be discussed later in this chapter. More generally, however, bringing the constructional ideas on coercion within the relevance-theoretic approach seems quite feasible. However, some have argued precisely against it. For instance, Ziegeler (2007a, 2007b) strongly argues against adopting the constructionist perspective on coercion for natural languages and in favor of pragmatic accounts.[86] Interestingly, a critical analysis of her arguments provides a nice transition to discussing some limits of the CxG view on the matter and how they may be overcome. There are two main reasons why Ziegeler argues against the notion of coercion. First, she argues that postulating coercion by referring to the semantics of constructions is unnecessary given that the reinterpretation of the lexemes involved can be solely explained in terms of analogy, metonymy or metaphor (Ziegeler, 2007b). For instance, she discusses the following example:

(85) She had a *beer*. (Ziegeler, 2007b: 1009)

She argues that the interpretation of the lexeme *beer* as 'a glass of beer' does not result from its being coerced by the INDEFINITE DETERMINATION construction (*a* NOUN) but rather is made possible by the CONTAINED FOR CONTAINER metonymy which pragmatically enables us to understand the lexeme. A couple of points are in order here, however. First, it is true that the example in (85) can also be explained in terms of this particular metonymy (and not only in terms of coercion, with the INDEFINITE DETERMINATION construction projecting its countable semantics onto the lexeme *beer*). Yet it is not clear why this necessarily provides a counter-argument to coercion by construction. There is no denying that this metonymic pattern has a role to play in the interpretation process (quite the contrary, see below), but it is exploited only because *beer* here occurs with the indefinite determiner, which is not expected given that it is a mass noun. Nevertheless, Ziegeler does not wish to call this a case of constructional coercion and insists that the interpretation process involved here is purely a matter of lexical pragmatics which involves metonymy.

In order to understand this perspective, it must be noted that Ziegeler finds more attractive accounts that "assume no *a priori* syntactic constructions" (Ziegeler, 2007b: 1024). The type of coercion presented in CxG, however, exists only because there are 'syntactic' constructions and, indeed, without such constructions, there is no (constructional) coercion. However, there is ample evidence that individuals do store and use these more schematic

enrichment) but that it is also mandated by the linguistic environment. Besides co-textual lexical triggers, he looks at evaluative morphemes in Spanish.

[86] Note that Ziegeler does not identify herself as a relevance theorist.

constructions, and this challenges Ziegeler's view.[87] Gonzálvez-García (2011) provides a detailed counter-argumentation to Ziegeler and very nicely shows that metonymy and metaphor alone cannot always explain cases of coercion. That is, the construction types discussed in CxG do contribute to the interpretation of the lexemes. Take the following example:

(86) When a visitor passes through the village, young lamas stop picking up trash to mug for the camera. A gruff 'police monk' *barks* them to work. (Gonzálvez-García, 2011: 1317)

Gonzálvez-García recognizes that the use of the denominal verb *barks* in (86) requires a metaphorical mapping from the domain of dogs to that of human beings from which the 'police monk' can be understood as emitting particularly loud sounds. This part of the interpretation of *bark* is undoubtedly pragmatically derived. However, in this context, *bark* is primarily used to communicate the particular way in which the lamas are caused to go back to work by the monk. This caused-motion part of the interpretation cannot be explained in terms of metonymic or metaphorical mappings. It can, however, be explained in terms of the meaning of the CAUSED-MOTION construction (i.e. [SUBJ V OBJ OBL], see above) in which *bark* occurs. That is, part of the interpretation of the lexeme *bark* here is made readily available by the semantics of the (argument structure) construction in which it occurs. Constructions such as the CAUSED-MOTION construction therefore directly contribute to the interpretation of the lexemes found inside them (Gonzálvez-García, 2011: 1310). In other words, Gonzálvez-García convincingly shows that Ziegeler's view is flawed.

> The recognition of the role played by metaphor and metonymy does not render superfluous the assumption that syntax in general and constructions in particular, understood as meaning-function correspondences, play an essential role in the phenomenon of slot-determined meaning in sentences involving coercion. (Gonzálvez-García, 2011: 1310)[88]

In spite of this observation, there is another, more fundamental, reason why Ziegeler is uneasy with the notion of coercion (and which, in fact, is much more consequential than that mentioned previously). When Ziegeler argues against coercion, she seems to be arguing against the view according to which constructions themselves automatically coerce their meanings onto the lexemes (Ziegeler, 2007b: 1005). In this case, coercion is a purely linguistic product whereby constructions act upon lexemes independently of the language user. However, Ziegeler (2007b: 999) strongly argues that it is the language user, not language itself, that can change the meaning of a particular word. In other

[87] The question of whether 'syntactic' constructions exist falls outside the scope of this chapter. I largely endorse the constructionist perspective. See Section 2.1 for specific references.

[88] For a similar observation, see Harder (2010: 247).

words, to use Lauwers and Willem's (2011: 1224) terminology, she favors the position of a 'language-user' coercion as opposed to a 'systemic' coercion. Note, however, that although she is most probably right to consider that coercion is not an automatic linguistic device (see below), she is wrong in assuming that this is the perspective adopted in CxG.

It is true that there are (many) unfortunate formulations that might have led Ziegeler to this particular conclusion. Goldberg (1995: 159), for instance, says that some meanings "are capable of being coerced *by particular constructions*" (original emphasis). In this case, she could indeed be understood to be suggesting that constructions themselves change the semantics of the lexemes that occur within them. Because of her firm cognitive (usage-based) orientation, however, it is unlikely that Goldberg or any of her followers think of coercion as a purely linguistic device. She explicitly attributes the creative potential of language, which involves cases of coercion, to speakers themselves and not to grammar: "grammars don't generate sentences, speakers do" (Goldberg, 2006: 22)[89]. It is mainly construction grammarians taking a strong formal approach to language who could be reproached for adopting a 'systemic' view of coercion. Lauwers and Willem (2011: 1225) argue that this is precisely what Michaelis (2004) does, for instance. Indeed, she refers to the "override principle" as a "coercion mechanism" whereby the semantics of the construction simply "wins out" over that of the lexeme (Michaelis, 2004: 25). In this case, the language user is only a witness to the linguistic mechanism. Once again, however, it is not clear whether Michaelis really conceives of coercion as such a strictly linguistic device. Consider the following quote:

> Coercion effects are triggered when *the interpreter* must reconcile the meaning of a morphosyntactic construction with the meaning of a lexical filler. Coercion effects, rather than representing a special form of composition, are by-products of the ordinary significations of constructions. (Michaelis, 2004: 7; emphasis mine)

This strongly suggests that Michaelis also recognizes the role of the language user during the interpretation process which is triggered by the semantic mismatch.[90] Consider the following example:

(87) Zak Bush: Talk me through your transition from professional surfer to writer.
Jamie Brisick: I guess you could say I *back-doored* my way into writing.[91]

[89] A similar statement is made by Langacker (1987: 65), see Chapter 2.

[90] It is interesting to note that Ziegeler's (2007b) understanding of the various constructionist perspectives on coercion differs radically from mine. One the one hand, she reproaches Goldberg (1995) for being too systemic, and on the other, she appreciates Michaelis' (2004) more user-based approach. Yet it seems clear to me (as it does to Lauwers and Willem, 2011: 1225) that the more formal approach to constructions developed by Michaelis renders her view relatively more systemic than that defended by Goldberg.

[91] Zak Bush interviewing Jamie Brisick for the Outerknown Journey blog in 2017 (no longer available).

When arguing that there is coercion in (87), for instance, constructionists only refer to the semantic (and morphosyntactic) mismatch between the (poly) lexeme *back-door* and the WAY construction that, in context, the hearer has to resolve. The noun *back-door* is indeed not the prototypical 'manner of motion' verb that one expects to find in the WAY construction. Most of the time, the lexeme is reinterpreted in accordance with the semantics of the construction (see override principle above). In the sentence in (87), this observation is confirmed since the denominal verb *back-door* indeed includes the (metaphorical) 'manner of motion' sense that originally belongs to the WAY construction. Nevertheless, it is also clear to constructionists that the resolution process is carried out by speakers/hearers themselves in context and not by the language. As a consequence, there is no particular reason for relevance theorists not to adopt the constructional view on coercion and recognize the semantic origin of the interpretation.[92]

Now, in spite of the observations just made, Ziegeler (2007a: 105) rightly observes that constructionists "tend to pass over the role of the language user in the interpretive process." For instance, it is indeed not clear how the lexeme *back-door* inherits aspects of meaning from the WAY construction in (87). In a similar way, Yoon (2012: 7) says that the "the psychological process toward the resolution [is] not dealt with." That is, although they argue that the resolution process is performed by the language user, construction grammarians indeed fail to explain exactly how this process operates. And this is exactly where insights from Relevance Theory become very useful. While constructionists do not address in detail the role of language users, it will have become

[92] It could of course be argued that viewing coercion as a *language-user* or a *systemic* process might also depend on whether one takes the perspective of the speaker or the hearer. It is true, after all, that while speakers are (relatively) free to choose between different options to express the same thought (hence more user-dependent), the interpretation process carried out by hearers is directly guided by the linguistic items used by the speaker (hence more system-dependent). Unfortunately, the reality of how coercion operates seems more complex. First, speakers are not entirely free to create novel expressions as they please and are in their own way also subject to the system pressure. In CxG, it has been shown that creating novel sentences also largely depends on a number of crucial properties of the linguistic system, which they refer to in terms of *productivity*, *coverage*, *competition* and *statistical preemption* (see Chapter 2). Second, it is also clear in RT that, like hearers, speakers are constrained by the 'principle of relevance' (i.e. they need to provide the hearer with a *relevant* interpretation), and therefore they need to choose linguistic items that will guarantee the relevance of the intended interpretation (cf. Sperber and Wilson, 1995: 157). This has been discussed by Park and Clark (2022) in terms of a relevance-focused production heuristics. From this perspective, speakers are therefore not so free after all. In this book, focus is placed on the interpretation process from the perspective of the hearer. For more information on how speakers are constrained by the linguistic system, the reader is invited to look at the references mentioned in Chapter 2. In the rest of this chapter, it will be shown that although constrained by the linguistic items used by the speaker, the particular interpretation process referred to as 'coercion' is not performed by the linguistic system directly (and is not, therefore, systemic) but remains primarily a pragmatic process carried out by hearers themselves.

clear from the previous chapters that relevance theorists can. This is precisely when a cross-theoretical understanding of coercion becomes possible and even beneficial to both theories. Where constructionists are able to identify the source of the reinterpretation process (i.e. the semantic mismatch between a lexeme and a construction), relevance theorists can explain the strategy used to resolve the incompatibility. In particular, this strategy is the relevance-theoretic comprehension procedure mentioned in Chapter 2. What exactly does this procedure entail? Consider again the sentence in (87), for instance. If RT were to adopt the insights from CxG, the argument would go along the following lines: in accordance with their expectations of relevance, on the basis of their knowledge of the two constructions (the noun *back-door* and the WAY construction), as well as taking into account extra-linguistic information, the hearer will look for an interpretation that provides them with sufficient cognitive effects to justify the amount of effort put into the resolution process. From this perspective, it is relatively clear that the resolution process is more complex than just copy-pasting (to put it simply) the meaning of the construction onto that of the lexeme. Rather, the hearer has to inferentially work out exactly what interpretation was intended by the speaker when creatively putting together seemingly incompatible constructions, i.e. looking for the particular way in which the speaker is observing the principle of relevance.

This analysis receives support from experimental data (Yoon, 2012; Busso, Perek and Lenci, 2021). For instance, Yoon (2012) conducted a series of experiments in order to find evidence for the possibility that coercion is not a binary distinction (that is, coercion either takes place or does not), but that there is instead a cline of semantic (in)compatibility between constructions and lexemes. These experiments particularly involved looking at the hearer's processing effort (by measuring processing time) during the resolution process.[93] Some of her results corroborate relevance-theoretic predictions (in terms of a balance between cognitive effects and effort) as to the resolution process. She shows that the less semantically compatible a lexeme is with a construction, the more processing effort the resolution process requires (i.e. more processing time). Yoon (2012: 261) obviously sees these results as evidence that there is indeed a continuum of coercion events (more or less compatible combinations require more or less processing effort). Yet this is first and foremost evidence that coercion is not a purely linguistic device but that language users are particularly involved in the resolution process, i.e. that the meaning of the construction does not simply 'win out' over that of the lexeme, in order to derive a *relevant* interpretation (see also Yoon, 2012: 310). If the meaning of the construction simply won out over that of the lexeme, then different coercion events should result in the same cognitive process regardless

[93] She uses acceptability judgment tasks (Yoon, 2012: 57).

of the incompatibility. Yoon convincingly shows, however, that "coercion is not a binary concept" (Yoon, 2012: 158). Rather, coercion involves inferential pragmatic processes which require hearers to take into account extra-linguistic factors. Here, RT can help determine exactly how this process is carried out.

4.1.4 Coercion and Context-Sensitivity: Further Evidence

It could be argued that many of the examples I used in the previous section contradict the perspective I am trying to present here (in purely inferential terms) and suggest that perhaps coercion does not involve the same type of inferential process as that involved, for instance, during the process of *lexically regulated saturation* discussed in the previous chapter. Indeed, many of the examples I have used so far include only one sentence and their interpretation seems rather clear. This could be taken as evidence that the larger (extra-linguistic) context may not have as much of a role to play in the interpretation of coerced lexemes. In this section, I will provide examples that challenge and contradict this argument and I will show that the extra-linguistic context also plays a major role in the interpretation of coerced lexemes. This discussion will show the need to combine the constructionist and the relevance-theoretic approaches and stress the inferential roots of coercion. It is worth noting that the cognitive linguist Peter Harder also discusses the process of coercion in inferential terms:

> I have suggested the term "syntagmatic implicature" as a cover term for all accommodation- and coercion-type adjustments, in order to stress the continuity between the utterance-external pragmatic mechanism and the utterance-internal content-syntactic mechanism. So what appears to be purely *syntactic* "coercion", is really an utterance-internal manifestation of interactive, functional pressure to adapt to the context in which the coded meaning belongs. (Harder, 2010: 247)[94]

The use of the term *implicature* here explicitly refers to the primarily inferential nature of the resolution process involved. (Although I find the relevance-theoretic term *explicature* more appropriate in this context (see Chapter 2), I share Harder's view on coercion.) The aim of this section is to provide further evidence for the (linguistic and extra-linguistic) context-sensitivity of coercion as well as to show that it is necessary to combine insights from both CxG and RT to understand how exactly coercion operates.[95]

Examples of various types can be used to highlight the context-sensitivity of coercion. In the first part of this section, I want to focus on examples that cannot

[94] Note that Harder is not a construction grammarian (he more generally considers himself a cognitive linguist), so this quote does not challenge the previous arguments.

[95] Mazzarella (2014) provides an interesting discussion on the reasons why inference is necessary to pragmatics (see also Carston, 2007).

be easily interpreted out of context, i.e. cases where the resolution process can only take place given a specific context. Consider the following example:

(88) ??Farmer Joe *grew* those vines onto his roof. (Goldberg, 1995: 169)

In this sentence, the verb *grow* occurs in the CAUSED-MOTION construction, the particular semantics of which needs to be coerced onto the lexeme given the semantic mismatch between the two constructions. Yet Goldberg (1995: 169) considers example (88) to be unconventional (and perhaps unacceptable) since the verb *grow* does not naturally take a directional prepositional phrase given the absence of motion in a typical scene of growing (and watering) plants. Nevertheless, Yoon (2012) convincingly shows that, given a specific context, this utterance and in particular the mismatch between the verb *grow* and the CAUSED-MOTION construction can be resolved by the hearer. It is the case, for instance, "if the situation is that Joe used wires and bars to support the vines so that they can reach the roof" (Yoon, 2012: 5). In this case, the sentence in (88) is judged as more acceptable by speakers of English. Yoon takes this as evidence that coercion is highly context-dependent since the context here clearly affects the resolution process. She explicitly argues that this process consists in the integration of both the "linguistic elements in the expressions and extra linguistic context" (Yoon, 2012: 37). A similar example is discussed by Boas (2011):

(89) ??Ed hammered the metal *safe*. (Boas, 2011: 1271; emphasis mine)

(90) The door of Ed's old Dodge had a piece of metal sticking out. When getting out of the car, Ed had cut himself on the metal and had to go to the hospital to get stitches. The next day, **Ed hammered the metal *safe***. (Boas, 2011: 1271; emphasis mine)

These sentences are meant to illustrate a particular use of the RESULTATIVE construction (see above). Boas (2011: 1271) argues that in (89) the use of *safe* in the resultative matrix of *hammer* is generally not acceptable in English. That is, outside a specific context, it is difficult to coerce *safe* here into a resultative phrase. Yet, in the relevant context, coercion is possible. In (90), the same combination is preceded by a specific context which makes sense of the use of *safe*. In this case, the same sentence as in (89) is now judged as an acceptable sentence of English.[96] That is, provided the right context, coercion is possible.[97]

[96] Boas (2011) conducted a judgment task to check the acceptability of (90). Amongst 40 native speakers of English (undergraduate students), "23 informants found (90) acceptable, 9 judged it marginally acceptable, and 8 found the example unacceptable" (Boas, 2011: 1297).

[97] This example once more shows that construction grammarians are fully aware of the context-sensitive nature of coercion. Boas admits, however, that CxG does not yet "provide satisfactory mechanisms capable of dealing with contextual background information" (Boas, 2011: 1275).

There is another set of examples that can be used to show the highly context-dependent, inferential roots of coercion. If coercion only involved the linguistic environment, then the same sentence should receive exactly the same interpretation by different individuals (given that they access exactly the same linguistic environment). This hypothesis is not borne out, however. Consider the following sentence:

(91) Strong is the new skinny. (*New York Post*; August 15, 2013)[98]

This title of a *New York Post* article illustrates the use of the X *is the new* Y construction in which the lexemes *strong* and *skinny* occur. I believe that the interpretation of the two lexemes is relatively clear. Out of context, the first interpretation that comes to mind is that looking strong (and muscular) is the new physical characteristic that makes an individual particularly attractive (instead of being skinny). In the context of this article, this interpretation is only partly correct, however. It is true that part of the interpretation concerns the attractiveness of muscular features. It is said that "the aesthetic is changing … long and lean muscles are the new attractive." Yet what the linguistic environment of the sentence in (91) does not make clear is that this actually concerns women only. That is, in this article, looking strong is said to be the new attractive feature of women and nothing is said about men. Therefore, understanding the use of *strong* and *skinny* in this particular article is already quite context-sensitive and does not only depend on the use of the X *is the new* Y construction. The context-sensitivity of the interpretation of (91) goes even further than this, however. After the release of the article, the 'strong is the new skinny' phrase became quite controversial and new interpretations started to emerge to soften the misogynist blow that followed its publication. In particular, it has been suggested instead that *strong* should be understood not as the main feature of a woman's attractiveness but as an indicator of her health. That is, *strong* and *skinny* here are given an interpretation which requires the metonymic derivation of a different category than that mentioned previously. This interpretation is arrived at by taking into account different contextual factors, such as the fact that emphasis on sports activities and health-related issues are also mentioned in the article. This is further evidence that cases of coercion such as illustrated in (91) are never just constrained by the linguistic environment but also depend on the extra-linguistic context. Here is another list of examples:

(92) a. Just in case you're not all *Biebered* out already, here's the full studio version of "Mistletoe". (Audring and Booij, 2016: 623)

Although he refers to particular processes of analogy, he does not explain exactly how context (and inference) can contribute to coercion, however.

[98] https://nypost.com/2013/08/15/strong-is-the-new-skinny/ (last accessed: May 31, 2023).

b. We hope this is the last time we hear any Bieber news, we don't know about you but we're completely *Biebered* out! (ZAlebs, May 14, 2013)[99]
c. Selena Gomez Rehab: Was She 'Exhausted', 'Drunk' Or *Biebered* Out? (INQUISITR, February 8, 2014)[100]

The sentences in (92) all illustrate the use of Justin Bieber's last name in the construction '*be* (intensifier) V-*ed out*' (see Hugou, 2013; Jackendoff, 2013: 89; Audring and Booij, 2016: 623). This construction is used when the speaker wants to communicate the particular way in which the subject is exhausted from experiencing (to excess) the action denoted by the verb (Jackendoff, 2013: 89). Examples of this construction include the following:

(93) a. I thought I **was all loved out**. But my heart's filled right up again. I love you, Jessie. (COCA, written)
b. He'**s all knitted out**. [after knitting for three days solid] (Jackendoff, 2013: 89)
c. If you'**re** not **all festivaled out** this summer head for The Moors Festival. (Audring and Booij, 2016: 624)

In the sentence in (93a), the speaker expresses their feeling of having loved too much to be able to love again. In (93b), the subject referent is described as having had enough of knitting. Similarly in (93c), the denominal verb *festivaled* is used to communicate the particular way in which an individual might have been to too many festivals during the summer to enjoy yet another one. Although these examples receive different interpretations depending on which verb is used by the speaker, they have in common a general feeling of weariness with regards to a specific situation. In CxG, it is argued that this meaning is attached to the form *be* (intensifier) V-*ed out*. It is this very construction which explains the particular use and interpretation of *Bieber* in the examples in (92) above. All of these examples somehow refer to the subject referent being weary of Justin Bieber and this particular interpretation is coerced from the construction in which it occurs. (There is indeed both a semantic and morphosyntactic mismatch between the nominal item *Bieber* and the position it occupies in that construction.)

Now, if coercion indeed involved the linguistic environment only, then the sentences in (92) should all receive the same interpretation without any further sensitivity to extra-linguistic context (since they all involve the use of the same lexeme in the same construction). Yet they do not. Given the nature of Justin Bieber's popularity (as a singer), we could perhaps expect an interpretation according to which one is tired of listening to his songs. This is the interpretation that is found in (92a). Here, the speaker who announces Justin Bieber's

[99] www.zalebs.com/whats-hot/money-heist-at-biebers-jhb-concert/ (last accessed: May 31, 2023).
[100] www.inquisitr.com/1125991/selena-gomez-rehab-was-she-exhausted-drunk-or-biebered-out/ (last accessed: May 31, 2023).

latest tune "Mistletoe" acknowledges that her audience might be tired of having to listen to him. It is worth noting that it is only the second clause (*here's the full studio version of "Mistletoe"*) that actually makes it clear this is the meaning intended by the speaker. Example (92a) already shows the context-sensitive nature of the interpretation of *Bieber* in the *be* (intensifier) V-*ed out* construction. This context-sensitivity is substantiated by examples such as in (92b) and (92c). Those examples are used to convey different meanings from that found in (92a). In the case of (92b), the speaker is not weary of *listening* to Justin Bieber but is rather weary of hearing stories about him in the news. (Whether or not the speaker still enjoys listening to Justin Bieber is not mentioned here.) Although the same combination as in (92a) is used (i.e. the same lexeme and the same construction), a different interpretation is derived. This interpretation is arrived at on the basis of the contextual evidence one has access to. First, of course, there is the previous linguistic context ("we hope this is the last time we hear any Bieber news") without which this interpretation might not have been available to the hearer. But also, this interpretation in particular follows from being used in *ZAlebs*, an online tabloid about celebrities. Once more, contextual information is crucial to the interpretation of the lexeme. The clause *we don't know about you but we're completely Biebered out!* alone does not suffice to arrive at the specific interpretation intended by the speaker. The same observation is true for the sentence in (92c). This example also comes from an online tabloid, yet here the interpretation of *Bieber* radically differs from that in (92b). In order to understand in what way *Bieber* is being used, one needs to know who Selena Gomez and Justin Bieber are, that they have been in a relationship but recently split, after which Selena Gomez went into rehab. Here, *Bieber* is used to express Selena's collapse after her relationship with the singer. It is only on the basis of all this information (and also knowing the type of information discussed in the particular tabloid) that one is able to recover this particular interpretation.

What I hope is clear from the examples in (92) is that the integration of a lexeme within a particular construction, and the resolution process that follows from it, is not a linguistic, context-insensitive mechanism but that extra-linguistic contextual information is crucial to the interpretation process. In (92a) to (92c), the same lexeme occurs in exactly the same construction, yet in their respective contexts different interpretations are derived depending on which facets of the singer are in focus. This constitutes evidence that coercion primarily involves inferential processes that depend on extra-linguistic information in order to be carried out and does not simply consist in the integration of the lexeme within a particular construction. Of course, cases of coercion differ from other adjustment processes (such as '*free*' *pragmatic enrichment*) since the construction involved is itself meaningful and therefore greatly

contributes to the interpretation. But even this meaning, as we saw in the examples in (92), is adjusted depending on the context.

This observation serves as a transition to the last type of example I will discuss to highlight the primarily inferential roots of coercion. It seems that if one assumes that coercion depends solely on the linguistic environment and not on the extra-linguistic context, then one espouses, as it were, the *systemic* view of coercion discussed above. In this case, the meaning of the construction indeed simply wins out over that of the lexeme. Yet, it will have now become clear that the interpretation of the lexeme depends as much on extra-linguistic information as it does on the semantics of the construction. The semantics of the construction therefore do not simply 'win out'. In fact, the context-sensitivity of coercion goes even deeper. Yoon (2012) indeed very elegantly shows that the resolution process may actually involve adapting the semantics of the construction to that of the lexeme. This is the case for the sentence in (94), for instance, which instantiates the DITRANSITIVE construction (SUBJ V OBJ1 OBJ2, see Chapter 2).

(94) David broke Jen the bread 6 hours ago. (Yoon, 2012: 178)

The DITRANSITIVE construction is usually said to convey the notion of transfer. (A typical example of the DITRANSITIVE construction is the sentence *John gave Mary the book*.) Yet in (94), the verb *break* does not easily receive a transfer interpretation. Rather, Yoon finds that her participants consider Jen a beneficiary (and not a recipient) only if the action involves breaking the bread into pieces (Yoon, 2012: 279). Here, the notion of 'transfer' originally part of the meaning of the construction is dropped during the interpretation process (Yoon, 2012: 280).[101] For this reason, Yoon makes the following observation:

> Some semantic *properties of the verb and construction are suppressed while the others become more salient*. This interaction challenges the one-way direction of coercion proposed by Override Principle (Michaelis, 2005) that people try to coerce the verb meaning into the constructional meaning. (Yoon, 2012: 279; emphasis mine)

This observation necessarily pushes us to think of coercion in terms of inferential processes. Example (94) shows that even the meaning of the construction can be affected by the context and has no primacy over the lexeme. What is the main defining factor during the interpretation process is the *relevance* of the intended meaning, which is evaluated in context. Therefore, as Yoon rightly points out, the override principle should be understood not as a strict rule but

[101] This interpretation relates to none of the six senses of the DITRANSITIVE construction that Goldberg (1995: 38) identifies.

instead as a strong tendency (see also Busso, 2020).[102] This observation once again supports the view that hearers do not simply try to force the constructional semantics onto the lexeme, but rather they contextually work out the speaker's intended interpretation.

4.1.5 Coercion: Semantically Constrained Pragmatic Effects

In the first part of this chapter, the aim was to compare the perspectives in CxG and RT on *coercion* in order to try and develop a more comprehensive understanding of this concept. In the previous sections, I showed that it is possible and even beneficial (to both theories) to combine both approaches. Indeed, while CxG can explain the origin of the reinterpretation process of (for instance) the lexemes *behave* and *carrier pigeon* in the sentences in (66) and (67), repeated here in (95) and (96), it was shown that RT can explain the interpretation process itself.

(95) You can't talk your way out of something you *behaved* your way into. You have to *behave* your way out of it. (Twitter, @DougConant, 9 jan. 2016)

(96) They *carrier pigeoned* me an invite this morning. (Twitter, @KyleShoreBBCAN, 3 jul. 2014)

The reinterpretation process originates, according to constructionists, in the semantic (and morphosyntactic) mismatch between the different lexemes and the larger construction in which they occur: the WAY construction in (95) and the DITRANSITIVE construction in (96). And Relevance Theory helps us to understand that the hearer will solve this mismatch by working out the speaker's intended interpretation on the basis of their knowledge of the different constructions (i.e. the lexemes and the argument structure constructions), extra-linguistic information and, most importantly, on the basis of their expectation of relevance (i.e. enough effects to justify the processing effort). And depending on the semantic incompatibility between the lexeme and the construction, this process will take more or less effort. This new perspective therefore sheds equal (or almost equal) light on the semantics of the constructions involved as well as on the role of the language user during the interpretation process.

In the next part of this chapter, I will look at the notion of procedural meaning discussed in RT and identify how it relates to coercion. Before doing so, there are a number of preliminary conclusions that I wish to draw. The first conclusion directly concerns RT. Regardless of the exact nature of the resolution process, the notion of *coercion* primarily rests on the observation that many

[102] Ziegeler (2007b: 994) suggests that this tendency might find an explanation in the more abstract and entrenched nature of the semantics of schematic constructions, which is less flexible than lexical meaning. This will be discussed more fully in the second part of this chapter.

lexemes actually inherit part of their interpretation from the larger constructions in which they occur. Although this observation is self-evident to most constructionists, this is not necessarily the case in RT. To be more precise, there is a tendency in RT not to pay attention to the larger structures in which lexemes are found and to account for the (relatively) creative uses of lexemes solely in terms of pragmatics. Yet it has been shown that the interpretation of a lexeme also largely depends on the semantics of the construction in which it occurs. Figure 4.1 lists a few of the constructions that have been discussed so far; they are placed on the continuum of lexical fixedness introduced in Chapter 2.

As mentioned several times already, it is essential for relevance theorists involved in lexical semantics–pragmatics not to focus on lexemes only (which in Figure 4.1 can be found in the fixed part of the constructional continuum), but also to take into consideration all the different types of constructions in which they can occur (which can be found in the more schematic part of the continuum). First, this makes for finer analyses. Constructions are indeed strong indicators both of the intended interpretation and of the speaker's intentions since they provide rich clues which the hearer will use in order to recover the speaker's intended meaning. At a more theoretical level, the integration of the constructionist perspective will enhance the position of RT as an explanatory theory. Indeed, as mentioned above, the all-pragmatics strategy adopted in RT tends to put off many who would otherwise find in RT many interesting answers.

Another major conclusion that needs to be drawn from the previous sections concerns CxG more directly. Although it is true that RT needs to take into account more systematically the larger types of constructions identified above, CxG also needs to give more room to pragmatics in its definition of coercion. First of all, it needs to be stated more explicitly that the resolution process is not a linguistic mechanism and that coercing the semantics of the construction onto that of the lexeme is carried out by individuals themselves and not by constructions. As a result, coercion effects emerge from pragmatic processes which

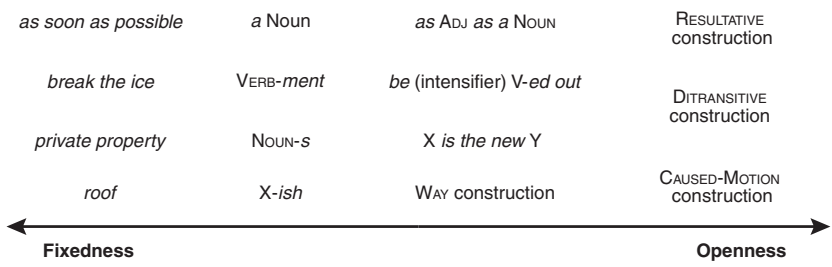

Figure 4.1 Lexicon–syntax continuum in CxG (2)

involve not only the lexeme and the construction but more largely the extra-linguistic context in which they occur. (A number of examples have been discussed in the previous section to illustrate this point.) In other words, coercion entails an inferential process which is primarily carried out in accordance with one's expectations of relevance. The distinctive feature of this process is simply that it is greatly constrained by the semantics of the construction used, which provides an indication of where relevance is to be found. This observation constitutes the last point that will be addressed in this section.

It was argued in the previous chapter that the interpretation of a lexeme largely consists in a systematic process of meaning construction. This process was referred to in terms of *lexically regulated saturation* and is meant to capture the observation that, regardless of the complexity of their semantics, the content of lexical items is systematically reconstructed inferentially in accordance with one's expectations of relevance (see Section 3.4). I want to argue that cases of coercion differ very little from this process of lexically regulated saturation and only constitute a special case: cases of coercion differ from other cases of meaning construction in the sense that the interpretation process is not only constrained by the search for a relevant interpretation but is also constrained by the semantics of the construction in which it occurs. But essentially, the same process of lexically regulated saturation is involved. Upon hearing the particular lexeme being used, the hearer will try to construct a relevant interpretation in accordance with their expectations of relevance and on the basis of the (activated parts of the) lexeme's semantic potential. The only difference is that, in addition, the hearer also has to take into account the semantics of the construction in which the lexeme occurs and which provides rich clues as to where relevance is to be found. I therefore completely agree with Michaelis (2004) when she states that "coercion effects, *rather than representing a special form of composition*, are by-products of the ordinary significations of constructions" (Michaelis, 2004: 7; emphasis mine). This is exactly the view defended here: cases of coercion are not as exceptional as they may seem. The use of a lexeme in those particular constructions is of course particularly innovative and gives rise to interesting interpretations. The interpretation process behind it, however, is not special. It is the same process (of lexically regulated saturation) which enables the interpretation of those lexemes. Constructions simply act as an additional (in this case, semantic) constraint for the derivation of a relevant interpretation, hence why I describe coercion in the title of this section as "semantically constrained pragmatic *effects*."

The view adopted here thus leaves open the possibility that the process of lexically regulated saturation (which is broader than coercion) operates every time a lexeme is embedded in a construction. This ties in well with the results in Yoon's (2012: 303) paper. She shows that there is indeed a cline of coercion

events and that there is no simple opposition between semantic compatibility and semantic incompatibility. As soon as a lexeme is used in a particular construction, and regardless of the compatibility between the two, the construction acts as a constraint on the interpretation of the lexeme. I argued previously that the lexemes *fly* and *push* in the sentences in (32) and (75b), repeated here in (97) and (98), readily occur in the CAUSED-MOTION construction since their semantics already include the notion of motion. It follows from the perspective adopted here, however, that these examples involve exactly the same process as other cases of coercion: the lexeme is interpreted (via lexically regulated saturation) in accordance with both expectations of relevance and knowledge of the CAUSED-MOTION construction, which acts as an additional constraint on the derivation of the intended interpretation.

(97) Our son was just three months old when we first *flew* him across the Atlantic. (COCA, written)

(98) The lieutenant *pushed* the box across the table. (BNC, written)

That is, I want to argue that even in the case of examples like these, which not all constructionists might view as involving coercion, the same process of meaning construction as in other coercion-type examples is involved.[103]

4.2 Procedural Meaning and Lexical Pragmatics

Throughout the previous sections, the terms *constrain*/*constraint* were used to describe the particular way in which the semantics of a construction affects the interpretation of the lexemes it selects. Yet this terminology is not often used in CxG. (This is to be expected since these terms suggest an asymmetric semantic relation between the different types of construction involved, a perspective which is at odds with the CxG view, see Section 2.1.1.) The use of these terms, however, was a careful and deliberate choice. The idea that some constructions might encode constraints on utterance interpretation has been widely discussed in the framework of RT. This phenomenon is captured under the notion of *procedural encoding* which was introduced by Diane Blakemore (see Chapter 2, Section 2.2.3.2). In the rest of this chapter, I will discuss the notion of procedural meaning and pin down exactly how it relates to the view of coercion presented in the previous sections. The challenge involved stems from

[103] Note, of course, that although the underlying cognitive process is in principle the same, I still consider that the notion of coercion is useful as a separate concept to single out (more obvious) mismatch cases where the interpretation of a lexeme crucially depends on the semantics of the construction in which it occurs. After all, from the perspective of cognitive *relevance*, cases of semantic mismatch necessarily require more effort and naturally beg for a high(er) number of cognitive effects (to achieve *relevance*), the nature of which might be worth looking into (see Wilson and Carston (2019) for a recent discussion).

the fact that in RT the notion of procedural encoding applies to lexical units whereas in CxG, when the term is used, it occurs at a more schematic level. As mentioned at the beginning of this chapter, I will argue that it is (semi-) schematic constructions that have a procedural (rather than conceptual) type of semantics, which further supports the view that coercion effects are the result of a semantically constrained pragmatic process.

4.2.1 Procedures in RT

In order to understand the relation between the notion of procedural meaning and the view on coercion developed in the previous section, it is important to understand exactly what procedures are in the first place. The aim of this section is to reintroduce this notion and to make explicit the way in which procedures differ from concepts. In Sections 4.2.2 and 4.2.3, the aim will be to pin down exactly what type of constructions can encode procedures as well as to identify specifically what procedures actually consist of. Once more, insights from both RT and CxG will prove very useful.

Of all the notions introduced in RT since the publication of *Relevance* (Sperber and Wilson, [1986] 1995), that of procedural meaning perhaps best captures what the theory is all about: the optimization of relevance. It is quite largely assumed in RT that human communication is primarily an inferential process which the linguistic system simply renders more efficient. Sperber and Wilson (1995: 172) specifically argue that "languages are indispensable not for communication, but for information processing; this is their essential function." For relevance theorists, it follows logically from this view that language might not only give us access to specific mental representations (i.e. concepts) but also provide us with the tools to compute these mental representations (i.e. procedures):

> Linguistic decoding provides input to the inferential phase of comprehension; inferential comprehension involves the construction and manipulation of conceptual representations. An utterance can thus be expected to encode two basic types of information: representational and computational, or conceptual and procedural – that is, information about the representations to be manipulated, and information about how to manipulate them. (Wilson and Sperber, 1993: 97)

From this perspective, procedural information is essentially information which enables speakers and hearers to manipulate conceptual information and which directly contributes to the optimization of relevance. Exactly what these procedures consist of will be discussed in section 4.2.3. So far, suffice it to say that constructions that have procedural meaning are usually described as encoding a constraint on inferential processes which guides the hearer towards relevance (Escandell-Vidal, Leonetti and Ahern, 2011: xxi). In RT, the typical example of constructions that encode procedural meaning are discourse connectives (e.g.

so, *after all*, *therefore*, etc.). This is due to the fact that Diane Blakemore, who introduced the notion of procedural meaning in RT, focused on discourse markers (Blakemore, 1987). Consider, for instance, the following examples:

(99) a. He is a linguist. He is intelligent.
b. He is a linguist, *so* he is intelligent.
c. He is a linguist, *but* he is intelligent.

In (99a), the discourse relation between the two sentences *He is a linguist* and *He is intelligent* is left implicit and has to be inferred by the hearer. Most often, speakers of English will infer the particular causal relation whereby the intelligence of the subject referent is considered a direct consequence of his being a linguist.[104] If the speaker considers that the hearer might not be able to retrieve exactly this relation, however, she may decide to use a particular discourse marker which will guide him in this direction. This is the case in (99b), where *so* is used precisely to achieve that effect. Alternatively, the speaker may also entertain the (unbelievable) assumption that linguists are not intelligent and therefore use a marker which will signal a contrast between the two propositions expressed. The use of *but* in (99c) enables the hearer to make this particular inference. What is important for our discussion is that the discourse markers used by the speaker contribute to neither of the two propositions they connect but only guide the hearer to recover the discourse relation intended by the speaker and help him to draw the right inferences. In this case, it is said that the discourse marker encodes procedural meaning in the sense that it provides the hearer not with a particular mental representation but with a semantic constraint that enables him to manipulate other representations (here, the two propositions communicated by each clause) and thereby facilitates the optimization of relevance.

In the case of discourse markers, the procedure they encode constrains the type of *implicatures* that the hearer will derive (here, the implicated premises *linguists are intelligent* or *linguists are not intelligent*). It is clear in RT, however, that inference does not only occur at the level of implicatures but also permits the derivation of *explicatures* (i.e. enriched logical forms) as well as *higher-level explicatures* (which include the speaker's beliefs and attitudes with regard to a proposition).[105] Therefore, one might also expect some procedural expressions to constrain the derivation of explicatures and higher-level explicatures. This is precisely what is captured by Figure 4.2.

[104] Note that this assumption is not (only) based on the personal hope that society naturally thinks of linguists as intelligent people. Rather, this assumption (also) finds root in the empirical observation that, in the case of implicit discourse relations, by default, a causal relation seems to be assumed between the propositions expressed in the two consecutive clauses (see Murray, 1995, 1997; Sanders, 2005; Hoek and Zufferey, 2015).

[105] See Chapter 2, Section 2.2.2.

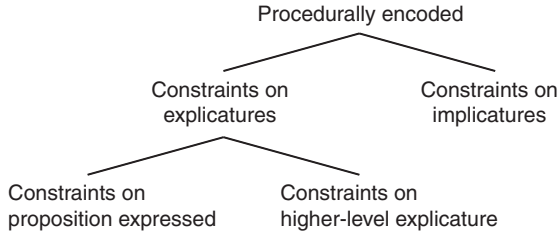

Figure 4.2 Procedural meaning: constraints on interpretation (adapted from Wilson and Sperber, 1993: 3)

In the relevance-theoretic literature, typical examples of expressions that constrain the derivation of explicatures (i.e. the proposition expressed) are pronouns and demonstratives, which are said to constrain the recovery of a specific referent (Wilson and Sperber, 1993; Scott, 2011, 2013, 2016). At the level of higher-level explicatures, different types of constructions have been discussed, such as sentence types (Clark, 1991) or prosodic patterns (e.g. Imai, 1998; Clark, 2007, 2012, 2013b; House, 2009). In both cases, the constructions involved are argued not to provide the hearer with a specific concept but rather to guide them during the inferential phase to recover the speaker's attitude with regard to the proposition expressed. Other types of procedural constraints on higher-level explicatures are discussed in Andersen and Fretheim (2000), such as the use of the pragmatic marker *like* in English (e.g. *Cos I need some friends around just to* like*, protect me*, Andersen, 2000: 30).

In comparison, the notion of procedural encoding is relatively absent in the constructionist literature. A noticeable exception can be found in the work of Elizabeth Traugott, who uses the term in her work on grammaticalization (Traugott and Dasher, 2002; Traugott and Trousdale, 2013; Traugott, 2014). Her understanding of procedural meaning, however, differs slightly from that in RT. This will be discussed more fully in Section 4.2.3. The term *procedural* is also briefly used by Bergs and Diewald (2009: 8) to describe the meaning of the French connective *parce que* ('because'). More generally, however, the terms *procedures* and *procedural* tend not to be used within CxG.[106] Rather, when the meaning of a construction affects not the proposition directly but an inferential process, different terms are used, such as 'discourse function', 'pragmatic function' or 'discourse-pragmatic function'. (These terms cover a number of phenomena such as illocutionary force, metalinguistic comments, speaker attitudes, scalar models and discourse parameters. See Kay (2004),

[106] More recently, the term also occurred in a volume by Coussé, Andersson and Oloffsson (2018a) on grammaticalization and CxG.

Nikiforidou (2009) and Cappelle (2017) for overviews.) This is the case, for instance, in the discussion of the *let alone* construction discussed in Chapter 2. Consider the following examples:

(100) They couldn't write a complete sentence, *let alone* an entire essay. (COCA, spoken)

(101) It's difficult to get people to stop at red lights, *let alone* a flashing yellow light. (COCA, spoken)

This construction, as mentioned previously, is used, first to contrast the two conjuncts, and to provide "constraints on the distribution of informativeness and relevance across the two propositions" (Cappelle, Dugas and Tobin, 2015: 73). In particular, the construction is used to ascribe more *relevance* to the second conjunct so as to reject the first conjunct "more forcefully" (p. 73). It is my understanding that, in RT, this particular type of meaning would be discussed in procedural terms. Both Fillmore, Kay and O'Connor (1988) and Cappelle, Dugas and Tobin (2015) say that this meaning contributes to the *pragmatics* of the construction. Yet, as mentioned in Chapter 2, it is not clear exactly what can count as the 'pragmatics of a construction'. Alternatively, the term *discourse function* is sometimes used in discussions about the meaning of a construction. Koops (2007), for instance, uses that term to describe the meaning of the INFERENTIAL construction (*It is . . . that . . .*), such as in the following examples (from Koops, 2007):

(102) a. I cannot pay you back today.
b. *It's* just *that* all the banks are closed.

(103) I look under the hood and I see all the stuff under there and I say, boy, my chances of doing – how shall I say it? Everything's electronic. *It's* not *that* I'm against at least trying, *it's* just *that* there's so much, you know. You can't tune it yourself. You can't do anything.

In these two examples, the construction is used by the speaker "as a pragmatic instruction to its audience to regard its clause as an interpretation of its local context, that is, to be about, rather than of, its context" (Delahunty, 1995: 359). In other words, the construction is used by the speaker to introduce the proposition embedded in the *that*-clause as providing contextual information about the discourse context (i.e. an implicated premise) in order to reduce (or relocate) the range of possible inferences. This type of instruction in RT would be described in procedural terms. Yet Koops uses the term *discourse function* (Koops, 2007: 208).

In the next sections, one of the aims will be to show that the term *procedural meaning* used in the relevance-theoretic literature is preferable to the different notions used in CxG. From a purely terminological perspective, it is unclear why and how the different terms *pragmatic*, *discourse* or even *discourse-pragmatic*

function are used in CxG (see Leclercq, 2020). They seem to be used relatively interchangeably. For the sake of terminological consistency and precision, however, only one term should be used.[107] The choice to employ the term *procedural meaning* here is not arbitrary, however. It is largely motivated by the observation that the term is used in RT in relation to a wider range of expressions and phenomena than the constructionist terms. (This observation can arguably be said to follow from the various degrees of attention given to pragmatics in the two frameworks.) As mentioned in Chapter 3, there is a tendency in CxG (as in cognitive linguistics more generally) to associate inferential processes (and the notion of pragmatics) with the derivation of *implicatures* only (or mostly). It is interesting to note that, as one might expect, the notions of discourse/pragmatic functions in CxG have also been largely applied to constructions that provide constraints on the derivation of implicatures. This is the case, for instance, for both the *let alone* construction and the INFERENTIAL construction discussed above. It is clear in RT, however, that inferential processes do not only occur at the level of implicatures but also affect the derivation of explicatures and higher-level explicatures. The notion of *procedural meaning* therefore applies to a much wider range of expressions than the constructionist terms and, more importantly, it is not associated with the derivation of implicatures only. The aim of adopting the relevance-theoretic terminology is therefore twofold. First, as we will see in the next sections, it is meant to account for a much wider range of constructions than the terms used in CxG actually do. More importantly, the aim is also to abandon the idea that inference is solely linked to implicatures.

In Section 4.2.2, I will try and pin down the type of constructions that encode procedural meaning. In Section 4.2.3, the aim will be to identify what procedures actually consist of. It will soon become clear that although I adopt the relevance-theoretic term, insights from CxG will also prove very useful to address these two questions. Eventually, it will be shown that there is a direct link between the notion of procedural meaning and that of coercion discussed at the beginning of this chapter.

4.2.2 Constructions with Procedural Meaning

In spite of the differences that can be found between RT and CxG, it is interesting to note that the linguistic units analyzed either in terms of procedural meaning or as having pragmatic/discourse functions are always

[107] This is particularly true since the notion of discourse/pragmatic properties is sometimes used to refer not to the type of meaning associated with a construction but rather to its contextual appropriateness (i.e. features about the situation, register, genre, discourse focus, politeness strategy, etc.). This is how Stephan Gries and Martin Hilpert seem to be using the term *discourse-pragmatic characteristics* in Hoffmann and Trousdale's (2013a) *The Oxford handbook of Construction Grammar*.

grammatical constructions (i.e. constructions that serve a grammatical function). The latest theoretical discussions on procedural meaning in RT confirm this observation (e.g. Escandell-Vidal, Leonetti and Ahern, 2011; Carston, 2016b; Wilson, 2016; Escandell-Vidal, 2017). In her investigation on the development of procedural meaning in RT, for instance, Carston (2016b: 155) explicitly points out that the difference between conceptual and procedural meaning is broadly consistent with the long-standing division "between the substantive lexicon (open-class words such as nouns, verbs and adjectives) and the functional lexicon (closed-class words like determiners, pronouns and connectives)."[108] The same is true for CxG, where the notion of pragmatic function is used a lot, for instance, in relation to information structure constructions (cf. Hilpert, 2019: ch. 5).

The aim of this section is to determine what types of constructions can (and do) encode procedural meaning. To begin, it is worth noting that the idea that there is a correspondence between grammatical constructions and procedural encoding is a view that receives support in both RT and CxG. In RT, Steve Nicolle has done considerable work to show the relationship between aspects of grammaticalization and the development of procedural content (see Nicolle, 1997b, 1998b, 2011, 2015). According to Nicolle, "grammaticalization begins with the addition of procedural information to the meaning of a construction" (Nicolle, 2011: 407). There is therefore a clear correspondence for him between grammatical constructions and procedural encoding (and between lexical constructions and concepts). It is interesting to note that it is precisely in research on grammaticalization that the term procedural encoding is also used in CxG. As mentioned earlier, Elizabeth Traugott and her co-authors also argue that the conceptual/procedural distinction coincides with the lexical/grammatical distinction (Traugott and Dasher, 2002; Traugott and Trousdale, 2013; Traugott 2014). Traugott and Trousdale specifically point out, for instance, that "the formal dimensions with which procedural meaning is usually linked are traditionally known as grammatical elements" (2013: 12)[109] Summing up, in both frameworks procedural meaning, i.e. information about how to manipulate conceptual information, is associated with grammatical constructions.

In the next section, the aim will be to identify exactly what procedural encoding consists of (as opposed to conceptual encoding). Before doing so, a number of questions concerning the correspondence between grammatical constructions and procedural encoding still need to be answered. The first question concerns the way in which the distinction between lexical and grammatical constructions is established in RT and CxG. In RT, for instance, there is

[108] See also Escandell-Vidal and Leonetti (2000), Leonetti and Escandell-Vidal (2004) and Escandell-Vidal (2017).

[109] See Section 4.2.3 for a discussion of grammaticalization processes.

an ongoing debate about what type of constructions encode procedural meaning. As Carston (2016b: 155) points out, it is usually assumed that this distinction broadly corresponds to that between the denotation of open-class words (e.g. noun, verbs, adjectives, adverbs) and closed-class words (e.g. auxiliaries, conjunctions, determiners). The categorical distinction is not always as clear-cut as RT theoreticians might think, however.[110] One of the core tenets of CxG is that there is no such dichotomy between lexical items on the one hand and grammatical elements on the other. Rather, the *construct-i-con* (i.e. the mental repository of *constructions*) consists of a continuum of constructions from (more) lexical ones to (more) grammatical ones (see Figures 2.1 and 4.1). They are not categorically distinguished but rather form a cline from more lexically fixed to more schematic patterns. For that reason, it might be unclear in CxG exactly how the conceptual/procedural distinction aligns with the lexical/grammatical cline (see Coussé, Andersson and Olofsson (2018b: 8) for a similar observation). Therefore, although the two frameworks establish a similar link between 'grammatical constructions' and 'procedural meaning', they have a different understanding of what counts as a grammatical unit of the language. As a natural consequence, this also means that the two frameworks have different expectations of where procedural meaning is to be found.

Traugott and Trousdale (2013: 12), who work on the basis of the constructional continuum, argue that, in line with the general CxG tenet, the conceptual/procedural distinction is itself also gradual.[111] From this perspective, constructions encode different types of meaning that range from more conceptual to more procedural, depending on where they are found in the continuum. Figure 4.3 is an attempt to represent the correspondence between these two gradients.

In this approach, not all constructions are either conceptual or procedural. Instead, the more grammatical a construction, the more procedural its content (and the more lexical, the more conceptual). This is the reason why Traugott and Trousdale (2013: 13) argue that between fully contentful (e.g. *red*) and fully procedural (e.g. plural *-s*) constructions, there are a number of 'intermediate' constructions that have both conceptual and procedural properties (e.g. the WAY construction). At first sight, this view appears to face a challenge, however. Indeed, it is largely assumed in RT that the distinction between concepts and procedures is not gradual but instead that they form two discrete categories. Nicolle (1998b) specifically argues that "there is no information type intermediate between conceptual and procedural information" (Nicolle, 1998b: 6). Yet in Figure 4.3, the 'intermediate' constructions encode precisely such an

[110] See Aarts (2007: 34–79) for an insightful discussion on grammatical gradience.

[111] Note that Traugott and Dasher (2002: 10) specifically indicate that they prefer using the term *contentful* to *conceptual*. (The term *contentful* is also used in Traugott and Trousdale, 2013.) This will be discussed more fully in the next section.

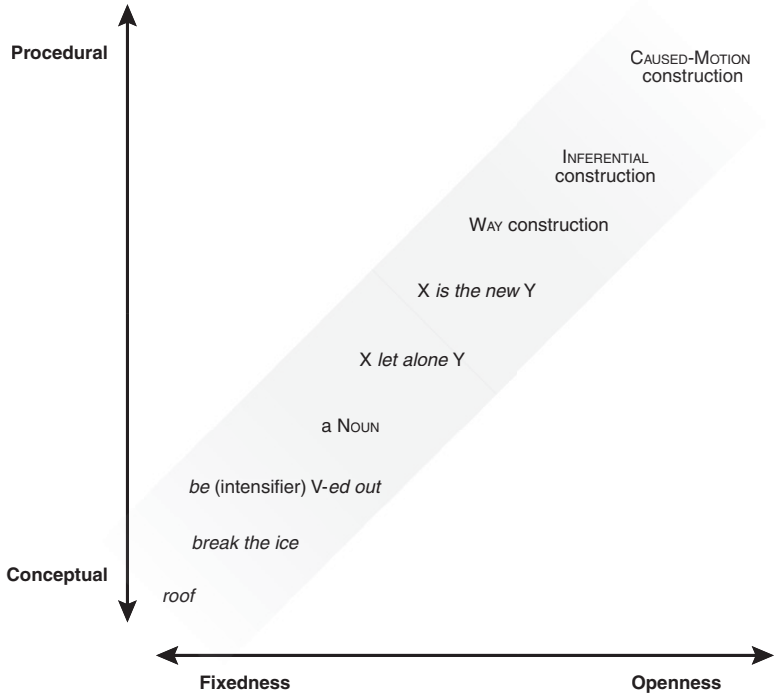

Figure 4.3 Constructions: correlation between formal and semantic gradients

intermediate type of information, neither fully conceptual nor fully procedural. This is not, however, what Traugott and Trousdale mean by *intermediate*. Constructions that are intermediate with regard to the conceptual–procedural distinction are simply understood as encoding both conceptual and procedural information and form "'hybrid' constructions" (Traugott and Trousdale, 2013: 26). That is, the distinction between purely conceptual and purely procedural types of information is maintained. It is simply assumed that many constructions encode both types of information.

The gradient approach turns out not to be incompatible with the relevance-theoretic view: here as well, it is argued that words can encode either a concept, a procedure, or both types of information. In RT, typical examples of expressions that encode both conceptual and procedural information are pronouns (see, for instance, Scott, 2011, 2016).[112] The main difference between RT and

[112] Pronouns are procedural in the sense that they act as instructions for the recovery of a specific referent; they are conceptual by specifying the referential category (i.e. gender, number, etc.).

CxG, however, has to do with the form that grammatical constructions take and, therefore, the type of construction that is assumed to encode procedural information. The relevance-theoretic approach is relatively lexeme-centered, and most of the attention is therefore given to grammatical *words*. The attention on the level of the lexeme most probably originates in the basic theoretical stance, which takes "a broadly Chomskyan approach to language and … Fodorian assumptions about modularity" (Clark, 2013a: 95). From this perspective, there are, on the one hand, the syntactic rules which belong to the linguistic system and, on the other hand, the words of the lexicon which can be used within these structures. The type of grammatical units that relevance theorists have paid most attention to are grammatical words (e.g. pronouns, discourse markers, mood particles, etc.).[113] In CxG, however, there is no strict divide between elements of the lexicon and 'syntax'. Rather, our linguistic knowledge is composed of a variety of (more or less complex) constructions, i.e. form–meaning pairs, all of which equally contribute to our mental grammar (called the *construct-i-con*). A direct consequence of this approach is that the notion of grammatical constructions in CxG differs from that in other approaches. In CxG, as is clear in Figure 4.3, 'grammatical' constructions are not discussed at the atomic (lexical) level but often involve longer, phrasal or clausal, more schematic structures. As mentioned in Chapter 2, for instance, the *let alone* construction is often referred to as the X *let alone* Y construction, which puts emphasis on its mainly schematic nature as well as on the clausal level. In other words, while grammatical meaning is situated at the level of the lexicon in RT, it pertains to the schematic (word, phrasal or clausal) level in CxG.[114] Schematicity is indeed identified by constructionists (and in the literature on grammaticalization more generally) as a central feature of grammatical constructions (see Croft, 2001: 16; Langacker, 2008: 22; Trousdale, 2008a: 59, 2008b: 304, 2010: 51, 2012: 168; Traugott, 2008: 34, 2015: 61; Coussé, Andersson and Olofsson, 2018b, inter alia). Trousdale (2008a) specifically argues, for instance, that "as constructions grammaticalize, they become more schematic; as they lexicalize, they become more idiom-like" (Trousdale, 2008a: 59).[115] In this case, units of the language that encode procedural information are not atomic, fully specific constructions (i.e. not

[113] As mentioned previously, very recently they have started to look at morphemes as well (e.g. Padilla Cruz, 2022; Carston, 2022).

[114] It is worth noting, for instance, that Ruiz de Mendoza and Gómez-González (2014) and Erviti (2017) generally treat discourse markers, which are central to the discussion on procedural meaning in RT, as partially schematic constructions: X *so* Y construction, X *but* Y construction, etc.

[115] Although grammaticalization processes systematically entail constructional schematization, there is a real debate in CxG whether all cases of schematization necessarily relate to the development of grammatical meaning (see Noël, 2007; Traugott and Trousdale, 2013). For reasons that will become clear in the rest of this chapter, however, I will assume that a construction's schematicity and grammatical meaning are interrelated (see also Trousdale, 2012: 193).

words), but constructions that are formally more schematic.[116] In the remainder of this chapter, I will work on the basis of the constructionist assumption that grammatical constructions (with which a procedural meaning is associated) necessarily involve a level of schematicity. After all, in CxG it is precisely (semi-)schematic constructions that enable the syntagmatic combination of lexical items into larger phrasal or clausal units. It seems intuitively logical that procedural information be encoded by this type of construction, which precisely enables speakers of a language to manipulate the type of linguistic units that carry conceptual information: lexemes. In this sense, grammatical constructions serve both as syntactic and semantic glue.

The perspective on grammatical constructions adopted here meshes well with the approach to coercion outlined in Section 4.1.5. All of the coercive constructions that were discussed in Section 4.1 are (semi-)schematic constructions (e.g. the INDEFINITE DETERMINATION construction, the *be* (intensifier) V-*ed out* construction, the WAY construction or the CAUSED-MOTION construction, etc.). In CxG, it is generally assumed that "any construction that selects for a specific lexical class or phrasal daughter is a potential coercion trigger" (Michaelis, 2011: 1384). That (semi-)schematic constructions should have a coercive potential makes a lot of sense when we assume, as I do here, that these types of construction encode procedural rather than conceptual information.[117] That is, once we assume that these constructions encode specific constraints on how to interpret the concepts that occur within them, then it follows logically that hearers will interpret the lexemes in accordance with the semantics of the construction in which they occur. As it happens, the only time I came across the notion of *coercion* in RT is precisely in discussions about procedural meaning. Escandell-Vidal and Leonetti (2011: 88) argue that units which carry conceptual meaning are coercible and only units that carry procedural meaning have a coercive force. This link is interesting since it provides further support to some of the arguments presented in the previous sections, some of which will be taken up again here.

First of all, treating schematic/grammatical constructions in procedural terms justifies the view that coercion results from a semantically constrained pragmatic process. This process is semantically constrained since the procedural information associated with the schematic construction precisely provides a constraint which is meant to guide the hearer towards a particular interpretation during the inferential phase of comprehension. It is, however, a pragmatic process in the sense that in spite of the semantic constraint provided by the

[116] Accordingly, morphological constructions (e.g. VERB-*ment* in 'govern*ment*' and 'invest*ment*', NOUN-*al* in 'nation*al*' and 'natur*al*', *im*-ADJ in '*im*possible' and '*im*polite') also qualify as grammatical constructions given their partially schematic nature (see Booij and Audring, 2017; Booij, 2018).

[117] What exactly constitutes the content of this procedure will be discussed in the next section.

construction, it is the hearer himself who inferentially derives the speaker's intended interpretation (see Section 4.1.4). In that sense, I share the view adopted by Escandell-Vidal and Leonetti (2011) when they argue that they view coercion "not as a semantic operation, but as a pragmatic process guided and constrained by linguistic meaning" (Escandell-Vidal and Leonetti, 2011: 95). This is what procedures do: they only constrain the inferential phase of comprehension. In the previous chapter, I argued that the interpretation of a lexeme can be understood in terms of lexically regulated saturation. That is, the interpretation of a lexeme consists of an inferential process whereby individuals systematically reconstruct the meaning of a lexeme in accordance with their expectations of relevance and on the basis of the (more or less rich) conceptual information made accessible by the lexeme. The notions of procedural meaning and coercion are thus directly related to lexically regulated saturation:

- *Lexically regulated saturation* (lexical level).
  Hearers inferentially reconstruct the meaning of the lexical constructions that are used by speakers.
  - *Procedural meaning* (schematic level).
    In so doing, hearers are directly guided by the procedural meaning of the grammatical/schematic constructions in which lexical constructions occur.
  - *Coercion* (mismatch lexical/schematic levels).
    In some cases, there is incompatibility between the semantic (and morpho-syntactic) properties of a lexical construction and the position it occupies in a grammatical construction. These cases lead to coerced interpretations, whereby the lexical construction is interpreted in accordance with the meaning of the grammatical construction. (The procedural information associated with grammatical constructions has stronger coercive force than conceptual information (see below), hence the override principle.)

The representation in Figure 4.4 is an attempt to show more explicitly the interaction between the three notions discussed here. *Lexically regulated saturation* is central to the interpretation of a lexeme. The procedural semantics of grammatical constructions facilitate this inferential process by guiding the hearer in a particular direction. In some cases, a mismatch between the conceptual semantics of the lexeme and the procedural semantics of the grammatical construction will result in coercion effects; the lexeme is interpreted in accordance with the meaning of the grammatical construction.

There are two consequences that follow from the model outlined here. First, one of the main roles of grammatical constructions is simply to facilitate the inferential processes involved when interpreting an utterance (such as that of *lexically regulated saturation*), which hearers systematically have to perform regardless of which constructions are used by the speaker. As a result, the use of a particular grammatical construction directly affects the optimization of

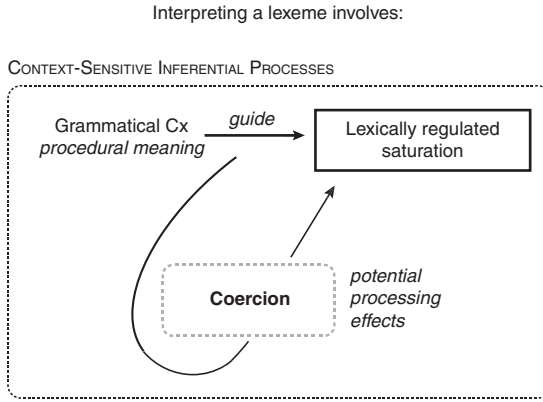

Figure 4.4 'Lexically regulated saturation' and utterance comprehension (1)

relevance since it helps the hearer recover the intended interpretation. In guiding the hearer in a particular direction, grammatical constructions reduce the search space and the amount of cognitive effort involved in the interpretation process. In this sense, I completely agree with the view defended by Nicolle (2011):

> Procedural information reduces processing effort by *constraining inferential processes that an addressee would have to perform in any case*; thus, the process of grammaticalization can be viewed as being motivated by the principle of relevance, according to which an optimally relevant interpretation is one which achieves adequate cognitive effects for minimal processing effort. (Nicolle, 2011: 407; emphasis mine)

In other words, one of the motivations behind processes of grammaticalization (and, by the same token, the acquisition and use of grammatical constructions) simply comes from the pressure to optimize *relevance*. Grammatical constructions increase the overall relevance of an interpretation by reducing the amount of effort put into the interpretation process. Secondly, this perspective also reinforces the view defended earlier that the interpretation process of a coerced lexeme differs very little (if at all) from that of non-coerced lexemes. That is, whether coercion is involved or not, understanding a lexeme primarily consists in an inferential process (namely, lexically regulated saturation), which is systematically guided by the meaning of the grammatical constructions in which lexemes are used. Cases of coercion are more special in the sense that the meaning of the lexeme somehow clashes with that of the grammatical construction, but both cases of coerced and non-coerced lexemes involve the same process of interpretation. A similar line of reasoning motivates Traugott

and Trousdale's claim that probably "coercion is not needed as a concept separate from metonymy and best-fit interpretations" (2013: 233). Unlike Traugott and Trousdale, however, I believe the term *coercion* is still useful. Indeed, although the actual process of interpretation is the same, the interpretation of a coerced lexeme is affected by the meaning of the grammatical construction in which it occurs to a much greater extent than that of non-coerced lexemes. Cases of coercion therefore involve an additional linguistic requirement that non-coerced lexemes do not have (since they already meet this requirement), hence the necessity to keep a distinct term so as to identify cases of coercion more clearly.

The notion of coercion is also useful as a distinct concept since it enables us to account for another observation. In CxG, the notion of coercion is often described in relation to the override principle introduced by Michaelis (2004). This principle states that in case of a semantic (and morphosyntactic) mismatch between a lexeme and the schematic/grammatical construction in which it occurs, the meaning of the lexeme will conform to that of the grammatical construction. It was shown in Section 4.1.3 that this principle may come across as an overgeneralization, since coercion can then be understood as the result of a semantic process operated by the linguistic system itself, disconnected from any considerations of pragmatic factors. Instead, it is preferable to think of the override principle as the observed *tendency* that in such situations language users indeed generally adapt the meaning of the lexeme in accordance with the meaning of the grammatical construction. This being said, the point remains essentially the same: it is usually the meaning of the lexeme which is adjusted and not that of the grammatical construction (see Section 4.1.4). Yet it is unclear exactly what motivates this relatively unilateral tendency. When one assumes (as construction grammarians often do) that the type of information that grammatical constructions encode is conceptual), then it should also be possible for them to be adjusted in context somehow, but they usually are not. (As mentioned above (footnote 102 in Section 4.1.5), this might be due to the more abstract and entrenched nature of the semantics of grammatical constructions which makes them less prone to change, but this is not necessarily obvious.) This problem is much less of a challenge, however, when one assumes (as I do here) that the grammatical constructions in which the lexemes occur encode not conceptual but procedural information. From this perspective, it is precisely the function of these constructions to constrain the inferential phase of comprehension and to guide the hearer towards the intended interpretation. It therefore follows from this that hearers will adjust the meaning of the lexemes that occur within grammatical constructions, and not the other way around. Escandell-Vidal argues that "a procedural instruction must be satisfied at any cost. Procedural meaning always prevails" (2017: 92).[118]

[118] It will be shown in the next section that procedural information does not "always prevail."

Indeed, it seems intuitively logical that individuals should adjust the meaning of the item which falls under a constraint rather than the constraint itself, even more so since the function of these constraints is to facilitate the use of conceptual information. The procedural semantics of grammatical constructions can therefore account for Michaelis' override principle. This is why the notion of coercion is needed as a separate concept. Although the interpretation of a coerced lexeme is pragmatically derived, in the same way that the interpretation of a non-coerced lexeme is, it is much more contingent on the procedural semantics of the grammatical construction in which it occurs than in cases of non-coerced lexemes.

The aim of this chapter is to identify some of the ways the linguistic environment in which lexemes occur directly affects their interpretation. This is why the notion of coercion was discussed in the first part. It was shown that many (partially) schematic constructions directly contribute to the interpretation of a lexeme, the meaning of which is usually adjusted in order to fit that of the construction in which it occurs. One of the main conclusions, however, is that it is not the constructions themselves which coerce their own semantics onto the lexemes, but rather that the resolution mechanism is primarily a pragmatic process which is carried out by the hearer in accordance with their expectations of relevance, and that the meaning construction process resembles that of non-coerced lexemes. This view is particularly interesting taking into account the fact that the schematic/grammatical constructions involved in cases of coercion in my view do not encode conceptual but procedural information. By definition, procedural information acts as a semantic constraint on pragmatic inferences. Therefore, it is logical that coercion effects should be viewed as resulting from a semantically constrained pragmatic process. The major challenge now is to understand exactly what procedural information consists of. This is the aim of the next section.

4.2.3 On the Nature of Procedural Encoding

It is necessary to define what procedural information consists of in order to understand exactly how grammatical constructions constrain the inferential processes involved during the interpretation of an utterance in general and of lexemes in particular. As mentioned in the previous section, the notion of procedural encoding is relatively absent in the framework of CxG. In RT, the notion still gives rise to much debate. In this section, the aim is to provide a critical discussion of the different views adopted in the literature. Eventually it will be suggested that procedural information might best be described in terms of meta-conceptual representations which function as expectation-like constraints.

4.2.3.1 Procedural Meaning in CxG In CxG, the notion of procedural encoding has been used mostly by Elizabeth Traugott and Graeme Trousdale in their work on grammaticalization and grammatical meaning. Elsewhere in the constructionist literature, the term is generally not used and meaning is discussed solely in conceptual terms. It must be noted that, for those who do establish a distinction in CxG, the idea that some constructions essentially encode a more procedural type of information comes directly from the work carried out in RT. Traugott and Dasher (2002: 10), for instance, explicitly refer to RT and to Diane Blakemore's work. As a result, the expectation is that Traugott and Dasher essentially adopt the relevance-theoretic perspective on what exactly constitutes procedural content.[119] However, the integration of relevance-theoretic insights is mainly terminological. Indeed, they assume that the nature of procedural information is also primarily conceptual and therefore prefer to make the distinction between *contentful* and *procedural* types of meaning (i.e. two types of conceptual information) rather than between conceptual and procedural (i.e. non-conceptual) types of meaning. They argue that "both procedural and non-procedural language-specific meanings are representations of more abstract Conceptual Structures" (2002: 10, fn. 10). In this case, however, it is less clear (than in RT) how procedural meanings differ from contentful ones. (This will be discussed more fully below.) Traugott and Dasher's view somewhat naturally follows from a long tradition in CxG which avoids differentiating between more lexical and more grammatical units of the language. All units of the language are argued to be meaningful, and this meaning is necessarily conceptual. The meaning of argument-structure constructions, for instance, is usually discussed in such conceptual terms.[120] A direct consequence of this view is that the procedural nature of grammatical expressions simply consists in conceptual representations of a more abstract (or schematic) nature.[121] This is what Langacker (2008) argues when he considers that "highly schematic meanings" are "characteristic of 'grammatical' elements" (Langacker, 2008: 178). This is also very explicit in Trousdale (2008b):

> Langacker (1987, 1991a) has repeatedly suggested that the meaning of grammatical elements is usually quite schematic, but given the gradient nature of schematicity, it would not be unwarranted to assume that some grammatical elements are more

[119] Note that this is the case even though relevance theorists do not fully agree on what procedural encoding means (see below).

[120] Concerning argument-structure constructions, Goldberg (1995: 39) argues in favor of a "scene encoding hypothesis," according to which these types of constructions "designate scenes essential to human experience." Similarly, Langacker (2008: 33) refers to *conceptual archetypes*.

[121] In the case of the grammatical category NOUN, for instance, Langacker (1987: 189) argues that its "semantic pole instantiates the schema [THING]."

schematic than others, and that the process by which grammatical elements become more schematic is known more generally in linguistic theory as grammaticalization. (Trousdale, 2008b: 317)

It is unclear whether grammaticalization can be reduced to a semantically higher level of schematicity, however. It is generally assumed that lexical and grammatical elements of the language serve different functions in discourse. It is therefore reasonable to assume that the shift from lexical to grammatical meaning also involves a change in the actual nature of the encoded content, for otherwise it is not clear what the distinction between lexical (contentful conceptual) and grammatical (procedural conceptual) constructions is actually trying to capture. Later in this chapter, it will be argued that of course some form of conceptual abstraction is involved in the process of grammaticalization and in the development of procedural encoding. There are different reasons why grammaticalization cannot be reduced to conceptual abstraction alone, however. First of all, it is unclear at what point a meaning is schematic enough to be considered grammatical and not lexical anymore. One must not forget that processes of schematization/abstraction are also involved at the lexical level. The different senses of a lexeme are abstracted away from actual usage, and it was shown previously (Chapter 2) that some senses in a conceptual network might be schematic relative to other senses. It follows that the level of schematicity at which the grammatical threshold should occur has to be quite high, at which point one might actually question its relevance. More importantly, it has been quite extensively shown that grammaticalization does not only involve semantic bleaching (i.e. loss of lexical/contentful conceptual properties), but it also primarily consists in semantic change. In particular, Elizabeth Traugott has shown that the shift from lexical to grammatical meaning often involves the conventionalization of implicatures (which she refers to as *invited inferences*) as well as a process of subjectification (e.g. Traugott and König, 1991; Traugott, 1995, 2003, 2010; Traugott and Dasher, 2002; Hopper and Traugott, 2003; Traugott and Trousdale, 2013). Langacker also recognizes the major role of subjectification in the process of grammaticalization:

My central claim is that *subjectification* represents a common type of semantic change, and that it often figures in the process of *grammaticization,* whereby "grammatical" elements evolve from "lexical" sources. (Langacker, 1990: 16)

Although Traugott and Langacker define *subjectification* differently (cf. Langacker, 1999: 149; Traugott, 1999: 187; Athanasiadou, Canakis and Cornillie, 2006: 4), the point remains that grammaticalization is often not solely the product of conceptual schematization (or semantic bleaching) but also involves a shift in the semantic value of the grammaticalizing

item.[122] Regardless of how one defines subjectification, however, the main challenge is still there: the encoded content of grammatical constructions in CxG (and cognitive linguistics more generally) is still assumed to be primarily conceptual and, therefore, of the same nature as that of lexical constructions. As mentioned earlier, I agree with relevance theorists that there must be a difference in the actual nature of the encoded content. If (more) grammatical constructions also encode conceptual information, then it is unclear how they can still be argued to contribute to the understanding of an utterance in a way that is different from that of (more) lexical items. It could of course be argued that it is precisely the point of CxG to consider that there is no such distinction and that (more) lexical and (more) grammatical elements make a similar contribution to the interpretation process. Perhaps the process of subjectification mentioned above suffices to distinguish between lexical and grammatical items. Yet it is not clear that this is the view that all constructionists (want to) espouse. Indeed, in spite of rejecting a clear-cut distinction between lexical and grammatical constructions, they still often assume that more lexical and more grammatical items serve a different function in discourse. This is exactly what motivates the distinction between contentful and procedural encoding in Traugott's work in the first place, for instance. In the rest of this chapter, it is my aim to argue that the semantics of (more) lexical and (more) grammatical constructions actually differ in nature.

The relevance-theoretic approach to procedural encoding will be presented shortly. Before doing so, it is important to make a couple of observations concerning the constructionist view on the information encoded by 'grammatical' constructions. When arguing that there is a continuum of constructions from more lexical to more grammatical ones, constructionists simply assume that there is no strict distinction between words of the lexicon on the one hand and abstract syntactic rules on the other. Rather, it is argued that individuals store a network of more or less complex and more or less schematic constructions, all of which are associated with a specific function/meaning. In CxG, constructions are defined as the conventional combination of a form and a meaning, and that is why, for instance, both the lexeme *roof* and the DITRANSITIVE pattern equally qualify as constructions (see Chapter 2). Unfortunately, there is one possible pitfall with this approach. One must not forget that although the form–meaning correspondence is indeed characteristic of both lexical and grammatical constructions, this is as far as the similarity goes between the different types of constructions. That is, even though *everything is a construction* in CxG, lexical and grammatical

[122] The notion of subjectification will be addressed more fully later in this chapter. In particular, the notion of subjectivity discussed by Traugott will prove particularly useful in defining the notion of procedural encoding in meta-conceptual terms.

constructions remain located on opposite ends of the constructional continuum. As Diessel (2019: 107) puts it, "one must not overlook the differences between lexemes and constructions."[123] On the formal side, grammatical constructions are in general more schematic than lexical ones. This distinction seems to have particular consequences that one cannot ignore. Pulvermüller, Cappelle and Shtyrov (2013) provide solid experimental evidence, for instance, that the physical brain treats lexical and grammatical constructions differently and that distinct neurophysiological processes are involved when using the different types of constructions (see also Divjak et al., 2022). This strongly suggests that the form of a construction is encoded differently by the brain depending on whether it is more lexical or more grammatical. As a consequence, it is reasonable to assume that, similarly, the semantics of these different constructions may itself also be of a different nature and encoded differently. This does not challenge the view that both are form–meaning pairs but, rather, the assumption that they should capture the same type of meaning.

It is worth noting more generally that research in grammaticalization has for a long time focused on the formal distinctions between lexical and grammatical units. Interest in the semantic implications of this process is comparatively more recent. Harder and Boye (2011) point out that (see also Boye and Harder, 2012)

> typical definitions are circular – for instance, grammatical expressions are defined as expressions that have grammatical meaning, but grammatical meaning is then defined ostensively in terms of examples of expressions that most linguists would intuitively agree are grammatical. (p. 60)

As the different contributions in Narrog and Heine (2011) illustrate, research on the semantics of grammatical expressions has given rise to a number of different perspectives, with varying degrees of (in)compatibility across views. It will have become clear in this chapter that I wish to pursue the idea put forward in RT, and in particular defended by Nicolle (2011), that grammatical items encode a procedural type of meaning. Now, the aim is to identify exactly what such a procedural content consists of. This will enable me to explain more specifically how more grammatical constructions (i.e. schematic constructions, be they atomic or complex) directly contribute to the interpretation of lexical items and account for cases of coercion.

[123] It is interesting to note that Diessel (2019: 107–108) in fact argues that unlike lexical meaning, constructional meanings "do not directly tap into encyclopedic knowledge but … provide processing instructions for the interpretation of lexical items." This is exactly the view developed in Relevance Theory (cf. Section 4.2.3.2), which provides further support for the integration of the two approaches.

4.2.3.2 Procedural Meaning in RT In spite of the pervasive attention to procedural meaning in RT since Blakemore's seminal papers and books, the notion remains relatively ill-defined. Relevance theorists disagree on its scope of application and in what contexts it can or should be used. For instance, although she argues the task may not be easy given the variety of expressions which are assumed to encode procedural information, Carston (2016b: 155) readily recognizes that RT needs a proper definition of procedural encoding. There is some common understanding of what counts as procedural encoding. First of all, it is relatively common in RT to describe procedural information in terms of either semantic *constraints* or *instructions*. These two terms have been used by Blakemore herself:

> Such expressions impose *constraints* on the context in which the utterances containing them must be interpreted. (1990: 363; emphasis mine)

> [They] encode *instructions* for processing propositional representations. (1992: 152, emphasis mine)

In both cases, however, it is left to the reader's appreciation to understand what the terminology used is actually meant to capture. Indeed, as far as semantics is concerned, it is not obvious what a semantic constraint or instruction consists of, and even less so how they might be acquired and cognitively processed. Curcó (2011) quite rightly points out that "in the literature on procedural meaning very little is asserted about how exactly such meaning is embodied" (Curcó, 2011: 35).[124] As a result, it is not clear what the relevance-theoretic approach to procedural meaning consists of. Indeed, there seem to be as many views of what constitutes procedural meaning as there are papers published on the topic. The dominant view is as follows: at the heart of the distinction between conceptual and procedural encoding lies the assumption that some pieces of information directly contribute to our mental representations (i.e. concepts) while others enable us to compute, or manipulate, these representations (i.e. procedures). The idea that procedural encoding is of a computational format is very strong in RT. Diane Blakemore argues that procedural items "map directly onto computations themselves – that is, onto mental processes" (Blakemore, 1987: 144). Similarly, Wilson also argues that "the function of procedural expressions is to activate or trigger domain-specific cognitive procedures which may be exploited in inferential communication" (Wilson, 2011: 12). According to Escandell-Vidal (2017), "a linguistic procedure can be modelled as an algorithm to be read by processing systems" (Escandell-Vidal, 2017: 92). In this case, the term *procedural encoding* is used in a quite literal

[124] A similar observation has been made by Bezuidenhout (2004: 106), who Wilson argues "is right to point out that the nature of the procedural information encoded by lexical items has been insufficiently addressed in relevance theory" (Wilson, 2016: 10).

sense since it corresponds to a cognitive procedure. Unfortunately, it is once again not clear what it means for the semantics of a linguistic item – and in particular here that of grammatical constructions – to consist of a mental computation/process. As will become clear in the rest of this section, this view has resulted in a lot of discussion within RT (see, for instance, Bezuidenhout, 2004; Curcó, 2011).[125]

Another way in which these cognitive procedures have been described is in terms of computational rules: "a procedural item triggers the application of a specific rule represented in its entry" (Curcó, 2011: 35). From this perspective, using a procedural expression triggers the activation of a specific rule which one naturally has to apply to the appropriate conceptual information available in the context of use. Curcó (2011) notes that:

> Given certain conceptual representations as input, the activation of a procedure instructs the hearer to manipulate them in a specific way. The process whereby the rule is executed produces as output conceptual representations too. (p. 36)

So, for instance, the use of the pronoun *she* requires the identification of a particular female referent whom, once found, will constitute the new conceptual representation. Similarly, the use of the discourse marker *therefore* (e.g. *He is an Englishman; he is,* therefore*, brave*) requires the hearer to represent the second conjunct (*he is brave*) as being naturally entailed by the information provided in the first conjunct (*He is an Englishman*), thus enabling the recovery of a particular implicated premise or conclusion (*Englishmen are brave*). The difficulty, however, remains to understand exactly, as mentioned above, how

[125] Note that it has been suggested (Gundel, 2011: 224; Escandell-Vidal, Leonetti and Ahern, 2011: xx) that the difference in RT between conceptual and procedural information might actually correspond to the distinction established between declarative and procedural memory in neuroscience (cf. Cohen and Squire, 1980; Eichenbaum, 2002; Squire, 2004, inter alia). In short, declarative memory contains all the stored information that one gradually acquires or learns (e.g. the color of one's dog, the name of one's neighbor, etc.), while procedural memory retains processing skills for how to perform a specific task (e.g. tying your shoes, riding a bike, etc.). I will not go into the detail of this discussion here, but it is not clear whether the parallel can be so easily drawn between the two, however. It is simply worth pointing out that there are quite a number of questions that this view naturally raises, from trying to understand exactly what it means for a linguistic item to give access to such a type of procedural memory, as well as pinning down the extent to which it can actually capture specific nuances between similar but distinct grammatical expressions (such as *so* and *therefore*, for instance). More specifically, it is important to note that procedural memory has been generally identified as sustaining the whole of linguistic performance, i.e. as generally providing support for language use (see Bybee, 1998; Paradis, 2009). This is particularly true on the formal side of language, whereby procedural memory particularly enables the use (and combination) of both lexical and grammatical expressions (cf. Paradis, 2009: 14) and accounts for the generativity of language (though see Divjak et al., 2022 for recent discussion). It is therefore unlikely that procedural memory is only related to the subtype of semantic encoding that RT describes as procedural information. In spite of the terminological similarity, procedural encoding as used in RT must be given a definition of its own.

such rules are actually embodied. In the different suggestions that have been made (see Bezuidenhout, 2004; Curcó, 2011; Wilson, 2016), these rules are generally assumed to be "either purely dispositional or formulated in a sub-personal 'machine language' distinct from the language of thought" (Wilson, 2016: 11). In other words, these rules have their very own format, the exact nature of which is not accessible to us. Curcó (2011) has explicitly argued against the approach defended by Bezuidenhout (2004) in terms of causal dispositions[126] and suggests that the rules encoded by procedural expressions might actually be of a conceptual type.[127] Only the use of those rules would require distinct abilities (e.g. of a dispositional nature) which enable us to access them and perform the required action. Curcó herself points out, however, that the perspective she puts forward is but one possibility among many others (Curcó, 2011: 44). Whichever format these rules might take, a rule-based approach to procedural meaning simply fails to win unanimous support in RT. For instance, Wharton (2009: 65) has expressed strong doubts about this idea. He argues that although the notion of rule encoding might apply easily to some procedural items (e.g. discourse connectives), it does not easily extend to all the different types of expressions that have been described in procedural terms (e.g. pronouns, mood indicators). He admits that procedural expressions primarily serve to indicate "the general direction in which the intended meaning is to be sought" (Wharton, 2009: 63), but this need not be in the format of a rule or instruction.[128]

The conclusion so far is that it is not obvious even to relevance theorists themselves exactly what constitutes the content of procedural expressions and that there is little consensus among those who address the question. There is only agreement that procedural information is used to "indicate, guide, constrain, or direct the inferential phase of comprehension" (Carston, 2002a: 162).

In the rest of this section, it is my aim to try and define the procedural meaning of grammatical constructions, be they atomic or complex, many of which directly affect the interpretation of lexical items. I have expressed strong doubts that the function of grammatical constructions consists of the same

[126] Dispositions are not representations (i.e. concepts) but are embodied "as ways in which the system acts on representations" (Bezuidenhout, 2004: 109), i.e. as potential action triggers.

[127] In earlier work, Groefsema (1992: 220) also suggests that these rules are encoded as concepts. The notion of *pragmatic features* in Moeschler (2016) also seems to go in that direction.

[128] In addition, one must not forget that for many relevance theorists, concepts consist of three entries, one of which (the logical entry) gives access to deductive rules that are used to compute the logical forms in which a concept occurs (cf. Chapter 2). I have argued against this view in the previous chapter. Nevertheless, for those who maintain that concepts give access to such rules, it becomes essential to spell out exactly in what sense the rules encoded by procedural expressions differ from those encoded by concepts. This is particularly true since it has been argued that many expressions actually encode both conceptual and procedural information. It is unclear exactly how the content of these expressions might then be acquired and how the different types of rules they simultaneously give access to can possibly be computed.

conceptual type of information as lexical items, as is assumed in CxG. At the same time, the more computational model presented in RT also fails to be entirely convincing. I assume that, like concepts, procedural encoding remains of a relatively representational format, in the sense that it consists of some information available to us rather than a cognitive process located in a sub-personal system. The challenge for this view is that representations are usually assumed to be conceptual. This might be why, as mentioned above, Traugott argues that procedures also consist of conceptual structures. It is exactly what motivates Bezuidenhout (2004) to argue that procedures are therefore not representational but dispositional. It could be argued that maintaining a representational format for procedural encoding thus contradicts my previous claim that unlike lexical items, grammatical expressions most probably do not encode concepts but a different type of information. This need not be so, however. As mentioned above, I want to suggest that the content of grammatical constructions might best be understood in terms of meta-conceptual knowledge which provides background information on which to compute lexical concepts. This view will be outlined in the rest of this section.[129]

4.2.3.3 Procedural Meaning: New Hypothesis The hypothesis is inspired by the following observation: the common denominator in relevance-theoretic approaches is that procedural encoding provides specific constraints on inferential processes.[130] They are commonly used to reduce the search space during inferential processes and, therefore, to optimize relevance. Unfortunately, to argue that some expressions encode particular constraints on interpretation is rather uninformative in a framework like RT. Indeed, the ostensive-inferential approach to communication adopted in RT (see Chapter 2) rests on the assumption that language provides support for the inferential processes that enable the recovery of a speaker's intentions and is therefore largely used to indicate where relevance is to be found.[131] From this perspective, even expressions that encode concepts can be thought of as constraints on inferential processes. Sperber and Wilson's (1995: 168) analysis of the sentences in (104) and (105) supports this view.

(104) George has a big cat.

(105) George has a tiger.

[129] Note that the main focus of this book remains lexical semantics–pragmatics. Therefore, the hypothesis briefly formulated in the rest of this section constitutes more a suggestion for further research than a definite claim and full-fledged proposal.

[130] After all, the notion of procedural encoding was introduced to RT in a book called "Semantic *constraints* on relevance" (Blakemore, 1987; emphasis mine).

[131] Wilson and Sperber (1993: 102) argue that "linguistic decoding feeds inferential comprehension."

They argue that, in the case that George possesses a tiger, the sentence in (105) is more relevant than the one in (104) since it obviously enables the faster recovery of the speaker's intended interpretation (i.e. that George owns a tiger and not a domestic cat). Here, choosing the conceptual expression *tiger* instead of *big cat* therefore directly affects the inferential process involved during the comprehension phase. So it appears that conceptual items also put constraints on the inferential phase of comprehension. This is particularly true, for instance, since the use of (105) also makes accessible specific assumptions which enable the derivation of a number of implicatures with regard to the situation. These examples are meant to illustrate that in order to keep the notion of procedural meaning distinct from conceptual encoding, it is necessary to specify exactly in what sense procedural expressions act as constraints on inferential processes (i.e. how they do so differently compared to items that encode concepts).

One of the earliest descriptions of procedural information which appears most appealing is that in Wilson and Sperber (1993) when they argue that constructions that encode procedural information provide "information about how to manipulate [conceptual representations]" (Wilson and Sperber, 1993: 97). That is, these expressions are used to put concepts together and form larger representations. This description is particularly interesting since it corresponds very closely to most of the descriptions that are generally given of the semantics of grammatical constructions (which I argue encode procedural information, see previous section). For instance, von Fintel (1995: 184) argues that the semantics of grammatical expressions constitute "a sort of functional glue tying together lexical concepts." Similarly, Langacker (2011) argues that:

> Despite the absence of a definite boundary, lexicon and grammar serve different primary functions. Lexical items have a descriptive function: their conceptual content serves to specify some portion of the objective situation. *The role of grammar is to abet and supplement their description. Grammatical constructions sanction and symbolize the integration of lexical content to form more complex conceptions*. . . . This supplementary function corresponds to what Boye and Harder (2009; see also Harder and Boye, 2011) identify as the basic feature distinguishing grammar from lexicon, namely the "coding of secondary information status." (p. 82; emphasis mine)

These two quotes illustrate the general tendency to think of grammatical function in terms of the mental organization (and manipulation) of particular conceptual representations into larger, more complex conceptions. It is this particular view which inspires me to argue that the procedural content associated with grammatical constructions consists of meta-conceptual information. Indeed, it implies that the grammatical/procedural function primarily provides an indication of how the embedded lexical concepts are to be employed. Yet in order to achieve this type of conceptual arrangement, it is necessary to adopt

a specific perspective on these concepts. That is, acquiring the meaning of grammatical constructions cannot simply consist in abstracting away from lexical concepts (since in spite of their more abstract nature, the function of grammatical concepts is essentially of the same type as those of lexical concepts), but rather has to involve some form of mental stepping back from them. It is in that sense that grammatical constructions seem to be conventionally associated with meta-concepts: they provide access not to mental representations but to "mental representations of mental representations" (Sperber, 2000b: 3).[132] In other words, the information provided by grammatical constructions does not simply complement that of lexical constructions but rather directly serves to compute lexical concepts.

An approach in meta-conceptual terms is in line with some of the findings discussed in the literature on the function of grammatical constructions (be they atomic or complex). For instance, as opposed to basic representations, meta-representations are often described as constituting representations of a higher (or second) order (cf. Sperber, 2000c). Grammatical constructions have been discussed in such terms as well. For instance, the cognitive psycholinguist Michael Tomasello, advocate of the usage-based approach adopted in CxG, refers to grammatical constructions as second-order symbols: "these may be seen as basically second-order symbols because they indicate how the first-order symbols are to be construed" (Tomasello, 1992: 6). This view also receives support from research in neuroscience where grammatical constructions are also argued to provide "second-order constraints" (Bergen and Wheeler, 2010: 156).[133] Bergen and Wheeler argue that they use the term *second order* in the following sense:

> We use the term "second-order" here because in this function, grammar serves not to directly propose content to be mentally simulated, but rather operates over this content. (p. 156)

It is exactly in this sense that I understand the notion of meta-concepts. Support for the view advocated here also comes from research on theory of mind (ToM) abilities, introduced in Chapter 2. It has been observed that the acquisition of ToM abilities involves incremental stages, where more advanced ToM abilities gradually develop throughout childhood (see Zufferey, 2010: 30–35). In particular, it is often argued that a critical stage in their acquisition precisely

[132] Note that the notion of meta-representations is also discussed in RT, but mostly in relation to meta-represented thoughts or propositions such as in the case of irony or meta-linguistic negation (see Allott (2017) for a detailed overview), and usually not in relation to grammatical/procedural meaning.

[133] It has also been suggested in developmental biology that "the development of second-order cognition is a necessary prerequisite for the formation of fully grammatical language" (Langer, 1996: 269) and that this is most probably what makes human language different from other animal communication systems (such as that used by chimpanzees, for instance).

concerns the ability to use meta-representations (e.g. (false) beliefs and attitudes), at around three or four years of age,[134] at which point ToM abilities are often assumed to be fully developed. It is worth making a couple of observations here. First of all, research in the field of language acquisition shows that adultlike grammatical knowledge develops and starts to be productive at about the same age (Tomasello, 2003; Clark, 2009).[135] This therefore constitutes an interesting observation for the hypothesis presented here whereby grammatical meaning consists of meta-representations. The link between grammatical constructions and meta-representations also receives support from clinical linguistics. Some individuals show abnormal developments of ToM abilities such as, for instance, individuals with autism spectrum disorder (ASD). It has been observed that one of the skills affected by ASD is theory of mind. In particular, most ASD subjects lack meta-representational abilities (cf. Baron-Cohen, Leslie and Frith, 1985; Baron-Cohen, 1989, 1995; Zufferey, 2015: 164). It appears that a majority of ASD individuals also suffer from language impairment and particularly lack grammatical skills (see, for instance, Eigsti, Bennetto and Dadlani, 2007; Zufferey, 2010; Eigsti et al., 2011; Wittke et al., 2017, and references cited therein). This further suggests that meta-representational abilities and grammatical function are related.[136] Finally, as mentioned earlier, the assumption that grammatical constructions (atomic or complex) give access to meta-conceptual information is also consistent with the observation that their development typically involves a process of subjectification. Traugott (1995: 31) uses the term *subjectification* to refer to the

> process whereby "meanings become increasingly based in the speaker's subjective belief state/attitude toward the proposition", in other words, towards what the speaker is talking about. (Traugott, 1989: 35)

This perspective once more seems to go hand in hand with the meta-conceptual hypothesis presented in this section. Indeed, the attitude expressed towards a specific proposition naturally imposes a particular representation (the attitude) onto another representation (the proposition) and therefore consists of a meta-representation. Ronald Langacker also uses the notion of subjectivity in relation to grammatical constructions but, as mentioned earlier, does so differently from Traugott. According to him, grammatical constructions are more

[134] Exactly at what age children manage to use meta-representations remains a bit of a debate. For a critical discussion of this issue, see Zufferey (2010: 33–34).

[135] Naturally, children acquire a number of word-combination patterns (such as formulaic phrases, pivot schemas and item-based constructions) at earlier stages, but these bear "no communicative significance" (Tomasello, 2003: 115) and most often only act as "usage-based syntactic operations" (p. 307).

[136] It also reinforces the view that acquiring grammatical constructions (or failing to do so) does not only involve a process of abstraction/generalization (contra Johnson, Boyd and Goldberg, 2012).

subjective than lexical constructions in the sense that their conceptual construal does not explicitly represent the subject of conceptualization as constituting its content but is rather located "offstage," "inhering in the very process of conception without being its target" (Langacker, 1999: 149). That is, the conceptual material provided by grammatical constructions provides tools for conceptualization (which Talmy (2018: 4) refers to as a "conceptual structure"), which is once more consistent with the meta-conceptual view adopted here.

When the procedural semantics of grammatical constructions are described in meta-conceptual terms, one can more easily explain in what sense grammatical constructions act as constraints on interpretation processes. Grammatical constructions precisely serve to provide information about the concepts that occur within their open slots, thus directly providing an indication to the hearer of where relevance is to be found. The types of grammatical constructions discussed in the section on coercion provide information about the types of lexical concepts that typically occur in a given slot, and hence directly affect the recovery of the explicature (i.e. the proposition expressed). As mentioned previously, however, procedures also constrain the recovery of higher-level explicatures and implicatures. Grammatical constructions that constrain the recovery of higher-level explicatures provide information about the type of attitude or speech act intended by the speaker (e.g. sentence types; Clark, 1991). Grammatical constructions that constrain the recovery of implicatures provide information about the type of links between different propositions (e.g. discourse connectives; Blakemore, 1987, 2002).

The aim of this section was to spell out more explicitly what constitutes the semantics of (atomic or complex) grammatical constructions in order to pin down more specifically the way in which they constrain the interpretation of the lexemes that are used within them and to better understand the notion of coercion discussed in the previous section. It was shown that neither of the two views adopted in CxG and RT is fully convincing. Nevertheless, given their respective arguments and on the basis of additional evidence, it has been suggested that procedural/grammatical content might consist of meta-conceptual representations, i.e. information about the (lexical) concepts that are embedded within these structures.[137] When described in meta-conceptual terms, procedural information is understood as providing information of a secondary status, the role of which is to provide a structure against which the concepts that fall within its scope can be mentally construed. This view is fully compatible with and, in fact, helps to explain the perspective on coercion

[137] Exactly how these meta-concepts are embodied has not been spelled out. This constitutes a topic for further research and will not be explored here. An interesting hypothesis, following Curcó (2011: 44), might be to consider that procedural/meta-conceptual information simply involves a kind of mental bracketing (i.e. encapsulation) different from conceptual content.

adopted in Section 4.1.5. First of all, as mentioned above, it can account for the relative unidirectionality (captured by the override principle) of the resolution process. Indeed, in this case the function of the lexical item and that of the grammatical construction with which there is a mismatch do not have exactly the same status and contribute in different ways to the interpretation process. It seems intuitively more logical that concepts should conform to the way in which they are meta-represented rather than the other way around. This is particularly true since the meta-conceptual information provided by grammatical constructions supposedly provides a more rigid structure against which the process of meaning construction operates (since they are based on higher-level cognitive abilities and therefore less amenable to change). It is interesting to note that in RT, *rigidity* is considered to be the main property of procedural information (cf. Escandell-Vidal and Leonetti, 2011). This view can therefore explain the natural tendency captured by the override principle (and left relatively unexplained in CxG). At the same time, by virtue of remaining in the format of an information (rather than a cognitive process), the view adopted here still makes it possible for the procedural information associated with grammatical constructions to change. That is, in spite of being more rigid than lexical concepts (i.e. less easily prone to contextual modulation), procedural encoding is not as change-proof as it is often assumed to be in RT. It has been shown in Section 4.1.4 that in some cases, it is precisely the meaning of the construction which is adjusted in accordance with the meaning of the lexical concept. This directly follows from their being acquired and learned in context on the basis of the conceptual elements which occur in them, i.e. from their usage-based origin. As a result, the lexemes used and the context in which a (more) grammatical construction occurs might sometimes have greater coercive force than the grammatical construction itself, which therefore directly affects the meta-representation associated with it. In CxG, it is taken for granted that the function of grammatical constructions can change given that language is assumed to emerge from usage and to be "constantly changing" (Bybee, 2013: 49.)[138] Finally, and perhaps most importantly, defining the function of grammatical constructions in terms of meta-conceptual representations further supports the view that coercion effects are the result of a semantically constrained pragmatic process. Indeed, as mentioned several times already, coercion is semantically constrained given that the meta-conceptual information associated with the grammatical constructions provides

[138] It must be noted that, from a usage-based approach, 'regular' cases of coercion (where it is the meaning of the lexeme which adapts to that of the grammatical construction) must also affect the function of the grammatical construction used. That is, although in this case coercion mostly has an impact on the meaning of the lexeme, its eventual interpretation most certainly also deviates (even slightly) from the meta-conceptual information stored by the grammatical construction and therefore leaves a trace in its representation (and thus contributes to its possible change). Bybee (2010: 186) has explicitly defended this perspective.

a structure against which to understand the lexical concepts that occur within them. At the same time, this meta-conceptual information does not itself constitute the content of these concepts (or the proposition to which they contribute) but simply acts as additional background information on the basis of which the pragmatic process of *lexically regulated saturation* (see previous chapter) can be carried out by the hearer (independently of whether there is a mismatch between the concept encoded by the lexeme and the meta-conceptual information associated with the grammatical construction, see Section 4.1.4).

4.3 Lexemes and Idioms

The aim of this chapter is to identify and explain the ways in which the interpretation of a lexeme is affected by its linguistic environment. A central assumption is that interpreting a lexical construct systematically involves the inferential process of lexically regulated saturation. In Sections 4.1 and 4.2, it was shown that this process is directly constrained by the procedural semantics of the grammatical constructions in which lexemes occur, which sometimes leads to coercion effects. In this section, it will be shown that interpreting a lexeme also largely depends on the hearer's ability to recognize the use of larger (fixed) sequences to which the lexical item may belong, namely idioms. It is widely acknowledged in linguistics that on top of knowing specific lexical units, speakers of a given language also store a number of rather fixed lexical sequences, often referred to as idioms or idiomatic expressions, which are associated with a specific interpretation. The term *idiom* can be found in both CxG and RT, which provides an interesting basis for comparison. The challenge is twofold, however. First, CxG and RT have opposite understandings of what idiomaticity consists of and they do not pay an equal amount of attention to idioms. Second, they focus on different facets of idiomatic expressions. In CxG, the main goal is to identify their formal and semantic properties; in RT, it is the interpretation process of idioms that constitutes the main focus of attention. This section aims to integrate the two perspectives and to provide a cross-theoretical understanding of the interaction between lexical constructions, idioms and the process of lexically regulated saturation.

Although in RT some research addresses the underlying cognitive strategies used by hearers to interpret idioms (e.g. Vega Moreno, 2001, 2003, 2005; Eizaga Rebollar, 2009), these papers stand out as exceptions since the contribution of idiomatic expressions is otherwise never discussed in the relevance-theoretic literature.[139] This is to be expected given that RT adopts a Chomskyan view of

[139] The terms *idiom*, *idiomatic* and *idiomaticity* figure in none of Sperber and Wilson (1995), Carston (2002a), Wilson and Sperber (2012) or Clark (2013a), all of which I consider to be reference books in RT.

language, where idioms are considered to be "a relatively marginal phenomenon" (Jackendoff, 2002: 167).[140] In the papers that do address idioms, the term is used in a rather technical sense to refer to (relatively) lexically fixed sequences that usually receive figurative interpretations. This includes patterns such as in (106) to (108).

(106) *to kick the bucket* – [to die]
  a. They're waiting for me to *kick the bucket* cause then they'll get more money. (COCA, written)
  b. I will work hard to make a niche for myself and wait until one of the old doctors *kicks the bucket*. (COCA, written)

(107) *to spill the beans* – [to reveal secret information]
  a. Jones tried to get him to *spill the beans* about his true allegiances, but he's not talking. (COCA, written)
  b. But since Bill and Monica have *spilled the beans*, you might want to recast your votes. (COCA, written)

(108) *to be barking up the wrong tree* – [to be wrong]
  a. If you're looking for good nutrition in a hot dog, you'*re barking up the wrong tree*. (COCA, written)
  b. Most of them agreed with us that TV news "stars" *are barking up the wrong tree* when they focus on their "great" good looks, rather than on the news and the reportorial task at hand. (NOW)

In CxG, idioms of this type have been referred to as *core idioms* (Wulff, 2008: 2). They are so called because constructionists assume that typical features of idiomaticity (i.e. non-compositionality and formal fixedness) are actually shared by a much larger range of constructions than those discussed here. This actually follows from a strict application of the central CxG idea that "any construction can be conceived of as idiomatic" (Wulff, 2008: 18), since most are either formally or semantically unpredictable. Wulff (2008) makes the following observation:

> Construction grammar is indeed all about idioms – not in the sense that its scope is restricted to the analysis of phrases like *kick the bucket* or *red herring*, but in the sense that construction grammar defines idiomaticity as a property that is inherent in all linguistic items regardless of their size and degree of schematization. (p. 18)

For this reason, the terms *idiom* and *idiomatic* are extremely frequent in CxG research.[141] From an external standpoint, such a perspective naturally challenges the necessity of keeping the notion of idiom as a separate concept. It is my understanding that construction grammarians might argue this is precisely the point of CxG, and that idioms do not constitute a distinct category of

[140] Note that Jackendoff is critical of this view.
[141] CxG was after all developed on the observation that features of idiomaticity pervade linguistic knowledge (Fillmore, Kay and O'Connor, 1988).

constructions (see Wulff, 2013). There are reasons to believe that the notion of idiom is still useful as a distinct concept, even in a theory like CxG. First, there is a general consensus that the term *idiom* does not refer to atomic constructions (i.e. the word-level) but necessarily entails formal complexity (Wulff, 2013: 287). Second, it is also (tacitly) assumed that idiomatic phrases involve a certain level of lexical specification; they are not fully schematic (Wulff, 2013: 287). This is exactly how Goldberg (2006: 5) uses the term. She applies the notion only to fixed (e.g. *going great guns*, *give the Devil his due*) and semi-fixed (e.g. *jog* < someone's > *memory*, *send* < someone > *to the cleaners*) constructions. This view is also explicitly spelled out in Wulff (2013):

> First, constructions differ in terms of their complexity: morphemes and words are simple constructions, whereas idioms and grammatical frames are increasingly complex. Second, constructions differ in their degree of schematization or lexical specification: words are fully lexically specified, whereas grammatical frames are maximally unspecified with regard to the lexical material that can be inserted. Idioms occupy the space in between these two extremes, with some like *shoot the breeze* being fully lexically filled and others like *pull X's leg* being only partially specified. (p. 278)

The term *idiom* here refers to any construction that is formally complex and lexically (semi-)fixed (see also Croft and Sutton, 2017: 2–3). This view offers an interesting trade-off between what may come across as two extreme views. On the one hand, it enables us to keep the notion of idiom distinct from that of construction, i.e. not all constructions are idioms. On the other hand, it also enables one to extend the scope of the concept to constructions other than those identified in (106) to (108). From this perspective, all of the following constructions can also be viewed as idiomatic phrases: *global warming*, *wide awake*, *all of a sudden*, *from now on*, *answer the door*, *fall in love*, *cost a fortune*, *catch a bus*, *run a business*, *pay* < someone > *a visit*, *drive* < someone > *crazy*, etc. Some of these constructions show little (formal or semantic) irregularity and might simply be referred to as collocations rather than as idioms.[142] Yet, although these lexical patterns are semantically more transparent than core idioms, they too are acquired and stored by speakers of English as individual constructions. It is for that reason that the term *idiom* (or *idiomatic phrase*) is used for any substantial pattern that ranges "from collocations to [core] idioms" (Wulff, 2013: 287). A direct consequence of this view is that idioms do not constitute marginal cases but rather pervade language: "there are thousands of them – probably as many as there are adjectives" (Jackendoff, 2002: 167). Goldberg (2019: 53) also argues that "the use of lexically specified constructions is a hallmark of native-like speech."

[142] See Schmid (2014: 254–259) for a detailed overview of the terminology used.

The idea that speakers of English store such a wide variety of idiomatic phrases (i.e. more or less fixed lexical sequences) has long since become a central tenet of CxG. This is not the case in RT, however. Apart from the core idioms, few linguistic units other than lexemes have been given much attention in RT. This naturally follows from the Chomskyan view of language on which the theory was developed. At the same time, the focus on the lexical level in RT is not motivated by a fundamental objection to the existence of larger lexical patterns. That is, in spite of their largely Chomskyan approach, it is my understanding that many relevance theorists would share the assumption that such patterns exist.[143] It is crucial to understand that the identification of such sequences is not meant to diminish the role played by pragmatics during the interpretation of an utterance (see below). Rather, the aim is only to show that the meaning of a lexical construct in an utterance may also be determined by idiomatic phrases in which it is embedded. Consider the verb *open*, for instance. Carston (2002a: 65) lists a number of examples (e.g. *open the window*, *one's mouth*, *a book*, *a briefcase*, *the curtains*, *a wound*) to show that the lexical item can be used to express a variety of (slightly) different meanings in different contexts and argues that each interpretation is arrived at via pragmatic inference in accordance with the principle of relevance, i.e. the hearer systematically has to derive an ad hoc concept OPEN*. While I admit that the interpretation of *open* typically depends on the process of lexically regulated saturation, there are cases where the interpretation of the verb is determined by the idiomatic phrase in which it occurs. Considers the following examples:

(109) *open the bidding* – [make the first offer]
  a. I *open the bidding* at five thousand dollars. (COCA, written)
  b. He was glad he had *opened the bidding* low. (COCA, written)

(110) *open one's mouth* – [say something]
  a. Don't *open your mouth* before the dealer does. (COCA, written)
  b. Every time he *opens his mouth*, he gets more popular than the rest of them. (COCA, spoken)

(111) *open the door to something* – [make something possible]
  a. If we deny anyone's humanity, we *open the door to* unimaginable horror. (COCA, written)
  b. But what actually *opened the door to* Globalization was the economic collapse of 1973-the depression that never was. (COCA, written)

[143] There might be relevance theorists who will prefer to ignore idiomatic phrases given the complexity of understanding the underlying cognitive principles that make their use possible. (It is due to a lack of a "strong guiding principle" that Carston (2002a: 219) rejects a polysemous approach to meaning.) But I doubt that all relevance theorists are willing to do so.

In these examples, the verb *open* receives different interpretations. It might be tempting to argue that those interpretations are pragmatically derived in accordance with the hearer's expectations of relevance. I believe, however, that the patterns I identified in (109) to (111) are actually stored as individual constructions by English speakers,[144] and therefore that the particular meaning retrieved is not (solely) the product of pragmatic processes. That is, the hypothesis is that interpreting a lexeme also largely depends on the hearer's ability to recognize the idiomatic phrases in which lexemes are embedded (and which provide their own conceptual information). Here are some further examples:

(112) *answer the door*
  a. That morning, my doorbell rings. So I jump up and I go *answer the door*, and I look out and I see a bunch of officers. (COCA, spoken)
  b. Funny phrase, "*answer the door.*" Excuse me, door, what exactly was your question? (COCA, written)

(113) *paralyzed with fear*
  a. Some women, like Moyer, also become *paralyzed with fear* and concern for the baby's safety. (COCA, written)
  b. And I remember just sitting there. And I was *paralyzed with fear*. I didn't know what to do. (COCA, spoken)

(114) *shining example of*
  a. This couple was a *shining example of* two people who have been married for 63 years, and have together, constructed a story of positive reflections and lifelong commitment. (COCA, written)
  b. You know, the BBC stands as a *shining example of* what can be done by radio broadcasting. (COCA, spoken)

In these examples, the lexemes *answer*, *paralyzed* and *shining* are not interpreted literally but receive a more specific interpretation. In (112), the verb *answer* is used in the sense of opening the (front) door for someone. In the examples in (113), *paralyzed* does not refer to a medical diagnosis but simply indicates one's inability to perform an action. In (114), the adjective *shining* is used to refer to a particularly good example. If one focuses on the lexical level only, then it could be argued that these interpretations require the pragmatic derivation of the ad hoc concepts ANSWER*, PARALYZED* and SHINING*. However, I want to argue, in accordance with CxG, that the patterns identified in (112) to (114) actually constitute idiomatic phrases that speakers of English store individually from the lexemes themselves, and that the particular interpretations just mentioned are made directly accessible by these patterns. In other words, the resulting interpretations are not solely the result of pragmatic inferencing.

[144] Entries for each of them can be found in dictionaries such as, for example, the Cambridge Dictionary.

There is no reason why relevance theorists would reject this view. It is not in contradiction with any of the core RT assumptions. The only rightful objection that relevance theorists might raise is that, although it provides a more accurate view of the type of constructions that contribute to the interpretation process, this account does not explain exactly in what way these idiomatic phrases enter the interpretation process. In other words, it is one thing to posit the existence of such constructions, but another to explain how the hearer manages to interpret utterances that contain them. CxG does not provide an answer to this question. In the rest of this section, it is my aim to show that RT can help shed some light on this issue.

One possibility consists in arguing that the meaning encoded by this type of idiomatic construction is directly accessed and systematically prevails over that of the lexemes found inside them. This is most probably due to the exact same intellectual shortcut that leads many to falsely believe that coercion in CxG is viewed as a systemic mechanism, namely that the hearer understands the utterance "because they know the construction." This I want to refer to as the *grammarian's fallacy*. Such a view can be found in previous research. The corpus linguist John Sinclair, for instance, argues that this is one of the implications of what he calls the *idiom principle* (Sinclair, 1991: 110–115). However, the interpretation process involved must be more complex: understanding utterances that contain idiomatic phrases certainly involves elaborate cognitive processes that go beyond simple recognition of those patterns. Consider, for instance, the construction "*open the door to* < something >" discussed previously. This construction is typically used by a speaker to express a meaning along the lines of 'making something possible'. The two examples in (115) are typical instantiations of this idiomatic phrase. In this case, it could be tempting to argue that the hearer's interpretation of the sentence simply follows from their knowing the "*open the door to* < something >" construction. Examples such as in (116) challenge this perspective, however.

(115) a. There was adamant opposition to anything that might *open the door to* government encroachment into school governance, admission, curriculum, or operations. (COCA, written)
b. Such a definition challenges Catholic doctrine on gender role "complementarity" and *opens the door to* acknowledging different sexual orientations. (COCA, written)

(116) I could think of no more reasons to delay. I took a deep breath and *opened the door to* the exam room where the police were waiting. (COCA, written)

In this case, although the formal make-up of the sentence in (116) corresponds exactly to that of the construction found in the two previous examples, it is not interpreted in accordance with the description given above. This necessarily calls into question the interpretation process of these sequences, and in particular the ways in which one actually recognizes a sequence as being an

instantiation of a particular construction (thus leading to one particular interpretation) or not. It is precisely my aim now to sketch a brief proposal of how utterances containing these patterns might be interpreted.

By and large, the view adopted here is that interpreting an utterance which contains a sequence of words that might be identified as an instantiation of a specific idiomatic phrase involves a similar type of process as that involved in the case of homonymy (i.e. ambiguity): there are two conflicting interpretations available but one is contextually (dis-)preferred. Applied to the analysis of sentences like (115) to (116), the idea is that hearers' recovery of the speaker's intended interpretation therefore systematically involves a relative conflict between a regular syntactic parsing of these sentences and the recovery of the function associated with the pattern "*open the door to* < something >". How one is to decide whether or not a particular sequence of words is best analyzed as an instantiation of an idiomatic phrase is then determined in context in accordance with the principle of relevance. Together with the linguistic environment, the extra-linguistic context in which this sequence occurs makes one interpretation more relevant to an individual than another. As a result, one may not even test the meaning of the idiomatic construction for relevance if its function is contextually obstructed, such as in example (116). This means that we need not postulate the primacy of the idiomatic phrase's meaning, let alone the need to cancel this meaning if it is deemed irrelevant.[145] The approach adopted here makes syntactic parsing an equal candidate during the search for relevance and, therefore, the overall interpretation process is viewed as being much more context-sensitive than previously assumed.

This view is entirely consistent with the *relevance-guided comprehension procedure* adopted in RT discussed earlier. Whether or not a particular string of words is recognized as an instantiation of a particular construction really depends on whether, during the search for relevance, its meaning is easily accessed and satisfies one's expectations of relevance. In RT, Vega Moreno (2001, 2003, 2005), who analyzes core idioms from a relevance-theoretic approach, provides a detailed and well-documented argument that supports this analysis. Her approach is captured very well in the following quote:

> This paper argues in favour of an account of idioms which is not committed to the existence of different processing modes in language understanding. It pursues the view that speakers do not aim at literalness (Bobrow and Bell, 1973) or at figurativeness (Gibbs, 1994) but at optimal relevance (Sperber and Wilson, 1995). The comprehension of idioms is achieved through just the same processing mechanisms as the comprehension of non-idiom strings. That is, in understanding an idiom, as in understanding any other instance of language, the hearer is guided by the relevance-theoretic

[145] In other words, like RT rejects the "encoded-first" hypothesis, I hereby reject the "idiom-first" hypothesis (i.e. the idea that the meaning encoded by the idiomatic phrases is always tested before the meaning of the individual words that compose the idiom).

comprehension procedure. Since utterance processing is not optional, both the concepts underlying the individual constituents in the string and the concept underlying the idiom as a holistic unit are activated as the idiom is heard. Precisely which of this activated information is accessed follows from considerations of relevance. (Vega Moreno, 2001: 100)

A consequence of this perspective is that although there might be contexts in which the meaning of the idiomatic phrase is tested first then rejected (thus giving rise to garden-path effects; see Slattery et al., 2013), there must also be contexts in which it is not even tested and only the interpretation obtained via regular syntactic parsing is considered (as seems to be the case in example (116)). This view is consistent with most of the work carried out in cognitive science on the processing of sentences containing idioms (see Jurafsky, 1992, 1993, 1996; Tabossi, Fanari and Wolf, 2009; Beck, 2020, and references cited therein). The overview provided by Jurafsky (1993: 3) convincingly shows that the processing of this type of sentence is indeed both *parallel* and *context-sensitive*.

Essentially, the main assumption here is that upon hearing (or reading) sentences like (115) to (116), one cannot entirely escape the process of lexically regulated saturation introduced in the previous chapter (which applies to atomic lexical items). That is, whether or not a particular utterance contains a more lexically fixed/idiomatic pattern, the early stages of the inferential process (which makes possible the recovery of the speaker's intended interpretation) will typically involve reconstructing the meaning of lexical items in accordance with one's expectations of relevance. Depending on a number of factors, such as contextual accessibility and relevance, recognizing one of the more idiomatic phrases will have an impact on the interpretation process and may redirect the hearer's cognitive resources to new inferential paths to reconstruct the meaning of the idiom. In this case, the process of lexically regulated saturation is simply suspended, and the hearer relocates their cognitive resources in such a way as to optimize the relevance of the interpretation (by managing the amount of cognitive effort required to obtain sufficient cognitive effects). There will be contexts, of course, where the meaning of these (idiomatic) constructions will be so salient that it might be tested for relevance almost immediately during the inferential phase of comprehension (thus giving the impression that the interpretation process is therefore 'short-circuited', as Cappelle and Depraetere (2016) argue). The main assumption here, however, is that the meaning of these idiomatic phrases will not systematically be tested first for relevance and only canceled in inappropriate contexts.

A direct consequence of this view is that lexically regulated saturation therefore lies at the heart of the interpretation process of a lexeme, in the sense that it is systematically performed during the inferential phase of comprehension. This is, of course, not to say that lexical processing necessarily

precedes idiom processing (as mentioned above, these are seen as running in parallel). Rather, the claim is that, in the early stages of the comprehension phase, idiom processing does not *ipso facto* block lexical processing. These processes involve context-sensitive cognitive procedures that require the hearer to determine in context which construction (i.e. the lexeme or the idiomatic phrase) is being used in order to recover the speaker's intended interpretation. As a result, early stages of the comprehension process systematically involve lexically regulated saturation, which may simply be suspended (i.e. in the sense of interrupted) if processing the meaning of the idiom seems more relevant to the hearer. The representation in Figure 4.5 is an attempt to visualize the (relatively) central role of lexically regulated saturation during the interpretation phase of an utterance.

The left part of Figure 4.5 captures the approach introduced in Section 4.2.2: lexical constructions are systematically interpreted via the inferential process of lexically regulated saturation, which is guided by the procedural meaning of the grammatical constructions in which they occur and as a result of which coercion effects sometimes emerge. In addition, the right part of this figure is meant to capture the observation made in this section according to which the interpretation of an utterance also often involves parallel processing of lexical constructions and the larger idiomatic patterns in which they occur, an inferential process which may lead to the suspension of lexically regulated saturation during the search for relevance in favor of idiom processing. Once more, therefore, I hope to have shown how complementary Construction Grammar and Relevance Theory are when it comes to providing cognitively accurate descriptions of language use. Reconstructing the meaning of an utterance is neither fully the result of pragmatic inference (RT), nor simply the recovery of

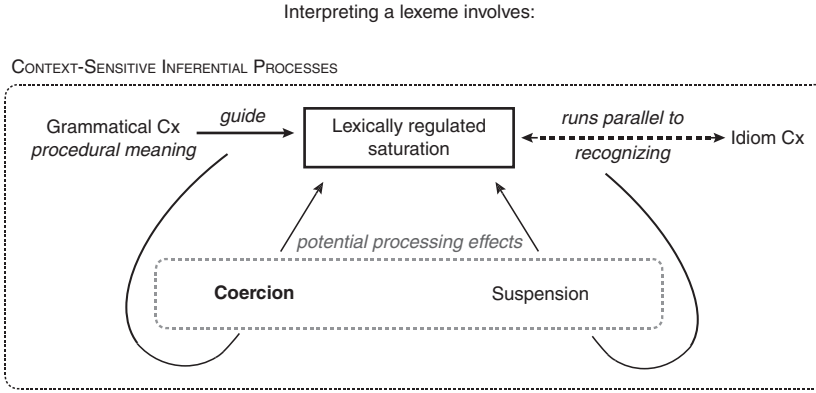

Figure 4.5 'Lexically regulated saturation' and utterance comprehension (2)

a construction's encoded meaning (CxG), but is a complex interaction of these two aspects.

4.4 Conclusion

This chapter started off with the simple observation that a negative consequence falls out of the respective aims of CxG and RT: CxG tends to overemphasize the role played by an individual's linguistic knowledge whereas RT tends to minimize it in favor of inferential processes. I have shown that these two aspects contribute equally to the (construction and) interpretation of an utterance in general, and lexemes in particular. In the case of lexemes, the process of lexically regulated saturation discussed in the previous chapter is meant to capture this very observation. The discussion of this process remained relatively lexeme-centered, however, and the central aim of this chapter was precisely to investigate the role played by the linguistic and extra-linguistic context in which lexemes are used and identify exactly how it affects the interpretation of lexical constructions (i.e. how it affects the process of lexically regulated saturation). In order to do so, a number of notions were discussed. In Sections 4.1 and 4.2, I focused on the concepts of coercion and procedural meaning. In Section 4.3, I looked at 'idiomatic' constructions.

It is a central assumption in CxG that in addition to specific lexemes, language users know a large variety of more schematic constructions in which lexemes are used and which have their own function (e.g. the Ditransitive construction, the Caused-Motion construction, the Way construction, etc.). Therefore, understanding a lexeme also crucially depends on the semantics of the construction in which it occurs. Of course, one could naturally expect the meaning of the lexeme to be compatible with that of the construction. This is not always the case, however. There is often a semantic (and morphosyntactic) mismatch between the lexeme and the particular slot of the construction in which it is used. CxG argues that in such a case the meaning of the lexeme (almost) systematically conforms to the semantics of the larger construction. These have been referred to as cases of coercion, since the meaning of the construction is coerced onto that of the lexeme. The notion of coercion proves particularly interesting since it shows that not all cases of lexical adjustments are therefore necessarily pragmatically (i.e. non-linguistically) motivated, as is often argued in RT. Rather, the interpretation of a lexeme is also a function of the semantics of the constructions in which it can be used and is, therefore, slightly more language-driven than is assumed in RT. The challenge is to understand exactly how the meaning of the construction is coerced onto that of the lexeme. CxG does not offer any explanation, however. By virtue of being a usage-based theory, most constructionists agree it is the language user that coerces the meaning of the construction

onto the lexeme (and not the construction itself), but none explain exactly how this process is actually carried out. This is when insights from RT become essential. Cases of coercion are best described as the result of an inferential process whereby the hearer constructs a relevant interpretation on the basis of their linguistic knowledge as well as taking into account the speaker's intention and extra-linguistic factors. In particular, I have argued that the process involved during coercion is exactly the same process as in non-coerced cases: lexically regulated saturation. The difference is that in the case of coercion, this process is constrained by the semantics of the construction in which lexemes are found to a greater extent than in the case of non-coerced lexemes (hence the need to keep coercion as a distinct concept).

In RT, the idea that some linguistic items might provide particular constraints during the interpretation process is usually discussed under the notion of procedural meaning. Items that have a procedural function do not contribute to the proposition expressed directly but simply affect the inferential process involved during its recovery. Given the particular perspective on coercion adopted here (in terms of semantic constraints), it therefore seemed interesting to identify to what extent the two notions actually overlap. It has been shown that there is a relation. First, both frameworks identify coercion and procedural meaning as associated with grammatical constructions. Unfortunately, CxG and RT have a different understanding of what counts as a grammatical unit of the language. Nevertheless, it has been argued that procedurality is particularly characteristic of the more schematic constructions identified in CxG (precisely those that are involved in the process of coercion). To treat these grammatical constructions in procedural terms provides further support for the view that coercion involves a semantically constrained pragmatic process since it is precisely the function of procedural expressions to act as constraints on inferential processes. The main challenge of course is to understand exactly what procedural encoding consists of and how it actually constrains the interpretation process. It was shown that the respective views developed in CxG and RT fail to be entirely convincing. For this reason, building on various arguments, a tentative hypothesis was put forward. I argued that the procedural content of grammatical constructions might best be described in meta-conceptual terms. In this case, the information associated with a grammatical construction is viewed as having a secondary status in that it is primarily used as background information to manipulate the concepts which occur within its scope.

In the third part of this chapter, it was shown that the interpretation of a lexeme also largely depends on whether it is embedded in a larger, idiomatic phrase. This naturally requires us to define what counts as idiomatic, and I argued that the term *idiomatic phrase* can be used to refer to any fixed lexical sequences that one stores as an individual construction (e.g. *global warming*, *answer the door*, *spill the beans*). These constructions make available a specific

interpretation for the lexemes that are found inside them which directly influences the process of lexically regulated saturation. The challenge is to know exactly in what way the meaning of these patterns enters the interpretation process. I argue that the meaning of idioms does not have priority over the meaning of the individual lexical items found inside them, but rather that interpreting a sentence that contains idiomatic phrases involves a complex, parallel process largely determined by considerations of relevance. In other words, early stages of the interpretation process involve lexically regulated saturation, which only gets suspended when the meaning of the idiom is contextually more relevant.

Generally, I hope to have shown that the interpretation of a lexeme systematically involves the pragmatic process of lexically regulated saturation. In the meantime, although pragmatic in nature, this process remains largely constrained linguistically by many schematic constructions in which lexemes occur (sometimes giving rise to coercion effects) or by the more idiomatic phrases in which they are embedded. There is a real equilibrium, therefore, between the contribution made by a speaker's linguistic knowledge and inferential pragmatic processes to the interpretation of a lexical item. Bringing together insights from CxG and RT thus once more proves beneficial to the understanding of lexical semantics–pragmatics. Although they share the intuition that the interpretation of a lexeme can largely be influenced by the semantics of the larger structures in which it occurs, it was shown that neither theory fully explains the role played by these constructions and the cognitive mechanisms that enable the integration of the different levels of meaning in context. Critical evaluation of the different arguments led to a new proposal regarding the complex nature of the interaction between lexically regulated saturation, procedural meaning, coercion and idioms.