

Construction Grammar and its Application to English

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This document contains, in draft format, the table of contents and the introductory chapter for a textbook on Construction Grammar that is to appear with the Edinburgh University Press (<http://www.euppublishing.com/series/ETOTELAdvanced>). Comments and questions are highly welcome. If you would like to receive an examination copy of the book once it is out, do let me know, EUP asked me to draw up a list of 'test readers'. Please email me at <martin.hilpert@unine.ch>.

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To readers

Why you shouldn't pick up, let alone read this book

So, you have found this book, an introduction to a linguistic theory called *Construction Grammar*, on a shelf in a library or book store, or you are reading these lines on your computer screen. Chances are that you somehow came across the term *Construction Grammar*, perhaps in connection with a sentence such as *John sneezed the napkin off the table*, and you were curious to find out more. Before you read any further, let me tell you why that would be a bad idea.

Most importantly perhaps, Construction Grammar is not one of these topics in linguistics where decades of work have produced a solid stock of ideas that most researchers in that area can more or less agree on. Take phonology, for instance, or sociolinguistics. Yes, there are important differences between current approaches to these topics, issues that give rise to fierce debates and the occasional ad-hominem attack. However, few of those arguments concern the ideas that are laid out in an introductory textbook. Adherents of optimality-theoretic phonology and followers of exemplar theory both would expect a textbook of their subject to introduce ideas such as the phoneme, complementary distribution, syllable structure, assimilation, dissimilation, and the like. They could sit down together and draw up a list of topics to represent the common bedrock of their respective research areas. Things are a little different when it comes to Construction Grammar. Researchers in Construction Grammar broadly agree that their work is 'different from work in generative grammar' and that 'constructions are important'. A necessary caveat to this statement is that Construction Grammar shares a fair number of ideas with the generative enterprise and that the notion of 'constructions' is rather hotly contested. That being the case, I have to warn you, dear reader, that this book will present a view of Construction Grammar that is not necessarily shared by the majority of researchers working in this field, which is still very young, highly diverse, and undergoing rapid development. I am writing these lines in early 2013, and the more time elapses between now and the moment in which you are reading them, the more likely you are to find a view that is not only disputed, but also hopelessly outdated.

Another point I would like to offer in order to discourage you from any further engagement with this book is that there are excellent texts out there that you can profitably use to get an overview of the kind of work that is being done in Construction Grammar. Let me mention the work of Adele E. Goldberg (1995, 2006), which has been extremely influential, and which offers an authoritative and highly accessible starting point for the interested novice. Also, the *Oxford Handbook of Construction Grammar* has recently been published (Hoffmann and Trousdale 2013). This hefty tome of some 650 pages, written by experts of the respective topics, is in a much better position to do justice to the complexities of the field than a slim introductory book such as this one. Another resource that I would like to mention is the excellent textbook *Syntactic Theory*, in which Ivan Sag, Thomas Wasow, and Emily Bender give a detailed account of how constructions can be usefully formalized (Sag et al. 2003). Formalization is completely disregarded in the book you are holding right now, but it is essential in many areas of research, not least in computational linguistics. Oh, one more thing. If you are passing through Northern California in the not-too-distant future, you could stop by at Copy Central, 2560 Bancroft Way, in Berkeley, and ask for a copy of the textbook manuscript written by Charles J. Fillmore and Paul Kay, who are the main architects of Construction Grammar and whose ideas literally inform every page of this book.

Lastly, you will note that the title of this book is *Construction Grammar and its application to English*. What this book aims to do is to lay out an inventory of English constructions and to explain how these can be analyzed, using the framework of Construction Grammar. The focus on English constructions comes at the price of neglecting all other languages that are currently the subject of constructional research and, importantly, comparisons between them. Construction Grammar has been devised as a framework for the analysis of the general human capacity for language. It is a basic assumption that knowledge of language will be organized according to the same principles across different languages, but to what extent this assumption is correct is still very much a matter of investigation. This book will completely ignore this interesting issue, focusing instead on English constructions, many of which are actually quite well-described in existing treatments of English grammar, idioms, and vocabulary.

You're still reading? Well, don't say I didn't warn you.

1 Introducing Construction Grammar

1.1 What do you know when you know a language?

What do speakers of English have to know in order to produce utterances that other speakers will understand? For many linguists, across different theoretical persuasions, figuring out what speakers know when they know a language is *the* most important task in their field of study. So, what do speakers know? If you had to come up with a number of bullet points with the most important aspects of linguistic knowledge, your list would likely show some overlap with the following ones.

(1) What speakers have to know:

- must know words
- must know how to combine words into phrases and sentences
- must know how to put the right endings on words
- must be able to understand newly coined words
- must know that sometimes what is meant is different from what is said
- must know that language varies across different contexts
- must know idiomatic expressions

Clearly, more items could be added to this list. In order to get a working model of linguistic knowledge, it would further be necessary to work out how each item on the list interacts with all the other ones. For instance, how does knowledge of idioms relate to knowledge of the words that occur in them? How does knowledge of syntactic patterns relate to knowledge of morphological inflections of the words in a sentence? Given that modeling speakers' knowledge of language is a highly complicated task, it will likely come to you as a surprise that linguistic knowledge, according to Construction Grammar, can be captured by a list that is considerably shorter than the one shown above.

(2) What speakers have to know, according to Construction Grammar:

- must know constructions

Yes, you have read correctly. All that speakers need to have, according to the constructional view, is knowledge of *constructions*. This claim is expressed by Adele E. Goldberg, one of the central developers of Construction Grammar as a theory of linguistic knowledge, in the following way (2003: 219):

The totality of our knowledge of language is captured by a network of constructions: a 'construct-i-con'.

At this point you will probably wonder what a construction is. This chapter will offer a comprehensive definition, but as a first approximation, Goldberg and other researchers in Construction Grammar view constructions as units of linguistic knowledge that pair a linguistic form with a meaning. This means that you are in fact familiar with a very common kind of construction, namely words. Words, by virtue of being symbolic form-meaning pairings, are constructions. The 'construct-i-con', as the name suggests, thus contains everything that would be contained in a lexicon, but in addition to that a large number of symbolic units that are larger in size than single words. The remaining parts of this chapter will characterize these units in some more detail, but let us for the moment return to the fundamental claim of Construction Grammar, namely that knowledge of language consists of a large network of constructions, *and nothing else in addition*. Everything that speakers know about words, about syntactic patterns, about prefixes and suffixes, about idioms, and about the intricacies of what is said and what is meant, everything of this is to be re-cast as knowledge of constructions. At first, this may seem an outrageous proposition. What motivates a claim that departs so drastically from the seemingly obvious conclusion that speakers need many different kinds of linguistic knowledge? The short answer is that all of that knowledge is thought to be represented directly at the level of constructions. The constructions that speakers know are directly associated with phonological, morphological, and syntactic properties, along with conventionalized meanings, possible variants, and the social contexts in which you

are likely to use and hear them. In the simplest of terms, your knowledge of a construction is the sum total of your experience with that construction.

This view of linguistic knowledge may be hard to stomach at first, because it militates against an idea that is widely shared, both among laypeople and among professional linguists. That idea goes by the name of the *dictionary and grammar model* (Taylor 2012: 8), which is a model of linguistic knowledge in which knowledge of vocabulary is neatly separated from knowledge of grammatical rules. (You will recognize the first two bullet points from our laundry list of linguistic knowledge.) And indeed, you might say, is it not obvious that children learn words and, in a second step, rules to combine those words into phrases and sentences? The central challenge for the dictionary and grammar view of linguistic knowledge is one that has plagued generations of second language learners, namely idiomatic expressions. (You recognize the last, seemingly less important bullet point from the list.) In the dictionary and grammar model, idioms form a kind of 'appendix' to the dictionary, a list that contains expressions such as *beat it*, *hit the road* or *make like a banana and split*. These expressions need separate entries in the mental lexicon because speakers have to learn that each of the three means 'to leave'. Knowledge of the individual words and their meanings will not lead a speaker to that particular conclusion. The constructional view of linguistic knowledge originates with the observation that relegating idioms to an appendix is not satisfactory. The following sections outline why this is the case.

1.1.1 Idiomatic expressions permeate ordinary language

Contrary to what you might think, idiomatic expressions are no particularly peripheral phenomenon in naturally occurring data. Consider the following snippet from the British National Corpus (BNC), which is a large text collection that documents the usage of British English in the second half of the 20th century.

- (3) In winter you can look out of the window and tell it's 2°C outside. How? Because the crocuses are coming into bloom. Crocuses are plants that nature has provided with a biological thermometer. It's very accurate, reacting to temperature

differences of as little as 0.5°C. As the weather gets warmer the flowers open. But when the temperature drops, they close again.

On the face of it, the text excerpt seems to be entirely unremarkable. You would be hard-pressed to even find an expression in the text that would qualify as an idiom. However, a closer look reveals a number of expressions that would be difficult to explain with a dictionary and grammar model of linguistic knowledge. Take the very first words, *In winter*. This is a conventional way of saying *during the time of winter, in general*, as opposed to *in the winter of 2012*. Knowing this is part of your linguistic knowledge, and a second language learner of English might not necessarily know it, opting for *in the winter* instead. Moving on, also the sentence *you can look out of the window and tell it's 2°C outside* is not as straight-forward as you might initially think. Note that the verb *tell* in this sentence does not have its usual meaning of 'narrate', as in *tell a story*, but rather, the sentence conveys that the listener can *infer* that the temperature is 2°C. Again, you understood that without any problems, but how so? The answer is that you know an idiomatic usage pattern with *tell*, which is important enough to receive its own entry in the Oxford English Dictionary as "*preceded by can: To be able to state; to know; to discern, perceive, make out, understand*" (OED: tell, v.). An example that would almost count as a real idiom is the expression *coming into bloom*, said of the crocuses. Plants in general can be *coming into leaf*, *coming into flower*, or *coming into fruit*, but crucially not into *leaves*, *flowers*, or *fruits*, even though that might be a more accurate description of what happens. Proficient speakers of English are aware that the singular is required, learners have to figure that out, but cannot bank on the help of a dictionary or grammar book in that endeavor. Two sentences later, the text mentions *temperature differences of as little as 0.5°C*. Here, we have an expression that many second language learners of English are actually taught, namely the use of *as ... as* with an intervening adjective. This expression typically serves to make a comparison, as in *John is as tall as Bob*, but note that here, the expression connects a scale with a value on that scale, so that the phrase *differences of as little as 0.5°C* instantiates a schema that is also at work in *interest rates of as high as 100%*, or *microcredit loans of as small as \$60*. What is conveyed by these examples is that some measure is comparatively high, or comparatively low, but the standard against which the respective measurements are compared remains implicit, to be understood by the reader. You know that, but neither because you know what the individual words

mean, nor because you know how to combine words into phrases. Again, the dictionary and grammar model is at a loss.

What emerges from the discussion of the short text excerpt is that ordinary language is fully permeated by a large number of idiomatic expressions whose forms and meanings are not entirely predictable on the basis of either the word meanings recorded in a dictionary or the rules of syntax provided by a grammar. The appendix to the dictionary, listing expressions such as *in winter*, *coming into bloom*, or *differences of as little as 0.5°C*, would have to be of a substantial size in order to fully reflect speakers' knowledge of language.

1.1.2 Idiomatic expressions are more than fixed strings

Besides the sheer size of the appendix that would have to be added to the lexicon, the dictionary and grammar model faces difficulties that are less easily resolved.

Representing speakers' knowledge of idiomatic expressions would be a relatively straight-forward task if those idioms were just fixed strings of words such as *bite the dust*, *let off steam*, or *jump the gun*. However, many idiomatic expressions cannot be analyzed as memorized strings, as two examples from the following BNC excerpt illustrate.

- (4) 'Clients tell me that they are not worried about their property as long as their pets are all right,' says William Lewis, managing director of Home & Pet Care. 'We often get asked to look after elderly pets whose owners are worried that going into kennels may be too big a shock.' Most sitters are over 60, sensible and probably have pets of their own.

Sentences such as *going into kennels may be too big a shock* have been discussed under the heading of the so-called 'big mess construction' (Van Eynde 2007). Clearly, understanding a phrase such as *too big a shock* does not come about because speakers would have memorized that very phrase. Rather, what speakers know is a more abstract pattern that also allows them to identify sentences such as *That's quite useful a lesson* or

How big an area are we talking about? as conventional expressions. This abstract pattern deviates in some ways from general syntactic patterns of English. For instance, in an ordinary English noun phrase, an attributive adjective follows the determiner and precedes the head noun, as in *a big shock*, rather than *big a shock*. Importantly, the big mess construction has a certain grammatical systematicity, which is to say that it is sensitive to distinctions that, under the dictionary and grammar model, would be handled by the grammar, rather than by the dictionary. To illustrate, the nominal in the big mess construction must be indefinite. Replacing the indefinite article in *too big a shock* or *quite useful a lesson* with the definite determiner *the* or a demonstrative such as *this* renders the examples highly unconventional. Likewise, the nominal must be in the singular, so that it is not possible to replace *a shock* with *two shocks*, *some shocks*, or *a few shocks*. Lastly, the schema that represents speakers' knowledge of the big mess construction must include some information on the pre-adjectival modifiers that are acceptable in the big mess construction. It is easy to find authentic examples with the degree modifiers *quite*, *rather*, *too*, *somewhat*, and *pretty*, examples with interrogative *how* are quite common, but examples with *very* are surprisingly rare, and even unacceptable to some speakers (Van Eynde 2007). Speakers' knowledge of the big mess construction is thus more than a fixed string of words, or perhaps a list of fixed strings, but rather a generalization over such strings that specifies what works and what does not.

The second example from the excerpt that is worth some consideration is the sentence *Most sitters are over 60, sensible and probably have pets of their own*. The crucial phrase here is *have pets of their own*, which illustrates another idiomatic expression with internal grammatical systematicity. The elements *of* and *own* are invariant, but between the two, any possessive determiner (*my*, *your*, *his*, *her*, etc.) may enter the expression. The expression includes a nominal that must be indefinite. The sentence *John now has a car of his own* is a conventional expression, but replacing the indefinite determiner with the definite determiner *the* invariably changes that. A constraint on the number of the nominal, as observed in the big mess construction above, does however not apply. *John now has three cars of his own* is just as good an example as the one in which he owns only one car.

Summing up this particular argument, there is evidence to suggest that many idioms cannot be stored as fixed strings, which makes it necessary to think of idiomatic expressions as schemata with slots that can be filled with certain elements but not others. The slots of some idioms are sensitive to grammatical distinctions, such as the distinction between singular and plural, or the distinction between definite and indefinite. These observations put the dictionary and grammar model of linguistic knowledge in a rather awkward position: Should the appendix to the dictionary perhaps include a bit of grammatical information, so that these expressions could be accounted for? Doing this is possible, but you see how that decision would start blurring the line between dictionary and grammar. If grammar enters the appendix, a large grey area emerges between dictionary and grammar in which the patterns that are memorized show characteristics of lexical entries, but also of grammatical rules. It is this grey area that researchers in Construction Grammar call the 'construct-i-con'.

1.1.3 Idiomatic expressions are productive

A good reason for keeping vocabulary and grammar apart as separate forms of linguistic knowledge is that words can be thought of as 'building blocks' that are highly numerous, but essentially fixed and atomic, whereas syntactic rules and morphological word formation processes are productive, that is, they allow speakers to create structures that are new and original. Vocabulary is thus just a finite collection of building material, grammar is what gives language the power to produce an infinite variety of new utterances.

The dictionary and grammar model of linguistic knowledge would be much more convincing if the idioms of a language were essentially like words: fixed and learnable as strings. The previous section has argued that this is an impoverished view. Many idiomatic expressions do not fully specify the lexical elements that can occur in them, and a good number of them even allow different grammatical elements into the variable slots that can be filled. For example, the phrase *the more, the merrier* instantiates a schema that has given rise to many expressions that are structurally identical but contain other adjectives in the comparative, such as *the bigger, the better* or *the redder*,

the deadlier. It appears that *the more, the merrier*, also known as the ‘comparative correlative construction’ (Culicover & Jackendoff 1999) or ‘the X-er the Y-er’ (Fillmore et al. 1988) is productive, allowing speakers to produce creative utterances. The productivity, however, does not stop with different types of adjective that are inserted into that construction, but it extends to variation of grammatical forms. In an example such as *The darker the roast, the stronger the taste*, each adjective is followed by a nominal. In *The stronger a voice we have, the more effective we are*, each adjective forms part of a clausal structure. In *The more carefully you do your work, the easier it will get*, the first part is in fact adverbial, rather than adjectival. Hence, speakers’ knowledge of this construction is not limited to the fact that there are open slots for different kinds of adjective, but rather, speakers have an active command of the kinds of grammatical unit that are acceptable in the construction. The fact that speakers know how to use idiomatic expressions productively makes it necessary to abandon the strict separation of lexical and grammatical knowledge.

1.1.4 The growth of the appendix

The considerations that were presented in the previous sections make one thing very clear. The commonsensical view of linguistic knowledge as divisible into knowledge of vocabulary and knowledge of grammar suffers from a painful growth of the appendix, requiring an emergency procedure. Should the appendix perhaps be surgically removed, so that the patient can recover? In a paper that has since become one of the central references of the Construction Grammar literature, Charles J. Fillmore and colleagues suggest a solution that takes a surprisingly different route. In the conclusion to their study of the so-called ‘let alone’ construction (*I don’t eat fish, let alone raw oysters*), they propose the following (1988: 534):

It appears to us that the machinery needed for describing the so-called minor or peripheral constructions of the sort which has occupied us here will have to be powerful enough to be generalized to more familiar structures, in particular those represented by individual phrase structure rules.

In other words, if it is the case that idiomatic expressions are abundant in language, if they cannot be characterized as fixed strings, and if speakers can be observed to use them productively, then these expressions deserve to be given a proper analysis. Since idiomatic expressions accommodate different words and show structural variation, the tools for such an analysis will have to be sensitive to both lexical and grammatical distinctions. Hence, and this is the punchline of Fillmore et al.'s argument, these tools can just as well be used for the 'more familiar structures', that is, everything that used to be part of the grammar component of the dictionary and grammar model. Instead of dictionary and grammar, all that is needed for the description of linguistic knowledge is the 'construct-i-con'. Essentially, this means that after the operation, the surgeons watch in astonishment as the severed appendix gets up, thanks everybody in the room, and walks out of the hospital, all on his own.

Up to now, the discussion in this chapter has dealt with linguistic knowledge in fairly general terms. What is still missing from the picture is a more detailed account of what constructions actually are. The following sections will focus on precisely that topic.

1.2 What is a construction?

The term 'construction' is used not only in Construction Grammar, but in almost any area of research that is concerned with language. Hence, you will likely already have an idea of what a construction is, but your idea might not fully correspond to the way in which the term will be used in this book. In pedagogical language textbooks, a construction is typically a complex linguistic form that serves a grammatical function. Examples would be the PASSIVE construction (*The village was destroyed*), the IMPERATIVE construction (*Go to your room and stay there!*), or the PAST PERFECT construction (*I had already heard the news*). The examples of idiomatic expressions that were discussed in the sections above would seem to suggest that the term means something similar in Construction Grammar. Perhaps, you might reason, the term is used a little more broadly, including not only grammatical constructions such as the past perfect, but also idioms and words. That is a good enough guess, but one important issue is missing from

this view of constructions. Recall that Construction Grammar is a theory of linguistic knowledge. Hence, constructions are first and foremost something cognitive, that is, a piece of speakers' linguistic knowledge. More specifically, we can say that a construction is a generalization that speakers make across a number of encounters with linguistic forms. Let's take another look at a few examples of the COMPARATIVE CORRELATIVE construction:

- (5) the more, the merrier
the bigger, the better
the redder, the deadlier
the younger, the messier
The darker the roast, the stronger the taste.
The larger the company, the worse is the service.
The stronger a voice we have, the more effective we are.
The more that Mrs. Bell reflected upon the subject, the more at a loss she was.
The less he knows, the better.
The more carefully you do your work, the easier it will get.

As was pointed out in the discussion above, the construction displays substantial variation in the lexical items that can appear, but also in the grammatical units that instantiate it. Nonetheless, you will probably agree that all of the examples above are 'the same' in that they belong to a common constructional pattern. If you do agree, that is evidence that your experience with language led you to abstract away from individual differences between sentences like these ones and to form a generalization. It is this generalization that Construction Grammarians talk about when they discuss the comparative correlative construction.

1.2.1 Defining constructions: a first try

The preceding discussion has mentioned several characteristics of constructions, but it has not yet presented a satisfying definition of the term that would allow us to identify a

construction as such when we look at linguistic data. A widely cited definition of constructions has been offered by Adele E. Goldberg (1995: 4):

C is a CONSTRUCTION iff_{def} C is a form-meaning pair $\langle F_i, S_i \rangle$ such that some aspect of F_i or some aspect of S_i is not strictly predictable from C's component parts or from other previously established constructions.

This definition captures three important notions. First, a construction pairs a linguistic form with a meaning. (In the definition, F stands for *Form*, S is for *Semantics*). Second, by virtue of being a form-meaning pair, a construction is a unit of knowledge, rather than a form that could be described without reference to speakers' knowledge of language. Third, the definition introduces a criterion that we have not explicitly mentioned up to now, namely the criterion of non-predictability. A construction is defined as a form-meaning pair in which either an aspect of form or an aspect of meaning is non-predictable. What does that mean? With regard to meaning, this criterion captures the common characteristic of idioms that the interpretation of the whole idiom is more than just a combination of the meanings of its component words. Consider the following idioms that carry non-compositional and hence non-predictable meanings:

- (6) We're back to square one.
Will and Jenny finally tied the knot.
His theory is totally off the mark.
Let's call it a day.

Non-compositional meaning is perhaps the most widely used diagnostic to identify constructions, but note that the definition does not only talk about non-predictable meanings. Constructions can also be identified on the basis of non-predictable aspects of their *form*. A form of a construction is non-predictable if it is not an instance of a more general formal pattern, say, a particular sentence type or a morphological schema. The following examples illustrate the idea of constructions with non-predictable forms.

- (7) all of a sudden
by and large

the more, the merrier

Try as I might, I just couldn't grasp the principle.

How big an area are we talking about?

I have waited many a day for this to happen.

These examples defy typical phrase structure rules that would model the structure of phrases such as *the large sandwich with egg salad*. In fact, for several of the examples it is not even possible to determine the parts of speech for every component word. Into what word class would we categorize *sudden* in *all of a sudden*? Is the *by* in *by and large* a preposition, and if so, why is it not followed by a nominal (*by the lake*), or at least coordinated with another preposition (*made by and for dog-owners*)? In some of the examples, the component parts are clearly identifiable, but their order seems to revolt against ordinary syntactic patterns. For instance, there is no general phrase structure rule that would allow speakers to conclude that *many a day* is a conventional expression of English. Usually, *many* occurs with plural nouns, or as a pronominal form by itself. In those contexts, *many* can be replaced by *few*, but this does not work in *many a day*. Fillmore et al. (1988: 506-510) describe these kinds of examples when they speak of 'familiar pieces, unfamiliarly arranged', and 'unfamiliar pieces, unfamiliarly arranged'. In pedagogical works on idioms, these two categories are often relegated to the relative background, with the focus being on expressions such as *set the record straight*, *tie up loose ends*, or *show someone the ropes*. These idioms, as you will notice, have non-compositional meanings, but are formally 'familiar pieces, familiarly arranged', that is, there is nothing idiomatic about their form, only about their meaning.

With all of these observations in place, we are in a position to look at linguistic data and to decide whether or not a given expression qualifies to be called a construction. Since formal or semantic non-predictability is a required criterion in the definition proposed by Goldberg (1995), this gives us a reason to exclude all kinds of expressions that are both semantically compositional and formed according to general phrase structure rules or word formation processes, as illustrated in the following examples:

(8) John enjoys playing the piano.

Strawberries are more expensive than apples.

I wonder why he keeps wearing that hat.

Harvey's taunting of the bear was merciless.

Saying that these are not constructions does of course raise the question what else they might be. And, you might add, was Construction Grammar not founded on the premise that knowledge of language was knowledge of constructions, and nothing else in addition? How can this claim be reconciled with the assessment that a certain linguistic expression is no construction? So, when we say that *John enjoys playing the piano* is not a construction, what is meant is that this particular example is not a construction in its own right, because first, the meaning of the whole is fully derivable from the meaning of the parts, and second, the structure of the whole is fully explicable from constructions that are known to exist in English. The sentence thus instantiates several more general constructions. At the most general level, this concerns the 'subject predicate' construction, which is instantiated by all sentences that combine a subject noun phrase with a predicate verb phrase. Somewhat more specifically, the sentence exemplifies the 'transitive' construction, which pairs a verb such as *enjoy* with a structure that serves as a direct object. In *John enjoys playing the piano* that object is not a noun, but rather a participial clause, which means that the sentence also instantiates the '-ing participial clause construction'. Within that participial clause, we find another instance of the 'transitive' construction, as *the piano* is the direct object of *playing*. Finally, the phrase *the piano* instantiates the 'definite noun phrase' construction. In summary, saying that a particular sentence is no construction boils down to the statement that every part of that sentence can be analyzed in terms of a more general construction. There is even a term for expressions that are no constructions: Phrases and sentences that merely instantiate more general constructions are called *constructs*. Dwelling on this term for a minute, you will notice that *by and large* is a construction because it does not instantiate any pattern that would be more general than itself, the same holds for *all of a sudden*. However, the phrase *many a day* in the sentence *I have waited many a day for this to happen* is a construct: it instantiates a more general pattern, namely the 'many a noun' construction, which also gives rise to the expressions *many a time* or *many an Englishman*. The distinction between constructions and constructs is thus one between generalizations and concrete instances.

1.2.2 Defining constructions: beyond non-predictability

The criterion of non-predictability in meaning or form is a very powerful diagnostic. If the meaning of an expression cannot be inferred from the meanings of its parts, then there is simply no alternative to the conclusion that speakers *must* have learned this expression as a form-meaning pair in its own right, that is, as a construction.

Nonetheless, researchers in Construction Grammar these days have largely abandoned the idea that non-predictability should be a necessary criterion for some expression to qualify as a construction. The reason for this assessment is that there are many expressions that are semantically and structurally transparent, but which nonetheless seem to qualify as constructions. Consider the following set of expressions.

- (9) I love you.
I don't know.
Take a seat!
Can I ask you something?
How has your day been?

As you will agree, all of these expressions would have to be viewed as constructs because they instantiate highly general syntactic patterns. The sentence *I love you* illustrates the most basic form of the TRANSITIVE construction, *I don't know* is an instance of the NEGATION WITH DO construction, and so on and so forth. Still, despite the fact that these examples are structurally transparent, and despite the fact that their meanings can be compositionally derived, there is a reason for viewing these expressions as constructions. That reason is the fact that all of those expressions are highly frequent, highly conventionalized ways of saying things. The question *How has your day been?* literally asks for the information how someone's day turned out, but note that it is very different from *Of what quality has your day been?*, which would seem to be a rough paraphrase, but which is inadequate for opening a conversation of small talk. Some expressions may thus superficially look like constructs, but through repeated use, they have become the default option for a specific communicative situation. Taylor (2012:

100) offers the conspicuous example of *How old are you?*, which simply cannot be replaced with *How long ago were you born?* to ask for the interlocutor's age. As a proficient speaker of English, you know this, and hence this kind of information needs to be represented in the construct-i-con. Knowledge of language does not only include the ability to understand everything that is said, but it crucially also involves the ability to speak idiomatically. In order to accommodate this important aspect of linguistic knowledge, Adele E. Goldberg has proposed a modified version of her earlier definition of constructions (2006: 5):

Any linguistic pattern is recognized as a construction as long as some aspect of its form or function is not strictly predictable from its component parts or from other constructions recognized to exist. In addition, patterns are stored as constructions even if they are fully predictable as long as they occur with sufficient frequency.

You recognize the prior definition in the first sentence: non-predictable constructions are still recognized as such. However, the second sentence opens up the definition to cover forms that are frequent enough to be remembered as such. These include sentence-level expressions such as *How old are you?* and *I don't know*, but crucially also many inflected word forms such as *cats*, *walked*, or *easier*. In the dictionary and grammar model of linguistic knowledge, these forms would not be stored as such, and also under Goldberg's earlier definition, these would have been viewed as constructs of the plural construction, the past tense construction, and the morphological comparative construction. In short, if you know the word *cat*, and if you know how the plural is formed, there is technically no need for you to remember the form *cats*. However, the view that regular, but sufficiently frequent expressions are stored in the construct-i-con is not only theoretically viable, but also receives empirical support from psycholinguistic studies (Stemberger and MacWhinney 1988, Arnon & Snider 2010). We will come back to psycholinguistic evidence for Construction Grammar later in this book.

1.3 Identifying constructions

Armed with our definition of what a construction is, we are now in a position to analyze linguistic data in the pursuit of finding and identifying constructions. Think of it what you like – many researchers in Construction Grammar are genuine language lovers who enjoy nothing more than finding a construction with peculiar non-predictable characteristics, preferably one that no-one has investigated before. Occasionally, Construction Grammarians even acknowledge their love of ‘butterfly collecting’ (Hilferty 2003: 49), though usually they hasten to add that finding generalizations is the ultimate purpose of their endeavors. Finding constructions is an activity that requires some practice, although there are people who seem to have a natural talent for sniffing out grammatical oddities. This section discusses a number of strategies that are useful for the detection and identification of constructions.

1.3.1 Does the expression deviate from canonical patterns?

A first strategy relates to Goldberg’s criterion of non-predictability, especially the formal side of that criterion. If a linguistic expression exhibits formal characteristics that deviate from more canonical grammatical patterns, then you have an argument for calling that expression a construction. Formal deviation from canonical patterns can be identified in different ways. Take for instance the expression *by and large*. A first observation would be that a phrase consisting of a preposition, a conjunction, and an adjective, in that order, is unique in the grammar of English. You do find sequences of those parts of speech in phrases such as *acquainted with and supportive of the school aims*, but note that *with and supportive* does not form a constituent in that expression. A second piece of evidence would be that *by and large* becomes completely unintelligible if the adjective *large* is replaced with the synonymous adjective *big*. Taken together, these pieces of evidence lead to the conclusion that there is no broader generalization that would allow speakers to produce or comprehend the expression *by and large*. See for yourself if you can apply the same logic to the examples that are offered in (10).

(10) There was cat all over the road.

The tractor was driven by a 16 year old boy.

John is best friends with Eddie Murphy.

The first example, which describes the unfortunate result of a car accident involving a feline, is probably the easiest to analyze. The lexical item *cat* is, in most contexts of use, a count noun. In the example above, it behaves structurally as a mass noun. Constructions in which count nouns are used as mass nouns are aptly called GRINDING constructions (Fillmore et al. 2011). Two structural characteristics of the example are worth some consideration. First, *cat* occurs here without a determiner. Second, when used as a mass noun, *cat* disallows pluralization. The sentence *There were cats all over the road* would enforce a count noun interpretation and thus refer to numerous intact felines occupying the road. Turning to the second example, the final noun phrase *a 16 year old boy* instantiates what could be called the MEASUREMENT-AS-MODIFIER construction. The idiosyncrasy that can be observed here is that the noun *year* is in the singular, despite the fact that *years* might be expected, given that the boy is 16 years old. This peculiarity is systematic, as is evidenced by expressions such as *a twelve-inch-thick wall* or *a six-foot-tall athlete*. The third example expresses a reciprocal relation between *John* and *Eddie Murphy*: the two are best friends. What is remarkable about the structure of the example is that we have a singular subject, *John*, but a plural subject complement, *best friends*. In canonical predicative constructions, subject and subject complement have to agree in number, as in *John is a doctor* or *They might be giants*. Note also that the RECIPROCAL PREDICATIVE construction, unlike canonical predicative constructions, requires a prepositional phrase such as *with Eddie Murphy*. Summing up, even though formal non-predictability is not a required criterion for constructions, finding formal idiosyncrasies is an excellent source of evidence for calling something a construction.

1.3.2 Does the expression carry non-compositional meaning?

The second strategy that will help you to find and identify constructions relates to Goldberg's criterion of non-predictable meaning. Can hearers figure out the meaning of an expression by combining the meanings of its individual parts, or does the whole expression signify something in addition that cannot be figured out? If the meaning of an expression is 'more than the sum of its parts', there is evidence to speak of a

construction. Non-compositional meanings are self-evident in idioms such as *get your act together*, *make waves*, or *call the shots*. A second language learner of English would be likely to know all component words of these idioms, but this would not allow her to figure out their overall meanings. In the preceding sections, we have discussed expressions that may be less salient than these figures of speech, but which nonetheless convey non-compositional meanings. Recall that *in winter* conveys the idea of ‘in winter, generally’, or that *How has your day been?* is used as a conventional way to strike up a conversation. A second language learner would have little trouble understanding these expressions, but she would have no way of knowing beforehand that these are typical, idiomatic ways of expressing the respective meanings. Identifying non-compositional meanings essentially requires you to ‘play dumb’, pretending not to understand anything that cannot be figured out on the basis of the component parts of an expression. Use the following examples to get some practice.

(11) During the game John broke a finger.

The result was not much of a surprise.

The Royal Shakespeare Company is a tough act to follow.

The first example conveys that John had an accident that left him with one of his fingers broken. Crucially, he did not break someone else’s finger, even though there is nothing in the words of the example that would preclude that interpretation. In the second example, the phrase *not much of a surprise* does not refer to ‘a small part of a surprise’, whatever that might be, but rather, it is to be understood as ‘no surprise at all’. Taylor (2012: 60) calls this the (NOT) MUCH OF A NOUN construction and points out some of its structural and semantic characteristics. The last example may be a little trickier than the two previous ones. What we are dealing with here is a special case of what has been called the TOUGH-RAISING construction (Langacker 1995). Adjectives such as *tough*, *difficult*, or *hard* occur in sentences such as *Proust is tough to read*, which ascribe toughness to ‘reading Proust’, rather than to ‘Proust’ himself. In the example above, the Royal Shakespeare Company is not ‘a tough act’, as a second language learner might conclude. Rather, following an act such as the Royal Shakespeare Company is considered a tough challenge.

At this point, we need to introduce a concept that is of central importance for the idea of non-compositional meaning in constructions. This concept is called **coercion**, and it describes the phenomenon that the meaning of a lexical item may vary systematically with the constructional contexts in which it is found. Laura Michaelis has formulated a **principle of coercion** that captures this phenomenon (2004: 25):

If a lexical item is semantically incompatible with its morphosyntactic context, the meaning of the lexical item conforms to the meaning of the structure in which it is embedded.

What this means is that constructions may override word meanings, creating non-compositional constructional meanings in the process. The ‘morphosyntactic context’, that is, the construction in which a lexical item is found, thus has the power to change or suppress certain semantic characteristics of that lexical item. When word meanings can be observed to change within a constructional context, we speak of **coercion effects**. The principle of coercion can be seen at work in the examples below.

- (12) Three beers please!
John sauced the pizza.
Frank played the piano to pieces.

The first example illustrates the converse of expressions such as *There was cat all over the road*. The noun *beer* is usually a mass noun, and hence semantically incompatible with the plural inflection and the numeral *three*. The morphosyntactic context thus imposes an interpretation that differs from the default meaning of *beer*: instead of a mass, the example refers to three units of beer, as served in a bottle or a glass. Constructions that convert mass nouns to count nouns will be discussed in this book as INDIVIDUATION constructions. In the second example we find the noun *sauce* used as a verb. The entire expression conveys the meaning that John applied sauce to the pizza. This meaning cannot be derived from the individual words, and a second language learner might arrive at different interpretations, assuming for instance that John dipped a piece of pizza into sauce, or that John, using a heavy-duty blender, turned a pizza into a thick, unappetizing sauce. Meanwhile, proficient speakers of English arrive at the

intended interpretation because their linguistic knowledge includes a subpattern of the TRANSITIVE construction with denominal verbs that shows itself in expressions such as *pepper the steak, butter the toast, or egg and breadcrumb the fish*. The construction coerces the lexical meanings of *pepper, butter, egg, and breadcrumb* into the meaning 'apply to a surface', which is a substantial semantic enrichment. Finally, the third example illustrates the English RESULTATIVE construction. What is conveyed by the example is that Frank played the piano in such a violent manner that it ultimately fell to pieces. The lexical meaning of *play* does make reference to an instrument that is played, but it does not specify a possible change of state in that instrument. It is the morphosyntactic context of the resultative construction that coerces *play* into the meaning 'bring about a change of state by means of playing'.

Spectacular coercion effects, as for instance in *John sneezed the napkin off the table* or in *She smiled herself an upgrade*, have served as a very compelling argument for the idea that constructions are symbolic units that carry meaning. After all, the only alternative explanation for the meanings of the above examples would be that verbs such as *sneeze* or *smile* have highly specific secondary senses, namely 'cause to move along a path by means of sneezing' or 'cause a transfer of a good between an agent and a recipient by means of smiling'. Goldberg (1995: 9) points out that Construction Grammar obviates the need to posit such implausible verb senses. In the dictionary and grammar model of linguistic knowledge, there would be no other choice.

1.3.3 Does the expression have idiosyncratic constraints?

So far, we have discussed two strategies that allow the detection and identification of constructions: We could be looking for non-predictable formal aspects or for non-compositional meanings. This section will discuss a third strategy, which relates to both form and meaning of a construction. Suppose that we come across an expression that, on a cursory glance, would seem to be entirely unremarkable, such as *The dog over there is asleep*. In terms of its structure, every part of that sentence can be analyzed as instantiating more general patterns of the grammar of English: *the dog over there* is a DEFINITE NOUN PHRASE construction that incorporates a prepositional phrase, not unlike

the book on the table. The entire expression instantiates a PREDICATIVE construction, which gives rise to expressions such as *The book on the table is new*. Still, there is something about the example that necessitates a constructional analysis. To let the cat out of the bag, the adjective *asleep* belongs to a class of English adjectives that exhibit an idiosyncratic constraint: they cannot be used attributively. Whereas you could speak of *an interesting book*, the grammar of English does not allow you to refer to **the asleep dog*. Evidently, restrictions of this kind have to be learned, and there is evidence to suggest that language learners pay close attention to the contexts in which elements such as *asleep* do and do not appear (Boyd and Goldberg 2011). At any rate, the positioning constraint on adjectives such as *asleep* is something that constitutes knowledge of language, and hence it needs to be included in the construct-i-con. The following examples show constraints that affect other English constructions.

(13) I brought John a glass of water.

* I brought the table a glass of water.

Mary is a smarter lawyer than John.

* Mary is the smarter lawyer than John.

She elbowed her way through the room.

* She elbowed her way.

I have long known your father.

* I have long read this book.

The first pair of examples illustrates a constraint on the English DITRANSITIVE construction, namely that the referent of the recipient argument be animate when actual transfers are at issue (In metaphorical examples such as *Give the table a good scrub!* that constraint is relaxed). Note that this is a semantic constraint, rather than a formal one. The second pair of examples shows a constraint on a DEGREE MARKER construction. As is shown by the examples, there is a constraint with regard to definiteness: only the example with the indefinite article is acceptable. In the third pair of examples, we see an example of the English WAY construction (Goldberg 1995). In present-day usage, this

construction requires the presence of an argument that specifies a path, here instantiated by *through the room*. As was shown in a historical study by Israel (1996), this was not always the case: the WAY construction used to occur without path arguments, but as such arguments became increasingly frequent, a constraint developed that is categorical for present-day speakers of English and that renders the second member of the pair ungrammatical. Finally, the fourth pair of examples shows a use of *long* as an adverb with the meaning 'for a long time'. Whereas it could be presumed that all sentences of the structure *I have V-ed NP for a long time* could be paraphrased as *I have long V-ed NP*, the unacceptability of the second example suggests otherwise. There are constraints on the HAVE LONG V-ED construction, and they form part of what speakers of English know about their language.

Discovering idiosyncratic constraints on the use of constructions is not as straightforward a task as the identification of non-predictable formal aspects or non-compositional meanings. Mainly, this is because finding an example such as *The dog over there is asleep* or *I have long known your father* in a corpus will not tell you anything about constraints that might affect parts of those expressions. In the words of Noam Chomsky, "A corpus never tells you what is impossible. In fact, it does not even tell you what is possible" (Aarts 2000: 6). Contrary to what Chomsky suggests, corpora in fact do both if quantitative tools of analysis are applied (Stefanowitsch 2008, 2011, Goldberg 2011). Still, Chomsky would have a point if the quote were altered to "A single, isolated example never tells you what is impossible. In fact, it does not even tell you what is possible". So, if that is the case, how can we determine what is possible and impossible? For the longest time, linguists have approached the issue by constructing examples and judging the grammaticality of those examples, using their intuitions. Using intuitions as the only source of evidence is methodologically highly problematic (Schütze 1996), and for readers of this book who are non-native speakers of English it might not even be feasible. Still, it would be wrong to demonize linguistic intuitions. Intuitions are in fact necessary for the analysis of idiosyncratic constraints, but they are only half of the story. What I recommend for the analysis of constructions and their constraints is to use intuition to construct examples and to check those examples against a large databasis, such as Mark Davies' suite of corpora, which is freely accessible on the world wide web (e.g. Davies 2010). If your experience in doing corpus analyses is limited, Lindquist

(2009) is an excellent resource to use. For a start, try to figure out some restrictions on the constructions that are illustrated in (14). First, search for expressions that conform exactly to these sentences, altering at most the concrete lexical items. Determine the parts of speech for all components of the respective expressions. Then, move on to change some of their formal aspects and see if the results point to restrictions.

- (14) Most at risk are the very young and the elderly.
I check my email once every ten minutes.
I'm willing to go thermonuclear war on this.

Even if your own intuitions at first do not generate the 'right' predictions about what is found in a corpus and what is not, chances are that you will get a clearer idea of how the respective constructions are used and what restrictions might be at play.

1.3.4 Does the expression have collocational preferences?

There is one strategy for finding constructions that we still need to discuss. Even if an expression seems formally regular, semantically transparent, and without noticeable constraints in its behavior, it might still be a construction in its own right, rather than an instantiation of a more general pattern. Take for instance the following example.

- (15) I will call you tomorrow morning.

The sentence is an example of the English WILL FUTURE construction. Let us for a moment ponder the question on what grounds, if any, we could make the case that a sentence-level construction with the auxiliary verb *will* and a following non-finite verb phrase should be called a construction. Evidently, pedagogical grammars call it a construction, but is it a construction according to the definitions and criteria that we have set up in the preceding sections? The argument from non-predictable structural criteria appears to fail: there is a more general pattern according to which auxiliary verbs can be paired with non-finite verbal complements. Also the argument from non-compositional meanings will not get us any further. The overall meaning of the example in (15) can

clearly be figured out from the meanings of the individual words, for will we rely on the OED and adopt the definition “auxiliary of the future tense with implication of intention or volition” (OED: *will*, v., 11). Can we identify constraints? It appears that *will* combines rather freely with verbs in the infinitive. Consequently, there would be nothing left for us to do but to concede that we are looking at a construct instantiating what we might call the AUXILIARY PLUS INFINITIVE construction.

However, there is evidence to suggest otherwise. Even though *will* is technically combinable with just about any verb of the English language, data from corpora show that *will* occurs more frequently with some verbs than with others. Well, you might say, is that not to be expected, given that some verbs, like *be*, are very frequent, and others, like *procrastinate*, are used less often? That is of course the case. But if you control for the respective frequencies of *be*, *procrastinate*, *arrive*, *eat*, *copy*, *argue*, and all the other verbs that are used with *will*, it turns out that some verbs occur more frequently than expected whereas others occur less frequently than expected. Gries and Stefanowitsch (2004) have analyzed the collocational preferences of *will* and *be going to*, finding that these two expressions of future time have markedly different preferences with regard to the verb types that occur with them. The basic result, which is replicated in Hilpert (2008), is that *be going to* exhibits a tendency to occur with verbs that are agentive, punctual, and high in transitivity. Conversely, *will* attracts verbs that are non-agentive, durative, and low in transitivity. Gries et al. (2005) present experimental evidence that speakers are acutely sensitive to the relation between constructions and their typical collocates. The construct-i-con, it turns out, stores information about language use in a highly detailed fashion that includes rich information about how linguistic units combine with others. Hence, it is absolutely warranted to speak of WILL PLUS INFINITIVE as a construction. The question whether a construction has collocational preferences can be addressed with relative frequency counts on the basis of corpus data. Stefanowitsch and Gries (2003) have developed an elegant method that goes by the name of **collostructional analysis**, and that has been applied to a variety of English constructions (cf. Gries and Stefanowitsch 2004, Gries & Wulff 2005, Hilpert 2006, Stefanowitsch 2006, inter alia).

1.4 Summing up

In this chapter, we have raised the question what speakers have to know when they know a language such as English. Common sense suggests that linguistic knowledge consists of several different kinds of knowledge. In linguistics, this idea has given rise to the so-called dictionary and grammar model of linguistic knowledge (Taylor 2012), which makes a clear distinction between knowledge of vocabulary on the one hand and knowledge of grammar on the other. Construction Grammar is a theory that takes a radically different perspective: knowledge of language is to be modeled as knowledge of constructions, and nothing else in addition. The main reasons for adopting such an approach are the following. First, it is observed that idiomatic expressions fully permeate ordinary language. Listing all idiomatic expressions in an appendix to the mental lexicon would greatly inflate its size. But a second point is more problematic. Many idioms cannot be reduced to fixed strings that could be memorized and represented as such. Rather, idiomatic expressions have slots that can accommodate different lexical items, and different grammatical structures. Furthermore, many idiomatic expressions are clearly productive, so that speakers can generate new and original utterances with them. The overall conclusion of these observations is that the line between the mental lexicon, containing knowledge of words, and the mental grammar, containing knowledge of rules, becomes increasingly blurry. So much so, that Construction Grammarians propose to abandon it altogether. Instead, knowledge of language is seen as a large inventory of constructions, a construct-i-con.

Constructions, on this view, are defined as linguistic generalizations that speakers internalize. Specifically, this book adopts a definition of constructions under which they are form meaning pairs which either have non-predictable formal characteristics, non-compositional meanings, or a high enough frequency to be remembered as such (Goldberg 2006: 5).

This chapter also discussed four strategies that allow you to identify constructions. The first strategy is to look out for structural traits of an expression that deviate from more canonical patterns. Second, constructions can be identified on the basis of non-

compositional meanings. Third, idiosyncratic constraints that involve meaning or form serve as a powerful and flexible diagnostic. Fourth, it was discussed that even if the first three strategies fail to identify an expression as a construction, an analysis of collocational preferences may reveal that the expression in question does in fact have the status of a construction.

1.5 Outline of the following chapters

It was the aim of this chapter to give you a rough overview of the enterprise that is Construction Grammar. In the remaining chapters of this book, that overview will be successively fleshed out in order to address the many open questions that will be on your mind right now. So, what lies ahead? The rest of this book is structured into two main parts. Chapters two to six will further familiarize you with the central concepts of Construction Grammar. They will do so by describing a repertoire of constructions that illustrates how these concepts are applied. Specifically, we will be concerned with ‘argument structure constructions (chapter 2), abstract phrasal and clausal constructions (chapter 3), morphological constructions (chapter 4), and information packaging constructions (chapter 5). What you can expect is thus a grand tour of English grammar. That tour will include several stops at locations that may seem more or less familiar, but I promise that these will appear in a new light. The second part of the book, comprising chapters six to eight, will focus on interfaces between Construction Grammar and specific areas of linguistic study. What makes Construction Grammar attractive as a linguistic theory is not least that it connects usefully to many areas of research that may interest you. We will discuss constructional work in psycholinguistics (chapter 6), research on language acquisition (chapter 7), and language variation and change (chapter 8). A concluding chapter will try to connect the most important ideas of this book, sending you off with a number of suggestions for research projects.

Study questions

- What is the dictionary and grammar model of linguistic knowledge?
- What is the construct-i-con?
- How are constructions defined?
- What are the reasons for rejecting non-predictability as a definitional criterion of constructions?
- What is the difference between a construction and a construct?
- What strategies can you use to identify a construction?
- What is meant by the term coercion?

Further reading

The work of Adele E. Goldberg (1995, 2006) has been extremely influential. An excellent starting point for further reading is her synopsis article of Construction Grammar (Goldberg 2003). All of the issues raised in the present chapter are discussed in greater depth in the *Oxford Handbook of Construction Grammar* (Hoffmann and Trousdale 2013). I also highly recommend the chapters on Construction Grammar that are found in two introductory works on Cognitive Linguistics (Croft and Cruse 2004, Evans and Green 2006). The first two chapters in Fried and Östman (2004) provide further information on the intellectual background of Construction Grammar and on formalization, the latter of which is also treated in Sag et al. (2003). Among the foundational works of Construction Grammar, Fillmore et al. (1988) and Kay and Fillmore (1999) stand out. Working through these papers is not easy, but very rewarding.