1 Introduction

1.1 Prologue

The argument of this book can be stated very simply in terms of three key ideas.

Firstly, verbs in English are used with complementation patterns. Often, the complementation patterns are linked to the verb meaning. For example, when LIE is used in the sense of 'being in a horizontal position' it is used with a preposition or with an adjective: *. . . lying on the ground*; *. . . lying at the end of the bed*; *. . . lay awake*. When it means 'be in a position in a competition' it is used with an ordinal number or with *in*: *. . . lying second*; *. . . lying in second place*. When it is used in the sense of 'say something untrue' it is used without complementation, or with *about* or *to*: *He lied*; *He lied about his past*; *He lied to his employers*. Part of knowing the grammar of English is knowing what complementation patterns a verb is used with, and dictionaries aimed at learners of English often include information about complementation in their entries. In the Collins COBUILD dictionaries, the grammar coding is called 'grammar patterns'. The approach to coding lexis in this way is known as Pattern Grammar.

Secondly, language can be said to be composed of constructions, that is, pairings of form and meaning. A description of a construction can capture something that is idiosyncratic usage, such as the 'let alone' construction: *I shouldn't even have talked to him, let alone been friendly.* They also account for much more regular sentence patterns, such as the 'caused motion' construction: *They pushed the piano into the classroom*. The meaning of a construction overrides the canonical meaning of any individual word used in it. For example, LAUGH does not mean anything like PUSH, but *The bank manager laughed me straight out of the room* is an instance of the 'caused motion' construction. Knowing a language means having a store of constructions and using them conventionally, or at least in a way that other language users understand. Describing a language means itemising its constructions and showing how they are related to one another. This approach to language description is known as Construction Grammar.

Thirdly, the language resources that a community uses can be expressed in terms of choices of form and meaning. For example, an event may be represented, or construed, as an occurrence in the 'external' world or as a construct in the 'internal' world of thought: *Bandits killed the villagers*; *They surmised that the villagers had been killed by bandits*. Differences between verbs are modelled as choices between features. For example, the difference between *Tom enjoyed the concert* and *The concert entertained Tom* is the 'direction' of the process of sensing emotion. The difference between *Harold made some cakes* and *Harold burnt the cakes* is the difference between creating something and having an effect on something that already exists. There are also differences in the participants involved in a process. In *Harold burnt the cakes*, 'the cakes' is the Goal of the process, and the clause answers the question 'what did Harold do to the cakes?'. However, in *Harold crossed the room*, 'the room' is not the Goal but is described as the Scope of the process. The question 'what did Harold do to the room?' does not make sense. This approach to contrasts in language description derives from Systemic Functional Grammar (SFG).

These approaches have developed independently of each other. This book brings them together.

1.2 The Background to This Book

The aim of this book is to bring together three approaches to form and meaning that have developed separately from each other but which in many ways support each other. The three approaches are: Pattern Grammar; Construction Grammar; and Systemic-Functional Linguistics. They are brought together in a study that starts with fifty verb complementation patterns, reinterprets these patterns as constructions, and organises these constructions into networks inspired by SFG. The progression through the stages of the research is summarised in Figure 1.1.

The starting point is the extensive corpus-driven lexicography carried out in the 1990s as part of the COBUILD project (Moon 2007). The research that led to the publication of the 1995 Collins COBUILD English Dictionary (CCED) was based on the 200 million word Bank of English corpus (Sinclair 1995: viii). This corpus was considered large for its time, and whereas it sacrificed balance for size (McEnery and Hardie 2012: 6), it included major types of written and spoken English, predominantly from the UK but also from the USA and Australia. The approach to lexicography was innovative (Moon 2009); not only did it prioritise observation of large amounts of data over introspection, but the explanations of words given in the dictionary reflected their usage. The introduction to the dictionary states: '. . . it is a feature of all COBUILD dictionaries that the definitions (or explanations, as we often call them) are written in

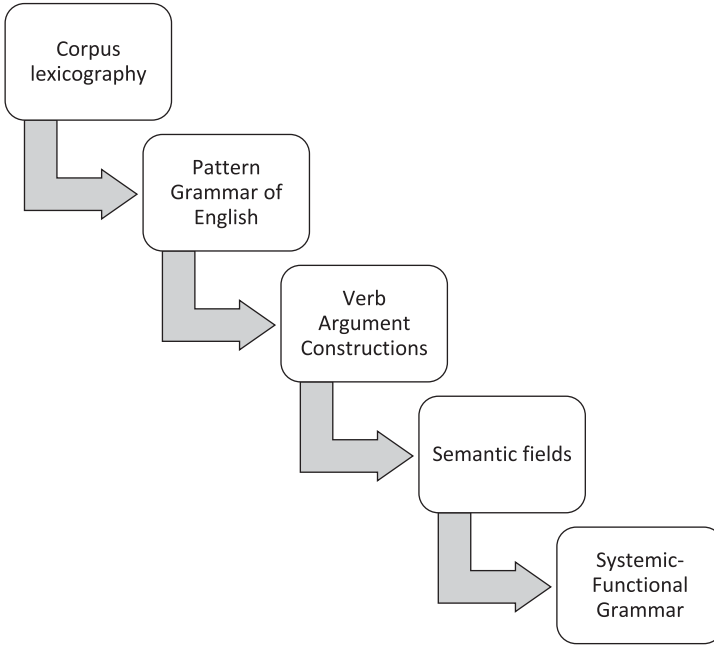

Figure 1.1 The research journey from pattern to construction to system

full sentences, using vocabulary and grammar that occur naturally with the word being explained' (Sinclair 1995: xviii).

As an example, here are the explanations of three senses of the verb INTEND in CCED, with a gloss of the usage of the part underlined:

- Sense 1: If you **intend** to do something, you have decided or planned to do it.
  - (the verb has a human subject and is followed by a to-infinitive clause)
- Sense 2: If something **is intended** for a particular purpose, it has been planned to fulfil that purpose.
  - (the verb is used in the passive and is followed by the preposition *for*)
- Sense 3: If you **intend** a particular idea or feeling in something that you say or do, you want to express it or want it to be understood.
  - (the verb has a human subject and is followed by a noun phrase that indicates an idea or a feeling)

Moon (2009: 9) describes the approach as an 'emphasis on form and downplay of independent meaning'. An important part of the emphasis on form was the development of a coding schema which detailed what might be called the

'grammatical behaviour' of each sense of each word. This can be exemplified using the three senses of INTEND:

- Sense 1: If you **intend** to do something ...
  - Grammar codes: **V to-inf**; **V -ing**; **V that**
  - Examples: *she intended to do ...* ; *I didn't intend coming ...* ; *we had always intended that the new series ...*
- Sense 2: If something **is intended** for a particular purpose ...
  - Grammar codes: ***be* V-ed *for* n**; ***be* V-ed to-inf**; ***be* V-ed *as* n**
  - Examples: *this money is intended for the development ...* ; *columns are usually intended to add grandeur ...* ; *Hatfield had been intended as a leisure complex ...*
- Sense 3: If you **intend** a particular idea or feeling in something that you say or do ...
  - Grammar codes: **V n**; **V n n**; **V n to-inf**; **V n prep**
  - Examples: *he didn't intend any sarcasm*; *he hadn't intended it that way*; *I didn't intend it to be ...* ; *he intended it as a put-down comment ...*

As a consequence of this lexicographic enterprise, the CCED comprised a grammatical analysis of around 70,000 words. The next stage of grammatical analysis was the listing of each pattern associated with verbs (87 patterns), nouns (63 patterns), and adjectives (49 patterns), together with all the words in the dictionary having that pattern code (Francis et al. 1996, 1998). For example, the pattern **V to-inf** lists 202 verbs, including of course INTEND. All these patterns and the associated words can be found on the grammar patterns website (http://grammar.collinsdictionary.com/grammar-pattern), which is an updated web version of the publications Francis et al. (1996, 1998).

The study in this book does not reanalyse a corpus, but instead takes as its primary data 52 of the 87 verb patterns, and their associated verbs, identified in Francis et al. (1996) and to be found on the grammar patterns website. Those patterns are interpreted as Verb Argument Constructions. From the 52 patterns, 809 constructions are identified. The next stage is to select a number of commonly studied semantic fields (such as Causation and Communication) and to find all the constructions that contribute to those fields. Those constructions are then organised in networks inspired by SFG.

This process can be illustrated as follows. One of the verb complementation patterns identified in Francis et al. (1996) is the pattern **V *after* n**, where a verb is followed by a prepositional phrase beginning with *after*. Instances of 'verb + *after*' are considered to be an example of this pattern only when the choice of preposition is dependent on, or governed by, the verb. Example (1) is an example of the pattern because the choice of *after powerful storage systems* is dependent on the verb *is hankering*, whereas example (2) is not an example

of this pattern, because the choice of *after my flight* is not dependent on the verb *arrive*.

(1) . . . and even the automotive industry is hankering after increasingly powerful energy storage systems. (enTenTen21)

(2) I'm concerned there won't be anywhere to camp when I arrive after my 3+ day flight. (enTenTen21)

The pattern **V *after* n** and the verbs identified as occurring with it (Francis et al. 1996: 151–153) are reinterpreted as constituting four constructions:

- The 'hanker after something' construction (= A person wants something very much).
- The 'follow after someone' construction (= A person follows another person, often with negative intentions).
- The 'chase after something' construction (= A person tries to get something that is difficult to get).
- The 'clean up after someone' construction (= A person helps someone, especially by correcting their mistakes).

In each construction, a number of verbs are found in the verb slot:

- *hanker after, hunger after, lust after, thirst after, yearn after*
- *chase after, follow after*
- *chase after, go after, run after*
- *clean up after, clear up after, run around after, tidy up after*

The first of these constructions ('hanker after') expresses a meaning of 'wanting something in the future'. It is one of a range of constructions that express similar meanings, i.e.

- 'dream about something'
- 'hanker after something'
- 'jump at the chance of something'
- 'yearn for something'
- 'dream of something'
- 'aspire to something'

Examples (1) to (6) illustrate these constructions:

(1) . . . the kind of treatment I'd always dreamed about when I was an actress. (BNC)

(2) A lot of people hanker after making a big scientific discovery . . . (BNC)

(3) I had jumped at the chance of a part-time job in the City. (BNC)

(4) [It] makes you yearn for the return of black-and-white photography. (BNC)

(5) [He] had made her dare to dream of a permanent partnership. (BNC)

(6) [They] . . . aspire to more senior positions. (BNC)

These constructions all express an emotion in relation to the future. In this they contrast with the expression of emotion towards the past (the 'repent of something' construction, example (7)) or a more general time frame (the 'delight in something' construction, example (8)).

(7) . . . nor was it her habit . . . to repent of what she did. (BNC)

(8) The river draws many visitors who delight in the beautiful scenery . . . (BNC)

In these constructions, the reason for the emotion is implicit in the noun phrase following the preposition. In example (8), we may deduce that the visitors delight in the scenery because it is beautiful. In example (3), we may deduce that a part-time job in the City is particularly desirable, without being told why. Other constructions that express emotion make the rationale more explicit, in that the object of emotion is in a noun phrase and the reason in a prepositional phrase. This is true of the 'admire someone for something' construction (example (9)) and the 'pride oneself on something' construction (example (10)).

(9) I also admire Bethany . . . for efforts to try and improve the estate. (BNC)

(10) Ministers pride themselves on their attention to detail . . . (BNC)

There are, then, at least 10 constructions that express an emotion towards something. Within these10, contrasts may be observed: reacting to future, past, or general situations; leaving the cause of the emotion implicit or expressing it in a prepositional phrase; expressing a positive emotion ('delight'); or a negative one ('repent'). These alternatives can be shown as a network. Figure 1.2 shows a very simplified partial network for the meaning 'expressing emotion towards something' (more detailed networks are shown in Chapter 7).

A taxonomy of the type shown in Figure 1.2 is termed in this book a 'meaning network'. An alternative way of showing the same information is to specify the choices available to the language user in expressing this meaning. Figure 1.3 shows these choices: the speaker chooses between three time references and between positive or negative polarity, and chooses whether or not to make a reason explicit. This arrangement of the relevant choices is termed in this book a 'systemic network'.

In this book, only a sample of the patterns and constructions studied are shown. The full set of 52 patterns and 809 constructions can be seen on the Transitivity-Net website (transitivity-net.bham.ac.uk). That website shows also the full set of meaning networks and systemic networks, most of which are shown in this book also.

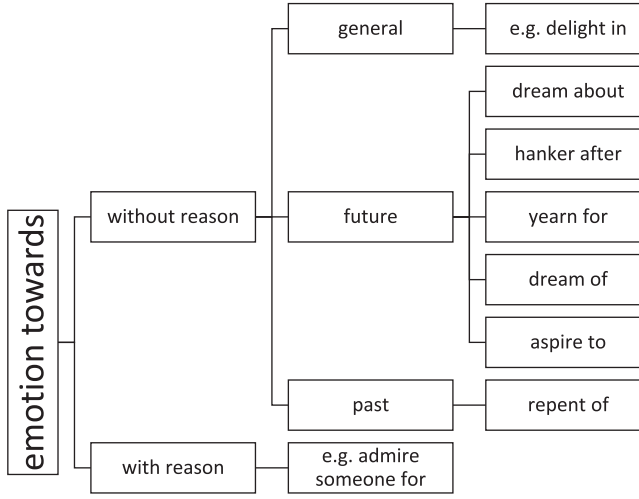

Figure 1.2 A simplified meaning network for 'expressing emotion towards something'

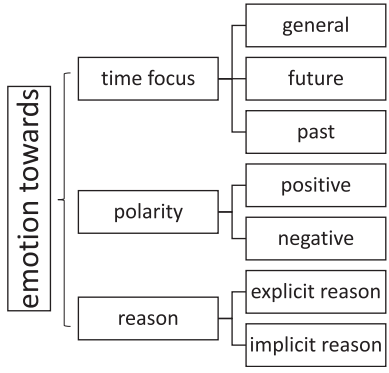

Figure 1.3 A simplified systemic network for 'expressing emotion towards something'

This book, then, considers three distinct approaches to language description (pattern, construction, and system), raising the question of why these particular approaches have been selected, and why the enterprise of 'unifying' them has been attempted. The simple answer is that all three are usage-based, and all three posit lexis and grammar as comprising a single entity, in opposition to approaches that envisage a lexicon that is separate from syntax (a view

associated with Chomsky, though see Andor 2015). Grammar patterns consist of lexical items in combination with grammatical units such as clauses or prepositional phrases. They account for the grammatical behaviour of words. Constructions similarly consist of both lexical and grammatical items and in some cases at least consist of grammatical frames with lexical slots (Haspelmath 2023). Systemic Functional Grammar considers lexis and grammar to form a continuum; accounts can focus on the more general 'grammar-like' descriptions or the more specific 'lexis-like' ones (Halliday 1973: 55).

In spite of having this in common, the three approaches have developed independently, belong to different traditions of language study, and have different views of what it is that a grammarian does. This may be explained as follows:

- Pattern Grammar is a descriptive framework based on corpus observation, specifically corpus lexicography. By implication, the job of the grammarian working with pattern grammar is to provide a coherent model of what is observed, consistent with approaches such as Sinclair (2004) and Hoey (2005).
- Construction Grammar aligns itself with Cognitive Linguistics, which studies language as a mental construct. The job of the construction grammarian is to model speakers' mental representations of language (Goldberg 2006).
- Systemic-Functional Linguistics sees language as a social entity. The job of the Systemic Functional Grammarian is to build models that best reflect community language resources (Halliday 1978).

'Language', then, can be reified as three objects: language in the mind; language in society; and language in corpus. These perspectives could be seen as incompatible, but this book argues that it is useful to draw out their compatibilities.

Although the approaches have different origins, connections are beginning to be made between the three. There are clear similarities between Pattern Grammar and Construction Grammar, such that articulating the contribution of Pattern Grammar to the notion of construction is an obvious next step (e.g. Ellis et al. 2016; Perek and Patten 2019). Connections are also beginning to be made between Construction Grammar and Systemic Functional Grammar (Laffut 2006; Lin and Peng 2006; Yang 2023). Both approaches regard lexis and grammar as indivisible. In addition, both Construction Grammar and Systemic Functional Grammar prioritise language as a meaning-making resource and take seriously the connection between meaning and form. Perhaps most strikingly, both regard themselves as constituting a theory that accounts for a language in its entirety, not just lexis and grammar. The whole of language consists of constructions: 'it's constructions all the way down' (Goldberg 2006:18); and/or the whole of language consists of systems: 'it is

systems all the way down' (Matthiessen 2023: 31). Each draws on corpora in support of its model of language, particularly to add quantitative information to the description (e.g. Matthiessen 2006; Stefanowitsch and Gries 2003; Ellis et al. 2016; Gries 2019).

The purpose of this book is to bring all three together and to find compatibility between views of language as a mental and as a social phenomenon. In terms of personal history, I am an 'insider' in terms of Pattern Grammar and an 'outsider' in terms of both Construction Grammar and Systemic Functional Grammar. In terms of the two theories of language, this book takes an agnostic stance, regarding models of language as abstractions from what is, and accepting of the viability of alternative models. In other words, it is argued that models of language can sit alongside each other, each offering useful insights, and it is not necessary to decide that one is 'right' and the other 'wrong'. Is language a mental or a social phenomenon? It is both. Does language consist of constructions or of systems? It consists of both. Can a dialogue between two disparate traditions of language study be fruitful to both? And can observations from Corpus Linguistics assist that dialogue? I believe the answer is yes to both questions.

1.3 The Organisation of the Book

The two chapters following this introduction discuss the relationship between pattern and construction. Chapter 2 provides further background information on the two concepts and the connections between them. Chapter 3 is an account of the process of reinterpreting the verb patterns as constructions.

Chapter 4 demonstrates a further stage in the analysis: the annotation of semantic roles. This has been applied to a subset of the constructions only. The chapter explains and exemplifies this process, also discussing other approaches to semantic role annotation.

In the following four chapters, attention turns to SFG and its role in this study. Chapter 5 provides background information on SFG and the questions it raises. Chapter 6 explains in detail how one semantic field, Causation, is treated in this study, showing how two kinds of networks (the Meaning Network and the Systemic Network) are derived. Chapters 7 and 8 perform the same exercise, though in less detail, for a further eight semantic fields: Cognition and Communication in Chapter 7; and Creation, Change, Location_change, and Possession_transfer (related to material processes); and Equivalence and Logical Relation (related to relational processes) in Chapter 8.

Chapter 9 concludes the study, discussing the issues it raises for both Construction Grammar and Systemic Functional Grammar.

1.4 A Note on Websites, Corpora, and Conventions

Readers may wish to take note of two websites that contain information of relevance to this book:

- The grammar patterns website, hosted by HarperCollins publishers, contains the output from the original Pattern Grammar study carried out in the 1990s by Gill Francis, Susan Hunston, and Elizabeth Manning. It is a digitised and revised version of the publications Francis et al. (1996, 1998). It can be found at: grammar.collinsdictionary.com/grammar-pattern.
- The Transitivity-Net website, hosted by the University of Birmingham, contains the output from the current study. It shows all the constructions and networks referred to in this book. It can be found at: transitivity-net.bham.ac.uk.

This book does not include analysis of a corpus. However, corpora are used as sources of illustrative examples; these corpora have been accessed via Sketch Engine (www.sketchengine.eu). Mostly, the British National Corpus has been used. Although this corpus is somewhat old and relatively small by modern standards, it is convenient to use because its small size means that searches are quickly performed. In some cases, examples come from the British Academic Written Corpus or the much larger English Web2021 corpus. A few examples come from the Bank of English corpus as it existed in the 1990s, when it stood at around 200 million tokens. Examples are annotated with the corpus they come from, as follows:

- BAWE. British Academic Written Corpus. 7 million tokens.
- BNC. British National Corpus. 96 million tokens.
- BoE. Bank of English. 200 million tokens.
- enTenTen21. English Web 2021. 52 billion tokens.

Throughout this book, the following conventions are used:

- Verb complementation patterns are shown in bold, with the verb shown with capital V and other elements in lower case. Word classes and clause types are shown in regular type, and specific words are shown in italics. For example, **V *to* n that** means 'Verb + *to* + noun phrase + that-clause'.
- Construction names are shown in inverted commas e.g. the 'causative *into*' construction.
- Numbered examples are shown in regular type. Example phrases that are not numbered are shown in italics if they come from a corpus and in inverted commas if they are invented.
- Lemmas are shown in capital letters e.g. INTEND.