

The grammar of sentences: slots and functions

Chapter Preview

What types of phrases can build sentences?

How are phrases organised among themselves to build sentences?

Does the order of the phrases within sentences affect meaning?

Why are there different types of sentences?

8.1 Introduction

In the previous chapter, we looked at how **phrase structure** accounts for the internal structure of a phrasal constituent. Phrase structure deals with constituents within phrases. We specified the word classes that constitute a phrasal constituent, and their relative position within a phrase. In this chapter, we deal with **sentence structure**, the internal organisation of sentences. Sentence structure deals with constituents within sentences. We will therefore investigate which phrases constitute a sentence, and their relative position within it.

8.2 Syntactic form and syntactic function

In general terms, it is usually the case that a specific **form**, syntactic or otherwise, corresponds to a specific **function**. A hammer, for example, has a specific shape, or form, because we use it for specific purposes, or functions, that are best served by a hammer-like structure. Consider the two sentences below:

- (8.1) *She would be angry.*
(8.2) *Would she be angry?*

We interpret (8.1) as a statement and (8.2) as a question, for two reasons. First, (8.1) and (8.2) are uttered with different intonations. The different punctuation symbols used in (8.1) and (8.2) attempt to capture this difference. The full stop in (8.1) represents a falling intonation typical of statements, whereas the question mark in (8.2) signals a rising intonation typical of questions (intonational falls and rises were discussed in section 5.5). Second, (8.1) and (8.2) show a difference in word order. Sentence (8.1) has a pronoun *she* before the auxiliary verb *would*, whereas sentence (8.2) inverts the order of these two words. **Statement** and **question** are labels that pertain to the function of sentences, i.e. to the “job” that they perform in a language. We typically use statements to communicate assertions, and questions to find out information. In contrast, **intonation** and **word order** pertain to the form of sentences, i.e. to their audible characteristics.

Function can, however, be independent of (physical) form. For example, you can use either a hammer or a stone to nail two pieces of wood together. Hammers and stones are differently-shaped objects, yet they may serve the same purpose of nailing objects together. Conversely, a stone can be used to nail objects together or to crack open, say, a hard-shelled fruit. The same is true of linguistic units. In fact, the difference between the form and the function of linguistic units, as of any other objects of our interest, has recurred throughout this book since Chapter 1. We saw, for example, that the form of morphemes may be the same (they sound the same), but that their grammar and meaning may tell us that they are distinct linguistic units (they have different functions in a language). At word level, the same physical word-form, e.g. *paint*, can be a noun or a verb, depending on its distribution. Conversely, we also dealt with several examples of alternation, where different forms correspond to the same linguistic function. The term *function* can thus be said to indicate a distributional, i.e. a *relational* property of linguistic units. Generalising, we say that linguistic **function** is the grammatical relationship that one constituent holds in relation to other constituents in a structure. Linguistic function thus depends on **distribution**.

Let’s clarify that it is indeed distribution and not form that enables us to interpret function. The following real-life example might help. If you’ve ever been out shopping and been mistaken by another customer for a shop assistant, you probably wondered what it was about your clothes or general appearance to suggest you earned your living as a shop-assistant. But, clearly, something in your behaviour got interpreted as shop-assistant-like behaviour.

Likewise, we identify heads versus modifiers, or affixes versus stems, by their behaviour inside constituents.

Function clearly plays a crucial role in our interpretation of linguistic meaning. The reason for investigating sentence constituency is that phrase constituency gives no clue about function. For example, why were we able to conclude, as early as in section 1.4.4, that these two word sequences are examples of two different sentences?

- (8.3) (a) *The cat licked the boy.*
(b) *The boy licked the cat.*

Both sentences in (8.3) contain one verb and two noun phrases each, in the same order, NP V NP. Yet we interpret the two sentences in totally different ways. In other words, both sentences are identical in terms of their formal constituents. What changes from one sentence to the other is the relative position of the two noun phrases. In (8.3a), the NP *the cat* precedes the verb *licked*, whereas in (8.3b) it follows the verb, and conversely for the NP *the boy*. Relative position of phrasal constituents must then play role in assigning meaning to sentences.

Keep in mind, however, that the examples that we have discussed so far concern one particular language, English, and by extension, languages whose syntactic patterns are similar to those of English. Taking the relative position of sentence constituents as a clue to syntactic function does not hold true for all languages. In many richly inflected languages, inflection contains the clues to syntactic function, and word order is thus much freer than in languages that lack functional inflections. Latin is the classic example, in both senses of the word “classic”, of what is meant by a free-word language. The English sentence *Father loves mother* can be rendered in Latin in any of the following six ways:

- (8.4) *Pater amat matrem. Matrem pater amat.*
Pater matrem amat. Amat pater matrem.
Matrem amat pater. Amat matrem pater.

The word-final inflections attached to the words *pater* and *matrem* indicate their function. Any difference among the meanings of the six Latin sentences concerns stylistics, not syntax.

Richness of inflection and free word order constitute a cline among languages, in a trade-off effect typical of language, whereby more structure at

one (morphological) level often implies less structure at another (syntactical). This trade-off in complexity, across different levels of structural organisation, across languages, helps us understand why it makes little sense to say that a language is, overall, “more complex” than another, or has “more grammar” than another. As in the proverbial mistaking of isolated trees for a forest, it all depends where, within the languages that you are comparing, you choose to look.

8.3 Obligatory and optional sentence constituents

In the previous chapter, we saw that phrases contain obligatory constituents and may contain optional constituents. Let’s now check whether the same is true of the phrasal constituents that make up sentences. Consider the following data:

- (8.5) *The cat licked the boy.*
- (8.6) *The cat licked the boy on the knee.*
- (8.7) **The cat licked.*
- (8.8) **The cat licked on the knee.*

We observe that certain phrasal constituents are obligatory, in order to form a grammatical sentence. Intuitively, English speakers know that if you lick, you must lick something. We can account for the unacceptability of (8.7) and (8.8) in terms of the absence of a constituent denoting the “something” that the cat licked. Other constituents are optional, in that the grammaticality of the sentence is unaffected by their presence or absence. Sentences (8.5) and (8.6) show that the constituent *on the knee* is optional because its absence in (8.5) and its presence in (8.6) does not affect the grammaticality of either sentence. Both are well-formed. Similarly, its presence in (8.6) does not help the ungrammaticality of (8.8).

How can we make sense of these observations? We need a starting point and, as before, this means that we will need to make assumptions that may guide our reasoning. As a working assumption in syntax, it is usual to take the **verb** as the pivotal element of the sentence. This verb has to be a main verb, not an auxiliary. That is to say, a sentence must contain a main verb. Conversely, any word sequence without a verb is not a sentence. The constituents of well-formed sentences are then said to occur, not occur or occur optionally because of the characteristics of the verbs in those sentences.

8.3.1 Adjunct

We can make a first broad distinction between optional and obligatory constituents. Optional constituents are called **adjuncts**. In the following examples, the adjuncts are in italics:

- (8.9) (a) The cat disappeared *last night*.
(b) *Last night*, the cat disappeared.
(c) The boy had licked it *furiously*.

These data help us define the properties that characterise adjuncts:

- The presence, or absence, of adjuncts does not affect the grammaticality of the sentences in which they occur. The sentences in (8.9) remain grammatical without their respective adjuncts.
- Adjuncts are often mobile within their sentence, and are often preceded and/or followed by a pause (indicated in spelling by a comma), as in (8.9a) and (8.9b).
- Adjuncts often convey meanings associated with the manner, place and time of events described in the sentence. Adjuncts typically answer questions like *How?*, *Where?*, *When?*

The reason that the presence or absence of adjuncts does not affect the grammaticality of sentences is that adjuncts convey extra information about the circumstances surrounding the events described in the sentences.

Adjunct **movement** in turn reflects the mobile character of adjuncts, and represents a further test of **constituency**, in that adjuncts can move to phrasal boundaries but not to positions inside phrases. Compare sentences (8.9a) and (8.9b) with:

- (8.10) The cat, *last night*, disappeared.
(8.11) *The, *last night*, cat disappeared.

The well-formedness of (8.10) indicates that *The cat* and *disappeared* belong to two different constituents, that can accept a different constituent at their boundaries. In contrast, the unacceptability of (8.11) shows the phrasal cohesion that holds between the determiner *The* and the noun *cat*.

Activity 8.1

Consider the underlined constituents in the following data:

- (a) I was tired after dinner.
- (b) I was tired yesterday.
- (c) I was tired that evening.
- (d) I was tired when they left.

With support from the data, provide arguments for distinguishing between *adverb* and *adjunct*, in English grammar.

8.3.2 Subject

Among obligatory constituents, common syntactic accounts include the subject. The **subject** is often defined in distributional terms, as the NP that comes before the verb.

However, it should be noted that the widespread assumption of subjects as obligatory sentence constituents is largely based on features of languages like English, where subjects are traditionally viewed as obligatory. In many other languages, like Mandarin or Portuguese, subject constituents are optional. Here is one example from Portuguese, in the form of a short dialogue between speaker A and speaker B, with word-by-word glosses in English and a translation in brackets. As was the case with Latin in (8.4), functional information is contained in inflections. In this example, information about the subject is suffixed to the verb:

- A. *Pareces doente.* 'Look ill.' (You look ill.)
- B. *Estou com febre.* 'Am with fever'. (I have a fever.)

In the following examples from English, the subjects are in italics:

- (8.12) *That cat* is crazy.
- (8.13) *It* chases the schoolboys every day.
- (8.14) *The boys* chase the cat on Sundays.

Activity 8.2

Given the following sentence, would you say that *cat* is its subject? Why?
That fat cat looks like Garfield.

We can summarise the properties that identify the functional constituent *subject* as follows:

- The subject is usually a noun phrase.
- The subject precedes the verb.
- Subject and verb agree in number and person.

In analyses of English, the principle of subject-verb **agreement** (or **concord**) means that subject and verb must share features of number and person. Using this principle, we can account for the ungrammaticality of the sentences in (8.15) in terms of the absence of agreement:

- (8.15) **It chase the schoolboys every day.*
**The boys chases the cat on Sundays.*

In both sentences, we have a discrepancy between the number of the subject (singular versus plural, respectively) and the number of the verbal form (plural versus singular, respectively). In many languages, agreement between subject and verb is present whenever a subject is present too.

Note that many languages have agreement of different kinds. Besides agreement between subject and verb, languages can have agreement for example between nouns and their modifiers within a noun phrase, which must all be singular or all plural, or must all be marked in other ways that signal the internal cohesion of noun phrases. In English, subject-verb agreement is extremely restricted, in that it occurs only in the 3rd person singular of present tense forms, and therefore concerns both person and number together. In a language like Latin, and in Latin languages, subject-verb agreement is the rule for each person, number, tense, and so on, independently of one another.

8.3.3 Object

Given the assumption of obligatory functional constituents, a second broad distinction can be made between subjects and non-subjects. Obligatory non-

subject constituents can be *objects* or *complements*. The major distinction between the two can be worked out through the relationship between **active** and **passive** sentences. Compare:

(8.16) *My son spilled the milk.*

(8.17) *The milk was spilled by my son.*

These two sentences mean roughly the same: there was some milk, which my son caused to be spilled. But the perspective from which each of the sentences describes this event is different. In (8.16) we are talking about my son and what he did, whereas in (8.17) we are talking about the milk and what happened to it (we return to the issue of perspective in the description of events in section 11.2.2). Sentence (8.16) is an *active* sentence, because its subject, *my son*, is actively doing something, i.e. it is the *agent* of the action described by the verb. Sentence (8.17) is *passive* because its subject, *the milk*, is passively affected by the action described by the verb, i.e. it is a *patient* of that action. The passive subject corresponds to the **object** of the equivalent active sentence, *the milk*. The form of each of the two sentences above is also different. The functional constituents of active sentences and their corresponding passives stand in a predictable relationship:

- The subject of an active sentence is incorporated within a PP (headed by the preposition *by*) following the verb in the corresponding passive.
- The object of an active sentence maps onto the subject in the corresponding passive.

Figure 8.1 shows how to toggle between an active sentence and its passive.

Active	Subject	Verb	Object
	My son	spilled	the milk.
Passive	Subject	<i>be</i> + Verb	<i>by</i> phrase
	The milk	was spilled	by my son.

Figure 8.1. The relationship between active and passive sentences

Let's now try to passivise another sentence, as in these examples:

- (8.18) *My son became a happy man.*
(8.19) **A happy man was become by my son.*

Comparing the two sentences in (8.16) and (8.18), we notice that in both cases we have an NP following the verb, *the milk* and *a happy man*, respectively. In contrast to what we concluded in our discussion of example (8.3) above, the relative positions of these NPs cannot explain the acceptability of (8.18) and the unacceptability of (8.19). Since the constituent *a happy man* in (8.18) cannot be made into the subject of a corresponding passive, as shown by the ill-formed (8.19), we must conclude that *a happy man* is not an object in (8.18). Objects can be passivised. This constituent, which cannot be passivised, is known as a **complement**, whose other properties we detail in the next section.

Having made clear the distinction between objects and complements, we can now focus on the types and additional properties of objects. Two types of objects can be identified through their behaviour in **substitution** and **movement** tests. In these and in following examples in this section, we use underlining and italics to distinguish between the constituents that are relevant for our discussion:

- (8.20) I can make a kite. *I can make *my son*.
(8.21) I can make *my son* a kite. *I can make a kite *my son*.
(8.22) I can make a kite *for my son*. *I can make *my son* for a kite.

The data above allow us to make three observations. First, of the two NPs, a kite and *my son*, only the former can occur on its own after the verb, as shown in (8.20). Second, the two NPs after the verb must be ordered in a specific way: a kite must follow *my son*, and not the other way around, as shown in (8.21). Thirdly, only one of the two NPs, *my son*, can be replaced by a PP, *for my son*, as shown in (8.22).

These observations clearly show that a kite and *my son* are two different types of constituents, that behave differently and therefore play different roles in their sentences. They are therefore given different labels, **direct object** and **indirect object**, respectively. Their properties may be summarised as follows:

Direct object	Indirect object
Can occur alone after the verb	Occurs with a direct object
Cannot be replaced by a PP	Can be replaced by a PP
Must precede an indirect object PP	If PP, must follow the direct object
Must follow an indirect object NP	If NP, must precede the direct object

Figure 8.2. The relationship between direct and indirect objects

Activity 8.3

Using syntactic arguments, explain why the following dialogue is an example of language play (you may use morphological arguments too!):

- A. *Have you ever seen a starfish?*
 B. *Never. Stars can't fish.*

8.3.4 Complement

In the preceding section, we concluded that complements cannot be passivised. Let's now check for additional properties of complements, comparing the following data:

- (8.23) I can make *my son* a kite.
 I can make a kite *for my son*.
 (8.24) I can make *my son* a happy man.
 *I can make a happy man *for my son*.

Example (8.24) shows that *a happy man*, although also an NP, is not an object: it doesn't behave like the object *a kite* that we identified in (8.23). Like the phrase *a happy man* in example (8.18), it cannot be passivised either:

- (8.25) *A kite can be made for my son by me.*
 **A happy man can be made for my son by me.*

Let's therefore check whether there are any regularities in the meaning contributed by the NP *a happy man* to sentences (8.18) and (8.24). If I say that

my son became a happy man, I'm attributing the quality of being a happy man to my son – the subject of the sentence. *My son became a happy man* means that my son is now a happy man. Similarly, if I say that *I can make my son a happy man*, then I'm counting on my son being a happy man at some stage. In other words, I'm attributing the quality of being a happy man to my son. The difference between (8.18) and (8.24) is that *my son* is a subject in (8.18) and an object in (8.24). That is, the quality of being happy affects a subject NP and an object NP, respectively.

Constituents whose meanings typically attribute qualities to a subject or an object are called **subject complements** and **object complements**, respectively. Figure 8.3 below summarises their differences:

Subject complement	Object complement
Can occur alone after the verb	Must occur with a direct object
Immediately follows the verb	Immediately follows a direct object

Figure 8.3. The relationship between subject and object complements

Activity 8.4

Using syntactic arguments, explain why this sentence is ambiguous:

I can make your son a star.

Start by providing clear paraphrases showing the different possible interpretations of the sentence.

8.3.5 Summary of syntactic functions

Figure 8.4 summarises one way of looking at functional constituents, based on our observations about English:

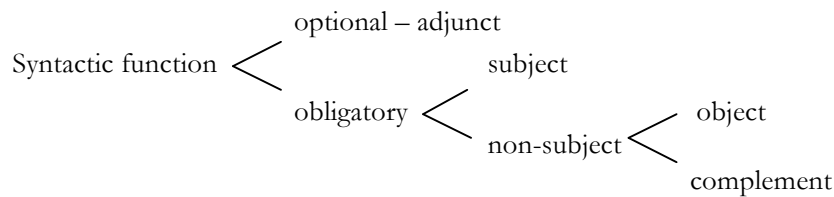


Figure 8.4. Functional syntactic constituents based upon English

Note that starting by distinguishing adjuncts from non-adjuncts, as we did in this chapter, is simply one choice among others. The important thing to keep in mind is the *procedure* in the identification of each functional constituent, through observation of similar and dissimilar syntactic behaviour, and through a principled discussion of those observations.

Before we move on to exemplify how different functional constituents pattern with different verbs, a note on terminology is in order. The syntactic terminology found in linguistics literature can at times be nebulous and confusing because of varying definitions. Two examples are:

- **Predicate.** This term is sometimes used to identify a functional constituent of the sentence. The confusion arises because the “predicate” function can correspond to two formal constituents: in some definitions, it corresponds to just the **verb**, while in others it corresponds to the **verb phrase**. To avoid such confusion, we chose to use the term *verb* to designate both a formal and a functional constituent.
- **Complement.** This term is also used in the literature in at least two senses. One, more general, takes it as a cover term for any obligatory functional constituent other than the verb. Thus, *verb complementation* includes all non-adjunct constituents besides the verb, that is, objects, complements, and the subject. The other sense matches our use of the term in section 8.3.4, distinguishing complements from both objects and the subject.

8.4 Verb subcategorisation: one example

We mentioned at the beginning of section 8.3 that the verb is taken as the pivotal constituent of a sentence, and that the presence, or absence, of other constituents in a sentence depends on the type of verb. We also saw that, for languages like English, the assumption is that a sentence must contain a subject. Let’s then see what kind of behaviour we can observe in the functional constituents that follow the verb. Consider these data:

- | | | |
|--------|------------------------------------|--------------------------------|
| (8.26) | <i>The cat fell.</i> | <i>*I threw.</i> |
| | <i>The cat fell from the roof.</i> | <i>*I threw from the roof.</i> |
| | <i>*The cat fell the roof.</i> | <i>I threw the cat.</i> |
| | <i>*The cat fell her the roof.</i> | <i>I threw her the cat.</i> |

We notice that there is a difference in the constituents that are required, allowed or disallowed with a verb like *fall* and a verb like *throw*. Different verbs thus appear to occur with different constituents. Other data show, additionally, that the same verb may occur with different phrasal constituents, or on its own, in different sentences. One example is the verb *believe*:

- (8.27) *I believe him.*
I believe that he's honest.
I believe.

It must then be possible to state the constraints in the syntactic patterning of verbs. **Verb subcategorisation** classifies the word class (or *category*) **verb** into types (or *subcategories*) according to the distribution and the meaning of particular verbs. For the sake of simplicity, take all verbs given below as *typical* examples of each verb type, bearing in mind that actual usage may vary widely.

We can represent verb subcategorisation by means of **subcategorisation frames**. These frames tell us the kinds of **verb phrase** that different verbs can form. Given in PS rule-type format, they can be generalised as follows:

verb, V, [___ X]

The conventions used in subcategorisation frames are the following:

<i>verb</i>	the verb itself, usually given in ordinary spelling
V	the word class to which the verb belongs
[]	the frame itself
___	the context in which the verb occurs
X	the type of constituent that makes up the VP together with V

Figure 8.5. Conventions used in subcategorisation frames

Subcategorisation frames state, explicitly, which constituents are obligatory. Implicitly, they also tell us which constituents are disallowed. In what follows we will assume that adjuncts, being optional constituents, need not be specified in the frame.

In English and in several other languages, verbs are traditionally categorised into five types. We briefly describe their frames, with examples, in turn.

- **Intransitive.** Intransitive verbs may form a VP on their own. They take no objects and no complements, but may of course take adjuncts. Example:

fall, V *The cat fell.*

- **(Simple) transitive.** Transitive verbs must be followed by another constituent, often an NP, functioning as direct object. Example:

throw, V [__ NP] *The boy threw the cat.*

- **Link / copular.** Link verbs must be followed by another constituent, often an AdjP or an NP functioning as subject complement. Example:

become, V [__ {Adj, NP}] *The cat became restless.*
The cat became my friend.

- **Ditransitive.** Ditransitive verbs must be followed by two constituents, often two NPs, functioning as indirect and direct object, respectively. Recall that an indirect object NP can be replaced by a PP, with associated changes in constituent order. Example:

give, V [__ NP NP] *She gave **him** the cat.*
*She gave the cat **to him**.*

- **Complex transitive.** Complex transitive verbs must be followed by two constituents, often two NPs, or one NP and one AdjP, functioning as direct object and object complement, respectively. Example:

call, V [__ NP {NP, Adj}] *She called him a nerd.*
She called him brilliant.

The frames that we describe above are not exhaustive, and offer only a small sample of VP constituency. To verify that this is so, recall our discussion of syntactic **subordination**, in the previous chapter. Our analysis of sentence (7.17) highlighted the similarity in structure (formal constituency) between the complex sentence *The boy said that he dropped the cat* and the simple sentence *The boy said something*. We saw how the subordinate clause *that he dropped the cat* could replace the noun phrase *something*. We can now extend our reasoning to functional constituency and say that, if *something* is the direct object of *said*, then so is the clause *that he dropped the cat*. The same is true of any sentence that may replace other constituents. Syntactic function also concerns the role that sentences play within other sentences. We would urge you to experiment

with other verb types, to see what modifications might be required to their frames.

As you experiment, keep in mind that most verbs belong in several subcategories, as illustrated by the verbs *make*, in (8.23) and *believe*, in (8.27). This knowledge should help you explain the following lame joke:

Mary: *John, will you call me a cab?*
 John: *You're a cab.*

Figure 8.6 below summarises the different types of verbs according to the constituency of the VP in which they occur. Figure 8.6 suggests a number of strategies that may help distinguish between different uses of each verb. The symbol \approx stands for 'equivalent to'.

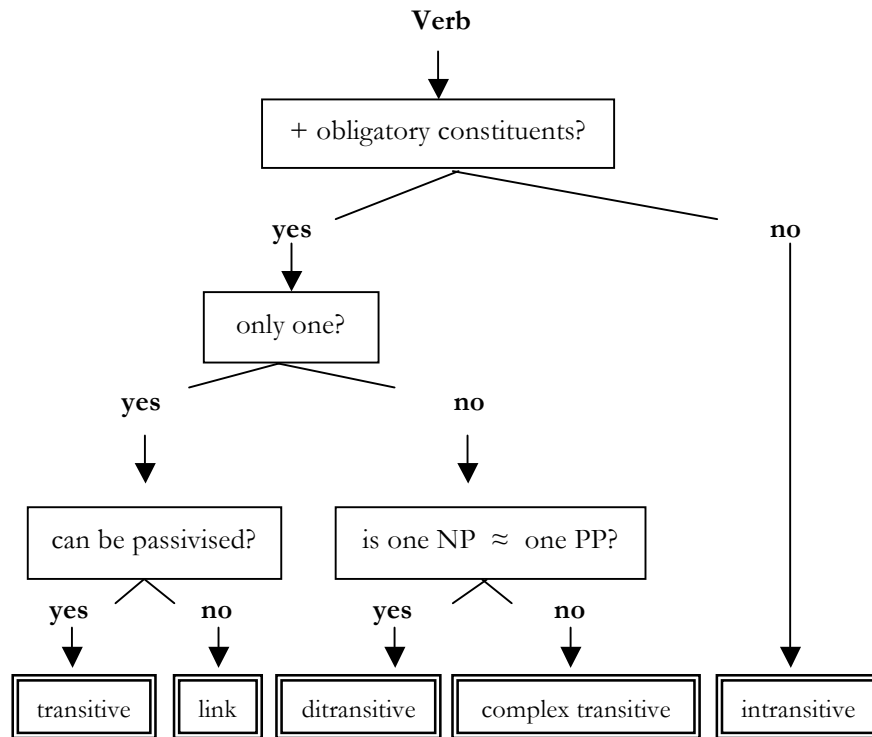


Figure 8.6. Flowchart to help determine verb subcategory

To recap: of the five types, intransitive verbs stand out from the remaining four, because they can form a VP on their own. Both (simple) transitive and

link verbs pattern with only one obligatory functional constituent – a direct object and a complement, respectively. To distinguish between transitive and link verbs, run the passivisation test. Link verbs don't passivise.

Ditransitive and complex transitive verbs pattern with two obligatory constituents. Ditransitive verbs take two objects, direct and indirect, whereas complex transitive verbs are so named because they pattern with two different kinds of constituent, a (direct) object and a complement. To distinguish between these two verb types, check whether one of the NPs corresponds to a PP.

These strategies and the syntactic manipulations discussed in this chapter should help you solve the more tricky cases in a consistent and systematic manner.

Activity 8.5

Find examples of each of the five types of verb above in another language that you're familiar with.

Do those verbs pattern exactly like English verbs? Can you find examples of verbs that belong to different subcategories?

Food for thought

“The structure of every sentence is a lesson in logic.”

John Stuart Mill

Further reading

Deterding, David H. and Poedjosoedarmo, Gloria R. (2001). Chapter 7. Objects and complements. In *The grammar of English. Morphology and syntax for English teachers in Southeast Asia*. Singapore: Prentice Hall, pp. 73-82.

Hudson, Grover (2000). Chapter 6. Sentences and syntax. In *Essential introductory linguistics*. Oxford: Blackwell, pp. 88-99.