Chapter 6

Syntax: Words in Combination

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Key Terms

• clause
• constituent
• phrase: noun phrase, adpositional phrase, verb phrase
• argument: core vs. oblique
• transitivity: intransitive, transitive, ditransitive
• grammatical relations: subject, object, indirect object
• sentence
• complex sentence
• coordination vs. subordination
• adverbial, complement, relative clause


Chapter Preview

The previous three chapters have shown how sounds are produced and patterned, how they combine into morphemes, and how morphemes combine into words. We now continue up the hierarchy to increasingly complex levels of structure by examining syntax: the combination of words into phrases, clauses, and sentences, and the grammatical principles and relationships that underlie these structures. Syntax is critical to communication as it allows us to talk about events, describe situations, and attribute states, actions, or activities to particular individuals or entities. This is done in part through grammatical relationships between verbs and noun phrases. These relations are grammatically marked and are independent of the semantic relationships between verbs and their arguments. The principles of syntactic organization also allow us to express complex relationships between events or situations. This is done through the combination of clauses into sentences through a variety of means.

Like the previous three units, this chapter emphasizes processes of analysis and argumentation. Each language is unique in the range of grammatical phenomena that can be used to identify and relate elements at every level of the syntax; each language needs to be examined independently, with the syntactic structures justified by the language-particular facts.
List of Aims

At the end of this chapter, students should be able to:

- identify syntactic constituents in a data set
- present arguments for constituency
- differentiate among intransitive, transitive, and ditransitive verbs
- identify core and oblique arguments
- provide evidence that a noun phrase is a subject, object, or indirect object
- state the difference between coordinate and subordinate clauses
- differentiate adverbial, complement, and relative clauses in English

6.1 Introduction

Syntax refers to the set of grammatical structures that allow for the combination of words into phrases and sentences. As with other aspects of language, syntactic structures are principled and systematic, with the potential for detailed analysis and description. Words that occur in phrases and sentences can be shown not only to have semantic, or meaningful, relationships to each other, but also to have intricate grammatical relationships to each other. Syntax is important because it provide speakers with a regular structure or framework for conveying relationships between people, things, or ideas and the states, events, or activities that they are involved in. The regularity of this framework within a language allows speakers to quickly produce and process the information. It also allows for the marking of particular grammatical categories that have arisen over time.
through repeated use by speakers. This process of grammaticalization, as well as the process of **syntactic change** will be discussed more fully in Chapter 13. Sidebar 6.1 contains a note about the format of this chapter. Textbox 6.1 introduces a long-standing theoretical debate in the field.

**SIDEBAR 6.1**

In several places throughout the chapter, you will be directed to apply what you learn to short data sets. Answers are available on the companion website, and indicated by the website icon: [ ]. Completing these data sets as you work through the chapter is highly recommended, as it will increase your understanding of the unit and improve your skills of linguistic analysis.
This book takes a functional approach to the field of linguistics, examining linguistic structure as it relates to the function of language as a tool of human communication. Within syntax, functional approaches examine the relationship between particular syntactic structures and how they are used in discourse interaction, and especially seek to explore how the functions have shaped the structures. That is, they seek to explain syntactic structures based on how they are used.

A very different perspective is found in formal approaches to syntax. These approaches seek to explain syntactic structures independently of function, instead constructing a formal model of linguistic knowledge based on abstract categories, structures, and principles. The model is posited to represent a single Universal Grammar that is considered to be part of humankind’s genetic endowment. Language-specific variation is brought about through specific modifications of the model. Radford et al. (2009) is an introductory textbook written from this perspective. See also Chapter 14, section 14.10, for a discussion of formal and functional approaches in the study of how children acquire language.
6.2 Constituent Structure

One of the central aspects of linguistic design is hierarchical structure: units contain units that contain units. We have seen so far that `there are units called words that contain smaller units called morphemes, which are made up of smaller units called phonemes. We will now move up from the word level to see that words combine into phrases, that phrases combine into clauses, and that clauses combine into sentences, leading us to progressively more complex structures.

Consider the English sentence in (1):

(1) The kids arrived at the house.

Our intuitions tell us that the two words the and kids form a single unit. By contrast, kids and arrived, to the exclusion of the, do not. You can sense that there is a natural break between kids and arrived, as indicated by the symbol | in (2). The starred example, indicating a break between The and kids, does not seem natural (see Sidebar 6.2).

(2a) The kids | arrived at the house
(2b) *The | kids arrived at the house
Observe that arrived at the house forms a unit, as it tells us something about the kids, specifically what they did. We can also note that at the house is optional; it can be left off and the result would still be the grammatical sentence The kids arrived. Of course, we would have to leave off the entire phrase. We couldn’t say, for example, *the kids arrived at and remove only the house. So at the house appears to be a single unit, separate from arrived:

(2c)  arrived | at the house

(2d)  * arrived at | the house

We are not finished, however, as the house is a smaller unit yet, with the definite article the pertaining to house and not to at.

(2e)  at | the house

(2f)  * at the | house

If we put each of these units within square brackets, we can represent the hierarchical structure visually, as in (2g). The outermost set of brackets encloses the sentence as a whole:
The term constituent simply refers to a sub-part of a higher unit. Our sentence contains two major syntactic constituents: [the kids] and [arrived at the house]. The latter contains two constituents, the verb arrived and the phrase [at the house]. This in turn contains two constituents: the preposition at and the phrase [the house]. Finally, [the house] has two constituents: the definite article the and the noun house. Another way to represent the constituent structure of this sentence would be to use a branching labeled tree diagram, where every node connecting two branches represents a constituent, labeled for its phrase type (each discussed in more detail below; see Sidebar 6.3) and the lexical class of each word. Figure 6.1 presents the labeled tree diagram for example (2g).

Figure 6.1. Labeled tree diagram for The kids arrived at the house.
We have arrived at this analysis of the sentence’s **constituent structure** largely by using speaker intuition. As scientists, however, it is important to move beyond the level of intuition and to provide argumentation based on the structural facts of the language. We will now provide such evidence for the three major type of **phrasal**
constituents that are found in English. These are the noun phrase (NP), the prepositional phrase (PP), and the verb phrase (VP).

6.2.1 The Noun Phrase

A noun phrase is a grammatically coherent syntactic constituent containing a head noun or a pronoun and optionally one or more modifiers. The noun or pronoun is the head of the noun phrase, or the element that determines the type of syntactic constituent and which is required in order for the modifiers, or dependents, to appear. Thus, in English one cannot just say *the three big, leaving out the head noun. Typical dependents found in the noun phrase include demonstratives, numerals, adjectives, articles, quantifiers, possessors, adpositional phrases (such as with a hammer), and relative clauses (such as who came late). Textbox 6.2 gives some further examples of noun phrases in English.
### TEXTBOX 6.2. Dependents of the English Noun Phrase

<table>
<thead>
<tr>
<th>Category</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Possessors</td>
<td><em>my dog; Susan’s play</em></td>
</tr>
<tr>
<td>Articles</td>
<td><em>the truth; an insult</em></td>
</tr>
<tr>
<td>Demonstratives</td>
<td><em>those words; that cookie</em></td>
</tr>
<tr>
<td>Numerals</td>
<td><em>fifty representatives</em></td>
</tr>
<tr>
<td>Quantifiers</td>
<td><em>some flowers; many nights</em></td>
</tr>
<tr>
<td>Adjectives</td>
<td><em>blue dress; complex structures</em></td>
</tr>
<tr>
<td>Prepositional phrases</td>
<td><em>the man with one black shoe</em></td>
</tr>
<tr>
<td>Relative clauses</td>
<td><em>The woman who just arrived</em></td>
</tr>
</tbody>
</table>

*Note that the English noun phrase can only have one of the following elements: article, demonstrative, possessor. Thus the phrases *the your book and *a that flower are ungrammatical. The cover term for these three categories is determiner.*

There are a number of ways to determine that noun phrases are grammatically coherent units. *In most languages the elements of the noun phrase must form a contiguous group that behaves as a single unit.* Here we will consider three distinct arguments that illustrate the coherence of the noun phrase and hence its status as a syntactic constituent in English.
First, a noun phrase can appear in any noun-phrase slot in a sentence, providing it fits semantically. When noun phrases switch positions, they do so as complete wholes, as illustrated in (3):

(3) a. [My best friend] called [the doctor] for [me].

b. [The doctor] called [my best friend] for [me].

c. [I] called [the doctor] for [my best friend].

It is not possible to move only part of a noun phrase. We never find, for example *my the doctor called best friend for me. The fact that the elements of a noun phrase form a cohesive group which acts as a unit (all elements move together) demonstrates that the noun phrase is a syntactic constituent. This argument is summarized in Sidebar 6.4.

**SIDEBAR 6.4**

*Argument 1: When noun phrases are moved, they move as cohesive units.*

A second argument that a noun and its dependent modifiers form a single syntactic constituent is that if one chooses to use a pronoun, it replaces not just the noun but all of the dependents as well. Consider the sentence in (3a). We can replace the initial noun phrase my best friend with the pronoun she, i.e., She called the doctor for me. However, one can never say *my she or *my best she. This shows that pronouns replace
entire noun phrases, not just pieces of them. So again we find evidence that the noun phrase works as a cohesive unit. This argument is summarized in Sidebar 6.5.

SIDEBAR 6.5

*Argument 2: When a pronoun is used, it replaces an entire noun phrase, not part of it.*

A third argument for the syntactic unity of the noun phrase is that *in most languages of the world, the order of elements in the noun phrase is fixed*. For example, in English we say *those three red books on the table*. We cannot shift the order of modifiers to *three those red on the table books*, or *red three on the table books those*, etc. The noun phrase thus has internal structuring, a feature of cohesive units. Textbox 6.3 describes English noun phrase ordering using a syntactic template.
TEXTBOX 6.3. **Syntactic Templates**

One way to describe the ordering of elements in a syntactic constituent is to use a **template**, which represents the structure of a phrase schematically. It lists all of the elements that could possibly occur in a constituent in the order in which they occur. Optional elements are placed in parentheses. The template for the English noun phrase is as follows:

\[(\text{DET}) (\text{QUANT}) (\text{NUM}) (\text{ADJ}* \text{ N} (\text{PP}* \text{ (REL)}} \]

The following abbreviations are standard: NP noun phrase, DET determiner, QUANT quantifier, ADJ adjective, N noun, PP prepositional phrase, REL relative clause. An asterisk placed after the category name indicates that you can have more than one of that type of element in a single phrase. For example, we can have more than one adjective, as in **the big black books**.

It is important to note that the ordering discussed thus far is specific to English. Other languages have other set orders of noun phrase elements. For example, in Mandarin Chinese, noun phrase elements have the order represented in the template in (4):
(4) Noun phrase template for Mandarin Chinese

(DEM) (NUM) (CLASSIFIER) (ADJ)* (NOMINALIZER) NOUN

A noun phrase of this structure is illustrated in (5a):

(5)a.  nà  sān  dúo  měili-de  hūa
     DIST.DEM  three  CLF  beautiful-NMLZ  flower

‘those three beautiful flowers’

Alternate orders are ungrammatical, as illustrated in (5b):

(5)b.  * sān  dúo  nà  hūa  měili-de
     three  CLF  DIST.DEM  flower  beautiful-NMLZ

The fact that the order of noun phrase elements is fixed reveals that noun phrases have an internal grammatical structure. Such structuring is evidence that noun phrases are cohesive syntactic units. This argument is summarized in Sidebar 6.6.

SIDEBAR 6.6

**Argument 3: The order of elements within noun phrases is fixed, showing that noun phrases have internal structure, which indicates that they are grammatical units.**
In some languages, there is other grammatical evidence for the unity of the noun phrase. For example, *in many languages elements of the noun phrase agree for number, gender, or other categories*. In Italian, the indefinite article agrees in gender with the noun it modifies. In other words, the form of the indefinite article depends upon whether the noun is masculine or feminine. The examples in (6) illustrate this agreement:

(6)a.  

\[
\text{un} \quad \text{columbo} \quad \text{‘a male dove’}
\]

\[
\text{INDF.M} \quad \text{male.dove}
\]

(6)b.  

\[
\text{una} \quad \text{columba} \quad \text{‘a female dove’}
\]

\[
\text{INDF.F} \quad \text{female.dove}
\]

This pattern of gender agreement applies only to elements within the noun phrase, never to elements outside of it. This behavior shows that the elements in the noun phrase are related grammatically and hence that the noun phrase is a grammatically cohesive unit. This argument is summarized in Sidebar 6.7, and all arguments thus far are reviewed inTextbox 6.4.

Try out the short exercise in Sidebar 6.8 to check your understanding of the noun phrase before moving on to the next section.
SIDEBAR 6.7

Argument 4: Elements of the noun phrase can agree for gender, indicating that they are grammatically-related members of cohesive units.
TEXTBOX 6.4. **Syntactic Argumentation**

While it was possible for us to intuitively sense that noun phrases are coherent syntactic units, we have also been able to confirm our intuitions with four arguments based on morphosyntactic behavior:

**Argument 1:** Noun phrase elements form a cohesive unit that functions as a group.

**Argument 2:** When a pronoun is used, it replaces all noun phrase elements.

**Argument 3:** Noun phrase elements have a fixed internal order.

**Argument 4:** Agreement illustrates that noun phrase elements are grammatically related.

Since linguists take a scientific approach to language, it is important not to rely solely on intuition – which can be uncertain and variable – but to provide concrete evidence for claims about linguistic structure. Intuition can point in the right direction, but only with argumentation based on linguistic evidence can we reach our goal of a scientific analysis of language.
For each of the following examples, place brackets around each complete noun phrase and label the category of each word. Answers are available on the website.

Hint: If you are not sure where the boundaries are, try replacing the noun phrase with a pronoun. You can only do this with whole noun phrases, not with parts.

Model: 
\[
\text{[My brother] ate [those fried green tomatoes].}
\]

POSS N DEM ADJ ADJ N

Compare the example with pronouns: 
\[
\text{[He] ate [them]}
\]

a. Her friends brought six chocolate cakes to the party.
b. The whole group admired the presents on the table.
c. Her favorite present was from her father.

6.2.2 The Adpositional Phrase

An adpositional phrase is a syntactic constituent consisting of an adposition (preposition or postposition), which is the head of the constituent, and a dependent noun phrase. There are two types of adpositional phrases. In prepositional phrases the preposition precedes the noun phrase, while in postpositional phrases the postposition
follows the noun phrase. Languages usually either have prepositional phrases or postpositional phrases, but not both. The noun phrase that occurs in a adpositional phrase is called the **object of the adposition**.

In most languages of the world, adpositions cannot occur without an accompanying noun phrase. Thus while we can easily say *he came from the house* in English, the sentence *he came from*, which lacks the dependent noun phrase, is ungrammatical. The same is true in Mandarin Chinese. Example (9a) has a prepositional phrase, set off by square brackets:

(9)a.  
\[
\text{wǒ} \ [gēn \ tā] \ chǎojìa \ le
\]
\[
1\text{SG} \ with \ 3\text{SG.M} \ argue \ PFV
\]
\[\text{‘I argued with him.’}\]

The sentence is not grammatical if either the noun phrase or the preposition is absent, as shown in (9b) and (9c):

(9)b.  
\[\text{Noun phrase absent}\]
\[* \ wǒ \ gēn \ chǎojìa \ le\]
\[1\text{SG} \ with \ argue \ PFV\]
(9)c.  

*Preposition absent*

* Wǒ  tā  chǎojia  le  
  1SG  3SG.M  argue  PFV

The same is true of languages with postpositions. Consider example (10), which illustrates this phenomenon in Japanese. Here there is an *instrumental* postposition, which translates into English as ‘with’:

(10)a.  Taroo  wa  [pen  de]  e  o  kaita  
  Taro  TOP  pen  INST  picture  ACC  draw.PST  
  ‘Taro drew a picture with a pen.’

Again, we see that both the postposition and the noun phrase are required for a grammatical sentence; it is not possible to omit either one:

(10)b.  *Noun phrase absent*  

*Taroo  wa  de  e  o  kaita  
  Taro  TOP  INST  picture  ACC  draw.PST

(10)c.  *Postposition absent*  

*Taroo  wa  pen  e  o  kaita  
  Taro  TOP  pen  picture  ACC  draw.PST
We have seen that adpositions require the presence of a noun phrase to form a syntactically complete unit. Hence the adposition and the noun phrase together form a syntactic constituent.

A second argument for the adpositional phrase as a syntactic constituent is that *the ordering between the noun phrase and the adposition is fixed.* Thus one can say in English *Hit it with a hammer* but not *Hit a hammer with.* (At this point you might be thinking about some seeming counter-examples to this claim, like the English sentence *Eat it up!* However, *up* in this sentence is actually not a preposition but a verb particle. For more on this, see Textbox 6.5.) Again, this is also true in Mandarin Chinese; *cóng táiběi* means ‘from Taipei’; the reverse order which puts the preposition after the noun phrase is ungrammatical: *táiběi cóng.* Since elements of the adpositional phrase occur in a fixed order, we see that it is a syntactic constituent.

Another argument for the adpositional phrase as a syntactic unit is that *in most languages the adposition and the noun phrase must be contiguous*; one cannot place other elements between them. For example, in English we cannot say *He arrived at suddenly the house.* Even though adverbs like *suddenly* can occur in a number of positions in the sentence, they cannot be placed between the elements of a prepositional phrase. Again this is true for Mandarin, one cannot say *cóng kè táiběi,* inserting *kè* ‘suddenly’ between the preposition and the noun.
We have presented three arguments for the syntactic unity of the adpositional phrase: obligatoriness, ordering, and contiguity. Thus we may conclude that the adposition and noun phrase together form a small but tightly constructed syntactic constituent, the adpositional phrase. Sidebar 6.9 gives templates for both prepositional and postpositional phrases.

**SIDEBAR 6.9. Template for the Prepositional Phrase**

The English prepositional phrase has a simple template:

```
PREP  NP
```

Here PREP is the abbreviation for ‘preposition’ and NP for ‘noun phrase’. The abbreviation of ‘prepositional phrase’ is PP. Prepositional phrases can have many structures, but that is because noun phrases can have many structures; at the higher level of the constituent represented here, the structure is simple.

The template for a postpositional phrase (also abbreviated PP) is simply: NP POST.
TEXTBOX 6.5. **English preposition or verb particle?**

In English syntax, we have to be careful to differentiate **prepositions**, which head prepositional phrases, from homophous **particles** that occur in **particle verbs**. Particle verbs are compounds that combine a verb with a particle that historically developed from a preposition, but no longer functions as one. Consider the following English sentences:

(a) Sonia walked out the door.
(b) Sonia handed out the candy.

In example (a) there is a prepositional phrase *out the door*, which contains a preposition *out* followed by a noun phrase *the door*. The preposition indicates the direction of the movement from an inside location outward; it can be simply contrasted with *in the door* which indicates movement in the opposite direction. Now consider example (b). Native English speakers will intuitively know that *out the candy* is not a prepositional phrase in the same way that *out the door* is in (a). Rather, *out* is part of the particle-verb compound *handed out*. We can find syntactic proof for this intuition in the fact that the (b) sentence can be restated with the word *out* positioned **after** the noun phrase, i.e., *Sonia handed the candy out*. The same is not true of example (a). The sentence *Sonia walked the door out* is decidedly odd, and even if one can think of a context where it would make sense (e.g., bringing a door out by walking it), it is not the semantic equivalent of the sentence in (a).

Also, notice that while substituting *in* for *out* in example (a) simply indicates a change in direction, substituting *in* for *out* in sentence (b) results in a sentence with an entirely different meaning. This is because *hand in* and *hand out* are unique compounds in the language with meanings that are not simply derivative from the sum of their parts. This is further evidence that *hand out* is a compound and not a verb followed by a preposition.

6.2.3. **Other types of syntactic constituents**

Most languages of the world have noun phrases and adpositional phrases. However, there are also other types of syntactic constituents that are less universal. **Each language needs** to be examined independently in order to determine which syntactic constituents form the building blocks of the syntax.
While noun phrases and adpositional phrases are probably the most common types of phrases cross-linguistically, there are other types as well. For example, an adverb and an adjective together can form an adjective phrase (e.g., English very well), or in Mandarin, a numeral and classifier can form a classifier phrase (e.g., sān dūo ‘three (flowers)’).

English has clear evidence for a **verb phrase** (see Sidebar 6.10), a syntactic constituent consisting of a verb as the head of the phrase, and optional dependents including adverbs, prepositional phrases, object noun phrases, and indirect objects in prepositional phrases. Examples of English verb phrases are given in Textbox 6.6; a short exercise to check your understanding appears in Sidebar 6.11.

**SIDEBAR 6.10**

The structure of the English verb phrase can be represented by the following template:

(ADV) V (ADV) (NP) (PP*) (ADV)

Note that adverbs can come in multiple positions.
TEXTBOX 6.6. **English verb phrases**

In the following sentences, each verb phrase is put into square brackets and marked as “VP.” The major constituents of the verb phrase are labeled with the following abbreviations: NP noun phrase, PP prepositional phrase, ADV adverbial, ADJ adjective.

a. *My parents* [live *in Sonoma* ]\( _{VP} \).

\[
V \quad PP
\]

b. *She* [drives *to the mountains* annually ]\( _{VP} \)

\[
V \quad PP \quad ADV
\]

c. *My kids* [always *carve pumpkins* at *Halloween* ]\( _{VP} \)

\[
ADV \quad V \quad NP \quad PP \quad Object
\]

d. *My Aunt Helen* [gave *her dog* to *my mom* ]\( _{VP} \)

\[
V \quad NP \quad PP \quad Object \quad Indirect Object
\]

e. *Carlos* [is *amazing* ]\( _{VP} \)

\[
V \quad ADJ
\]

**SIDEBAR 6.11**

Draw labeled tree diagrams for each of the sentences in Textbox 6.6, labeling the phrase types and word class for each word. Check your work with the answers posted on the website for your learning and skill development.

Verb phrases obligatorily contain a **predicate** (in English always a verb), the structural center of the clause. A special type of verb is a **copula**, which denotes a relation between two noun phrases or between a noun phrase and an adjective. The
The copula in English is *be*. The noun phrase or adjective that follows a copula is called the **copula complement** (sometimes also the **predicate nominal** or **predicate adjective**). In the sentence *Carlos is amazing*, *amazing* is the copula complement (predicate adjective). In the sentence *Kobin is a top scholar*, the noun phrase *a top scholar* is the copula complement (predicate nominal).

We will now explore two arguments for the status of the verb phrase as a syntactic constituent in English. First, the order of elements within a verb phrase is relatively fixed. For example, we cannot place elements other than an auxiliary before the verb, e.g., *She with the food drive helps* and *Everyone would boxes of chocolates give* are decidedly incorrect. Similarly, placing a prepositional phrase between the verb and a noun phrase results in an ungrammatical sentence: *My kids baked for Halloween cookies*. These types of tests constitute clear evidence that the verb phrase is a unit that has internal structure.

A second argument that the English verb phrase forms a syntactic constituent is that it can be replaced with the **pro-verb** *do*. Note that the entire verb phrase is replaced by *do*, not part of it, as the examples in (11) illustrate. (Although some of the starred sentences in the examples below may be grammatical in other contexts, they are not possible utterances in the exchanges given here.)
(11) a. *Who lives in Sonoma?  
    My parents do.  
    *My parents do in Sonoma.

b. *Does she drive to the mountains?  
    She does.  
    *She does to the mountains.

c. *My kids baked cookies for Halloween.  
    They did?  
    *They did cookies?

d. *Frida gave her dog to Frank.  
    She did?  
    *Did she her dog?

By replacing the verb phrases with pro-verbs, as in (11), we can see that the verb phrase in English is treated as a single cohesive unit; thus, it is a syntactic constituent.

However, **not all languages have verb phrases**. The grammatical arguments that illustrate the cohesiveness of the verb phrase in English do not automatically apply to other languages. Every language must be analyzed independently to determine the set of phrasal constituents and their particular grammatical features.
6.2.4 Recursive structures in syntax

One of the interesting design principles of constituent structure is recursion, or the ability for a phrasal constituent to embed another phrasal constituent of the same type within it. We can see this by examining the templates of the English noun phrase and the English prepositional phrase:

NP: (DET) (QUANT) (NUM) (ADJ*) N (PP*) (REL)

PP: PREP NP

Notice that the noun phrase can contain a prepositional phrase and that a prepositional phrase obligatorily contains a noun phrase. This allows sentences such as (12).

(12) I saw the book on the table by the window in the corner of the room.

Each prepositional phrase is embedded into the noun phrase containing the noun it modifies. We can represent this by means of a labeled tree diagram. The elements of each phrase are represented on a unique level of the tree, as in Figure 6.2.
We can see that each phrase type is recursively embedded into the other. In principle, this recursion could go on infinitely; however, human cognitive constraints on memory as well as physical constraints on production – make excessively long recursive structures impractical as mediums of communication. Nevertheless, the ability to embed one complex element into another, allows for great structural flexibility and expressive power in human language.
6.3 The Clause

We will now move up from the phrase to the next higher level of syntactic organization: the clause. **A clause can be defined as a syntactic unit typically consisting of a verb (in some languages within a verb phrase), its noun phrase arguments, and optional adverbial elements (usually adverbs and adpositional phrases).** As with other syntactic units, clauses have internal organization. For example, in most languages the elements of the clause occur in a relatively fixed order. Usually clauses occur as contiguous units; they are not divided by other inserted elements that are not part of the clause. Clauses can also have other restrictions; for example, typically only one tense can be specified per clause.

We can see evidence for these facts in English. For example, the typical order for a verb and its noun-phrase arguments in English is Subject-Verb-Object (SVO), as in (13).

\begin{align*}
\text{(13) } & \quad \text{The band} \quad \text{played} \quad \text{my favorite song} \\
& \quad \text{subject} \quad \text{verb} \quad \text{object}
\end{align*}

Note that other orderings result in ungrammatical sentences, e.g., *played my favorite song the band* is ungrammatical.

We can see the contiguity of clausal elements if we put two clauses together with a conjunction, as in (14).
The two clauses must occur in a strict linear order: first one then the other. We can’t scramble their elements, as shown by the ungrammatical nature of *Chris the drinks carried the popcorn and Robin carried or *Chris carried carried the popcorn and Robin the drinks.

Finally, the fact that clauses in English can only have one tense is illustrated by the inability of the future auxiliary will to occur in the same clause as the 3rd-person singular present tense morpheme –s. Thus, while both Camille will play her violin and Camille plays her violin are acceptable, *Camille will plays is not. This restriction does not hold over separate clauses. So we can say Camille plays today at 4 and she will play again tomorrow. There is a grammatical uniformity within each clause (e.g., the entire clause is in future tense), which we can describe using statements of grammatical regularity, or rules. The elements in a clause are grammatically unified, demonstrating that the clause is an important unit in grammar.

We will now look in more detail at the grammatical relationships between elements of the clause, beginning with verbs and their arguments.
6.3.1 Arguments and Transitivity

The term argument refers to a noun phrase, but rather than emphasizing its internal constituent structure, the term emphasizes the grammatical status of the argument in relation to the verb. There are two types of arguments: core arguments and oblique arguments. (See Sidebar 6.12 on the meaning of the word ‘argument’.)

SIDEBAR 6.12. ‘Argument’

The word ‘argument’ has both technical and non-technical uses in linguistics and you will see both in this chapter. The technical meaning is that presented here, a noun phrase of a particular grammatical status in relation to a verb. ‘Argument’ is also used in its non-technical sense of advancing evidence in favor of a conclusion. Both terms are used throughout this chapter and beyond.

Core arguments are those that have a grammatical relationship with the verb; this can be determined by their grammatical behavior, such as the ability to take certain types of affixes, the ability to trigger affixation on the verb, and their ordering in the clause with respect to other elements.
Oblique arguments do not have a grammatical relationship with the verb. They may instead be grammatically linked to a preposition or a postposition, although they don’t need to be. In many languages, oblique arguments have more freedom of positioning than core arguments. Oblique arguments also convey information external to the strict verbal semantics, such as the location of an event, its time, or the instrument used to carry out an action. Try out the exercise given in Sidebar 6.13 to check your understanding of core versus oblique arguments.

Each argument in the English sentences in (15) has been marked for its core or oblique status:

(15) a. *She ate her french fries with a fork*
    
    core core oblique

b. *My mother arrived at the airport this morning.*
    
    core oblique oblique

c. *The ball hit the goal post.*
    
    core core

d. *I gave a dollar to my son for ice cream.*
    
    core core core oblique

A brief comparison of the examples in Table 6.1 shows that clauses can differ in the number of core arguments. Some verbs take only one core argument, other verbs take two, and a smaller number of verbs take three. This property of verbs is referred to as transitivity. Verbs that can take at most one core argument are referred to as intransitive; verbs that can take at most two core arguments are referred to as transitive; and verbs that can take at most three core arguments are referred to as
**ditransitive.** Verbs of each type are illustrated in Table 6.1, together with the number of core arguments and example sentences with the core arguments underlined.

<table>
<thead>
<tr>
<th>Transitivity</th>
<th>Number of Core Args.</th>
<th>Example Verb</th>
<th>Sample sentence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intransitive</td>
<td>1</td>
<td>‘sneeze’</td>
<td><em>I sneezed.</em></td>
</tr>
<tr>
<td>Intransitive</td>
<td>1</td>
<td>‘go’</td>
<td><em>Sam went to Russia.</em></td>
</tr>
<tr>
<td>Intransitive</td>
<td>1</td>
<td>‘grow’</td>
<td><em>Tomatoes never grow well here.</em></td>
</tr>
<tr>
<td>Transitive</td>
<td>2</td>
<td>‘push’</td>
<td><em>Carl pushed the wheelbarrow.</em></td>
</tr>
<tr>
<td>Transitive</td>
<td>2</td>
<td>‘build’</td>
<td><em>We built our house last year.</em></td>
</tr>
<tr>
<td>Transitive</td>
<td>2</td>
<td>‘lift’</td>
<td><em>They lifted the table onto the truck.</em></td>
</tr>
<tr>
<td>Ditransitive</td>
<td>3</td>
<td>‘donate’</td>
<td><em>Angelo donated fifty dollars to the foodbank.</em></td>
</tr>
<tr>
<td>Ditransitive</td>
<td>3</td>
<td>‘teach’</td>
<td><em>He teaches maths to high school students.</em></td>
</tr>
<tr>
<td>Ditransitive</td>
<td>3</td>
<td>‘tell’</td>
<td><em>Mike told that story to my children.</em></td>
</tr>
</tbody>
</table>

Table 6.1. Examples of Intransitive, Transitive, and Ditransitive verbs and sentences
The noun phrases in each of the following examples are underlined. Determine whether each noun phrase is core or oblique. Also note the transitivity of the verb. Answers can be found on the website.

a. *He left with* *his friends.*
b. *They will meet us at the restaurant.*
c. *Tomorrow I will drive from San Francisco to Los Angeles.*
d. *She gave the letter to her boyfriend.*

6.3.2 Grammatical Relations: Subjects

We have seen that verbs have a certain number of core arguments based on their transitivity. Now we will examine how the various core arguments have different grammatical relations with the verb. We will begin our discussion using English and the grammatical relation of subject. Subjects are one type of core noun phrase. In the sentences in (16) – taken from the Santa Barbara Corpus of Spoken American English – the subjects are in bold; while objects are underlined.

(16) a. *I need new filters.* (SBC: 001)
b. *Do you remember the date?* (SBC: 008)
c. *She wants everything on her terms.* (SBC: 006)
d. *Me and mom always accused her of being lazy.* (SBC: 001)
Note that the subjects in these sentences consistently precede the verb. This is the usual position for subjects in English statements (although it is possible to change the order for stylistic effect).

Another grammatical feature of English subjects is that they trigger the use of the suffix -s on the verb. This suffix is used when the subject is both third-person and singular, as in (16c). Note that we can’t use the –s suffix when the subject is: first-person, as in (16a); second-person, as in (b); or third-person plural, as in (d). Notice also that the –s suffix is not triggered by her in (d), even though it is a third-person-singular core argument. This is because her is the object of the verb accused, not the subject (hence the use of her, the object form of the pronoun, as opposed to she, the subject form) The verb agrees with third-person singular subjects—rather than objects—in the present tense, as in (c).

From this brief exercise, we have identified two grammatical properties that are shared by English subjects:

(i) English subjects occur before the verb in stylistically-neutral statements.

(ii) English subjects trigger third-person-singular agreement in the present tense.

There are a number of other grammatical features of subjects in English. Consider the fabricated sentences in (17), both of which have the subject omitted in the first clause.
(17) a. Removing his sunglasses, **Adam** watched **Sam**.
   
b. Removing his sunglasses, **Sam** watched **Adam**.

In each case, it is necessarily the one who is watching (the subject of the second clause) who also raises his wand (the subject of the first clause). When the subject of an initial clause is omitted in this fashion, the omitted subject is necessarily **coreferential** with the subject of the following clause.

We can represent the grammatical relationships between the two subjects as in (18). A null sign is used to indicate that the subject of the initial clause has been omitted.

(18) \[ [\emptyset \text{SUBJ VERB OBJ}]_{\text{clause 1}} \quad [\text{SUBJ VERB OBJ}]_{\text{clause 2}} \]

We have thus uncovered a third property of grammatical subjects in English:

(iii) When combining clauses in a certain way, omitted subjects are necessarily coreferential with the subject of the following clause.

*Languages across the world differ in the grammatical properties that define subjects.* In Nepali, verb agreement indexes the person, number, and – for second and third person – the honorific status of the subject. The Nepali paradigm in (19) illustrates these various verb forms in the present tense. Note that we find verb agreement with both intransitive verbs (e.g., *sutnu* ‘come’) and transitive verbs (e.g., *khanu* ‘eat’).
(19)  

<table>
<thead>
<tr>
<th>Case</th>
<th>Verb Form 1</th>
<th>Verb Form 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1SG</td>
<td>sut-chu</td>
<td>khan-chu</td>
</tr>
<tr>
<td>1PL</td>
<td>sut-chāū</td>
<td>khan-chāū</td>
</tr>
<tr>
<td>2SG</td>
<td>sut-chau</td>
<td>khan-chau</td>
</tr>
<tr>
<td>2PL</td>
<td>sut-chāu</td>
<td>khan-chau</td>
</tr>
<tr>
<td>2HON</td>
<td>sut-nu-huncha</td>
<td>khā-nu-huncha</td>
</tr>
<tr>
<td>3SG</td>
<td>sut-cha</td>
<td>khan-cha</td>
</tr>
<tr>
<td>3PL</td>
<td>sut-chan</td>
<td>khan-chan</td>
</tr>
<tr>
<td>3HON</td>
<td>sut-nu-huncha</td>
<td>khā-nu-huncha</td>
</tr>
</tbody>
</table>

In Korean, there is a case-marker –*ka* that is found only on subjects. We find it suffixed both to subjects of intransitive verbs, as in (20a), and to subjects of transitive verbs, as in (b). (See Sidebar 6.14 for a note on these examples.)

(20)a.  

```
mulkoki-ka  iss-ta
```

fish-NOM  exist-DECL

'There's a fish.' (Literally: ‘A fish exists (there)’)

(20)b.  

```
nay-ka    ttwukkeng-ul  yel-ess-e
```

1SG-NOM  cover-ACC  open-ANT-IE

'I opened the cover.'
SIDEBAR 6.14

The examples in (20) are taken from recordings of parent-child discourse as part of a larger study on Korean language acquisition by Professor Patricia Clancy, at the University of California, Santa Barbara. The utterances were produced by a child named Wenceng, at age 2 years and 1 month.

Glossing

<table>
<thead>
<tr>
<th>NOM</th>
<th>nominative case</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACC</td>
<td>accusative case</td>
</tr>
<tr>
<td>ANT</td>
<td>anterior (marks an event as completed and prior to current time or other event)</td>
</tr>
<tr>
<td>IE</td>
<td>informal ending (marks an utterance as being informal)</td>
</tr>
<tr>
<td>DECL</td>
<td>declarative</td>
</tr>
</tbody>
</table>

Case-markers with this distribution are said to mark **nominative (i.e., subject)** case.

Korean is unlike English in this regard. Korean differs from both English and Nepali in having case-marking, but not verb agreement. It is similar to Nepali, however, in placing the verb at the end of the clause and allowing flexibility in the word order of the subject and the object.

This brief discussion illustrates that **languages differ in the grammatical properties that define the subject grammatical relation**. While some languages may have a number of
grammatical properties that define this relation, others might have only one, or even none. In the latter case, we would say that those language lacked the subject category.

6.3.3 Grammatical Relations: Objects

Transitive and ditransitive verbs have **objects**. Objects are also a type of core argument, but **objects have different grammatical properties than subjects**. Consider again our examples of transitive clauses in English; objects are underlined (Example 21).

(21) a. *I need new filters.*

   b. *She wants everything.*

   c. *Me and mom always accused her.*

   d. *Adam removed his sunglasses.*

   e. *Sam watched Adam.*

In English, objects directly follow the verb; these are called **direct objects**. We can see that English grammatically distinguishes subjects from direct objects in part by their ordering: in stylistically-neutral declarative sentences, subjects precede the verb and objects follow the verb. English is thus described as having SVO (subject-verb-object) constituent order.
English also distinguishes direct objects from **indirect objects**. By definition, *indirect objects only occur with ditransitive verbs*. In English, indirect objects differ from direct objects in that they can occur in two positions: in prepositional phrases following the prepositions *to* or *for* and in so-called **double-object constructions** where they immediately follow the verb. We can see these two possibilities in the related sentences in (22). *Veronica*, the indirect object, occurs following the preposition *to* in (22a), and in the first position of the double-object construction in (b).

(22)  

a. *The Dean gave the prize to Veronica.*  
b. *The Dean gave Veronica the prize.*

In English, only indirect objects have the ability to occur in this pairing of positions. Try out the short exercise in Sidebar 6.15 to check your understanding of direct and indirect objects.
a. John handed the baby to his mother.
b. He taught French to sixth-graders.
c. She brought flowers for her sister.
d. He told his version of events to the police officer.

Do the following sentences have indirect objects? How do you know?

e. He drove me to Portland.
f. He worked my shift for me.

In many languages, case-marking is used to differentiate direct and indirect objects. Case-markers that indicate direct objects are called accusative, while those that indicate indirect objects are called dative. We can see case-marking differentiating these two classes of objects in the Japanese sentences in (23). Note that direct objects occur with the accusative casemarker regardless of whether they are objects of transitive (23a) or ditransitive (23b) verbs (see Sidebar 6.16 for the glossing conventions).
Nez Perce, a Native American language spoken in eastern Oregon and western Idaho, also has an accusative case-marker, as illustrated in (24). (Glossing conventions given in Sidebar 6.17.)
(24) Nez Perce (Phinney 1934:368)

kaa wéétú núu-ne hi-nees-qicx-ne

and not we-ACC 3.NOM-PL.OBJ-take.care-PST

‘And he didn’t take care of us.’

Example (24) also illustrates a verbal prefix nees-, which agrees with the direct object in number. Thus in Nez Perce, both case-marking and agreement index the direct object grammatical relation. There are many other grammatical properties related to categories of object; each language needs to be examined independently to determine which criteria (if any) distinguish between types of objects.
6.3.4 Other grammatical relations

*While subjects, objects, and indirect objects are familiar from English and most European languages, these are not the only core grammatical relations that are found in the world’s languages.* For example, it is quite common to have grammatical properties that pertain only to the “subject” of transitive verbs, but not to the “subject” of intransitive verbs. We refer to this grammatical relation as **ergative**. Discussions of languages with ergative grammatical patters are found in the Tsez, Bardi, and Manange language profiles.

6.3.5 Grammatical relations versus semantic case roles

Up to this point, we have been looking solely at **grammatical relations** between arguments and verbs, that is, the grammatical properties (such as agreement, case, order, etc.) that characterize sets of core arguments. **It is important to differentiate these grammatically-defined relationships from the semantic relationships between arguments and verbs.** Consider the sentences in (25).

(25) a. *Julie swims at the health club.*

    b. *Julie feels dizzy after breakfast.*

In (25a), Julie is acting intentionally, of her own volition; we say Julie is an **agent** in this clause. In (25b) Julie is not a volitional actor, but someone experiencing a physical
state; we say here that Julie is an **experiencer**. In both cases, the noun phrase *Julie* is the grammatical subject of the clause. It occurs before the verb and triggers the third-person-singular agreement marker –s. So while the grammatical relationship between *Julie* and the verb is the same in both examples, the semantic relationship is different.

*Grammatical and semantic relationships are independent of each other.*

Now consider the two oblique arguments in (25a) and (b). You will see that while both *the health club* and *breakfast* are oblique (i.e., neither is a core argument), they also differ semantically; *the health club* indicates the location of an activity, while *after breakfast* is temporal, specifying the time that the situation occurs.

*The semantic relationships between verbs and arguments are referred to as semantic case roles.* The following list gives the most commonly found semantic case roles in the world’s languages (see Sidebar 6.18). To illustrate the independence of semantic case roles and grammatical relations, the grammatical relation of each underlined NP will be given in parentheses to the right of each example:

**Sidebar 6.18**

The list of semantic case roles given here is not exhaustive. Beginning students should become familiar with these terms and be able to identify these relations in sentences. The most important point, however, is that semantic case roles and grammatical relations are independent of each other; one tracks the meaning and the other the grammar.
<table>
<thead>
<tr>
<th>Semantic Case Role</th>
<th>Grammatical Relation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Agent</strong>: The volitional instigator of an activity or event.</td>
<td></td>
</tr>
<tr>
<td>Andrea carved the pumpkin.</td>
<td>(subject)</td>
</tr>
<tr>
<td>The dog ate the cake.</td>
<td>(subject)</td>
</tr>
<tr>
<td>This pumpkin was carved by Andrea.</td>
<td>(oblique)</td>
</tr>
<tr>
<td><strong>Patient</strong>: An entity that undergoes a change of state as the result of an activity or event.</td>
<td></td>
</tr>
<tr>
<td>Andrea carved the pumpkin.</td>
<td>(direct object)</td>
</tr>
<tr>
<td>The dog ate the cake.</td>
<td>(direct object)</td>
</tr>
<tr>
<td>The pumpkins will be carved by Andrea.</td>
<td>(subject)</td>
</tr>
<tr>
<td><strong>Theme</strong>: An entity undergoing motion or being located.</td>
<td></td>
</tr>
<tr>
<td>Shelly took the dog to the vet.</td>
<td>(direct object)</td>
</tr>
<tr>
<td>Brian is at his mom’s house.</td>
<td>(subject)</td>
</tr>
<tr>
<td><strong>Recipient</strong>: An entity that receives a theme.</td>
<td></td>
</tr>
<tr>
<td>He speaks Navajo to his children.</td>
<td>(indirect object)</td>
</tr>
<tr>
<td>She got a letter from an old friend.</td>
<td>(subject)</td>
</tr>
<tr>
<td><strong>Beneficiary</strong>: An entity who benefits from an action.</td>
<td></td>
</tr>
<tr>
<td>He substituted for John.</td>
<td>(oblique)</td>
</tr>
<tr>
<td>He sang songs for the children.</td>
<td>(indirect object)</td>
</tr>
<tr>
<td>They helped her when she was ill</td>
<td>(direct object)</td>
</tr>
<tr>
<td>He benefited from their kindness.</td>
<td>(subject)</td>
</tr>
<tr>
<td><strong>Experiencer</strong>: An entity that experiences a physical or emotional state.</td>
<td></td>
</tr>
</tbody>
</table>
Clifford became delirious. (subject)

Rasheed was tired. (subject)

**Location:** A static location.

Brian slept at his mom’s house. (oblique)

Each packet contains one ounce of powder. (subject)

**Source:** The beginning point of a motion trajectory.

She drove from San Francisco to Los Angeles. (oblique)

They left Kenya. (direct object)

Rotterdam will be next year’s starting point for the Tour de France. (subject)

**Goal:** The endpoint of a motion trajectory.

She drove from San Francisco to Los Angeles. (oblique)

He hopes to reach Portland tomorrow. (direct object)

Seattle is their destination. (subject)

**Temporal:** A location in time.

She comes home during the holidays. (oblique)

June is when the strawberries are at their best. (subject)

**Instrument:** An entity used to perform an action.

She applied the last coat of paint with a roller. (oblique)

Dad used a small knife to cut open the fish. (direct object)

This type of key opens several locks. (subject)
These examples illustrate the independence of semantic case roles and grammatical relations: each semantic case role is shown in multiple grammatical relations, and each grammatical relation is shown with multiple case roles.

6.4 Constructions

Most of the examples cited so far in this chapter have illustrated affirmative, declarative, active clauses, which are both the simplest and most prototypical clause types. However, functions like signaling negation, asking questions, giving commands, and highlighting or downplaying the importance of referents in a given discourse context are also critical to human communication. For such tasks, languages have a variety of constructions, fixed grammatical patterns associated with particular functions. Consider the five sentences in (26). Although they all convey information about Olivia, a dog, and an event of finding, the sentences have different forms and different functions.

(26) a. *Olivia found the dog.* Declarative, affirmative, active
b. *Did Olivia find the dog?* Interrogative, affirmative, active
c. *Olivia didn't find the dog.* Declarative, negative, active
d. *The dog was found.* Declarative, affirmative, passive
e. *Wasn't the dog found?* Interrogative, negative, passive
The sentence in (26b) illustrates a **polar question** (a question that one could answer with a simple ‘yes’ or ‘no’ response). In English, polar questions require an auxiliary verb in the first position of the sentence. This is followed by the subject noun phrase, and then the verb phrase. This is a construction, with the fixed part of it being both the required auxiliary and the strict ordering of the auxiliary, subject, and verb phrase; the function is that of requesting an affirmative or negative response.

English negation, exemplified in (26c) also requires an auxiliary verb, which is followed by the negative morpheme *not* (sometimes contracted into *n’t*). In this case, the auxiliary follows the subject, as in the declarative clause. Note that this construction requires the presence of a particular morpheme (the negative) in a particular position.

The **passive** construction exemplified in (26d) requires a particular auxiliary—a form of the verb *be*—and a particular form of the lexical verb (the past participle). In addition, the semantic patient, which would typically be the direct object in an active construction, is the grammatical subject in the passive. These differences can be schematized as in Figure 6.3.

![Figure 6.3. Schemas representing active and passive constructions in English](image)

As shown in Figure 6.3, it is also possible for a passive clause to specify the semantic agent in a prepositional phrase as the object of the preposition *by*, e.g., *the dog was found by Olivia*. This is optional, a feature denoted by the parentheses in the schema. The function of the passive is to put noun phrases that denote prominent or important
referents into the subject position. For example, if people are discussing a particular lost dog and what happened to it, then keeping NPs referring to the dog in subject position allows for structural continuity with the surrounding discourse. Passive constructions can also be used when speakers want to de-emphasize an agent, or when the identity of an agent is unknown or unimportant. Consider, for example, the ubiquitous passives of the structure [Celebrity name] was spotted [e.g., at a local club, with their ex-girlfriend, etc.] The identity of the person spotting the celebrity is assumed to be unimportant to the reader compared to the celebrity’s unexpected appearance in public.

It is important to note that there are cross-linguistic differences in the types of constructions used for a given function. For example, Dolakha Newar signals negation by simply prefixing a negative morpheme to the verb; auxiliaries are not required, as they are in English:

(27)  
\[ \text{chana kehē mo-cō} \]

\[ \text{2SG.GEN younger.sister NEG-stay} \]

‘your sister isn’t staying (at home)’

Polar questions are also constructed differently in Dolakha Newar than in English. They simply involve the addition of a particle (glossed here as Q) at the end of the sentence:
(28)  

<table>
<thead>
<tr>
<th>chin</th>
<th>khā</th>
<th>la-ina</th>
<th>rā</th>
</tr>
</thead>
<tbody>
<tr>
<td>2SG-ERG</td>
<td>matter</td>
<td>talk-2SG.FUT</td>
<td>Q</td>
</tr>
</tbody>
</table>

‘Will you talk about this matter?’

**SIDEBAR 6.19 Transcription note**

<table>
<thead>
<tr>
<th>Dolakha Newar Orthography</th>
<th>IPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>ch</td>
<td>/tʃ/</td>
</tr>
<tr>
<td>ā</td>
<td>/a/</td>
</tr>
<tr>
<td>a</td>
<td>/ə/</td>
</tr>
</tbody>
</table>

Without the final question particle, the sentence in (28) would be the affirmative counterpart, i.e., ‘you will talk about this matter’.

Interestingly, the range of constructions that are attested in the world’s languages for particular linguistic functions (such as asking questions, signaling negation, or giving commands) is usually quite limited. Study of such cross-linguistic variation is the primary focus of linguistic **typology** and can tell us much about how linguistic structures are used to meet speakers’ communicative needs.
6.5 The Sentence

A sentence is an integrated syntactic unit consisting of at least one clause and optionally adverbials that have scope over the sentence as a whole. The notion of integration is important, because there is a difference between having two adjacent sentences that are not integrated, as in (29a), and having two clauses integrated into a single sentence, as in (29b) or (c).

(29) a. The sun came up. It shone in my eyes.
   b. When the sun came up it shone in my eyes.
   c. The sun came up and shone in my eyes.

In example (29a), there is nothing that connects the two sentences; each forms a complete syntactic unit that could stand on its own as an independent utterance. By contrast, in examples (29b) and (c), the two clauses have been integrated into a single sentence.

In (29b), the first clause has been marked as subordinate by the use of an adverbial conjunction, when. Note that this clause could not normally stand on its own; it is providing the temporal frame for the following proposition.

In (29c) the two clauses have been coordinated by the conjunction and. The integration of the two is evident from the omission of the subject in the second clause. In
English, one typically does not omit the subject in a single-clause sentence. Thus * Ø shone in my eyes, where Ø indicates the position of the omitted subject, is considered ungrammatical.

6.5.1 Clause-combining: Coordination versus subordination

A complex sentence is a sentence with more than one clause. Both (26b) and (c) above are complex sentences. Clauses can be combined either by coordinating two independent clauses using a conjunction, thereby creating the larger unit, or by placing one clause inside of another as a dependent (or subordinate) element. These two structural types can be represented schematically as in Figure 6.4.

![Figure 6.4. Schematic representation of coordination and subordination](image-url)
With coordination, two (or more) clauses are conjoined at the same level of structure. In contrast, with subordination, a main or **matrix clause** has another subordinate clause within it as a dependent element. **There are three distinct ways by which subordinate clauses are made dependent to a matrix clause, so there are three types of subordinate clauses: adverbial clauses, relative clauses, and complement clauses.**

Many of the world’s languages use both coordination and subordination in creating complex sentences. The details of clause combining vary considerably across languages. Here we will restrict the discussion to English.

To begin our exploration, let’s consider some examples from *Harry Potter and the Goblet of Fire* by J.K. Rowling. Dependent clauses are underlined.

(30)  

a. **Hermione joined him a moment later and slipped him a butterbeer under his cloak.**

b. **Harry felt he ought to go, but his curiosity held him in the chair.**

c. **If Voldemort is really getting stronger again, my priority is to ensure your safety.**

d. **He sat with Hermione and Ron in the library as the sun set outside.**

e. “**Dumbledore, you know perfectly well that you did not make a mistake!**”

f. **She knew he’d passed information to the Death Eaters.**

g. **Harry watched the dragon nearest to them teeter dangerously on its back legs.**
h. Professor Dumbledore was now looking down at Harry, who looked right back at him.

i. Those people whose names come out of the Goblet of Fire are bound to compete in the tournament.

The ten sentences in (30) illustrate four distinct types of clause combining. Examples (a) and (b) illustrate coordination, with clauses combined using a simple conjunction (and in (a) and but in (b)). Examples (c) and (d) illustrate adverbial clauses, marked by the subordinating conjunctions if (c) and as (d). Examples (e) and (f) illustrate relative clauses, where a clause is placed within a noun phrase and is a dependent of a head noun. Examples (g) through (i) illustrate complement clauses, where a clause functions as a noun-phrase argument of the verb of the matrix clause. We will now examine each structure in more detail.
6.5.1 Clause-combining: Coordination versus subordination

Coordination combines two clauses in linear sequence using a conjunction: typically and, or, or but, or their equivalents in other languages. Clauses combined through coordination form sentences that behave as single cohesive syntactic units. There are a number of arguments that support this claim. For example, in English the subject of the second clause in a coordinate structure can be omitted, as in (30a) above. This clause, with the absence of an overt subject argument, would be ungrammatical if it occurred independently, i.e., *slipped him a butterbeer under his cloak is not by itself a complete sentence; it is only grammatical when combined with another clause via coordination.

A second argument that coordinated clauses act as a single cohesive unit is the fact that the unit as a whole can be combined with other clauses. We see this in example (j), where two conjoined clauses (underlined) function as the complement of a matrix verb.

j. Harry watched Cedric pull a knife out of his pocket and cut Cho free.
6.5.2 Adverbial clauses

**Adverbial clauses** are dependent clauses that are linked to a matrix clause using either an adverbial conjunction or an affix that specifies the semantic relationship between clauses. These conjunctions convey meanings such as condition (*if*), cause (*because*), consequence (*so*), concession (*although*), temporal sequence (*when, after*), temporal overlap (*while*), and purpose (*to, in order to*).

The subordinate status of adverbial clauses is evident from the fact that they cannot occur independently; for example *as the sun set outside* cannot stand alone as an independent utterance.

6.5.3 Complement clauses

**Complement clauses** are dependent clauses that function as noun phrase arguments of verbs. Consider again our Harry Potter examples (e) through (g), repeated here for convenience:

- **e.** “Dumbledore, you know perfectly well **that you did not make a mistake!**”
- **f.** She knew *he’d passed information to the Death Eaters*.
- **g.** Harry watched the dragon nearest to them teeter dangerously on its back **legs**.
In examples (e) and (f) the verb of the **matrix clause** is *know* and in (g) it is *watch*; all three are transitive verbs. Rather than having simple noun phrases as objects, however, **these examples have clauses as objects** (the underlined portion in each example). These are considered **complement clauses** as they “complete” the verb by providing one of its core arguments. These complements provide the object of the verb and are thus **object complements**.

The labeled tree diagram of example (g) in Figure 6.5 schematically illustrates the relationship between the complement clause and the matrix verb.

![Labeled tree diagram](image)

Figure 6.5. Labeled tree diagram for a sentence with a complement clause
The noun phrase preceding the verb phrase is the subject, *she*. The verb phrase consists of the matrix verb *know* and a noun phrase which directly follows the verb, the customary position for objects. In this case, however, the object noun phrase does not consist of a noun and its dependent elements; instead, the noun phrase is realized as an entire complement clause (represented in the tree diagram by S): *he’d passed information to the Death Eaters.*

### 6.5.4 Relative clauses

Relative clauses are similar to complement clauses in that they are embedded as part of a matrix clause. However relative clauses are not arguments of verbs. Instead **relative clauses are embedded within noun phrases and function as dependent modifiers of nouns**. Consider sentences (h) and (i); the relative clauses are underlined.

- **h.** *Professor Dumbledore was now looking down at Harry, who looked right back at him.*
- **i.** *Those people whose names come out of the Goblet of Fire are bound to compete in the tournament.*
In English, relative clauses directly follow the nouns that they modify. *The noun, relative clause, and any other noun phrase elements together form a single cohesive noun phrase.* We can see this by replacing the subject noun phrase of (i) with a pronoun. This produces *They are bound to compete in the tournament,* with the pronoun replacing not just the demonstrative and noun but also the relative clause. Keeping the relative clause in would produce *They whose names come out of the Goblet of Fire,* which is distinctly odd. This shows that the relative clause is part of the same unit as the noun.

The structure of the noun phrase containing the relative clause in (i) is represented in a labeled tree diagram in Figure 6.6.

![Labeled tree diagram for (i)](image)

Comparing this to Figure 6.5, *we can structurally contrast complement clauses with relative clauses.* With complement clauses, *an embedded clause is as an entire noun phrase,* while with relative clauses, *an embedded clause is within a noun phrase,* *following the noun that it modifies.* Within the noun phrase, relative clauses are dependent elements and nouns modified by relative clauses are called *head nouns.*

In describing the English relative clause, it is important to note that there is an obligatory gap in the relative clause, which corresponds to the head noun. In the following examples, the gap is represented by a null symbol:
The guy who Ø came late  compare  The guy came late

The guy I met Ø yesterday  compare  I met the guy

The guy I gave my keys to Ø  compare  I gave my keys to the guy

The guy I was working for Ø  compare  I worked for the guy

We can see this gapping as a grammatical adjustment for the integration of the relative clause into the noun phrase. It helps to clarify the role of the head noun in the relative clause.

Try out the short exercise in Sidebar 6.20 to check your understanding of coordination and the various types of subordination.
SIDEBAR 6.20

For each of the following examples, state whether the structure illustrates coordination or subordination. For subordination, underline the dependent clause and determine whether it is an adverbial, complement, or relative clause. Then check your answers on the website.

a. Connie read the book that I recommended.
b. Connie read the book because I recommended it.
c. Connie liked reading the book.
d. Connie read the book and wrote a report on it.

Hints: If a conjunction separates the clauses, it is coordination.
If there is an adverbial conjunction (e.g., if, when, etc.), it is an adverbial clause.
If it directly follows a noun that it modifies, it is a relative clause.
If it directly follows a matrix verb, it is an object complement clause.

6.6 Chapter Summary

Words combine syntactically into phrases, which combine into clauses, which in turn combine into sentences. At each level there are a variety of structural types:
• Noun phrases, adpositional phrases, and verb phrases are among the phrase types in the world’s languages.

• Clauses, containing intransitive, transitive, and ditransitive verbs as their centers, have grammatical relationships with core arguments, including subjects, direct objects, and indirect objects, as well as other categories. Oblique arguments are not grammatically linked to verbs and generally convey information that supplements the verbal semantics.

• Sentences combine clauses either by coordinating clauses at the same level of structure, or by subordinating a clause, through adverbial, complement, or relative clause structures.

Just as with word-class categories, linguistic diversity is reflected in the variety of syntactic categories that are relevant for any particular language. Each language must be examined independently in order to determine the particular syntactic categories that are relevant for that language. To do so, we need to examine patterns of distribution, compare sentences that are minimally distinct, and provide arguments for the existence of structural categories.
Syntax allows us to go beyond the simple naming of things by words and to communicate the multiplicity of situations, events, activities, actions, and complex concepts in which we are engaged. It allows us to state, negate, question, command, and describe. The networks of markings and grammatical relationships mean that words are not simply thrown out randomly in the hopes that others will guess at how they are related, but that they are closely tied to one another in precise and detailed ways. As such, syntax is a central and critical component of linguistic communication.

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Exercises

1. Each of the following English sentences is followed by the label of a particular constituent. Identify that constituent in the sentence, then: (i) write out the entire constituent, (ii) state one structural characteristic that proves it is a constituent of that type, and (iii) provide one argument, based on the reading, that further justifies your analysis.

Example:

*Marcus is watching football with his dad.*  
Prepositional phrase

(i)  *with his dad*

(ii) It contains a preposition *with* immediately followed by an NP *his dad*.

(iii) Both the preposition and the noun phrase are required. The sentences

*Marcus is watching football his dad* and *
Marcus is watching football with* are ungrammatical. This criterion of obligatoriness shows that the preposition and the noun phrase are both required to occur, and that the prepositional phrase as a whole is a cohesive syntactic unit.

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a. *The coat on the back of the chair is still damp.*  
Noun phrase

b. *Ken put the ice-cream maker in the car.*  
Verb phrase

c. *I am going for a walk.*  
Prepositional phrase
d. The family that moved in across the street keeps their car in the driveway. **Subject**

e. Olivia studied her world-history notes before the exam. **Object**

f. My dog never brings the stick to me. **Indirect object**

2. Draw labeled tree diagrams for each of the following sentences. If you are unsure about the constituent structure of an example, use the criteria and arguments discussed in the chapter to test whether the elements are part of the same constituent.

a. The team played four games at the youth center.

b. The three girls brought a cake with frosting.

c. Those big dogs down the street always bark at the guy that delivers the mail.

3. The following sentence is syntactically ambiguous: there are two possible interpretations, each reflecting a different syntactic structure, although the string of words remains the same. Explain the two meanings and how they differ, then draw labeled tree diagrams representing the two different possible structures.

   I watched the birds in the garden.
4. Maninka is a Niger-Congo language spoken in West Africa. Tones are not represented in the following data set. (Data are taken from: Bird, Charles and Timothy Shopen. 1979. Maninka. In Shopen, Timothy (ed.), Languages and Their Speakers. Cambridge, Massachusetts: Winthrop Publishers.)

a. *baba be na*  ‘Baba is coming’

b. *baba be ta*  ‘Baba is going’

c. *a be sigi*  ‘s/he is sitting’

d. *fanta be sunogo*  ‘Fanta is sleeping’

e. *baba be daga sigi*  ‘Baba is setting down the pot’

f. *a be ji sigi*  ‘S/he is setting down the water’

g. *fanta be kini sigi*  ‘Fanta is setting down the rice’

h. *i be daba sigi*  ‘I am setting down the hoe’

i. *an be kini tobi*  ‘We are cooking the rice’

j. *fanta be an fo*  ‘Fanta is greeting us’

i. Give the meaning in English of each of the following words. If there appears to be more than one English translation, list both. Can you think of a way to represent a single meaning for these morphemes?
What meaning might the word *be* signal?

What is the order of the noun phrases and the word *be* with respect to the verb in Maninka (in terms of S (roughly subject), O (roughly object), and V (verb))?}

5. The goal of this problem is to determine the basic principles underlying the grammatical marking of noun phrases in Nepali, which is an Indo-Aryan language and the national language of Nepal. The answer you turn in should be a coherent analysis of Nepali syntax, based upon the data below. Questions (i) through (vii) are designed to help you work through the data and produce an analysis. Question (viii) tells you what to include in your prose write-up to complete the problem.
Consider the following sentences:

a. mero āmāle mānchelāi pasalmā heryo.  ‘My mother saw the man at the store’

b. mero āmāle mānchelāi heryo.  ‘My mother saw the man’

c. usko āmāle mānchelāi pasalmā heryo.  ‘His mother saw the man at the store’

d. mero āmāle mero dāilāi pasalmā heryo.  ‘My mother saw my brother at the store.’

e. mero āmāle mero dāilāi pasalmā bheto.  ‘My mother met my brother at the store.’

f. mero dāile mero āmālāi pasalmā bheto.  ‘My brother met my mother at the store’

g. mero āmā nepālāi āyo.  ‘My mother came to Nepal.’

h. ma nepālāi ā.  ‘I came to Nepal.’

i. usko dāi pasalmā āyo.  ‘His brother came to the store.’

j. usko pasal rāmro cha.  ‘His store is good.’

k. mero āmā rāmro cha.  ‘My mother is good/beautiful.’

l. mero āmā calākh cha.  ‘My mother is clever.’

m. mero calākh āmā pasalmā āyo.  ‘My clever mother came to the store.’
i. Identify the Nepali word for each English meaning by comparing example sentences that differ minimally (as with morphological analysis). If there is more than one form, write them all:

- ‘my’
- ‘mother’

- ‘his’
- ‘man’

- ‘store’
- ‘saw’

- ‘met’
- ‘good/beautiful’

- ‘brother’
- ‘came’

- ‘clever’

ii. Constituent analysis. Identify the word class of each word. Break each sentence into phrasal constituents. You may want to separate these using square brackets.
iii. Determine whether the verbs for ‘saw’, ‘met’, and ‘come’ are transitive or intransitive. You can do this by counting the number of core arguments in each clause (assume pasalmā is oblique).

iv. The verb cha is a copula, like English be. Copulas are a special type of verb that relate a subject to an adjective or noun phrase. These are referred to as copula complements. What type of copula complement is found in examples 10 through 12 (adjectival or nominal)?

v. Morphological analysis. Compare words with more than one form. Determine the position of morpheme boundaries. List all affixes.

vi. Determine the grammatical function of each affix. Under what morphosyntactic conditions does each affix appear? Give a brief statement of the meaning or grammatical function of each affix. *Hint: Consider the transitivity of the verbs and the grammatical relations of the arguments.*

vii. Based on these data, what is the basic constituent order of the Nepali transitive clause? Use the terms S (subject), O (object) and V (verb) to characterize the order. (e.g., the English sentence The dog bit the cat is an SVO sentence: the subject precedes the verb, which precedes the object.)
viii. Now type up the problem, using academic English prose. Be sure that your write-up:

A. States the overall goals of the problem

B. Lists each word, with meanings, broken into morphemes where necessary

C. Clearly states the grammatical function of grammatical affixes and provides evidence for this by citing the relevant examples

D. Clearly states the constituent order of Nepali

E. Provides a complete syntactic analysis of examples (a), (h), (k), and (m), noting the following:

   a) the noun or adpositional phrase boundaries, marked with square brackets and labeled

   b) the transitivity of the verb

   c) the class of each word

   d) the core and oblique arguments of each example

Examples (but be sure use the Nepali vocabulary, not the English translations):

[My son]_{NP} eats [many cookies]_{NP} [in the afternoon]_{PP}

POSS N Vtrans. quantifier N PREP ART N

core core oblique
Suggestions for Further Reading


This book is one of the leading introductions to the field of linguistic typology, which encompasses the analysis and classification of the common features and forms of the world’s languages. It includes chapters on word order, subjects, relative clauses, case-marking, and causative constructions.


This book is a sophisticated overview of a theory of grammar that has arisen from extensive typological research.

These volumes are a cross-linguistic introduction to syntactic structures, with discussion of both structural properties and functional motivations.


(Online version: http://wals.info/)

This online resource allows you to explore the distribution of linguistic features across the globe.


This book provides a detailed introduction to morphology and syntax from a typological perspective.