Linguistics for Language Teachers

Lessons for Classroom Practice

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Routledge
Taylor & Francis Group
NEW YORK AND LONDON

First published 2020
by Routledge
52 Vanderbilt Avenue, New York, NY 10017

and by Routledge
2 Park Square, Milton Park, Abingdon, Oxon, OX14 4RN

Routledge is an imprint of the Taylor & Francis Group, an informa business

Library of Congress Cataloging-in-Publication Data
A catalog record for this book has been requested

ISBN: 978-1-138-68182-8 (hbk)
ISBN: 978-1-138-68193-4 (pbk)
ISBN: 978-1-315-54546-2 (ebk)

Typeset in Times New Roman
by Apex CoVantage LLC

5 Syntax

The Analysis of Sentences

5.1 Introduction

Syntax is the study of sentence structure. Every language has rules that govern how the words in that language come together to form phrases, clauses, and sentences. This is the layer of language that informs us that while some orders work just fine (*why did he eat the sandwich?*) others do not work at all (*he eat the sandwich did why?*). It is important to note that while there are differences in these rules from language to language, all languages have their own sets of rules. Dialects and creoles have systematic rules as well.

What does it mean for languages to have rules for sentence structure? It means that words cannot be combined randomly. For instance, suppose you give someone a stack of eight index cards with a different word on each card. The cards have the following words written on them: *all, comedian, funny, of, laugh, made, the, us*. Theoretically, there are 40,320 possible combinations. However, if you give this stack of cards to a large group of English speakers and ask them to create a sentence using all the cards, they will all likely come up with the same sentence (that's .002% of all the possible combinations). The fact that they can do that suggests that word combinations in language are not random.

This chapter shows how words are grouped into syntactic categories, and how sentences have a hierarchical design in which words are gathered into successively larger structural units. You will learn how to diagram phrase structure trees, and derive questions from statements as well as passive sentences from active sentences. This chapter will show how to focus learners' attention on grammatical form by providing tasks that require the use of certain structures (i.e., implicit teaching of grammar). It will also provide strategies for helping learners navigate dense academic texts with complex sentences.

5.2 Constituency

Often, we think of phrases, clauses, and sentences as being a string of words. Certainly, when we hear a sentence or produce an utterance, it comes out in a continuous string. However, linguists have identified that there are groupings in sentences that form a hierarchy. Words come together to form phrases, and these phrases come together to form clauses. This idea that words are

grouped into units is called **constituency**. Let us consider the following examples.

(1) They quickly ran out the door.
(2) They quickly found out the truth.

On the surface, the two preceding sentences look quite similar in structure. Both sentences have the same subject *they*, both sentences have an adverb, verb, and an *out the* construction to end the sentence. In fact, the sentences are identical on the surface except for two words. However, the sentences are structurally quite different. One way to explore that is by moving some parts of the sentence around. Let us invert the first sentence:

(3) Out the door, they quickly ran.

When you invert the first sentence, it sounds fine, rather like a construction you would see in a children's book. But what happens when you invert (2)?

(4) *Out the truth, they quickly found.

The result is ungrammaticality (notated with an asterisk). Even though two sentences may appear similar on the surface, the internal structure reveals otherwise. This tells us that *out the door* in (1) is a constituent because it can be moved as a unit, but *out the truth* in (2) is not a constituent because it cannot be moved.[1] If sentences were a string of words with no hierarchy, we should be able to apply the same test to both and have the same outcome. In fact, we should be able to group words any which way. However, tests of constituency show that there are natural groupings of words that form a unit that prevent some of these tests, like movement.

Constituents can be individual words, phrases, and clauses. Although every language has different rules, there are some tests of constituency that work across many of the world's languages. We have already seen the movement test. Another test is substitution. The idea is that if a grouping of words forms a constituent, then it should be substitutable. Let us explore this further with another example.

(5) A woman from the cafe found my backpack.

In this example, there are a number of constituents that can be identified. Every word by itself is a constituent, of course, but there are several phrases embedded within. Since phrases are constituents, it follows that phrases can be substitutable. In English, one good way to identify a noun phrase is to see if it can be substituted with a pronoun, because pronouns are stand-ins for noun phrases. Let's suppose we suspect that *a woman* is a noun phrase. If so, it should be substitutable with the pronoun *she*.

(6) *<u>She</u> from the cafe found my backpack.

Does the test work? No, it sounds quite bad to substitute *a woman* with *she* in this sentence. That tells us that *a woman* by itself is not a noun phrase. However, if we extend the test and substitute *a woman from the cafe* with the pronoun, we have a much better result. This tells us that *a woman from the cafe* is a noun phrase and therefore a constituent.

(7) She found my backpack.

Both the movement and the substitution tests are helpful in identifying constituents. It is important to recognize where constituents are because they are vital in building phrases from words, and clauses from phrases, as we will see next.

5.3 Parts of Speech

To start, let us talk about **parts of speech**. Different words have different grammatical functions. We are often taught in school that nouns are people, places, or things, and verbs are actions. However, sometimes those definitions lead us to the wrong conclusion. Consider (8) below.

(8) *baby*

a. The baby cried.
b. My parents baby me.
c. I knit a baby blanket.

If we look at the word *baby* in isolation, we would quickly evaluate that the word is a noun because it is a person. However, instead of relying only on meaning, if you look at both the morphological clues and where it occurs in the sentence (a clue we call *distribution*), you will realize that the word *baby* functions differently in each example in (8). In (8a) the word *baby* can be pluralized to *babies* and comes after the article *the*, so it is a noun. In (8b) the word *baby* can be changed to past tense *babied* and comes after the subject of the sentence, so it is a verb. In (8c) the word *baby* comes before a noun and after an article, and it can be substituted for a different descriptor like *soft*, so it is an adjective. These rules and tests are specific to English, but every language has rules and tests that are specific to that language that can be utilized.

The basic nine parts of speech that we will cover in this chapter are nouns (N), verbs (V), adjectives (A), adverbs (Adv), prepositions (P), determiners (D), auxiliaries (Aux), complementizers (C), and conjunctions (Conj). The parts of speech and characteristics of each one for English can be found in Table 5.1.

Nouns are open class words that generally refer to people, places, events, things, and ideas. As discussed in Chapter 4, open classes are parts of speech where new words enter the category frequently. Nouns can be proper nouns or common nouns. Proper nouns are ones that refer to a specific person, place, event, thing, or idea, such as *George, Wisconsin, Labor Day, The Statue of Liberty*. However, the most typical noun is a common noun, and these nouns are the ones that tend to obey the characteristics listed in Table 5.1: they can

Table 5.1 Parts of Speech and Their Characteristics

Part of Speech	*Characteristics*	*Examples in context*
Noun (N)	can form a plural can take a possessive can occur after determiners	The song was beautiful. Melissa asked me to bring the keys. We found no evidence for the theory.
Verb (V)	can take past tense can take *-ing* ending can take *-ed/-en* participle ending occurs after auxiliaries like *should*, *has, does*	He is studying biology. Our group will present first. Dr. Lau had prepared a speech. They caught a huge insect.
Adjective (A)	can take comparative forms (*-er, more X*) can take superlative forms (*-est, most X*) can occur before a noun can occur in sentences with the verb *to be* (e.g. She is *tall*) can be modified by an adverb	The sweet baby cooed happily. Those desserts are very decadent. My sister is taller than me.
Adverb (Adv)	can take *-ly* ending (not always a guarantee) can be modified by *very* or *too* can modify verbs, adjectives, prepositions, or other adverbs	Jorge regretfully cannot come. Not too surprisingly, there were many leftovers. The package was delivered fast.
Auxiliary (Aux)	comes before a verb can have more than one	She has seen the movie ten times. I might have opened it early. They were not eating yet.
Preposition (P)	occur before noun phrases cannot be inflected	Leave the homework on the desk. Hester lived across the street. The numbers in the table don't add up.
Determiner (D)	cannot be inflected can come before a noun cannot have more than one determiner in a noun phrase (*the my dog Rex)	My headache is better now. We found these papers in the file. Lia messaged us about the meeting.
Complementizer (C)	can begin a new clause cannot be inflected	They closed the school because of the snowstorm. That you won first place surprised no one. Please pick up a syllabus if you didn't get one.
Conjunctions (Conj)	cannot be inflected	My father and I share the same hobbies. Do they want the chicken or steak?

take a plural morpheme (*cake, cakes*), they can take possessives (*dog, dog's*), and they can come after determiners (*desert, the desert*). Common nouns can be further divided into two categories: count nouns and mass nouns. Count nouns are ones that can be counted with a numeral or a quantifier, and can be pluralized (e.g., *one shoe, two shoes, many shoes*; *one idea, two ideas, many ideas; one person, two people, many people*). Mass nouns, however, are ones that usually refer to a group, a substance, or a whole. Mass nouns typically cannot be counted with a numeral or quantifier, and they sound awkward when pluralized (e.g., **one furniture, *two furnitures, *many furnitures*).

Verbs are one of the more complex parts of speech in language. Verbs in English only sometimes refer to actions, but are better characterized by their function: verbs drive the clause by functioning as the **predicate**. Verbs can take the past tense (*played, broke, ate*), can take progressive participle-*ing* ending (*playing, breaking, eating*), can take the past participle-*ed/-en* ending (*played, broken, eaten*), and can come after auxiliaries (*has played, will break, must have eaten*).

Adjectives are open class words whose one job is to modify nouns. They can modify nouns by preceding them (*funny joke, delicious meal*) or following a form of the verb *to be* (*the joke was funny, that meal is delicious*). Adjectives can take comparative forms (*funnier, more delicious*) and superlative forms (*funniest, most delicious*). Adjectives can also be modified by an adverb (*very funny joke, exceedingly delicious meal*).

Adverbs are open class modifiers too, but they do the job of modifying everything except nouns. Adverbs can modify verbs (*walk quickly*), adjectives (*very cold*), prepositions (*just across the street*), or even other adverbs (*too happily*). They are easiest to identify when they carry the *-ly* suffix, but this is not always a guarantee that the word is an adverb (*lovely*). Because adverbs modify so many of the other parts of speech, their position within a sentence can be very flexible.

Auxiliaries are words that precede verbs, and provide information such as conditionality, future expression, aspect, and mood. While some languages use verb endings to encode this information, English does this through auxiliaries that come before the verb. Auxiliaries can take the form of the verb *to be* (*was singing, are returned*), *to have* (*has finished, had informed*), and modals (*will go, should decide, can visit, might try*).

The remaining four parts of speech are all closed class words. The consequence of this is that there is a strict set of words that belong to the categories that cannot easily change. Furthermore, these words cannot be **inflected** with prefixes or suffixes. **Prepositions** are words that indicate relationships in space and time and are usually followed by a noun phrase (*in the dark, across the street, before class*). **Determiners** are words that precede nouns and provide information such as (in)definiteness (*the homework, a tree*), quantification (*some burgers, much water*), possession (*my house, their computer*), or demonstrative (*this research, those fish*). **Complementizers** are words that connect clauses together, usually in order to embed one into another (*she said that we could go, I was tired because I woke up early*). Finally, **conjunctions** are words that join two words, phrases, or clauses of equal weight (*he played the violin and recited a poem, do you want coffee or tea*).

5.4 Phrase Structure

Phrases are units of language (constituents) that are just above the level of words. Phrases can consist of a single word, as in (9), or many words, as in (10).

(9) Ella found my backpack.
(10) The tall woman in the green sweatshirt from the cafe found my backpack.

There are many kinds of phrases, but the main ones we will discuss in this book are the following: noun phrase (NP), verb phrase (VP), adjective phrase (AP), adverb phrase (AdvP), and prepositional phrase (PP). In Table 5.2, you can see some examples of each type of phrase. Phrases are generally written out with square brackets around them to show their boundaries.

The most simple kind of phrase has only one word in it. At the bare minimum, a phrase has to contain a head. The **head** of a phrase is the most important word, the word without which the phrase would be pointless, like a birthday party without the birthday person. The head is the VIP of the phrase. Thus, if you have a single-word phrase, that word is most assuredly the head of that phrase because a phrase has to have a head. For example, in the NP [*Sarah*], the head of the phrase is the noun *Sarah*. In a slightly longer NP [*these striped socks*], there still needs to be an N head, *socks*, but there are other words that make up the phrase. Without the head noun *socks*, the noun phrase would be rather meaningless. You might have noticed that the phrase (NP) and the head (N) match in type. The head of a VP is a V, the head of an AP is an A, and so on. That is the first main fact about heads and phrases:

Fact 1: The category of the head matches the category of the phrase.

If you look at the examples of phrases in Table 5.2, you will see that the underlined heads are of the same category (e.g., a noun is the head of the noun phrase). In short, the phrase and the head have to match. The two have a close relationship.

Another observation you might make when you look at the examples in Table 5.2 is that for every phrase, there is just one head underlined. This gives way to another fact about heads and phrases:

Fact 2: For every one phrase, there is one head.

The head and the phrase have an exclusive 1:1 relationship that cannot be broken.

You might have also noticed that within some of the phrases, there are other phrases within them. Indeed, phrases are often found within other phrases. Prepositional phrases, for example, often contain a noun phrase: the PP [*up the tree*] contains a P head, *up*, and the NP [*the tree*]. Prepositional phrases can also

contain an adverb phrase just before the preposition, such as PP [*somewhat in the way*], where *somewhat* is the AdvP containing the adverb head *somewhat*. Often, linguists will use brackets to indicate where the phrase boundaries are: $[_{PP}\ [_{AdvP}$ *somewhat*] *in* $[_{NP}$ *the way*]]. This notation shows that the PP contains the head P, of course, but also an AdvP and a NP. This brings us to our final fact about heads and phrases:

Fact 3: The head determines the selectional properties for the phrase.

In other words, the head decides what other elements can join a phrase and what cannot, like an exclusive clique. These rules are referred to as **phrase structure rules**, and every language has them. The phrase structure rules for English can be seen in Table 5.2. These rules are basically templates for each type of phrase. It gives you information about what constituents can be in the phrase, and it also tells you the position that the constituent can go. The elements that are in parentheses are optional. But beyond just being a formula, what is truly fascinating about phrase structure is that it is recursive; in other words, in an NP you might find a PP, and in that PP there is another NP, and in that NP there is yet another PP, and so on and so forth: *The girl in the photo of the class from the school on the corner of the street . . .* . There is theoretically no limit to how far you can go, other than the fact that most people will have forgotten what they were trying to say in the first place. This recursive nature of language is often cited as a feature of **generative grammar**, in that you can come up with an infinite number of utterances from a small subset of rules. It is infinitely generative.

Voices From the Classroom 5.1—Teaching Vocabulary Involves Not Only Reviewing the Meaning of the Word but Also Its Relationship to Other Words in the Sentence

It's useful to help students break down sentences into parts. I teach parts of speech and break sentences into chunks: subject, verb, and object, but I don't have students diagram sentences. I do not go too deep, but knowledge of how phrases are constructed is huge. Some verbs require direct objects. Native English speakers know this automatically, but ESL students need to be taught which verbs need a direct object and which need an indirect object. Sometimes a student says, *I give her*. A native English speaker knows it is wrong but may not be able to explain why it should be *I give it to her*. Teachers can show students which verbs need direct and indirect objects.

Hilary Reintges, Adult ESL Teacher

Table 5.2 Phrases in English

Phrase Type	*Phrase Structure Rules*	*Examples (head)*
Noun Phrase (NP)	NP → (D) (AP) N (PP)	*Sarah* *A teacher* *These striped socks* *House on the corner of the street*
Verb Phrase (VP)	VP → (AdvP) V (AdvP) (NP) (AdvP) (PP) (AdvP)	*Sleep* *Really sings well* *Practice the drums* *Carefully decide on the verdict*
Adjective Phrase (AP)	AP → (AdvP) A	*Heavy* *Very happy* *Disgustingly wealthy*
Adverb Phrase (AdvP)	AdvP → (AdvP) Adv	*Quickly* *Extremely delicately*
Prepositional Phrase (PP)	PP → (AdvP) P (NP)	*Off* *Up the tree* *With my good friends* *Somewhat in the way*

5.5 Drawing Tree Diagrams

A **tree diagram** is a typical way that linguists represent the inner workings of phrases and sentences. They are called trees because of the way different constituents branch off from other parts of the structure. These are often easier to read than the bracket notation we showed you in Table 5.2 because it visually represents the groupings in a dimensional rather than linear format. Tree diagrams show the relationship that words have to other words. They also demonstrate the hierarchy within phrases, clauses, and sentences.

Let us learn some basic terms for the parts of a tree diagram. Figure 5.1 presents an abstract tree for us to reference. Each joint of a tree is called a **node**; therefore, every letter on the tree in Figure 5.1 is a node. **Terminal nodes** are the ones at the ends of the branches, like B, D, E, G, and I. Also, **mother**, **daughter**, and **sister** are relationships between nodes. Mothers are nodes one level directly above the node in question. So for instance, C is the mother of D, E, and F. F is the mother of G and H. Daughters are the other way around, so D is the daughter of C, and C is the daughter of A. Sisters are ones that have a common mother, so B and C are sisters, and D, E, and F are sisters.

Recall that sentences are not just strings of words, but rather groupings called constituents. How we represent them on the tree is quite indicative of that property: to find a constituent on a tree diagram, identify a node and everything under it. Thus, C and all its daughters and granddaughters and

great-granddaughters make up one constituent. H and I are constituents. D and E alone are NOT constituents together, because we have left out F and everything under it. Much like a family event, if you are inviting one sibling, you have to invite all the siblings.

Now, let us consider some good phrases and bad phrases. The good phrases in Figure 5.2 all obey the three main facts: the phrase and the head match in type, there is a 1:1 match between a phrase and its head, and the phrase only contains elements that are allowed for that phrase type. The bad phrases in Figure 5.3 break one or more of these rules. Tree 4 has two NPs and one VP, but they should then have two N heads and one V head. Also, NPs do not have VPs within them, per our phrase structure rule for NPs. In Tree 5, the head and the phrase do not match. And in Tree 6, the N head does not have a phrase.

Now let us draw some tree diagrams of our own, starting with a simple noun phrase, [*the book*]. The first step is to identify the parts of speech of all the

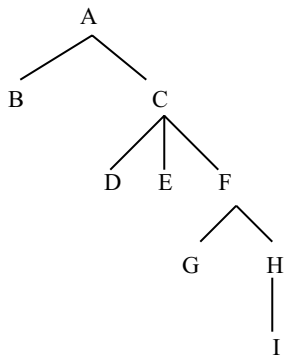


Figure 5.1 Sample Tree Diagram

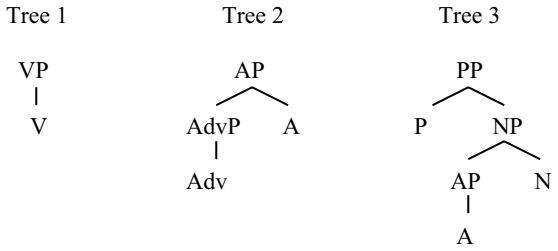


Figure 5.2 Good Phrase Structure Trees

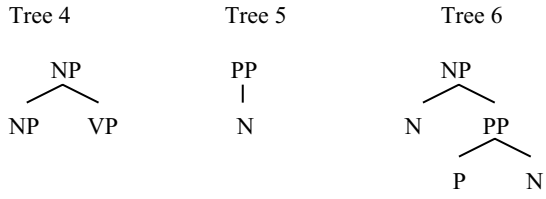


Figure 5.3 Bad Phrase Structure Trees

words in the phrase. A good way to do this is to write out the sentence and write the parts of speech above each word.

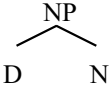
(11) D N

the book

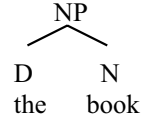
Next, we identify the head of the noun phrase. Recall that nouns must match in type to the phrase; in a noun phrase, the head must be a noun. Since there is only one noun in (11), identifying the head noun is quite simple: the head is *book*. The next step is to deal with the other words in the phrase. The only other word in this phrase is a determiner, but those are not one of the five phrases we are covering (NP, VP, PP, AP, AdvP).[2] Now, we are ready to diagram the NP [*the book*]. First we start with the NP at the top.

NP

Now, according to the NP phrase structure rule (NP → (D)(AP)N(PP)), we can have all kinds of elements branching off it. However, we only really have the D and the N in this case. Thus, we draw the determiner and noun branching off the NP.



This tree diagram shows that the NP consists of a determiner and a noun, *the* and *book*. There are no other embedded phrases within it. This is a very basic tree, but it is quite common. We can now write the words under the terminal nodes to finish this tree diagram.



Let us diagram another one that is slightly more complex. Consider the phrase [*a woman from the café*] which we saw earlier in the chapter. We have

already identified it as a noun phrase. The first step is to write the parts of speech above each word like we did with the previous example.

(12) D N P D N
a woman from the café

Next, we want to identify the head of the noun phrase. The head of a noun phrase must be a noun according to Fact 1, so that helps narrow down the choices. In this case, *woman* is the head of this noun phrase because it is the most important noun in the phrase.

Now that we have found the head of the phrase, we turn our attention to the remaining words. Keeping in mind the five types of phrases we have learned about in this chapter (NP, VP, PP, AP, AdvP), identify any phrases you see within the entire noun phrase. Since we know that a head cannot exist without a phrase, a good place to start would be to see if there are any lone heads that do not yet have a phrase. The noun *café* does not have a noun phrase yet, and the preposition *from* does not have a prepositional phrase yet. [*The café*] forms an NP which is structurally exactly like [*the book*] from the previous example. Referencing the phrase structure rules in Table 5.2, a PP almost always has an NP in it. In fact, the PP [*from the café*] is made up of the head P *from* and the NP [*the café*]. Here is a bracketed version in (13).

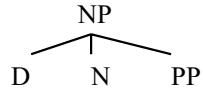
(13) D N P D N
$[_{NP}$ a woman $[_{PP}$ from $[_{NP}$ the café]]]

The brackets show us that within the large noun phrase, there is an embedded prepositional phrase, and within that prepositional phrase, there is another noun phrase.

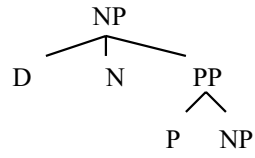
Having parsed the sentence, we are ready to draw the tree. To draw the tree top down, we start with the NP node:

NP

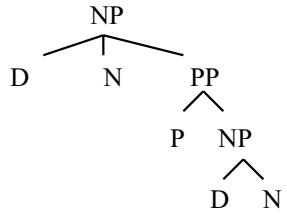
Then we have three daughter nodes branching off: D, N, and PP.



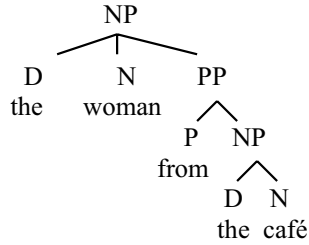
Next, from the PP node there are two nodes: P and NP.



Finally, the NP node branches down into the components of the NP node.



Then, we just fill in the terminal nodes with the words.



Once again, what we learn from this tree is that there are groupings within this phrase. There are phrases, and the head noun is modified by the elements that are sisters to it. Another important piece of information that we can derive from the tree is that everything that is a sister to the head is supporting or modifying the head in some way. The D *the* is giving information about *woman* (that she is a specific, definite, previously mentioned woman). The PP [*from the café*], a sister to the head, is modifying *woman* as well. In linear form, it may be difficult to see that relationship—that all signs point to the head noun *woman*—but in the tree diagram, it is much easier to see and identify the head and all of its modifiers. This is why linguists like such diagrams; trees allow us to analyze the structures more accurately and easily.

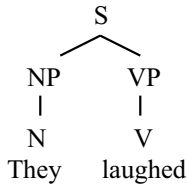
5.6 Clauses

Thus far, we have talked about words coming together to form phrases. The next level of syntax is the **clause**, which is made up of several phrases coming together. A clause is a constituent containing a **subject** and a predicate. Subjects are typically noun phrases. Predicates are typically verb phrases. The subject and the predicate come together to form the clause. Here is a simple example clause.

(14) They laughed.

In (14), the subject is NP [*they*] and the predicate is the VP [*laughed*]. The only new element in drawing tree diagrams for clauses is the S-node (where S stands for *sentence*), which connects the subject and the predicate.

(15)

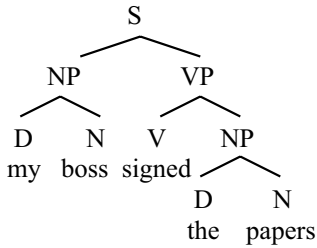


Let us try another example that is slightly more complex. Consider the clause in (16).

(16) My boss signed the papers.

In this example, the subject is the NP [*my boss*] and the predicate is the VP [*signed the papers*]. To diagram the sentence, we put the NP and VP together using the S-node. The rest of the tree, which includes drawing out NPs and VPs, is exactly what we have done earlier.

(17)



How do you identify the subject and the predicate? Earlier in the chapter we talked about a few tests for constituency like movement and substitution. Subjects in English are typically noun phrases, and we have learned that noun phrases can be substituted with a pronoun. Thus, to test whether something is a subject or not, try to substitute it with a pronoun. Let us take a look at the clauses in (18) and run the test on each one, as in (19).

(18) a. Tao sings really well.
b. The birds found a nest.
c. Mr. Sanders and I came to an agreement.
d. The team from the leading school in the area won the championship.

(19) a. He sings really well.
b. They found a nest.
c. We came to an agreement.
d. It won the championship. or They won the championship.

The substitution test with a pronoun reveals that *Tao, the birds, Mr. Sanders and I*, and *the team from the leading school in the area* are the subjects of these clauses.

You can also identify the subject by turning the sentence into a clarification question. A clarification question is an echo question with emphasis on the **wh-word** (such as *what* or *who*) that is used when you want someone to repeat what they just said. In this case, you can turn each into a clarification question, like in (20):

(20) a. Who sings really well?
b. Who found a nest?
c. Who came to an agreement?
d. Who won the championship?

The answer to the questions will be your subject.

Predicates can be identified with a substitution test, too. Typically, English predicates can be substituted with *do so*. Let us run this substitution on our clauses from (18) in (21).

(21) a. Tao does so.
b. The birds did so.
c. Mr. Sanders and I did so.
d. The team from the leading school in the area did so.

The *do so* substitution test reveals that *sings really well, found a nest, came to an agreement*, and *won the championship* are the predicates. It's important to remember that when you do the substitution test, you are not adding extra words or altering the remaining ones. Like a science experiment, we want to test one variable at a time. If you alter more than one thing at a time, you don't know whether the test actually worked, or some other element just made it look like it did.

Clauses come in two main varieties. The first type of clause is an **independent clause**. It is named such because it can stand alone, like the examples in (22). Independent clauses are sentences.

(22) a. Jill ran.
b. The student studied.
c. Every attendee received an award.
d. The package was delivered to the wrong house.

The second type of clause is a **dependent clause,** or **embedded clause**. Dependent clauses usually begin with a complementizer, or a particle that serves as a connector to the main sentence, as in (23).

(23) a. Because Jill ran
b. What the student studied
c. That every attendee received an award
d. If the package was delivered to the wrong house

Dependent clauses are usually found embedded within an independent clause.

(24) a. Jack dropped out of the race because Jill ran.
b. I don't know what the student studied.
c. That every attendee received an award surprised us all.
d. We'll see if the package was delivered to the wrong house.

In formal spoken English and in most written registers of English, dependent clauses typically cannot stand alone. However, it is important to note that it is not ungrammatical or wrong; it is simply a usage etiquette rule. It's not atypical to hear dependent clauses by themselves in spoken English or within informal registers of written English.

Related to this, in formal written English, you may have heard of the terms **run-on** and **fragment**. Run-ons are two independent clauses in one sentence, which usually sounds like just that; two sentences fused together (*The student studied she got an A in her class*). To remedy a run-on, students can (a) separate them into two different sentences, (b) put a semicolon between the two clauses if the clauses are related, or (c) turn one of the sentences into a dependent clause by adding a complementizer. An example of each remedy can be seen in (25).

(25) a. The student studied. She got an A in her class.
b. The student studied; she got an A in her class.
c. Because the student studied, she got an A in her class.

A fragment, on the other hand, is a clause that is missing something. It could be an independent clause missing a subject (*found no relationship between the two variables*) or missing a predicate (*the researchers from the institute with*

Voices From the Classroom 5.2—Word Order in Embedded Questions

I like to use large word cards to help students grasp word order. For example, if we are learning about embedded questions, I will write out "where", "is", "the", "bathroom", and "?" on separate cards big enough for the whole class to see. I hand out the cards to five students, who must stand in front of the class and arrange themselves in the proper order to produce the sentence, *Where is the bathroom?* Then, I'll call up one more student, and hand her a card that says, *Can you tell me*. Students then have to rearrange themselves to produce, *Can you tell me where the bathroom is?* This helps them see how word order changes when questions are embedded.

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many years of experience). Additionally, a fragment can be a dependent clause that is not embedded within an independent clause (*since the research was funded by the government*). To fix a fragment, students can (a) supply a subject, (b) supply a predicate, or (c) embed the dependent clause in an independent clause, like in the examples below in (26):

(26) a. Dr. Park found no relationship between the two variables.
b. The researchers from the institute with many years of experience visited our lab.
c. Since the research was funded by the government they were able to complete the project.

5.7 Movement

Thus far we have covered simple sentences (independent clauses) and sentences with embedded, dependent clauses. However, some sentences are complex not because they are particularly long, but because there is internal **movement** associated with them. For example, questions are derived from statements. What does this mean? It means that in order to form a question, the original statement must be reshuffled. In other words, the structure of questions are actually declarative statements in a different order. Consider the questions in (27).

(27) a. Are you going to the dinner party?
b. Should we drive there together?
c. What are you bringing?
d. When did you have time to make that?

The first two examples are yes-no questions, or questions that can be answered with a yes or a no. The second two are wh-questions, or questions that require more of an answer. In all four cases, the questions in (27) are actually derived from their declarative counterpart, as in (28).

(28) a. You are going to the dinner party.
b. We should drive there together.
c. You are bringing ___. (*a soufflé*)
d. You had time to make that ___. (*this morning*)

As you can see, the statements in (28) are basically the questions in (27) where the word order has been changed. In some languages, all you need to do in order to form a question is to change the intonation or fill in the blank with a question word like *what* or *when* and the question would be complete.

In languages like English and many European languages, however, question formation requires movement. For instance, in English to derive a question from the statement *you are going to the dinner party*, the auxiliary *are* must be moved to the front of the sentence: *are you going to the dinner party?*

Similarly, the statement *we should drive there together* can be turned into a question by identifying the auxiliary and moving it to the front of the sentence; in this case, *should* is the auxiliary, resulting in the question *should we drive there together?*

For wh-questions, there is an extra step. We still identify the auxiliary and move it to the front of the sentence, like this:

(29) Are you ~~are~~ bringing ___

Next, we fill in the blank with a wh-word. Since food items are inanimate, we fill it with the wh-word *what*.

(30) Are you ~~are~~ bringing what

Finally, we have to move the wh-word to the front of the sentence to complete the wh-question.

(31) What are you ~~are~~ bringing ~~what~~

It is no wonder that this is an area of difficulty for many learners. Constructing a question is much more than simply putting *what* at the beginning of the sentence. The movement involved adds to the complexity of the structure.

Another type of sentence that requires movement in its derivation is a sentence with a passive voice wherein the agent, or the doer of the action, is placed at the end of the clause so that the action and the result of that action are highlighted. Compare the two sentences in (32).

(32) a. Harry broke the expensive vase.
b. The expensive vase was broken by Harry.

In the first example, there is an emphasis on the agent; you could almost picture someone pointing a finger at Harry while uttering that sentence. This sentence is in active voice. However, in the second sentence, the agent is displaced, and the focus is on the action and the result. The agent *Harry* is added on at the end in a *by*-phrase. The convenient fact of the *by*-phrase is that it is now optional, so it can be omitted and it would be a perfectly grammatical sentence: *The expensive vase was broken*.

To derive a passive sentence from an active sentence, we follow three stages. First, identify the direct object, or the entity that was acted upon, and move it to the front of the sentence. In this case, that direct object is the noun phrase [*the expensive vase*].

(33) [The expensive vase] Harry broke ~~the expensive vase~~.

Next, convert the verb to the *be* + past participle form. In this case, *broke* becomes *was broken*.

(34) [The expensive vase] Harry *was broken* ~~the expensive vase~~.

Finally, identify the subject, put it in a *by*-phrase, and move it to the end of the sentence.

(35) [The expensive vase] ~~Harry~~ *was broken* ~~the expensive vase~~ [by Harry].

The end result is the passive voice version *The expensive vase was broken by Harry*. Or, of course, we can leave out the agent altogether and leave the action blameless. Passive voice is used in academic writing to deemphasize the doer of the action and avoid first person. It can also be a handy trick when you want to shift blame or avoid blatantly mentioning the agent in a delicate situation, such as in a court of law.

It is sometimes difficult for learners to recognize passive voice construction because the agent may or may not be present. Additionally, the difference between the verb in an active voice construction and a verb in a passive voice construction is very slight in some languages. Forming the passive is even more challenging because of all the movement involved, where the object becomes the subject and the subject gets moved to a prepositional phrase at the end of the sentence. Derivations such as these might be intuitive to the proficient or native speaker, but to learners there are a lot of moving parts that can lead to difficulty. In the next section, we discuss what teachers can do to address these difficulties.

5.8 Application to Teaching and Learning

Let us take a step back and reconsider why syntax is important. Earlier in this chapter, we talked about how sentences are not a random jumble of words. If we learned ten Gujarati words—a mix of nouns, verbs, prepositions, and a few connectors—would we be able to form a sentence in Gujarati? With the exception of our Gujarati readers, the rest of us would not. That is because we would not know how to string those words together; to be more precise, we do not know the phrase structure rules for Gujarati, so we would not know what the word order is. Because phrase structure rules differ from language to language, word orders differ from language to language as well.

This is the reason why word-for-word translation does not work. For instance, to say *we tried to take the bus but we missed it* in Spanish is *intentamos tomar el autobús pero lo perdimos*. However, if we translate that sentence back to English word-for-word, it sounds nonsensical: *intended to take the bus but it we missed*. If we translate the equivalent sentence from Korean word-for-word, it sounds even stranger: *bus ride did try missed*. Often, beginner language learners will apply the word order of their first or dominant language to the target language, resulting in what sounds ungrammatical. This is quite understandable; students have to wrap their minds around the fact that the language they are learning sometimes works in an entirely different way, and it takes time to get accustomed to the new rules. For example, if you have

spoken a subject-verb-object (SVO) language all your life, learning a language that has subject-object-verb (SOV) word order can be challenging. Rather than saying *I ate an apple*, the student has to become familiar and comfortable with the order *I an apple ate* in the target language. It is helpful for teachers to recognize the differences in phrase structure and word order between the students' language and the target language in order to help students overcome some of these barriers.

Another example is that in many of the world's languages, the subject pronoun is not always necessary: it can be omitted if it is understood from context. In other words, if we have been talking about a person named Joe, you don't have to repeat *he* again and again: *Went to the store. When got there, bought some ice cream. Ate it*. While this sounds awkward in English, this is perfectly grammatical and actually preferred in other languages. Languages that allow for the subject pronoun to be omitted are called **prodrop languages**, or sometimes **subject drop** or **null-subject languages**. Prodrop languages have phrase structure rules that make the subject optional. However, students who speak a non-prodrop language tend to have difficulty with intentionally leaving out a subject pronoun because they are accustomed to supplying a subject in every clause. Again, students have the difficult task of learning a new set of phrase structure rules, and the errors they make might be a result of applying the rules of their first or dominant language to the target language.

The two preceding examples are just a tiny sampling of the kinds of challenges students may face when learning another language. As language teachers, how do we help students with these grammatical differences? One strategy is to focus learners' attention to the specific grammatical form you want to target by giving students tasks that require the use of these structures. For example, suppose students are having difficulty with English question formation. While students might easily understand that the wh-word needs to appear in the front of the sentence, they might not remember that the auxiliary verb also needs to move to the front of the sentence right after the wh-word. This is indeed an area that is difficult not just for ESL students but children learning English as their first language because of all the complexity involved. While it can be helpful to explicitly point out that this is how questions are formed in English, often this is not necessarily very effective. For younger learners, it might also not be plausible that they understand such a technical point in the grammar. Instead, teachers can provide tasks where using wh-questions would naturally occur.

One strategy teachers can use is pairing up students to interview one another and write up a biography about their partner. They would have to use wh-questions during the interview such as *Where were you born? What is your birthday? What are your hobbies? Who is your best friend? When did you come to the U.S.?*

There are several things to note with this strategy. The first is that students are not just given these questions by the teacher; they must generate their

own questions (with teacher guidance) that utilize the structure they are learning. Anyone can mimic, but it requires cognitive effort to apply the rule for meaningful use. Secondly, it's important to vary the structure so that they are not using the same formula with the same words. *Where were you born, what is your birthday*, etc. are all wh-questions with a fronted wh-word and auxiliaries that are raised, but the wh-word is varied and the auxiliaries are different (*were, are, is, did*). Students get the opportunity to try out different combinations, ensuring that the rule is generative, not static. Lastly, by incorporating the structure you want students to learn in an activity that could generate real interest (asking questions to a peer and getting real responses is fun; asking questions for a computer microphone to record you is not), the student is participating in a meaningful exercise that can be engaging.

Another strategy that can be helpful for learners is to use syntactic knowledge to break down complex academic texts. While general texts tend to be fairly straight forward, academic texts are a genre of their own. They are typically dense and wordy, often containing complex modifiers and embedded clauses. The average spoken sentence is about seven words long, but an average written academic sentence is about twenty words long. One way to help learners deal with a complex sentence is to partition it into smaller pieces. Take the sentence in (36) as an example.

(36) Mosses and other bryophytes are distinguished from algae by several features derived during evolutionary adaptation to living on land.
(Campbell & Reece, 2002, p. 576)

While the sentence is informative and well-constructed, language learners would most likely have difficulty with this sentence. Certainly, the vocabulary can be a hindrance; native speakers also have difficulty with new academic vocabulary such as *bryophytes*. However, what may be an additional challenge to a learner of English is that this sentence has passive construction and embedded clauses. Recognizing this is helpful because you can help students focus on the most important content in the sentence. First, we learned earlier that in passive sentences, there is often a *by*-phrase that is optional. Let us identify that *by*-phrase and omit it.

(37) Mosses and other bryophytes are distinguished from algae ~~by several features derived during evolutionary adaptation to living on land~~.

Omitting the optional *by*-phrase in a passive sentence allows us to focus on the main clause, which is much easier to digest. The clause *mosses and other bryophytes are distinguished from algae* is simpler to tackle without the *by*-phrase here. Next, the *by*-phrase can be further broken down by identifying the relative clause, which is bracketed in (38).

(38) by several features [derived during evolutionary adaptation to living on land]

The relative clause is a modifier for the noun *features*. Thus, everything in the bracket helps explain a little more about the features. If we want to dissect it a little more, you could pinpoint some of the prepositional phrases that are tucked inside the relative clause.

(39) derived [during evolutionary adaptation [to living [on land]]]

Each of these prepositional phrases are embedded within another. It may sound more academic than something like *on big plates with loads of food*, but in truth the structure is exactly the same. Both would have the exact same tree diagrams. After that, the sentence is not so intimidating.

Recommended Website

A free online tree diagram website
http://mshang.ca/syntree/

Notes

1. *Ran out the door* is a verb followed by a prepositional phrase, while *found out* is a phrasal verb followed by the noun phrase *the truth*.
2. Determiners do have phrases, but for the purposes of this chapter, we will leave them be. There are definitely such things as determiner phrases (DP) that you might explore if you study syntax further.

Further Reading

Carnie, A. (2012). *Syntax: A generative introduction*. Hoboken, NJ: John Wiley & Sons.
Huddleston, R., & Pullum, G. K. (2005). *A student's introduction to English grammar*. Cambridge, UK: Cambridge University Press.
Larsen-Freeman, D., & Celce-Murcia, M. (2015). *The grammar book: Form, meaning, and use for English language teachers*. Boston, MA: Heinle ELT.

Exercises

1. For each of the sentences below, identify the **part of speech** of the underlined word(s). Then, give one piece of evidence to support your choice.

    a. Jillian and her sister Suzanne are planning a trip to Chicago.
    b. They often like to travel together.
    c. Suzanne wants to visit the museums.
    d. Jillian would like to go on an architecture tour.
    e. They found a good price for tickets to a show as well.

2. Identify the type of phrase. Then, draw a tree diagram for each phrase. Hint: some phrases may have embedded phrases within them.

    a. my class
    b. in the snow
    c. caught the ball
    d. this interesting research
    e. very slow
    f. very slowly
    g. finding a new assistant for our department
    h. kindly helped the students with their homework

3. Diagram the following sentences.

    a. Garrett found his keys.
    b. The book was interesting.
    c. Those nice folks recommended this restaurant.

4. The following sentence has two different interpretations. What are those interpretations? Draw a tree diagram for each interpretation.

    a. I tickled the bear with a feather.

5. Embedded questions are a type of dependent clause that is embedded within an independent clause. They are similar to regular wh-questions, but are slightly different in terms of movement. How is the embedded question different from the main clause question?

    a. Main question: Who are you calling?
    Embedded question: I don't know <u>who you are calling</u>.

    b. Main question: What should we order?
    Embedded question: They told me <u>what we should order</u>.

    c. Main question: How does she know?
    Embedded question: I wonder <u>how she knows</u>?

Reference

Campbell, N. A., & Reece, J. B. (2002). *Biology* (6th ed.). New York: Pearson.