

**A [wikid]**

# **GLOSSARY OF SYNTAX**

## ADJECTIVE PHRASE

An **adjective phrase** is a phrase whose head word is an adjective, e.g. *fond of steak*, *very happy*, *quite upset about it*, etc. The adjective in an adjective phrase can initiate the phrase (e.g. *fond of steak*), conclude the phrase (e.g. *very happy*), or appear in a medial position (e.g. *quite upset about it*). The dependents of the head adjective – i.e. the other words and phrases inside the adjective phrase – are typically adverbs or prepositional phrases, but they can also be clauses (e.g. *louder than you do*). Adjectives and adjective phrases function in two basic ways in clauses, either attributively or predicatively. When they are attributive, they appear inside a noun phrase and modify that noun phrase, and when they are predicative, they appear outside of the noun phrase that they modify and typically follow a linking verb (copula).

## ADVERB PHRASE

An **adverb phrase** is a linguistic term for a group of two or more words operating adverbially, when viewed in terms of their syntactic function. Adverb(ial) phrases (“AdvP” in syntactic trees) are phrases that do the work of an adverb in a sentence.

## ADVERBIAL

An **adverbial** a word (an adverb) or a group of words (an adverbial phrase or an adverbial clause) that modifies or tells us something about the sentence or the verb. The word *adverbial* is also used as an adjective, meaning “having the same function as an adverb”.

In English, adverbials most commonly take the form of adverbs, adverb phrases, temporal noun phrases or prepositional phrases. Many types of adverbials (for instance reason and condition) are often expressed by clauses.

*James answered **immediately**.* (adverb)

*James answered **in English**.* (prepositional phrase)

*James answered **this morning**.* (noun phrase)

*James answered in English **because he had a foreign visitor**.* (adverbial clause)

The following basic types of adverbials can be recognized:

- adjuncts (circumstance adverbials): these are part of the core meaning of the sentence, but if omitted still leave a meaningful sentence.  
*John and Sophia helped me **with my homework**.*
- disjuncts (stance adverbials): these make comments on the meaning of the rest of the sentence.  
***Surprisingly**, he passed all of his exams.*
- conjuncts (linking adverbials): these link two sentences together.  
*John helped so I was, **therefore**, able to do my homework.*

## APPOSITION

Apposition is a grammatical construction in which two elements, normally noun phrases, are placed side by side, with one element serving to define or modify the other. When this device is used, the two elements are said to be *in apposition*. For example, in the phrase “my friend Alice”, the name “Alice” is in apposition to “my friend”.

## CLAUSE

A **clause** is the smallest grammatical unit that can express a complete proposition. A typical clause consists of a subject and a predicate, where the predicate is typically a verb phrase – a verb together with any objects and other modifiers. However the subject is sometimes not expressed; this is often the case in null-subject languages if the subject is retrievable from context, but it also occurs in certain cases in other languages such as English (as in imperative sentences and non-finite clauses).

A simple sentence usually consists of a single finite clause with a finite verb that is independent. More complex sentences may contain multiple clauses. Main clauses (i.e., *matrix clauses*, *independent clauses*) are those that can stand alone as a sentence. Subordinate clauses (i.e., *embedded clauses*, *dependent clauses*) are those that would be awkward or incomplete alone.

# CLAUSE CONSTITUENT

English is an SVO language, that is, in simple declarative sentences the order of the main components (constituents) is *subject–verb–object(s)* (or *subject–verb–complement*).

A typical finite clause consists of a noun phrase functioning as the subject, a finite verb, followed by any number of dependents of the verb. In some theories of grammar the verb and its dependents are taken to be a single component called a verb phrase or the predicate of the clause; thus the clause can be said to consist of subject plus predicate.

Dependents include any number of complements (especially a noun phrase functioning as the object), and other modifiers of the verb. Noun phrase constituents which are personal pronouns or (in formal registers) the pronoun *who(m)* are marked for case, but otherwise it is word order alone that indicates which noun phrase is the subject and which the object.

The presence of complements depends on the pattern followed by the verb (for example, whether it is a transitive verb, i.e. one taking a direct object). A given verb may allow a number of possible patterns (for example, the verb *write* may be either transitive, as in *He writes letters*, or intransitive, as in *He writes often*).

Some verbs can take two objects: an indirect object and a direct object. An indirect object precedes a direct one, as in *He gave the dog a bone* (where *the dog* is the indirect object and *a bone* the direct object). However the indirect object may also be replaced with a prepositional phrase, usually with the preposition *to* or *for*, as in *He gave a bone to the dog*. (The latter method is particularly common when the direct object is a personal pronoun and the indirect object is a stronger noun phrase: *He gave it to the dog* would be used rather than *?He gave the dog it*.)

Adverbial adjuncts are often placed after the verb and object, as in *I met John yesterday*. However other positions in the sentence are also possible. Another adverb which is subject to special rules is the negating word *not*.

Objects normally precede other complements, as in *I told him to fetch it* (where *him* is the object, and the infinitive phrase *to fetch it* is a further complement). Other possible complements include prepositional phrases, such as *for Jim* in the clause *They waited for Jim*; predicative expressions, such as *red* in *The ball is red*; subordinate clauses, which may be introduced by a subordinating conjunction such as *if*, *when*, *because*, *that*, for example the *that*-clause in *I suggest that you wait for her*; and non-finite clauses, such as *eating jelly* in the sentence *I like eating jelly*.

English is not a “pro-drop” (specifically, null-subject) language – that is, unlike some languages, English requires that the subject of a clause always be expressed explicitly, even if it can be deduced from the form of the verb and the context, and even if it has no meaningful referent, as in the sentence *It is raining*, where the subject *it* is a dummy pronoun. Imperative and non-finite clauses are exceptions, in that they usually do not have a subject expressed.

Adjuncts are constituents which are not required by the main verb, and can be removed without leaving behind something ungrammatical. Adjuncts are usually adverbs or adverbial phrases or clauses.

Many clauses have as their finite verb an auxiliary, which governs a non-finite form of a lexical (or other auxiliary) verb.

## CLEFT SENTENCE

A **cleft sentence** is a complex sentence (one having a main clause and a dependent clause) that has a meaning that could be expressed by a simple sentence. Clefts typically put a particular constituent into focus. This focusing is often accompanied by a special intonation.

In English, a cleft sentence can be constructed as follows:

*it* + conjugated form of *to be* + *X* + subordinate clause

where *it* is a cleft pronoun and *X* is usually a noun phrase (although it can also be a prepositional phrase, and in some cases an adjectival or adverbial phrase). The focus is on *X*, or else on the subordinate clause or some element of it. For example:

*It's Joey (whom) we're looking for.*

*It's money that I love.*

*It was from John that she heard the news.*

*It was meeting Jim that really started me off on this new line of work.*

## COMPLEMENT

In grammar and linguistics, the term **complement** is used with different meanings, so it is difficult to give a single precise definition and explanation. In a broad general sense however, a complement can be understood as a word, phrase or clause that is necessary to *complete* the meaning of a given expression.

In many traditional grammars, the terms *subject complement* and *object complement* are employed to denote the predicative expressions (e.g. predicative adjectives and nominals) that serve to assign a property to a subject or object, e.g.

Ryan is **upset**. – Predicative adjective as subject complement

Rachelle is **the boss**. – Predicative nominal as subject complement

That made Michael **lazy**. – Predicative adjective as object complement

We call Rachelle **the boss**. – Predicative nominal as object complement

## CONCORD (AGREEMENT)

**Agreement** or **concord** happens when a word changes form depending on the other words to which it relates. It is an instance of inflection, and usually involves making the value of some grammatical category (such as gender or person) “agree” between varied words or parts of the sentence.

For example, in Standard English, one may say *I am* or *he is*, but not “I is” or “he am”. This is because the grammar of the language requires that the verb and its subject agree in *person*. The pronouns *I* and *he* are first and third person respectively, as are the verb forms *am* and *is*. The verb form must be selected so that it has the same person as the subject.

The agreement based on overt grammatical categories as above is **formal agreement**, in contrast to notional agreement, which is based on meaning. For instance, the phrase *The United States* is treated as singular for purposes of agreement, even though it is formally plural.

## CONSTITUENT

A **constituent** is a word or a group of words that functions as a single unit within a hierarchical structure. The analysis of constituent structure is associated mainly with phrase structure grammars, although dependency grammars also allow sentence structure to be broken down into constituent parts. The constituent structure of sentences is identified using *constituency tests*. These tests manipulate some portion of a sentence and based on the result, clues are delivered about the immediate constituent structure of the sentence. Many constituents are phrases. A phrase is a sequence of two or more words built around a head lexical item and working as a unit within a sentence.

## COORDINATION

**Coordination** is a frequently occurring complex syntactic structure that links together two or more elements, known as *conjuncts* or *conjoins*. The presence of coordination is often signaled by the appearance of a coordinator (coordinating conjunction), e.g. *and*, *or*, *but* (in English). The totality of coordinator(s) and conjuncts forming an instance of coordination is called a coordinate structure. The unique properties of coordinate structures have motivated theoretical syntax to draw a broad distinction between coordination and subordination. Coordination is one of the most studied fields in theoretical syntax, but despite decades of intensive examination, theoretical accounts differ significantly and there is no consensus about the best analysis.

Coordination is a very flexible mechanism of syntax. Any given lexical or phrasal category can be coordinated. The examples throughout this entry employ the convention whereby the conjuncts of coordinate structures are marked using square brackets and bold script. The coordinate structure each time includes all the material that follows the left-most square bracket and precedes the right-most square bracket. The coordinator appears in normal script between the conjuncts.

- [**Sarah**] and [**Xolani**] went to town – N + N  
 [**The chicken**] and [**the rice**] go well together. – NP + NP  
 The president will [**understand**] and [**agree**]. – V + V  
 The president will [**understand the criticism**] and [**take action**] – VP + VP  
 Insects were [**in**], [**on**], and [**under**] the bed. – P + P + P  
 [**After the announcement**] but [**before the game**], there was a celebration. – PP + PP  
 Susan works [**slowly**] and [**carefully**]. – Adv + Adv  
 Susan works [**too slowly**] and [**overly carefully**]. – AdvP + AdvP  
 We appreciated [**that the president understood the criticism**] and [**that he took action**]. – Clause + Clause

Data of this sort could easily be expanded to include every lexical and phrasal category. An important aspect of these data is that the conjuncts each time are indisputably constituents. In other words, the material enclosed in brackets would qualify as a constituent in both phrase structure grammars and dependency grammars.

## COPULAR VERB

A **copular verb** is a word used to link the subject of a sentence with a predicate (a subject complement), such as the word *is* in the sentence “The sky **is** blue.” The word *copula* derives from the Latin noun for a “link” or “tie” that connects two different things.

A copula is often a verb or a verb-like word, though this is not universally the case. A verb that is a copula is sometimes called a **copulative** or **copular verb**. In English primary education grammar courses, a copula is often called a **linking verb**. In other languages, copulas show more resemblances to pronouns, as in Classical Chinese and Guarani, or may take the form of suffixes attached to a noun, as in Beja, Ket, and Inuit languages.

Most languages have one main copula (although some, like Spanish, Portuguese and Thai, have more than one, and some have none). In the case of English, this is the verb *to be*. While the term *copula* is generally used to refer to such principal forms, it may also be used to refer to some other verbs with similar functions, like *become*, *get*, *feel* and *seem* in English (these may also be called “semi-copulas” or “pseudo-copulas”).

# COREFERENCE

**Coreference** occurs when two or more expressions in a text refer to the same person or thing; they have the same referent, e.g. *Bill<sub>i</sub> said he<sub>i</sub> would come*; the proper noun *Bill* and the pronoun *he* refer to the same person, namely to Bill. Coreference is the main concept underlying binding phenomena in the field of syntax. The theory of binding explores the syntactic relationship that exists between coreferential expressions in sentences and texts. When two expressions are coreferential, the one is usually a full form (the antecedent) and the other is an abbreviated form (a proform or anaphor). Linguists use indices to show coreference, as with the *i* index in the example *Bill<sub>i</sub> said he<sub>i</sub> would come*. The two expressions with the same reference are *coindexed*, hence in this example *Bill* and *he* are coindexed, indicating that they should be interpreted as coreferential.

When exploring coreference, there are numerous distinctions that can be made, e.g. anaphora, cataphora, split antecedents, coreferring noun phrases, etc. When dealing with proforms (pronouns, pro-verbs, pro-adjectives, etc.), one distinguishes between anaphora and cataphora. When the proform follows the expression to which it refers, anaphora is present (the proform is an anaphor), and when it precedes the expression to which it refers, cataphora is present (the proform is a cataphor). These notions all illustrated as follows:

## Anaphora

- a) *The music<sub>i</sub> was so loud that it<sub>i</sub> couldn't be enjoyed*. – The anaphor *it* follows the expression to which it refers (its antecedent).
- b) *Our neighbors<sub>i</sub> dislike the music*. If *they<sub>i</sub>* are angry, the cops will show up soon. – The anaphor *they* follows the expression to which it refers (its antecedent).

## Cataphora

- a) If *they<sub>i</sub>* are angry about the music, *the neighbors<sub>i</sub>* will call the cops. – The cataphor *they* precedes the expression to which it refers (its postcedent).
- b) Despite *her<sub>i</sub>* difficulty, *Wilma<sub>i</sub>* came to understand the point. – The cataphor *her* precedes the expression to which it refers (its postcedent)

## Split antecedents

- a) *Carol<sub>i</sub> told Bob<sub>i</sub> to attend the party*. *They<sub>i</sub>* arrived together. – The anaphor *they* has a split antecedent, referring to both Carol and Bob.
- b) When *Carol<sub>i</sub>* helps *Bob<sub>i</sub>* and *Bob<sub>i</sub>* helps *Carol<sub>i</sub>*, *they<sub>i</sub>* can accomplish any task. – The anaphor *they* has a split antecedent, referring to both Carol and Bob.

# DEPENDENCY GRAMMAR

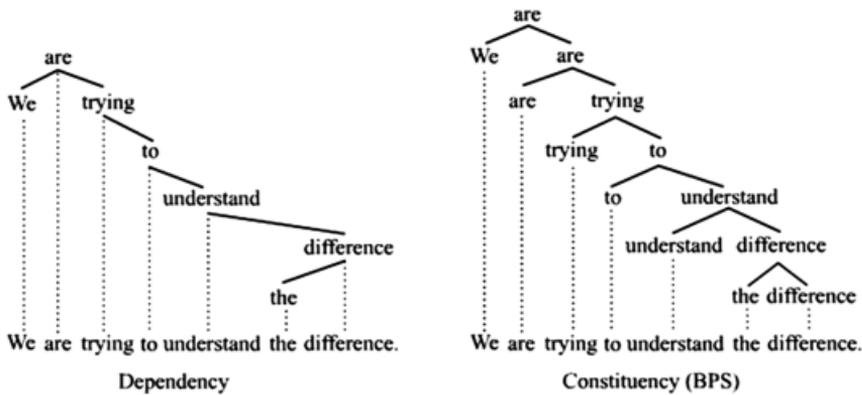
**Dependency grammar** is a class of modern syntactic theories that are all based on the dependency relation and that can be traced back primarily to the work of Lucien Tesnière. The dependency relation views the (finite) verb as the structural center of all clause structure. All other syntactic units (e.g. words) are either directly or indirectly dependent on the verb. DGs are distinct from phrase structure grammars (constituency grammars), since DGs lack phrasal nodes – although they acknowledge phrases. Structure is determined by the relation between a word (a head) and its dependents. Dependency structures are flatter than constituency structures in part because they lack a finite verb phrase constituent, and they are thus well suited for the analysis of languages with free word order, such as Czech and Turkish.

The following frameworks are dependency-based:

- Algebraic syntax
- Operator grammar
- Functional generative description
- Lexicase grammar
- Meaning–text theory
- Word grammar
- Extensible dependency grammar

## **Dependency vs. constituency**

Dependency is a one-to-one correspondence: for every element (e.g. word or morph) in the sentence, there is exactly one node in the structure of that sentence that corresponds to that element. The result of this one-to-one correspondence is that dependency grammars are word (or morph) grammars. All that exist are the elements and the dependencies that connect the elements into a structure. This situation should be compared with the constituency relation of phrase structure grammars. Constituency is a one-to-one-or-more correspondence, which means that, for every element in a sentence, there are one or more nodes in the structure that correspond to that element. The result of this difference is that dependency structures are minimal compared to their constituency structure counterparts, since they tend to contain many fewer nodes.



These two trees illustrate just two possible ways to render the dependency and constituency relations (see below). The dependency tree is an “ordered” tree, i.e. it reflects actual word order. Many dependency trees abstract away from linear order and focus just on hierarchical order, which means they do not show actual word order. The constituency tree follows the conventions of bare phrase structure (BPS), whereby the words themselves are employed as the node labels.

The distinction between dependency- and constituency-based grammars derives in a large part from the initial division of the clause. The constituency relation derives from an initial binary division, whereby the clause is split into a subject noun phrase (NP) and a predicate verb phrase (VP). This division is certainly present in the basic analysis of the clause that we find in the works of, for instance, Leonard Bloomfield and Noam Chomsky. Tesnière, however, argued vehemently against this binary division, preferring instead to position the verb as the root of all clause structure. Tesnière’s stance was that the subject-predicate division stems from term logic and has no place in linguistics. The importance of this distinction is that if one acknowledges the initial subject-predicate division in syntax as something real, then one is likely to go down the path of constituency grammar, whereas if one rejects this division, then the only alternative is to position the verb as the root of all structure, which means one has chosen the path of dependency grammar.

## DETERMINER (DETERMINATIVE)

A **determiner (determinative)** is a word, phrase or affix that occurs together with a noun or noun phrase and serves to express the reference of that noun or noun phrase in the context. That is, a determiner may indicate whether the noun is referring to a definite or indefinite element of a class, to a closer or more distant element, to an element belonging to a specified person or thing, to a particular number or quantity, etc. Common kinds of determiners include definite

and indefinite articles (like the English *the* and *a[n]*), demonstratives (like *this* and *that*), possessive determiners (like *my* and *their*), and quantifiers (like *many*, *few* and *several*). Examples:

- **The** girl is **a** student.
- I've lost **my** keys.
- **Some** folks get all **the** luck.
- **Which** book is that?
- I only had **thirty-seven** drinks.
- I'll take **this** one.
- **Both** windows were open.

Most determiners have been traditionally classed along with adjectives, and this still occurs: for example, demonstrative and possessive determiners are sometimes described as *demonstrative adjectives* and *possessive adjectives* respectively. However, modern theorists of grammar prefer to distinguish determiners as a separate word class from adjectives, which are simple modifiers of nouns, expressing attributes of the thing referred to. This distinction applies particularly in languages like English which use definite and indefinite articles, frequently as a necessary component of noun phrases – the determiners may then be taken to be a class of words which includes the articles as well as other words that function in the place of articles. (The composition of this class may depend on the particular language's rules of syntax; for example, in English the possessives *my*, *your* etc. are used without articles and so can be regarded as determiners, whereas their Italian equivalents *mio* etc. are used together with articles and so may be better classed as adjectives.) Not all languages can be said to have a lexically distinct class of determiners.

## DETERMINER PHRASE

A **determiner phrase** is a type of phrase posited by some theories of syntax. The head of a DP is a determiner, as opposed to a noun. For example in the phrase *the car*, *the* is a determiner and *car* is a noun; the two combine to form a phrase, and on the DP-analysis, the determiner *the* is head over the noun *car*. The existence of DPs is a controversial issue in the study of syntax. The traditional analysis of phrases such as *the car* is that the noun is the head, which means the phrase is a noun phrase (NP), not a determiner phrase. Beginning in the mid 1980s, an alternative analysis arose that posits the determiner as the head, which makes the phrase a DP instead of an NP.

In the determiner phrases below, the determiners are in **boldface**:

- **a** little dog, **the** little dogs (*indefinite or definite articles*)
- **my** little dog, **your** little dogs (*possessives*)
- **this** little dog, **those** little dogs (*demonstratives*)
- **every** little dog, **each** little dog, **no** dog (*quantifiers*)

The DP-analysis of phrases such as *the car* is the majority view in generative grammar today (Government and Binding and Minimalist Program), but is a minority stance in the study of syntax and grammar in general. Most frameworks outside of generative grammar continue to assume the traditional NP analysis of noun phrases. For instance, representational phrase structure grammars assume NP, e.g. Head-Driven Phrase Structure Grammar, and most dependency grammars such as Meaning-Text Theory, Functional Generative Description, Lexicase Grammar also assume the traditional NP-analysis of noun phrases, Word Grammar being the one exception. Construction Grammar and Role and Reference Grammar also assume NP instead of DP. Furthermore, the DP-analysis does not reach into the teaching of grammar in schools in the English-speaking world, and certainly not in the non-English-speaking world.

## DISCOURSE FUNCTION

**Sentence** (or **discourse**) **function** refers to a speaker's purpose in uttering a specific sentence, phrase, or clause. Whether a listener is present or not is sometimes irrelevant. It answers the question: "Why has this been said?" The four basic sentence functions in the world's languages include the *declarative*, *interrogative*, *exclamative*, and the *imperative*. These correspond to a *statement*, *question*, *exclamation*, and *command* respectively. Typically, a sentence goes from one function to the next through a combination of changes in word order, intonation, the addition of certain auxiliaries or particles, or other times by providing a special verbal form.

## ELLIPSIS

**Ellipsis** (from the Greek: ἔλλειψις, *élleipsis*, "omission") or **elliptical construction** refers to the omission from a clause of one or more words that are nevertheless understood in the context of the remaining elements. There are numerous distinct types of ellipsis acknowledged in theoretical syntax. Theoretical accounts of ellipsis can vary greatly depending in part upon whether a constituency-based or a dependency-based theory of syntactic structure is pursued.

## GRAMMATICAL FUNCTION (RELATION)

**Grammatical relations** (= **grammatical functions**, **grammatical roles**, **syntactic functions**) refer to functional relationships between constituents in a clause. The standard examples of grammatical functions from traditional grammar are subject, direct object, and indirect object. In recent times, the syntactic functions (more generally referred to as grammatical relations), typified by the traditional categories of subject and object, have assumed an important role in linguistic theorizing, within a variety of approaches ranging from generative grammar to functional and cognitive theories. Many modern theories of grammar are likely to acknowledge numerous further types of grammatical relations (e.g. complement, specifier, predicative, etc.).

## HEAD

The **head** of a phrase is the word that determines the syntactic type of that phrase or analogously the stem that determines the semantic category of a compound of which it is a part. The other elements modify the head and are therefore the head's *dependents*. Headed phrases and compounds are endocentric, whereas exocentric ("headless") phrases and compounds (if they exist) lack a clear head. Heads are crucial to establishing the direction of branching. Head-initial phrases are right-branching, head-final phrases are left-branching, and head-medial phrases combine left- and right-branching. Examine the following expressions:

big red **dog**  
bird**song**

The word *dog* is the **head** of *big red dog*, since it determines that the phrase is a noun phrase, not an adjective phrase. Because the adjectives *big* and *red* modify this head noun, they are its *dependents*. Similarly, in the compound noun *birdsong*, the stem *song* is the head, since it determines the basic meaning of the compound. The stem *bird* modifies this meaning and is therefore dependent on *song*. The *birdsong* is a kind of song, not a kind of bird. The heads of phrases like the ones here can often be identified by way of constituency tests. For instance, substituting a single word in for the phrase *big red dog* requires the substitute to be a noun (or pronoun), not an adjective.

### Trees

Many theories of syntax represent heads by means of tree structures. These trees tend to be organized in terms of one of two relations: either in terms of the *constituency* relation of phrase structure grammars or the *dependency* relation of dependency grammars. Both relations are illustrated with the following trees:



The constituency relation is shown on the left and the dependency relation on the right. The a- trees identify heads by way of category labels, whereas the b-trees use the words themselves as the labels. The noun *stories* (N) is the head over the adjective *funny* (A). In the constituency trees on the left, the noun projects its category status up to the mother node, so that the entire phrase is identified as a noun phrase (NP). In the dependency trees on the right, the noun projects only a single node, whereby this node dominates the one node that the adjective projects, a situation that also identifies the entirety as an NP. The b-trees are structurally the same as their a-counterparts, the only difference being that a different convention is used for marking heads and dependents. The conventions illustrated with these trees are just a couple of the various tools that grammarians employ to identify heads and dependents. While other conventions abound, they are usually similar to the ones illustrated here.

## INVERSION

**Inversion** is any of several grammatical constructions where two expressions switch their canonical order of appearance, that is, they invert. The most frequent type of inversion in English is subject–auxiliary inversion, where an auxiliary verb changes places with its subject; this often occurs in questions, such as *Are you coming?*, where the subject *you* is switched with the auxiliary *are*. In many other languages – especially those with freer word order than English – inversion can take place with a variety of verbs (not just auxiliaries) and with other syntactic categories as well.

When a layered constituency-based analysis of sentence structure is used, inversion often results in the discontinuity of a constituent, although this would not be the case with a flatter dependency-based analysis. In this regard inversion has consequences similar to those of shifting.

### Inversion in English

In broad terms, one can distinguish between two major types of inversion in English that involve verbs: *subject–auxiliary inversion* and *subject–verb inversion*. The difference between these two types resides with the nature of the verb involved, i.e. whether it is an auxiliary verb or a full verb.

### Subject–auxiliary inversion

The most frequently occurring type of inversion in English is subject–auxiliary inversion. The subject and auxiliary verb invert, i.e. they switch positions, e.g.

- a) **Fred will stay.**
- b) **Will Fred stay?** – Subject–auxiliary inversion with yes/no question
- a) **Larry has done it.**
- c) **What has Larry done?** – Subject–auxiliary inversion with constituent question
- a) **Fred has helped at no point.**
- d) **At no point has Fred helped.** – Subject–auxiliary inversion with fronted expression containing negation (negative inversion)
- a) **If we were to surrender,...**
- e) **Were we to surrender,...** – Subject–auxiliary inversion in condition clause

The default order in English is subject–verb (SV), but a number of meaning-related differences (such as those illustrated above) motivate the subject and auxiliary verb to invert so that the finite verb precedes the subject; one ends up with auxiliary–subject (Aux-S) order. This type of inversion fails if the finite verb is not an auxiliary:

- a) **Fred stayed.**
- b) **\*Stayed Fred?** – Inversion impossible here because the verb is NOT an auxiliary verb

### Subject–verb inversion

The verb in cases of subject–verb inversion in English is not required to be an auxiliary verb; it is, rather, a full verb or a form of the copula *be*. If the sentence has an auxiliary verb, the subject is placed after the auxiliary *and* the main verb. For example:

- a) **A unicorn will come into the room.**
- b) **Into the room will come a unicorn.**

Since this type of inversion generally places the focus on the subject, the subject is likely to be a full noun or noun phrase rather than a pronoun. Third-person personal pronouns are especially unlikely to be found as the subject in this construction. For example:

- a) **Down the stairs came the dog.** – Noun subject
- b) **?Down the stairs came it.** – Third-person personal pronoun as subject; unlikely unless it has special significance and is stressed
- c) **Down the stairs came I.** – First-person personal pronoun as subject; more likely, though still I would require stress

## MODIFIER

A **modifier** is an optional element in phrase structure or clause structure. A modifier is so called because it is said to *modify* (change the meaning of) another element in the structure, on which it is dependent. Typically the modifier can be removed without affecting the grammar of the sentence. For example, in the English sentence *This is a red ball*, the adjective *red* is a modifier, modifying the noun *ball*. Removal of the modifier would leave *This is a ball*, which is grammatically correct and equivalent in structure to the original sentence.

Other terms used with a similar meaning are **qualifier** (the word *qualify* may be used in the same way as *modify* in this context), **attribute**, and adjunct. These concepts are often distinguished from *complements* and *arguments*, which may also be considered dependent on another element, but are considered an indispensable part of the structure. For example, in *His face became red*, the word *red* might be called a complement or argument of *became*, rather than a modifier or adjunct, since it cannot be omitted from the sentence.

Modifiers may come either before or after the modified element (the *head*), depending on the type of modifier and the rules of syntax for the language in question. A modifier placed before the head is called a **premodifier**; one placed after the head is called a **postmodifier**.

For example, in *land mines*, the word *land* is a premodifier of *mines*, whereas in the phrase *mines in wartime*, the phrase *in wartime* is a postmodifier of *mines*. A head may have a number of modifiers, and these may include both premodifiers and postmodifiers. For example:

*that nice tall man from Canada whom you met*

In this noun phrase, *man* is the head, *nice* and *tall* are premodifiers, and *from Canada* and *whom you met* are postmodifiers.

Notice that in English, simple adjectives are usually used as premodifiers, with occasional exceptions such as *galore* (which always appears after the noun) and the phrases *time immemorial* and *court martial* (the latter comes from French, where most adjectives are postmodifiers). Sometimes placement of the adjective after the noun entails a change of meaning: compare *a responsible person* and *the person responsible*, or *the proper town* (the appropriate town) and *the town proper* (the area of the town as properly defined).

It is sometimes possible for a modifier to be separated from its head by other words, as in *The man came who you bumped into in the street yesterday*, where the relative clause *who...yesterday* is separated from the word it modifies (*man*) by the word *came*. This type of situation is especially likely in languages with free word order.

## NON-FINITE CLAUSE

A **non-finite clause** is a dependent clause whose verb is non-finite; for example, many languages can form non-finite clauses from infinitives, participles and gerunds. Like any dependent (subordinate) clause, a non-finite clause serves a grammatical role – commonly that of a noun, adjective, or adverb – in a greater clause that contains it.

A typical finite clause consists of a verb together with its objects and other dependents (i.e. a verb phrase or predicate), along with its subject (although in certain cases the subject is not expressed). A non-finite clause is similar, except that the verb must be in a non-finite form (such as an infinitive, participle, gerund or gerundive), and it is consequently much more likely that there will be no subject expressed, i.e. that the clause will consist of a (non-finite) verb phrase on its own.

## NOUN PHRASE

A **noun phrase (nominal phrase)** is a phrase which has a noun (or indefinite pronoun) as its head word, or which performs the same grammatical function as such a phrase. Noun phrases are very common cross-linguistically, and they may be the most frequently occurring phrase type.

Noun phrases often function as verb subjects and objects, as predicative expressions, and as the complements of prepositions. Noun phrases can be embedded inside each other; for instance, the noun phrase *some of his constituents* contains the shorter noun phrase *his constituents*.

In some modern theories of grammar, noun phrases with determiners are analyzed as having the determiner rather than the noun as their head; they are then referred to as *determiner phrases*.

## OBJECT

Traditional grammar defines the **object** in a sentence as the entity that is acted upon by the subject. There is thus a primary distinction between subjects and objects that is understood in terms of the action expressed by the verb, e.g. *Tom studies grammar* – *Tom* is the subject and *grammar* is the object. Traditional theories of sentence structure divide the simple sentence into a subject and a predicate, whereby the object is taken to be part of the predicate. Many modern theories of grammar (e.g. dependency grammars), in contrast, take the object to be a verb argument like the subject, the difference between them being mainly just their prominence; the subject is ranked higher than the object and is thus more prominent.

The main verb in a clause determines if and what objects are present. Transitive verbs require the presence of an object, whereas intransitive verbs block the appearance of an object. The term *complement* overlaps in meaning with *object*, although the two are not completely synonymous. The objects that verbs do and do not take is explored in detail in valency theory.

## PHRASE

A **phrase** is a group of words (or sometimes a single word) that form a constituent and so function as a single unit in the syntax of a sentence. A phrase is lower on the grammatical hierarchy than a clause.

Examine the following sentence:

***The house at the end of the street** is red.*

The words in bold form a phrase; together they act like a noun (making them a noun phrase). This phrase can be further broken down; a prepositional phrase functioning as an adjective can be identified:

***at the end of the street***

Further, a smaller prepositional phrase can be identified inside this greater prepositional phrase:

***of the street***

And within the greater prepositional phrase, one can identify a noun phrase:

***the end of the street***

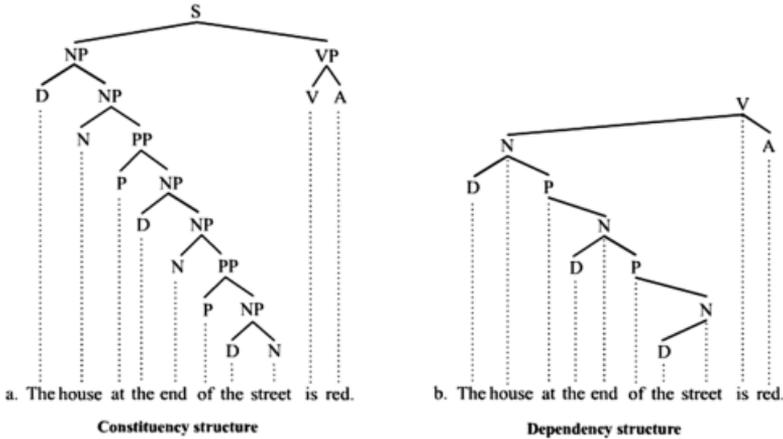
And within this noun phrase, there is a smaller noun phrase:

***the street***

Phrases can be identified by constituency tests such as proform substitution (=replacement). The prepositional phrase *at the end of the street*, for instance, could be replaced by an adjective such as *nearby*: *the nearby house* or even *the house nearby*. *The end of the street* could also be replaced by another noun phrase, such as *the crossroads* to produce *the house at the crossroads*.

Many theories of syntax and grammar represent sentence structure using trees. The trees provide schematic illustrations of how the words of sentences are grouped. These representations show the words, phrases, and at times clauses that make up sentences. Any word combination that corresponds to a complete subtree can be seen as a phrase. There are two competing

principles for producing trees, constituency and dependency. Both of these principles are illustrated here using the example sentence from above. The constituency-based tree is on the left, and the dependency-based tree on the right:



The constituency-based tree on the left is associated with a traditional phrase structure grammar, and the tree on the right is one of a dependency grammar. The node labels in the trees (e.g. N, NP, V, VP) mark the syntactic category of the constituents. Both trees take a phrase to be any combination of words that corresponds to a complete subtree. In the constituency tree on the left, each phrasal node (marked with P) identifies a phrase; there are therefore 8 phrases in the constituency tree. In the dependency tree on the right, each node that dominates one or more other nodes corresponds to a phrase; there are therefore 5 (or 6 if the whole sentence is included) phrases in the dependency tree. What the trees and the numbers demonstrate is that theories of syntax differ in what they deem to qualify as a phrase. The constituency tree takes three word combinations to be phrases (*house at the end of the street*, *end of the street*, and *is red*) that the dependency tree does not judge to be phrases. Which of the two tree structures is more plausible can be determined in part by empirical considerations, such as those delivered by constituency tests.

The common use of the term “phrase” is different from that employed by some phrase structure theories of syntax.

## PHRASE STRUCTURE GRAMMAR

The term **phrase structure grammar** was originally introduced by Noam Chomsky as the term for grammars as defined by phrase structure rules, i.e. rewrite rules of the type studied previously by Emil Post and Axel Thue. Some authors, however, reserve the term for more restricted grammars in the Chomsky hierarchy: context-sensitive grammars, or context-free grammars. In a broader sense,

phrase structure grammars are also known as *constituency grammars*. The defining trait of phrase structure grammars is thus their adherence to the constituency relation, as opposed to the dependency relation of dependency grammars.

In linguistics, phrase structure grammars are all those grammars that are based on the constituency relation, as opposed to the dependency relation associated with dependency grammars; hence phrase structure grammars are also known as constituency grammars. Any of several related theories for the parsing of natural language qualify as constituency grammars, and most of them have been developed from Chomsky's work, including

- Government and Binding Theory,
- Generalized Phrase Structure Grammar,
- Head-Driven Phrase Structure Grammar,
- Lexical Functional Grammar,
- The Minimalist Program, and
- Nanosyntax.

Further grammar frameworks and formalisms also qualify as constituency-based, although they may not think of the themselves as having spawned from Chomsky's work, e.g.

- Arc Pair Grammar and
- Categorical Grammar.

The fundamental trait that these frameworks all share is that they view sentence structure in terms of the constituency relation. The constituency relation derives from the subject-predicate division of Latin and Greek grammars that is based on term logic and reaches back to Aristotle in antiquity. Basic clause structure is understood in terms of a binary division of the clause into subject (noun phrase NP) and predicate (verb phrase VP).

## PREDICATE

The **predicate** in traditional grammar is inspired by propositional logic of antiquity (as opposed to the more modern predicate logic). A predicate is seen as a property that a subject has or is characterized by. A predicate is therefore an expression that can be *true of* something. Thus, the expression "is moving" is true of those things that are moving. This classical understanding of predicates was adopted more or less directly into Latin and Greek grammars and from there it made its way into English grammars, where it is applied directly to the analysis of sentence structure. It is also the understanding of predicates in English-language dictionaries. The predicate is one of the two main parts of a sentence (the other being the subject, which the predicate modifies). The predicate must contain a verb, and the verb requires, permits, or precludes other sentence elements to complete the predicate.

These elements are: objects (direct, indirect, prepositional), predicatives, and adjuncts:

*She dances.* – verb-only predicate

*Ben reads the book.* – verb + direct object predicate

*Ben's mother, Felicity, gave me a present.* – verb + indirect object + direct object predicate

*She listened to the radio.* – verb + prepositional object predicate

*They elected him president.* – verb + object + predicative noun predicate

*She met him in the park.* – verb + object + adjunct predicate

*She is in the park.* – verb + predicative prepositional phrase predicate

Most modern theories of syntax and grammar take their inspiration for the theory of predicates from predicate calculus as associated with Gottlob Frege. This understanding sees predicates as relations or functions over arguments. The predicate serves either to assign a property to a single argument or to relate two or more arguments to each other. Sentences consist of predicates and their arguments (and adjuncts) and are thus predicate-argument structures, whereby a given predicate is seen as linking its arguments into a greater structure. This understanding of predicates sometimes renders a predicate and its arguments in the following manner:

*Bob laughed.* → laughed (Bob) or, laughed =  $f(\text{Bob})$

*Sam helped you.* → helped (Sam, you)

*Jim gave Jill his dog.* → gave (Jim, Jill, his dog)

## PREPOSITIONAL PHRASE

Prepositional phrases have a preposition as the central element of the phrase, i.e. as the head of the phrase. The remaining part of the phrase, usually a noun (phrase) or pronoun, is sometimes called the *prepositional complement*.

## SENTENCE

A **sentence** is a grammatical unit consisting of one or more words that are grammatically linked. A sentence can include words grouped meaningfully to express a statement, question, exclamation, request, command or suggestion.

A sentence can also be defined in orthographic terms alone, i.e., as anything which is contained between a capital letter and a full stop. For instance, the opening of Charles Dickens' novel *Bleak House* begins with the following three sentences:

*London. Michaelmas term lately over, and the Lord Chancellor sitting in Lincoln's Inn Hall. Implacable November weather.*

The first sentence involves one word, a proper noun. The second sentence has only a non-finite verb. The third is a single nominal group. Only an orthographic definition encompasses this variation.

As with all language expressions, sentences might contain function and content words and contain properties distinct to natural language, such as characteristic intonation and timing patterns.

Sentences are generally characterized in most languages by the presence of a finite verb, e.g. “The quick brown fox *jumps* over the lazy dog”.

One traditional scheme for classifying English sentences is by clause structure, the number and types of clauses in the sentence with finite verbs.

- A *simple sentence* consists of a single independent clause with no dependent clauses.
- A *compound sentence* consists of multiple independent clauses with no dependent clauses. These clauses are joined together using conjunctions, punctuation, or both.
- A *complex sentence* consists of one independent clause and at least one dependent clause.
- A *complex-compound sentence* (or *compound-complex sentence*) consists of multiple independent clauses, at least one of which has at least one dependent clause.

## SUBJECT

The **subject** is, according to a tradition that can be traced back to Aristotle (and that is associated with phrase structure grammars), one of the two main constituents of a clause, the other constituent being the predicate, whereby the predicate says something about the subject. According to a tradition associated with predicate logic and dependency grammars, the subject is the most prominent overt argument of the predicate. By this position all languages with arguments have subjects, though there is no way to define this consistently for all languages. From a functional perspective, a subject is a phrase that conflates nominative case with the topic. Many languages (such as those with ergative or Austronesian alignment) do not do this, and so do not have subjects.

All of these positions see the subject in English determining person and number agreement on the finite verb, as exemplified by the difference in verb forms between *he eats* and *they eat*. The stereotypical subject immediately precedes the finite verb in declarative sentences in English and represents an agent or a theme. The subject is often a multi-word constituent and should be distinguished from parts of speech, which, roughly, classify words within constituents.

## SUBORDINATION

**Subordination** is a principle of the hierarchical organization of linguistic units. While the principle is applicable in semantics, syntax, morphology, and phonology, most work in linguistics employs the term “subordination” in the context of syntax, and that is the context in which it is considered here. The syntactic units of sentences are often either subordinate or coordinate to each other. Hence an understanding of subordination is promoted by an understanding of coordination, and vice versa.

Subordination as a concept of syntactic organization is associated closely with the distinction between *coordinate* and *subordinate* clauses. One clause is subordinate to another, if it depends on it. The dependent clause is called a *subordinate clause* and the independent clause is called the *main clause* (= matrix clause). Subordinate clauses are usually introduced by subordinators (= subordinate conjunctions) such as *after, because, before, if, so that, that, when, while*, etc. For example:

***Before we play again**, we should do our homework.*

*We are doing our homework now **because we want to play again**.*

The strings in bold are subordinate clauses, and the strings in non-bold are the main clauses. Sentences must consist of at least one main clause, whereas the number of subordinate clauses is hypothetically without limitation. Long sentences that contain many subordinate clauses are characterized in terms of hypotaxis, the Greek term meaning the grammatical arrangement of “unequal” constructs (*hypo*=“beneath”, *taxis*=“arrangement”). Sentences that contain few or no subordinate clauses but that may contain coordinated clauses are characterized in terms of parataxis.

## SYNTAX

**Syntax** (from Ancient Greek σύνταξις “coordination” from σύν *syn*, “together,” and τάξις *táxis*, “an ordering”) is “the study of the principles and processes by which sentences are constructed in particular languages.”

In addition to referring to the discipline, the term *syntax* is also used to refer directly to the rules and principles that govern the sentence structure of any individual language. Modern research in syntax attempts to describe languages in terms of such rules. Many professionals in this discipline attempt to find general rules that apply to all natural languages.

The term *syntax* is also used to refer to the rules governing the behavior of mathematical systems, such as formal languages used in logic.

## THEMATIC RELATION

In a number of theories of linguistics, **thematic relations** is a term used to express the role that a noun phrase plays with respect to the action or state described by a sentence's verb. For example, in the sentence "Susan ate an apple", Susan is the doer of the eating, so she is an agent; the apple is the item that is eaten, so it is a patient. While most modern linguistic theories make reference to such relations in one form or another, the general term, as well as the terms for specific relations, varies; ,participant role', ,semantic role', and ,deep case' have been used analogously to ,thematic relation'.

Here is a list of the major thematic relations.

- **Agent:** deliberately performs the action (e.g., *Bill ate his soup quietly.*).
- **Experiencer:** the entity that receives sensory or emotional input (e.g. *Susan heard the song. I cried.*).
- **Theme:** undergoes the action but does not change its state (e.g., *We believe in many gods. I have two children. I put the book on the table. He gave the gun to the police officer.*) (Sometimes used interchangeably with patient.)
- **Patient:** undergoes the action and changes its state (e.g., *The falling rocks crushed the car.*). (Sometimes used interchangeably with theme.)
- **Instrument:** used to carry out the action (e.g., *Jamie cut the ribbon with a pair of scissors.*).
- **Force or Natural Cause:** mindlessly performs the action (e.g., *An avalanche destroyed the ancient temple.*).
- **Location:** where the action occurs (e.g., *Johnny and Linda played carelessly in the park. I'll be at Julie's house studying for my test.*).
- **Direction or Goal:** where the action is directed towards (e.g., *The caravan continued on toward the distant oasis. He walked to school.*).
- **Recipient:** a special kind of goal associated with verbs expressing a change in ownership, possession. (E.g., *I sent John the letter. He gave the book to her.*)
- **Source or Origin:** where the action originated (e.g., *The rocket was launched from Central Command. She walked away from him.*).
- **Time:** the time at which the action occurs (e.g., *The rocket was launched yesterday.*).
- **Beneficiary:** the entity for whose benefit the action occurs (e.g., *I baked Reggie a cake. He built a car for me. I fight for the king.*).
- **Manner:** the way in which an action is carried out (e.g., *With great urgency, Tabitha phoned 911.*).
- **Purpose:** the reason for which an action is performed (e.g., *Tabitha phoned 911 right away in order to get some help.*).
- **Cause:** what caused the action to occur in the first place; not *for what*, rather *because of what* (e.g., *Because Clyde was hungry, he ate the cake.*).

There are no clear boundaries between these relations. For example, in "the hammer broke the window", some linguists treat hammer as an agent, some others as instrument, while some others treat it as a special role different from these.

## THEME / RHEME

In linguistics, the **topic**, or **theme**, of a sentence is what is being talked about, and the **comment** (**rheme** or **focus**) is what is being said about the topic. That the information structure of a clause is divided in this way is generally agreed on, but the boundary between topic/theme depends on grammatical theory.

The difference between “topic” and grammatical subject is that topic is used to describe the information structure, or pragmatic structure of a clause and how it coheres with other clauses, whereas the subject is a purely grammatical category. For example it is possible to have clauses where the subject is not the topic, such as in passive voice. In some languages, word order and other syntactic phenomena are determined largely by the topic–comment (theme–rheme) structure. These languages are sometimes referred to as topic-prominent languages. Chinese and Japanese are often given as examples of this.

The distinction was probably first suggested by Henri Weil in 1844. Georg von der Gabelentz distinguished **psychological subject** (roughly topic) and **psychological object** (roughly focus). In the Prague school, the dichotomy, termed **topic–focus articulation**, has been studied mainly by Vilém Mathesius, Jan Firbas, František Daneš, Petr Sgall and Eva Hajičová. They have been concerned mainly by its relation to intonation and word-order. The work of Michael Halliday in the 1960s is responsible for bringing the ideas to functional grammar.

## VALENCY

**Valency** (or **valence**) refers to the number of arguments controlled by a verbal predicate. It is related, though not identical, to verb transitivity, which counts only object arguments of the verbal predicate. Verb valency, on the other hand, includes all arguments, including the subject of the verb. The linguistic meaning of valence derives from the definition of valency in chemistry. This scientific metaphor is due to Lucien Tesnière, who developed verb valency into a major component of his (what would later become known as) dependency grammar theory of syntax and grammar. The notion of valency first appeared as a comprehensive concept in Tesnière’s posthumously published book (1959) *Éléments de syntaxe structurale* (Elements of structural syntax).

There are several types of valency: impersonal (=avalent), intransitive (=monovalent), transitive (=divalent) and ditransitive (=trivalent):

- an impersonal verb takes no arguments, e.g. *It rains*. (Though *it* is technically the subject of the verb in English, it is only a dummy subject, that is a syntactic placeholder – it has no concrete referent. No other subject can replace *it*. In many other languages, there would be no subject at all. In Spanish, for example, *It is raining* could be expressed as simply *llueve*.)

- an intransitive verb takes one argument, e.g. *He<sup>1</sup> sleeps.*
- a transitive verb takes two, e.g. *He<sup>1</sup> kicked the ball<sup>2</sup>.*
- a ditransitive verb takes three, e.g. *He<sup>1</sup> gave her<sup>2</sup> a flower<sup>3</sup>.*
- There are a few verbs that take four arguments. Sometimes *bet* is considered to have four arguments in English, as in the examples *I<sup>1</sup> bet him<sup>2</sup> five quid<sup>3</sup> on “The Daily Arabian”<sup>4</sup>* and *I<sup>1</sup> bet you<sup>2</sup> two dollars<sup>3</sup> it will rain<sup>4</sup>.*

## VERB PHRASE

A **verb phrase** is a syntactic unit composed of at least one verb and the dependents of that verb – objects, complements and other modifiers, but not including the subject. Thus in the sentence *A fat man put the jewels quickly in the box*, the words *put the jewels quickly in the box* may be considered a verb phrase – this consists of the verb *put* and its dependents, but not its subject *a fat man*. A verb phrase is therefore similar to what is considered a *predicate* in some contexts.

Verb phrases may be either finite (the head of the phrase is a finite verb) or non-finite (the head of the phrase is a non-finite verb, such as an infinitive, participle or gerund). While phrase structure grammars acknowledge both types of VP, dependency grammars reject the existence of a finite VP constituent (unlike the former, they regard the subject as being among the verb’s dependents). In this regard, the understanding of verb phrases can be dependent on which theory is being considered.

Verb phrases are sometimes defined more narrowly in scope to allow for only those sentence elements that are strictly considered verbal elements to form verb phrases. According to such a definition, verb phrases consist only of main verbs, auxiliary verbs, and other infinitive or participle constructions. For example, in the following sentences only the words in bold would be considered to form the verb phrase for each sentence:

*John **has given** Mary a book.*  
*They **were being eaten** alive.*  
*She **kept screaming** like a maniac.*  
*Thou **shalt not kill**.*

This more narrow definition is often applied in functionalist frameworks and traditional European reference grammars.