

Linguistics

Part 1 - Syntactic terms

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Syntax

In linguistics, **syntax** (from Ancient Greek οὐνταξίς "arrangement" from οὐν syn, "together", and τάξις táxis, "an ordering") is "the study of the principles and processes by which sentences are constructed in particular languages".^[1]

In addition to referring to the overarching discipline, the term *syntax* is also used to refer directly to the rules and principles that govern the sentence structure of any individual language, for example in "the syntax of Modern Irish." 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. (See Logical syntax).

Early history

Works on grammar were written long before modern syntax came about; the *Aṣṭādhyāyī* of Pāṇini is often cited as an example of a premodern work that approaches the sophistication of a modern syntactic theory.^[2] In the West, the school of thought that came to be known as "traditional grammar" began with the work of Dionysius Thrax.

For centuries, work in syntax was dominated by a framework known as *grammaire générale*, first expounded in 1660 by Antoine Arnauld in a book of the same title. This system took as its basic premise the assumption that language is a direct reflection of thought processes and therefore there is a single, most natural way to express a thought. (That *natural way*, coincidentally, was exactly the way it was expressed in French.)

However, in the 19th century, with the development of historical-comparative linguistics, linguists began to realize the sheer diversity of human language, and to question fundamental assumptions about the relationship between language and logic. It became apparent that there was no such thing as the most natural way to express a thought, and therefore logic could no longer be relied upon as a basis for studying the structure of language.

The Port-Royal grammar modeled the study of syntax upon that of logic (indeed, large parts of the Port-Royal Logic were copied or adapted from the *Grammaire générale*).^[3] Syntactic categories were identified with logical ones, and all sentences were analyzed in terms of "Subject – Copula – Predicate". Initially, this view was adopted even by the early comparative linguists such as Franz Bopp.

The central role of syntax within theoretical linguistics became clear only in the 20th century, which could reasonably be called the "century of syntactic theory" as far as linguistics is concerned. For a detailed and critical survey of the history of syntax in the last two centuries, see the monumental work by Giorgio Graffi (2001).^[4]

Modern theories

There are a number of theoretical approaches to the discipline of syntax. One school of thought, founded in the works of Derek Bickerton,^[5] sees syntax as a branch of biology, since it conceives of syntax as the study of linguistic knowledge as embodied in the human mind. Other linguists (e.g. Gerald Gazdar) take a more Platonic view, since they regard syntax to be the study of an abstract formal system.^[6] Yet others (e.g. Joseph Greenberg) consider grammar a taxonomical device to reach broad generalizations across languages.

Generative grammar

The hypothesis of generative grammar is that language is a structure of the human mind. The goal of generative grammar is to make a complete model of this inner language (known as *i-language*). This model could be used to describe all human language and to predict the grammaticality of any given utterance (that is, to predict whether the utterance would sound correct to native speakers of the language). This approach to language was pioneered by Noam Chomsky. Most generative theories (although not all of them) assume that syntax is based upon the constituent structure of sentences. Generative grammars are among the theories that focus primarily on the form of a sentence, rather than its communicative function.

Among the many generative theories of linguistics, the Chomskyan theories are:

- Transformational grammar (TG) (Original theory of generative syntax laid out by Chomsky in *Syntactic Structures* in 1957)^[7]
- Government and binding theory (GB) (revised theory in the tradition of TG developed mainly by Chomsky in the 1970s and 1980s)^[8]
- Minimalist program (MP) (a reworking of the theory out of the GB framework published by Chomsky in 1995)^[9]

Other theories that find their origin in the generative paradigm are:

- Generative semantics (now largely out of date)
- Relational grammar (RG) (now largely out of date)
- Arc pair grammar
- Generalized phrase structure grammar (GPSG; now largely out of date)
- Head-driven phrase structure grammar (HPSG)
- Lexical functional grammar (LFG)
- Nanosyntax

Categorial grammar

Categorial grammar is an approach that attributes the syntactic structure not to rules of grammar, but to the properties of the syntactic categories themselves. For example, rather than asserting that sentences are constructed by a rule that combines a noun phrase (NP) and a verb phrase (VP) (e.g. the phrase structure rule $S \rightarrow NP VP$), in categorial grammar, such principles are embedded in the category of the head word itself. So the syntactic category for an intransitive verb is a complex formula representing the fact that the verb acts as a function word requiring an NP as an input and produces a sentence level structure as an output. This complex category is notated as $(NP\backslash S)$ instead of V. $NP\backslash S$ is read as "a category that searches to the left (indicated by \) for a NP (the element on the left) and outputs a sentence (the element on the right)". The category of transitive verb is defined as an element that requires two NPs (its subject and its direct object) to form a sentence. This is notated as $(NP/(NP\backslash S))$ which means "a category that searches to the right (indicated by /) for an NP (the object), and generates a function (equivalent to the VP) which is $(NP\backslash S)$, which in turn represents a function that searches to the left for an NP and produces a sentence".

Tree-adjoining grammar is a categorial grammar that adds in partial tree structures to the categories.

Dependency grammar

Dependency grammar is an approach to sentence structure where syntactic units are arranged according to the dependency relation, as opposed to the constituency relation of phrase structure grammars. Dependencies are directed links between words. The (finite) verb is seen as the root of all clause structure and all the other words in the clause are either directly or indirectly dependent on this root. Some prominent dependency-based theories of syntax:

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

Lucien Tesnière (1893–1954) is widely seen as the father of modern dependency-based theories of syntax and grammar. He argued vehemently against the binary division of the clause into subject and predicate that is associated with the grammars of his day ($S \rightarrow NP\ VP$) and which remains at the core of all phrase structure grammars, and in the place of this division, he positioned the verb as the root of all clause structure.^[10]

Stochastic/probabilistic grammars/network theories

Theoretical approaches to syntax that are based upon probability theory are known as stochastic grammars. One common implementation of such an approach makes use of a neural network or connectionism. Some theories based within this approach are:

- Optimality theory
- Stochastic context-free grammar

Functionalist grammars

Functionalist theories, although focused upon form, are driven by explanation based upon the function of a sentence (i.e. its communicative function). Some typical functionalist theories include:

- Functional discourse grammar (Dik)
- Prague linguistic circle
- Systemic functional grammar
- Cognitive grammar
- Construction grammar (CxG)
- Role and reference grammar (RRG)
- Emergent grammar

Notes

- [1] Chomsky, Noam (2002) [1957]. *Syntactic Structures*. p. 11 (<http://books.google.co.uk/books?id=SNeHkMXHcd8C&pg=PA11&dq=syntax+is+the+study+of+the+principles+and+processes+by+which+sente>ntences+are+constructed+in+particular+languages").
- [2] Fortson IV, Benjamin W. (2004). *Indo-European Language and Culture: An Introduction*. Blackwell. p. 186. ISBN 1-4051-0315-9 (hb); 1-4051-0316-7 (pb). "[The *Aṣṭādhyāyī*] is a highly precise and thorough description of the structure of Sanskrit somewhat resembling modern generative grammar...[it] remained the most advanced linguistic analysis of any kind until the twentieth century."
- [3] Arnauld, Antoine (1683). *La logique* (<http://visualiseur.bnf.fr/Visualiseur?Destination=Gallica&O=NUMM-57444>) (5th ed.). Paris: G. Desprez. pp. 137. . "Nous avons emprunté...ce que nous avons dit...d'un petit Livre...sous le titre de *Grammaire générale*."
- [4] Giorgio, Graffi (2001). "200 Years of Syntax: A Critical Survey" (http://books.google.com/books/about/200_Years_of_Syntax.html?id=mydolrE-PPKC) (googlebook preview). John Benjamins Publishing.
- [5] See Bickerton, Derek (1990). *Language and Species*. University of Chicago Press. ISBN 0-226-04610-9. and, for more recent advances, Derek Bickerton; Eörs Szathmáry, ed. (2009). *Biological foundations and origin of syntax*. MIT Press. ISBN 978-0-262-01356-7.
- [6] Ted Briscoe, 2 May 2001, Interview with Gerald Gazdar (<http://www.informatics.susx.ac.uk/research/nlp/gazdar/briscoe/gpsg.html#SECTION00040000000000000000>). Retrieved 2008-06-04.
- [7] Chomsky, Noam. 1957. *Syntactic Structures*. The Hague/Paris: Mouton, p. 15.

- [8] Chomsky, Noam (1981/1993). *Lectures on Government and Binding: The Pisa Lectures*. Mouton de Gruyter.
- [9] Chomsky, Noam (1995). *The Minimalist Program*. MIT Press.
- [10] Concerning Tesnière's rejection of the binary division of the clause into subject and predicate and in favor of the verb as the root of all structure, see Tesnière (1969:103–105).

References

- Brown, Keith; Jim Miller (eds.) (1996). *Concise Encyclopedia of Syntactic Theories*. New York: Elsevier Science. ISBN 0-08-042711-1.
- Carnie, Andrew (2006). *Syntax: A Generative Introduction* (2nd ed.). Oxford: Wiley-Blackwell. ISBN 1-4051-3384-8.
- Freidin, Robert; Howard Lasnik (eds.) (2006). *Syntax*. Critical Concepts in Linguistics. New York: Routledge. ISBN 0-415-24672-5.
- Graffi, Giorgio (2001). *200 Years of Syntax. A Critical Survey*. Studies in the History of the Language Sciences 98. Amsterdam: Benjamins. ISBN 90-272-4587-8.
- Mieszko Talasiewicz (2009). *Philosophy of Syntax—Foundational Topics*. Springer. ISBN 978-90-481-3287-4. An interdisciplinary essay on the interplay between logic and linguistics on syntactic theories.
- Tesnière, Lucien 1969. *Éléments de syntaxe structurale*. 2nd edition. Paris: Klincksieck.

Further reading

- Martin Everaert, Henk Van Riemsdijk, Rob Goedemans and Bart Hollebrandse, ed. (2006). *The Blackwell companion to syntax*. Blackwell. ISBN 978-1-4051-1485-1. 5 Volumes; 77 case studies of syntactic phenomena.
- Brian Roark; Richard William Sproat (2007). *Computational approaches to morphology and syntax*. Oxford University Press. ISBN 978-0-19-927477-2. part II: Computational approaches to syntax.
- Isac, Daniela; Charles Reiss (2008). *I-language: An Introduction to Linguistics as Cognitive Science* (<http://linguistics.concordia.ca/i-language/>). Oxford University Press. ISBN 978-0-19-953420-3.
- Edith A. Moravcsik (2006). *An introduction to syntax: fundamentals of syntactic analysis*. Continuum International Publishing Group. ISBN 978-0-8264-8945-6. Attempts to be a theory-neutral introduction. The companion Edith A. Moravcsik (2006). *An introduction to syntactic theory*. Continuum International Publishing Group. ISBN 978-0-8264-8943-2. surveys the major theories. Jointly reviewed in *The Canadian Journal of Linguistics* 54(1), March 2009, pp. 172–175 (http://muse.jhu.edu/login?uri=/journals/canadian_journal_of_linguistics/v054/54.1.hewson.html)

External links

- The syntax of natural language: An online introduction using the Trees program (<http://www.ling.upenn.edu/~beatrice/syntax-textbook>)—Beatrice Santorini & Anthony Kroch, University of Pennsylvania, 2007

Syntactic terms

Adjective

Examples
<ul style="list-style-type: none"> That's an interesting idea. (attributive) That idea is interesting. (predicative) Tell me something interesting. (postpositive) The good, the bad, and the ugly. (substantive)

In grammar, an **adjective** is a 'describing' word; the main syntactic role of which is to qualify a noun or noun phrase, giving more information about the object signified.^[1]

Adjectives are one of the traditional eight English parts of speech, although linguists today distinguish adjectives from words such as determiners that formerly were considered to be adjectives. In this paragraph, "traditional" is an adjective, and in the preceding paragraph, "main" is.

Distribution

Most, but not all, languages have adjectives. Those that do not, typically use words of another part of speech, often verbs, to serve the same semantic function; an example, such a language might have a verb that means "to be big", and would use as attributive verb construction analogous to "big-being house" to express what English expresses as "big house". Even in languages that do have adjectives, one language's adjective might not be another's; for example, whereas English uses "to be hungry" (*hungry* being an adjective), Dutch and French use "*honger hebben*" and "*avoir faim*", respectively (literally "to have hunger", *hunger* being a noun), and whereas Hebrew uses the adjective "זָקֵן" (*zaqēn*, roughly "in need of"), English uses the verb "to need".

Adjectives form an open class of words in most languages that have them; that is, it is relatively common for new adjectives to be formed via such processes as derivation. Bantu languages are well known for having only a small closed class of adjectives, however, and new adjectives are not easily derived. Igbo has an extremely limited number, just eight: *mnukwu* 'big', *nta* 'small'; *ojii* 'dark', *ocha* 'light'; *ohuru(ofuru)* 'new', *ochie* 'old'; *oma* 'good', and *ojo* 'bad'.^[2] Similarly, native Japanese adjectives (*i*-adjectives) are a closed class (as are native verbs), although nouns (which are open class) may be used in the genitive and there is the separate class of adjectival nouns (*na*-adjectives), which is also open, and functions similarly to noun adjuncts in English.

Adjectives and adverbs

Many languages, including English, distinguish between adjectives, which qualify nouns and pronouns, and adverbs, which modify verbs, adjectives, and other adverbs. Not all languages have exactly this distinction and many languages, including English, have words that can function as both. For example, in English *fast* is an adjective in "a fast car" (where it qualifies the noun *car*), but an adverb in "he drove fast" (where it modifies the verb *drove*). In Dutch and German, almost all adjectives are implicitly also adverbs, without any difference in form.

Determiners

Linguists today distinguish determiners from adjectives, considering them to be two separate parts of speech (or *lexical categories*), but formerly determiners were considered to be adjectives in some of their uses. In English dictionaries, which typically still do not treat determiners as their own part of speech, determiners are often recognizable by being listed both as adjectives and as pronouns. Determiners are words that are neither nouns nor pronouns, yet reference a thing already in context. Determiners generally do this by indicating definiteness (as in *a* vs. *the*), quantity (as in *one* vs. *some* vs. *many*), or another such property.

Types of use

A given occurrence of an adjective can generally be classified into one of four kinds of uses:

1. *Attributive* adjectives are part of the noun phrase headed by the noun they modify; for example, *happy* is an attributive adjective in "happy people". In some languages, attributive adjectives precede their nouns; in others, they follow their nouns; and in yet others, it depends on the adjective, or on the exact relationship of the adjective to the noun. In English, attributive adjectives usually precede their nouns in simple phrases, but often follow their nouns when the adjective is modified or qualified by a phrase acting as an adverb. For example: "I saw three happy kids", and "I saw three kids happy enough to jump up and down with glee." See also Postpositive adjective.
2. *Predicative* adjectives are linked via a copula or other linking mechanism to the noun or pronoun they modify; for example, *happy* is a predicate adjective in "they are happy" and in "that made me happy." (See also: Predicative expression, Subject complement.)
3. *Absolute* adjectives do not belong to a larger construction (aside from a larger adjective phrase), and typically modify either the subject of a sentence or whatever noun or pronoun they are closest to; for example, *happy* is an absolute adjective in "The boy, happy with his lollipop, did not look where he was going."
4. *Nominal* adjectives act almost as nouns. One way this can happen is if a noun is elided and an attributive adjective is left behind. In the sentence, "I read two books to them; he preferred the sad book, but she preferred the happy", *happy* is a nominal adjective, short for "happy one" or "happy book". Another way this can happen is in phrases like "out with the old, in with the new", where "the old" means, "that which is old" or "all that is old", and similarly with "the new". In such cases, the adjective functions either as a mass noun (as in the preceding example) or as a plural count noun, as in "The meek shall inherit the Earth", where "the meek" means "those who are meek" or "all who are meek".

Adjectival phrases

An adjective acts as the head of an *adjectival phrase*. In the simplest case, an adjectival phrase consists solely of the adjective; more complex adjectival phrases may contain one or more adverbs modifying the adjective ("very strong"), or one or more complements (such as "worth several dollars", "full of toys", or "eager to please"). In English, attributive adjectival phrases that include complements typically follow their subject ("an evildoer devoid of redeeming qualities").

Other noun modifiers

In many languages, including English, it is possible for nouns to modify other nouns. Unlike adjectives, nouns acting as modifiers (called *attributive nouns* or *noun adjuncts*) are not predicative; a beautiful park is beautiful, but a car park is not "car". In plain English, the modifier often indicates origin ("Virginia reel"), purpose ("work clothes"), or semantic patient ("man eater"), however, it may generally indicate almost any semantic relationship. It is also common for adjectives to be derived from nouns, as in *boyish*, *birdlike*, *behavioral*, *famous*, *manly*, *angelic*, and so on.

Many languages have special verbal forms called *participles* that can act as noun modifiers. In many languages, including English, participles are historically adjectives, and have retained most of their original function as such. English examples of this include *relieved* (the past participle of the verb *relieve*, used as an adjective in sentences such as "I am so relieved to see you"), *spoken* (as in "the spoken word"), and *going* (the present participle of the verb *go*, used as an adjective in sentences such as "Ten dollars per hour is the going rate").

Other constructs that often modify nouns include prepositional phrases (as in "a rebel *without a cause*"), relative clauses (as in "the man *who wasn't there*"), other adjective clauses (as in "the bookstore *where he worked*"), and infinitive phrases (as in "a cake *to die for*").

In relation, many nouns take complements such as content clauses (as in "the idea *that I would do that*"); these are not commonly considered modifiers, however.

Adjective order

In many languages, attributive adjectives usually occur in a specific order. In general, the adjective order in English is:^[3]

1. general opinion
2. specific opinion
3. size
4. shape
5. age
6. color
7. origin (nationality)
8. material

So, in English, adjectives pertaining to size precede adjectives pertaining to age ("little old", not "old little"), which in turn generally precede adjectives pertaining to color ("old white", not "white old"). So, we would say "One (quantity) nice (opinion) little (size) old (age) white (color) brick (material) house."

This order may be more rigid in some languages than others; in some, like Spanish, it may only be a default (*unmarked*) word order, with other orders being permissible.

Due partially to borrowings from French, English has some adjectives that follow the noun as postmodifiers, called postpositive adjectives, such as *time immemorial*. Adjectives may even change meaning depending on whether they precede or follow, as in *proper*: *They live in a proper town* (a real town, not a village) vs. *They live in the town proper* (in the town itself, not in the suburbs). All adjectives can follow nouns in certain constructions, such as *tell me something new*.

Comparison of adjectives

In many languages, adjectives can be *compared*. In English, for example, we can say that a car is *big*, that it is *bigger* than another is, or that it is the *biggest* car of all. Not all adjectives lend themselves to comparison, however; for example, the English adjective *extinct* is not considered comparable, in that it does not make sense to describe one species as "more extinct" than another. However, even most non-comparable English adjectives are still *sometimes* compared; for example, one might say that a language about which nothing is known is "more extinct" than a well-documented language with surviving literature but no speakers. This is not a comparison of the degree of intensity of the adjective, but rather the degree to which the object fits the adjective's definition.

Comparable adjectives are also known as "gradable" adjectives, because they tend to allow grading adverbs such as *very*, *rather*, and so on.

Among languages that allow adjectives to be compared in this way, different approaches are used. Indeed, even within English, two different approaches are used: the suffixes *-er* and *-est*, and the words *more* and *most*. (In

English, the general tendency is for shorter adjectives and adjectives from Anglo-Saxon to use *-er* and *-est*, and for longer adjectives and adjectives from French, Latin, Greek, and other languages to use *more* and *most*.) By either approach, English adjectives therefore have *positive* forms (*big*), *comparative* forms (*bigger*), and *superlative* forms (*biggest*). However, many other languages do not distinguish comparative from superlative forms.

Restrictiveness

Attributive adjectives, and other noun modifiers, may be used either *restrictively* (helping to identify the noun's referent, hence "restricting" its reference) or *non-restrictively* (helping to describe an already-identified noun). For example:

"He was a lazy sort, who would avoid a **difficult task** and fill his working hours with easy ones."

"difficult" is restrictive - it tells us which tasks he avoids, distinguishing these from the easy ones: "Only those tasks that are difficult".

"She had the job of sorting out the mess left by her predecessor, and she performed this **difficult task** with great acumen."

"difficult" is non-restrictive - we already know which task it was, but the adjective describes it more fully: "The aforementioned task, which (by the way) is difficult"

In some languages, such as Spanish, restrictiveness is consistently marked; for example, in Spanish *la tarea difícil* means "the difficult task" in the sense of "the task that is difficult" (restrictive), whereas *la difícil tarea* means "the difficult task" in the sense of "the task, which is difficult" (non-restrictive). In English, restrictiveness is not marked on adjectives, but is marked on relative clauses (the difference between "the man *who recognized me* was there" and "the man, *who recognized me*, was there" being one of restrictiveness).

Agreement

In some languages, adjectives alter their form to reflect the gender, case and number of the noun that they describe. This is called agreement or concord. Usually it takes the form of inflections at the end of the word, as in Latin:

<i>puella bona</i>	(good girl, feminine)
<i>puellam bonam</i>	(good girl, feminine accusative/object case)
<i>puer bonus</i>	(good boy, masculine)
<i>pueri boni</i>	(good boys, masculine plural)

In the Celtic languages, however, initial consonant lenition marks the adjective with a feminine noun, as in Irish:

<i>buachaill maith</i>	(good boy, masculine)
<i>girseach mhaith</i>	(good girl, feminine)

Often a distinction is made here between attributive and predicative usage. Whereas English is an example of a language in which adjectives never agree and French of a language in which they always agree, in German they agree only when used attributively, and in Hungarian only when used predicatively.

The good (Ø) boys. The boys are good (Ø).

Les bons garçons. Les garçons sont bons.

*Die brav**en** Jungen. Die Jungen sind brav (Ø).*

A jó (Ø) fiúk. A fiúk jók.

References

- [1] "Adjectives" (<http://grammar.ccc.commnet.edu/grammar/adjectives.htm>). *Capital Community College Foundation*. Capital Community College Foundation. . Retrieved 20 March 2012.
- [2] JR Payne, 1990, "Language Universals and Language Types", in Collinge, ed., *An Encyclopedia of Language*
- [3] Order of adjectives (<http://learnenglish.britishcouncil.org/en/english-grammar/adjectives/order-adjectives>) British Council.

Bibliography

- Dixon, R. M. W. (1977). "Where have all the adjectives gone?". *Studies in Language* **1**: 19–80. doi:10.1075/sl.1.1.04dix.
- Dixon, R. M. W.; R. E. Asher (Editor) (1993). *The Encyclopedia of Language and Linguistics* (1st ed.). Pergamon Press Inc. pp. 29–35. ISBN 0-08-035943-4.
- Dixon, R. M. W. (1999). Adjectives. In K. Brown & T. Miller (Eds.), *Concise encyclopedia of grammatical categories* (pp. 1–8). Amsterdam: Elsevier. ISBN 0-08-043164-X.
- Warren, Beatrice. (1984). *Classifying adjectives*. Gothenburg studies in English (No. 56). Göteborg: Acta Universitatis Gothoburgensis. ISBN 91-7346-133-4.
- Wierzbicka, Anna (1986). "What's in a noun? (or: How do nouns differ in meaning from adjectives?)". *Studies in Language* **10** (2): 353–389. doi:10.1075/sl.10.2.05wie.

External links

- Adjectives and Adverbs (<http://www.ego4u.com/en/cram-up/grammar/adjectives-adverbs>)
- Adjective article on HyperGrammar (<http://www.uottawa.ca/academic/arts/writcent/hypergrammar/adjective.html>)
- Pratheepraveendrabathan - List of Adjectives (<http://www.d.umn.edu/~rave0029/research/adjectives1.txt>)
- Adjectives in English (<http://linguapress.com/grammar/adjectives.htm>)
- Adjectives at the Internet Guide to Grammar and Writing (<http://grammar.ccc.commnet.edu/grammar/adjectives.htm>)
- Adjectives - The Qualifiers that Add Emphasis to Your Words (<http://www.brighthub.com/education/languages/articles/22197.aspx>)

Predicative expression

A **predicative expression** (or just *predicative*) is (part of) a clause predicate. The term is used more specifically to denote expressions that typically follow a copula (= linking verb), e.g. *be*, *seem*, *appear*, or that appear as a second complement of a certain type of verb, e.g. *call*, *make*, *name*, etc.^[1] The most frequently acknowledged types of predicative expressions are **predicative adjectives** (also *predicate adjectives*) and **predicative nominals** (also *predicate nominals*). The main trait of all predicative expressions is that they serve to express a property that is assigned to a "subject", whereby this subject is usually the clause subject, but at times it can be the clause object.^[2] A primary distinction is drawn between predicative (also *predicate*) and attributive expressions. Further, predicative expressions are typically NOT clause arguments, and they are also typically NOT clause adjuncts. There is hence a three-way distinction between predicative expressions, arguments, and adjuncts.

The terms *predicative expression* on the one hand and *subject complement* and *object complement* on the other hand overlap in meaning to a large extent.

Examples

The most widely acknowledged predicative expressions are adjectives and nominals:^[3]

The idea was **ridiculous**. - Predicative adjective over the subject

He seems **nice**. - Predicative adjective over the subject

Bob is **a postman**. - Predicative nominal over the subject

They were all **happy campers**. - Predicative nominal over the subject

That shrimp dish made him **sick**. - Predicative adjective over the object

We painted the door **white**. - Predicative adjective over the object

They elected him **president**. - Predicative nominal over the object

They called Jill **a thief**. - Predicative nominal over the object

The formulations "over the subject" and "over the object" indicate that the predicative expression is expressing a property that is assigned to the subject or to the object.^[4] For example, the predicative expression *a thief* in the last sentence serves to assign to *Jill* the property of being a thief. Predicative nominals over subjects are also called *predicate nominatives*, a term borrowed from Latin grammars and indicating the morphological case that such expressions bear (in Latin).

Further predicative expressions

While the most widely acknowledged predicative expressions are predicative adjectives and nominals, most syntactic categories can be construed as predicative expressions, e.g.

The snake is **in the bag**. - Predicative prepositional phrase

That is **when it happened**. - Predicative clause

It is **soon**. - Predicative adverb (or adjective?)

There are, however, certain categories that cannot appear as predicative expressions. Adverbs in *-ly*, for instance, cannot appear as predicative expressions, e.g.

*The event was **splendidly**. - Failed attempt to use an adverb ending in *-ly* as a predicative expression

*Our ideas are **insightfully**. - Failed attempt to use an adverb ending in *-ly* as a predicative expression

These examples raise the following fundamental question: What characteristic of words and phrases allows or prohibits them from appearing as predicative expressions? The answer to this question is not apparent.

Predicative vs. attributive adjectives

Predicative expressions are not attributive expressions. The distinction is illustrated best using predicative and attributive adjectives:^[5]

- a. The man is **friendly**. - Predicative adjective
- b. the **friendly** man - Attributive adjective
- a. One snake was **large**. - Predicative adjective
- b. one **large** snake - Attributive adjective
- a. His bag is **damp**. - Predicative adjective
- b. his **damp** bag - Attributive adjective

A given clause usually contains a single predicative expression (unless coordination is involved), but it can contain multiple attributive expressions, e.g. *The friendly man found a large snake in his damp bag*.

Predicative expressions vs. arguments and adjuncts

Predicative expressions are typically NOT arguments, e.g.

- a. She was **our friend**. - Predicative nominal
- b. She visited **our friend**. - Argument nominal
- a. That is **an excuse**. - Predicative nominal
- b. He produced **an excuse**. - Argument nominal

The predicate expressions here are properties that are assigned to the subject, whereas the arguments cannot be construed as such properties. Predicative expressions are also typically NOT adjuncts, e.g.

- a. The bag is **under the bed**. - Predicative prepositional phrase
- b. Something is moving **under the bed**. - Adjunct prepositional phrase
- a. The dispute was **after the talk was completely over**. - Predicative clause
- b. Everybody relaxed **after the talk was completely over**. - Adjunct clause

The predicative expressions again serve to assign a property to the subject, e.g. the property of being under the bed. In contrast, the adjuncts serve to establish the situational context. One can hence acknowledge a three-way distinction between predicative expressions, arguments, and adjuncts. One should note, however, that upon deeper examination, the lines between these categories become blurred and overlap can occur. For instance, in the sentence *Bill arrived drunk*, one can judge *drunk* to be both a predicative expression (because it serves to assign a property to *Bill*) and a an adjunct (because it appears optionally in the sentence).

Predicative expressions in other languages

Predicative expressions exist in most if not all languages. In languages that have morphological case, predicative nominals typically appear in the nominative case (e.g. German and Russian) or instrumental case (e.g. Russian), although predicative expressions over objects generally bear the same case as the object. Some languages lack an equivalent of the copula *be* (see zero copula), or they have the option to omit the copula, which means that the case marker plays a greater role since it helps distinguish predicative nominals from argument nominals.

Notes

- [1] See for instance Burton-Roberts (1997:79).
- [2] See for instance Radford (2004:353).
- [3] For an insightful discussion of predicative adjectives and nominals, see Lester (1971:86ff.).
- [4] Concerning the fact that predicative expressions express some property of another entity in the sentence, see Hudson (1984:95f.).
- [5] See for instance Crystal (1997:303).

References

- Burton-Roberts 1997. Analysing sentences: An introduction to English grammar. London: Longman.
- Crystal, D. 1997. A dictionary of linguistics and phonetics, 4th edition, Oxford, UK: Blackwell.
- Hudson, R. 1984. Word grammar. New York: Basil Blackwell Publisher.
- Lester, M. 1971. Introductory transformational grammar of English. New York: Holt, Rinehart and Winston, Inc.
- Radford, A. 2004. English syntax: An introduction. Cambridge, UK: Cambridge University Press.

Adjunct (grammar)

In linguistics, an **adjunct** is an optional, or *structurally dispensable*, part of a sentence, clause, or phrase that, when removed, will not affect the remainder of the sentence except to discard from it some auxiliary information.^[1] A more detailed definition of the adjunct emphasizes its attribute as a modifying form, word, or phrase that depends on another form, word, or phrase, being an element of clause structure with adverbial function.^[2] An adjunct is not an argument (nor is it a predicative expression), and an argument is not an adjunct. The argument-adjunct distinction is central in most theories of syntax and semantics. The terminology used to denote arguments and adjuncts can vary depending on the theory at hand. Some dependency grammars, for instance, employ the term "circonstant" (instead of "adjunct"), following Tesnière (1959).

The area of grammar that explores the nature of predicates, their arguments, and adjuncts is called valency theory. Predicates have a valence; they determine the number and type of arguments that can or must appear in their environment. The valence of predicates is also investigated in terms of subcategorization.

Examples

Take the sentence *John killed Bill in Central Park on Sunday* as an example:

1. *John* is the subject argument.
2. *killed* is the predicate.
3. *Bill* is the object argument.
4. *in Central Park* is the first adjunct.
5. *on Sunday* is the second adjunct.^[3]

An *adverbial adjunct* is a sentence element that often establishes the circumstances in which the action or state expressed by the verb takes place. The following sentence uses adjuncts of time and place:

Yesterday, Lorna saw the dog **in the garden**.

Notice that this example is ambiguous between whether the adjunct *in the garden* modifies the verb *saw* (in which case it is Lorna who saw the dog while she was in the garden) or the noun phrase *the dog* (in which case it is the dog who is in the garden). The definition can be extended to include adjuncts that modify nouns or other parts of speech (see noun adjunct).

Forms and domains

An adjunct can be a single word, a phrase, or an entire clause.^[4]

Single word

She will leave **tomorrow**.

Phrase

She will leave **in the morning**.

Clause

She will leave **after she has had breakfast**.

Most discussions of adjuncts focus on adverbial adjuncts, that is, on adjuncts that modify verbs, verb phrases, or entire clauses like the adjuncts in the three examples just given. Adjuncts can appear in other domains, however, that is, they can modify most categories. Thus one can have ad-nominal adjuncts, ad-adjectival adjuncts, ad-adverb adjuncts, etc.

the discussion **before the game** - *before the game* is an ad-nominal adjunct.

very happy - *very* is an ad-adjectival adjunct.

too loudly - *too* is an ad-adverb adjunct.

Adjuncts are always constituents. Each of the adjuncts in the examples throughout this article is a constituent.

Semantic function

Adjuncts can be categorized in terms of the functional meaning that they contribute to the phrase, clause, or sentence in which they appear. The following list of the semantic functions is by no means exhaustive, but it does include most of the semantic functions of adjuncts identified in the literature on adjuncts:^[5]

Causal - Causal adjuncts establish the reason for, or purpose of, an action or state.

The ladder collapsed **because it was old**. (reason)

She went out **to buy some bread**. (purpose)

Concessive - Concessive adjuncts establish contrary circumstances.

Lorna went out **although it was raining**.

Conditional - Conditional adjuncts establish the condition in which an action occurs or state holds.

I would go to Paris, **if I had the money**.

Consecutive - Consecutive adjuncts establish an effect or result.

It rained so hard **that the streets flooded**.

Instrumental - Instrumental adjuncts establish the instrument used to accomplish an action.

Mr. Bibby wrote the letter **with a pencil**.

Locative - Locative adjuncts establish where, to where, or from where a state or action happened or existed.

She sat **on the table**. (locative)

Measure - Measure adjuncts establish the measure of the action, state, or quality that they modify

I am **completely** finished.

That is **mostly** true.

We want to stay **in part**.

Modal - Modal adjuncts establish the extent to which the speaker views the action or state as (im)probable.

They **probably** left.

In any case, we didn't do it.

That is **perhaps** possible.

Modicative - Modicative adjuncts establish how the action happened or the state existed.

He ran **with difficulty**. (manner)

He stood **in silence**. (state)

He helped me **with my homework**. (limiting)

Temporal - Temporal adjuncts establish when, how long, or how frequent the action or state happened or existed.

He arrived **yesterday**. (time point)

He stayed **for two weeks**. (duration)

She drinks in that bar **every day**. (frequency)

Distinguishing between predicative expressions, arguments, and adjuncts

Omission diagnostic

The distinction between arguments and adjuncts and predicates is central to most theories of syntax and grammar. Predicates take arguments and they permit (certain) adjuncts.^[6] The arguments of a predicate are necessary to complete the meaning of the predicate.^[7] The adjuncts of a predicate, in contrast, provide auxiliary information about the core predicate-argument meaning, which means they are not necessary to complete the meaning of the predicate. Adjuncts and arguments can be identified using various diagnostics. The omission diagnostic, for instance, helps identify many arguments and thus indirectly many adjuncts as well. If a given constituent cannot be omitted from a sentence, clause, or phrase without resulting in an unacceptable expression, that constituent is NOT an adjunct, e.g.

- a. Fred **certainly** knows.
- b. Fred knows. - *certainly* may be an adjunct (and it is).
- a. He stayed **after class**.
- b. He stayed. - *after class* may be an adjunct (and it is).
- a. She trimmed **the bushes**.
- b. *She trimmed. - *the bushes* is NOT an adjunct.
- a. **Jim** stopped.
- b. *Stopped. - *Jim* is NOT an adjunct.

Other diagnostics

Further diagnostics used to distinguish between arguments and adjuncts include multiplicity, distance from head, and the ability to coordinate. A head can have multiple adjuncts but only one object argument (=complement):

- a. John ate **the pizza**. - *the pizza* is an object argument (=complement).
- b. *John ate **the pizza the hamburger**. *the pizza* and *the hamburger* would both be object arguments (=complements).
- c. John ate the pizza **with a fork**. - *with a fork* is an adjunct.
- d. John ate the pizza **with a fork on Tuesday**. - *with a fork* and *on Tuesday* are both adjuncts.

Object arguments are typically closer to their head than adjuncts:

- a. the collection **of figurines** (complement) **in the dining room** (adjunct)
- b. *the collection **in the dining room** (adjunct) **of figurines** (complement)

Adjuncts can be coordinated with other adjuncts, but not with arguments:

- a. *John ate **the pizza** and **with a fork**.
- b. John ate **with a fork** and **with a spoon**.

Optional arguments vs. adjuncts

The distinction between arguments and adjuncts is much less clear than the simple omission diagnostic (and the other diagnostics) suggests. Most accounts of the argument vs. adjunct distinction acknowledge a further division. One distinguishes between obligatory and optional arguments. Optional arguments pattern like adjuncts when just the omission diagnostic is employed, e.g.

- a. Fred ate **a hamburger**.
- b. Fred ate. - *a hamburger* is NOT an obligatory argument, but it could be (and it is) an optional argument.
- a. Sam helped **us**.
- b. Sam helped - *us* is NOT an obligatory argument, but it could be (and it is) an optional argument.

The existence of optional arguments blurs the line between arguments and adjuncts considerably. Further diagnostics (beyond the omission diagnostic and the others mentioned above) must be employed to distinguish between adjuncts and optional arguments. One such diagnostic is the relative clause test. The test constituent is moved from the matrix clause to a subordinate relative clause containing *which occurred/happened*. If the result is unacceptable, the test constituent is probably NOT an adjunct:

- a. Fred ate **a hamburger**.
- b. Fred ate. - *a hamburger* is not an obligatory argument.
- c. *Fred ate, which occurred **a hamburger**. - *a hamburger* is not an adjunct, which means it must be an optional argument.
- a. Sam helped **us**.
- b. Sam helped. - *us* is not an obligatory argument.
- c. *Sam helped, which occurred **us**. - *us* is not an adjunct, which means it must be an optional argument.

The particular merit of the relative clause test is its ability to distinguish between many argument and adjunct PPs, e.g.

- a. We are working **on the problem**.
- b. We are working.
- c. *We are working, which is occurring **on the problem**. - *on the problem* is an optional argument.
- a. They spoke **to the class**.

- b. They spoke.
- c. *They spoke, which occurred **to the class**. - *to the class* is an optional argument.

The reliability of the relative clause diagnostic is actually limited. For instance, it incorrectly suggests that many modal and manner adjuncts are arguments. This fact bears witness to the difficulty of providing an absolute diagnostic for the distinctions currently being examined. Despite the difficulties, most theories of syntax and grammar distinguish on the one hand between arguments and adjuncts and on the other hand between optional arguments and adjuncts, and they grant a central position to these divisions in the overarching theory.

Predicates vs. adjuncts

Many phrases have the outward appearance of an adjunct but are in fact (part of) a predicate instead. The confusion occurs often with copular verbs, in particular with a form of *be*, e.g.

It is **under the bush**.

The party is **at seven o'clock**.

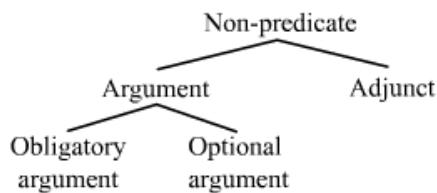
The PPs in these sentences are NOT adjuncts, nor are they arguments. The preposition in each case is, rather, part of the main predicate. The matrix predicate in the first sentence is *is under*; this predicate takes the two arguments *It* and *the bush*. Similarly, the matrix predicate in the second sentence is *is at*; this predicate takes the two arguments *The party* and *seven o'clock*. Distinguishing between predicates, arguments, and adjuncts becomes particularly difficult when secondary predicates are involved, for instance with resultative predicates, e.g.

That made him **tired**.

The resultative adjective *tired* can be viewed as an argument of the matrix predicate *made*. But it is also definitely a predicate over *him*. Such examples illustrate that distinguishing predicates, arguments, and adjuncts can become difficult and there are many cases where a given expression functions in more ways than one.

Overview

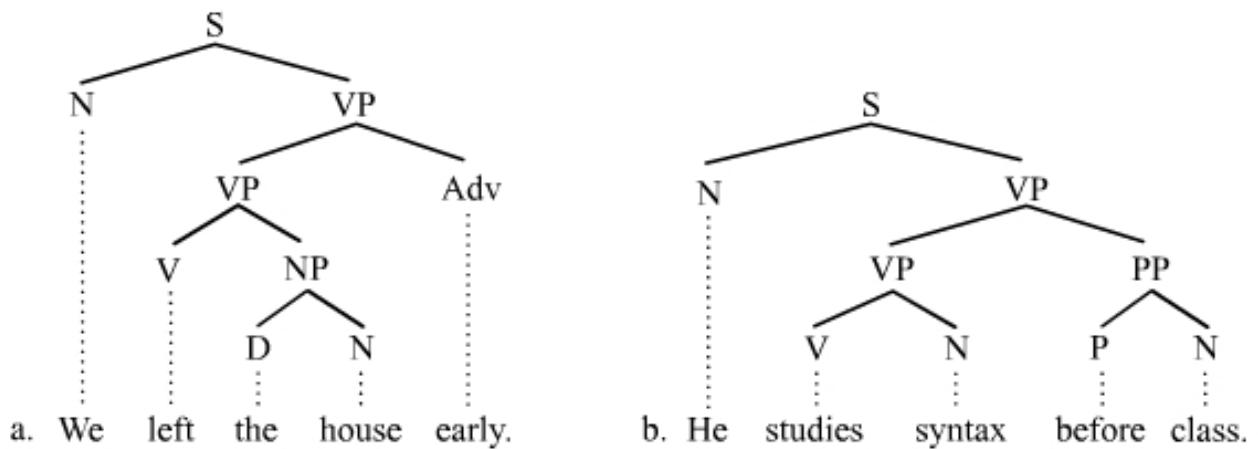
The following overview is a breakdown of the current divisions:



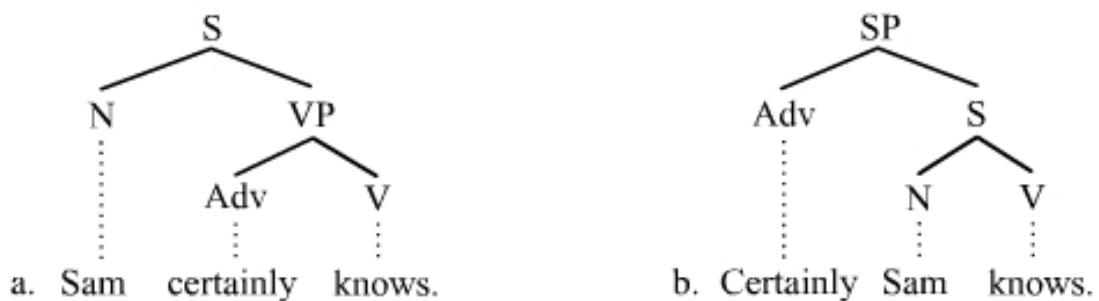
This overview acknowledges three types of entities: predicates, arguments, and adjuncts, whereby arguments are further divided into obligatory and optional ones.

Representing adjuncts

Many theories of syntax and grammar employ trees to represent the structure of sentences. Various conventions are used to distinguish between arguments and adjuncts in these trees. In phrase structure grammars, many adjuncts are distinguished from arguments insofar as the adjuncts of a head predicate will appear higher in the structure than the object argument(s) of that predicate. The adjunct is adjoined to a projection of the head predicate above and to the right of the object argument, e.g.

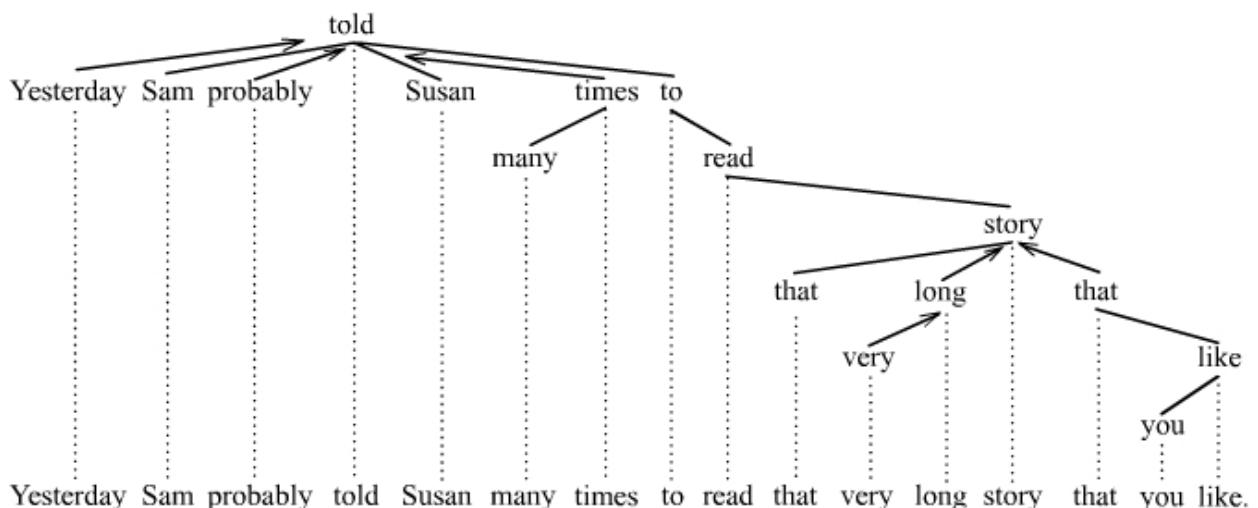


The object argument each time is identified insofar as it is a sister of V that appears to the right of V, and the adjunct status of the adverb *early* and the PP *before class* is seen in the higher position to the right of and above the object argument. Other adjuncts, in contrast, are assumed to adjoin to a position that is between the subject argument and the head predicate or above and to the left of the subject argument, e.g.



The subject is identified as an argument insofar as it appears as a sister and to the left of V(P). The modal adverb *certainly* is shown as an adjunct insofar as it adjoins to an intermediate projection of V or to a projection of S. In X-bar theory, adjuncts are represented as elements that are sisters to X' levels and daughters of X' level [X' adjunct [X'...]].

Theories that assume sentence structure to be less layered than the analyses just given sometimes employ a special convention to distinguish adjuncts from arguments. Some dependency grammars, for instance, use an arrow dependency edge to mark adjuncts,^[8] e.g.



The arrow dependency edge points away from the adjunct toward the governor of the adjunct. The arrows identify six adjuncts: *Yesterday*, *probably*, *many times*, *very*, *very long*, and *that you like*. The standard, non-arrow dependency edges identify *Bill*, *Susan*, *that very long story that you like*, etc. as arguments (of one of the predicates

in the sentence).

Notes

- [1] See Lyons (1968).
- [2] Dictionary.com: adjunct (<http://dictionary.reference.com/browse/adjunct>)
- [3] See Lyons (1968).
- [4] Briggs, Thomas Henry; Isabel McKinney, Florence Vane Skeffington (1921). "DISTINGUISHING PHRASE AND CLAUSE ADJUNCTS" (<http://books.google.com/books?id=ZIUXAAAAIAAJ&pg=PA116#v=onepage&q&f=false>). *Junior high school English, Book 2*. Boston, MA, USA: Ginn and company. pp. 116. .
- [5] For similar inventories of adjunct functions, see Payne (2006:298).
- [6] Concerning the distinction between arguments and adjuncts, see Payne (2006:297).
- [7] See Payne (2006:107ff.).
- [8] For an example of the arrow used to mark adjuncts, see for instance Eroms (2000).

References

- Eroms, H.-W. 2000. Syntax der deutschen Sprache. Berlin: de Gruyter.
- Carnie, A. 2010. *Constituent Structure*. Oxford: Oxford U.P.
- Lyons J. 1968. Introduction to theoretical linguistics. London: Cambridge U.P.
- Payne, T. 2006. Exploring language structure: A student's guide. Cambridge, UK: Cambridge University Press.
- Tesnière, L. 1959. Éléments de syntaxe structurale. Paris: Klincksieck.

Adverb

Examples
<ul style="list-style-type: none"> • I found the film incredibly dull. • The meeting went well and the directors were extremely happy with the outcome. • Crabs are known for walking sideways. • Only members are allowed to enter. • I often have eggs for breakfast. • However, I shall not eat fried eggs again.

An **adverb** is a word that changes or qualifies the meaning of a verb, adjective, other adverb, clause, sentence or any other word or phrase, except that it does not include the adjectives and determiners that directly modify nouns. Adverbs are traditionally regarded as one of the parts of speech, although the wide variety of the functions performed by words classed as adverbs means that it is hard to treat them as a single uniform category.

Adverbs typically answer questions such as *how?*, *in what way?*, *when?*, *where?*, and *to what extent?*. This function is called the adverbial function, and is realized not just by single words (i.e., adverbs) but by adverbial phrases and adverbial clauses.

Uses of adverbs

Adverbs are words like *slowly*, *yesterday*, *now*, *soon*, and *suddenly*. An adverb usually modifies a verb or a verb phrase. It provides information about the manner, place, time, frequency, certainty, or other circumstances of the activity denoted by the verb or verb phrase.

Examples:

1. She walked slowly. (Here the adverb *slowly* shows the manner in which she walked.)
2. The kids are playing together. (Here the adverb *together* provides information about how the kids are playing.)

Adverbs can also modify adjectives and other adverbs.

1. You are quite right. (Here the adverb *quite* modifies the adjective *right*.)
2. She spoke quite loudly. (Here the adverb *quite* modifies another adverb – *loudly*.)

In English, adverbs of manner (answering the question *how?*) are often formed by adding *-ly* to adjectives. Other languages often have similar methods for deriving adverbs from adjectives (French, for example, uses the suffix *-ment*), or else use the same form for both adjectives and adverbs. Some examples are listed under Adverbs in specific languages below.

Where the meaning permits, adverbs may undergo comparison, taking comparative and superlative forms. In English this is usually done by adding *more* and *most* before the adverb (*more slowly*, *most slowly*), although there are a few adverbs that take inflected forms, such as *well*, for which *better* and *best* are used.

For more information about the use of adverbs in English, see English grammar: Adverbs. For use in other languages, see Adverbs in specific languages below, and the articles on individual languages and their grammars.

Adverbs as a "catch-all" category

Adverbs are considered a part of speech in traditional English grammar and are still included as a part of speech in grammar taught in schools and used in dictionaries. However, modern grammarians recognize that words traditionally grouped together as adverbs serve a number of different functions. Some would go so far as to call adverbs a "catch-all" category that includes all words that do not belong to one of the other parts of speech.

A more logical approach to dividing words into classes relies on recognizing which words can be used in a certain context. For example, a noun is a word that can be inserted in the following template to form a grammatical sentence:

The _____ is red. (For example, "The hat is red".)

When this approach is taken, it is seen that adverbs fall into a number of different categories. For example, some adverbs can be used to modify an entire sentence, whereas others cannot. Even when a sentential adverb has other functions, the meaning is often not the same. For example, in the sentences *She gave birth naturally* and *Naturally, she gave birth*, the word *naturally* has different meanings. *Naturally* as a sentential adverb means something like "of course" and as a verb-modifying adverb means "in a natural manner". This "naturally" distinction demonstrates that the class of sentential adverbs is a closed class (there is resistance to adding new words to the class), whereas the class of adverbs that modify verbs isn't.

Words like *very* and *particularly* afford another useful example. We can say *Perry is very fast*, but not *Perry very won the race*. These words can modify adjectives but not verbs. On the other hand, there are words like *here* and *there* that cannot modify adjectives. We can say *The sock looks good there* but not *It is a there beautiful sock*. The fact that many adverbs can be used in more than one of these functions can confuse this issue, and it may seem like splitting hairs to say that a single adverb is really two or more words that serve different functions. However, this distinction can be useful, especially considering adverbs like *naturally* that have different meanings in their different functions. Huddleston distinguishes between a *word* and a *lexicogrammatical-word*.^[1]

Not is an interesting case. Grammarians have a difficult time categorizing it, and it probably belongs in its own class^{[2][3]}

Adverbs in specific languages

Listed below are some of the principles for formation and use of adverbs in certain languages. For more information, see the articles on individual languages and their grammars.

- In English adverbs can be formed from most adjectives with the ending *-ly*, and there are also many independent adverbs. For detailed information, see English grammar: Adverbs.
- In Dutch adverbs have the basic form of their corresponding adjectives and are not inflected (except for comparison in which case they are inflected like adjectives, too).
- In German the term *Adverb* is differently defined than in the English language. German adverbs form a group of not inflectable words (except for comparison in which in rare cases some are inflected like adjectives, too). An English *adverb*, which is derived from an adjective, is arranged in the German language under the adjectives with *adverbial use* in the sentence. The others are also called adverbs in the German language.
- In Scandinavian languages, adverbs are typically derived from adjectives by adding the suffix '*-t*', which makes it identical to the adjective's neuter form. Scandinavian adjectives, like English ones, are inflected in terms of comparison by adding '*-ere/-are*' (comparative) or '*-est/-ast*' (superlative). In inflected forms of adjectives the '*-t*' is absent. Periphrastic comparison is also possible.
- In Romance languages many adverbs are formed from adjectives (often the feminine form) by adding '*-mente*' (Portuguese, Spanish, Galician, Italian) or '*-ment*' (French, Catalan) (from Latin *mens, mentis*: mind, intelligence). Other adverbs are single forms which are invariable.
- In the Romanian language, the vast majority of adverbs are simply the masculine singular form of the corresponding adjective – one notable exception being *bine* ("well") / *bun* ("good"). However, there are some Romanian adverbs that are built from certain masculine singular nouns using the suffix "*-ește*", such as the following ones: *băiet-ește* (boyishly), *tiner-ește* (youthfully), *bărbat-ește* (manly), *frăț-ește* (brotherly), etc.
- Interlingua also forms adverbs by adding '*-mente*' to the adjective. If an adjective ends in *c*, the adverbial ending is '*-amente*'. A few short, invariable adverbs, such as *ben*, "well", and *mal*, "badly", are available and widely used.
- In Esperanto, adverbs are not formed from adjectives but are made by adding '*-e*' directly to the word root. Thus, from *bon* are derived *bone*, "well", and *bona*, "good". See also: special Esperanto adverbs.
- In Hungarian adverbs are formed from adjectives of any degree through the suffixes *-ul/iil* and *-an/en* depending on the adjective. E.g. *szép* (beautiful) -> *szépen* (beautifully) or the comparative *szebb* (more beautiful) -> *szebben* (more beautifully)
- Modern Standard Arabic forms adverbs by adding the indefinite accusative ending '*-an*' to the root. For example, *kathiir-*, "many", becomes *kathiiran* "much". However, Arabic often avoids adverbs by using a cognate accusative plus an adjective.
- Austronesian languages appear to form comparative adverbs by repeating the root (as in WikiWiki), similarly to the plural noun.
- Japanese forms adverbs from verbal adjectives by adding */ku/* (く) to the stem (e.g. *haya-* "rapid" *hayai* "quick/early", *hayakatta* "was quick", *hayaku* "quickly") and from nominal adjectives by placing */ni/* (に) after the adjective instead of the copula */na/* (な) or */no/* (の) (e.g. *rippa* "splendid", *rippa ni* "splendidly"). These derivations are quite productive but there are a few adjectives from which adverbs may not be derived.
- In Gaelic, an adverbial form is made by preceding the adjective with the preposition *go* (Irish) or *gu* (Scottish Gaelic), meaning 'until'.
- In Modern Greek, an adverb is most commonly made by adding the endings <-α> and/or <-ως> to the root of an adjective. Often, the adverbs formed from a common root using each of these endings have slightly different meanings. So, <τέλειος> (<téleios>, meaning "perfect" and "complete") yields <τέλεια> (<téleia>, "perfectly") and <τελείως> (<teleíos>, "completely"). Not all adjectives can be transformed into adverbs by using both

endings. <Γρήγορος> (<grígoros>, "rapid") becomes <γρήγορα> (<grígora>, "rapidly"), but not normally *<γρηγόρως> (*<grigóros>). When the <-ως> ending is used to transform an adjective whose tonal accent is on the third syllable from the end, such as <επίσημος> (<epísimos>, "official"), the corresponding adjective is accented on the second syllable from the end; compare <επίσημα> (<epísima>) and <επισήμως> (<episímos>), which both mean "officially". There are also other endings with particular and restricted use as <-ί>, <-εί>, <-ιστί>, etc. For example, <ατιμωρητί> (<atimorít>, "with impunity") and <ασυζητητί> (<asyzitít>, "indisputably"); <αυτολεξεί> (<autolexeí> "word for word") and <αυτοστιγμεί> (<autostigmeí>, "in no time"); <αγγλιστί> [<anglistí> "in English (language)"] and <παπαγαλιστί> (<papagalistí>, "by rote"); etc.

- In Latvian, an adverb is formed from an adjective, by changing the masculine or feminine adjective endings -s and -a to -i. "Labs", meaning "good", becomes "labi" for "well". Latvian adverbs have a particular use in expressions meaning "to speak" or "to understand" a language. Rather than use the noun meaning "Latvian/English/Russian", the adverb formed from these words is used. "Es runāju latviski/angliski/krieviski" means "I speak Latvian/English/Russian", or very literally "I speak Latvianly/Englishly/Russianly". When a noun is required, the expression used means literally "language of the Latvians/English/Russians", "latviešu/angļu/krievu valoda".
- In Ukrainian, and analogously in Russian and some other Slavic languages, an adverb is formed by removing the adjectival suffixes "-ий" "-а" or "-е" from an adjective, and replacing them with the adverbial "-о". For example, "швидкий", "гарна", and "смачне" (fast, nice, tasty) become "швидко", "гарно", and "смачно" (quickly, nicely, tastefully). As well, note that adverbs are mostly placed before the verbs they modify: "Добрий син гарно співає." (A good son sings nicely/well). Although, there is no specific word order in East Slavic languages.
- In Korean, adverbs are formed by replacing တ of the dictionary form of a verb with 게. So, 쉽다 (easy) becomes 쉽게 (easily).
- In Turkish, the same word usually serves as adjective and adverb: *iyi bir kız* ("a good girl"), *iyi anlamak* ("to understand well").
- In Chinese, adverbs end in the word "地 (的)", the English equivalent of "-ly".

References

- [1] Huddleston, Rodney. 1988. *English grammar: an outline*. Cambridge: Cambridge University Press. p. 7. doi:10.2277/0521311527. ISBN 0-521-32311-8.
 - [2] Cinque, Guglielmo. 1999. *Adverbs and functional heads—a cross linguistic perspective*. Oxford: Oxford University press.
 - [3] Haegeman, Liliane. 1995. *The syntax of negation*. Cambridge: Cambridge University Press.
- Ernst, Thomas. 2002. *The syntax of adjuncts*. Cambridge: Cambridge University Press.
 - Jackendoff, Ray. 1972. *Semantic Interpretation in Generative Grammar*. MIT Press,

External links

- The Online Dictionary of Language Terminology (<http://www.odlt.org>)

Answer ellipsis

Answer ellipsis (= answer fragments) is a type of ellipsis that occurs in answers to questions. Answer ellipsis appears very frequently in any dialogue, and it is present in probably all languages. Of the types of ellipsis mechanisms, answer fragments behave most like sluicing, a point that shall be illustrated below.

Examples

Standard instances of answer ellipsis occur in answers to questions. A question is posed, and the answer is formulated in such a manner to be maximally efficient. Just the constituent that is focused by the question word is uttered. The elided material in the examples in this article is indicated using a smaller font and subscripts:

- Q: Who walked the dog? A: Tom _{walked the dog}. - **Subject noun as answer fragment**
- Q: Who did you call? A: _{I called} Sam. - **Object noun as answer fragment**
- Q: What did you try to do? A: _{I tried to} Fix the hard drive. - **Verb phrase as answer fragment**
- Q: Whose house is too big? A: Fred's _{house is too big}. - **Possessor as answer fragment**
- Q: When did they arrive? A: _{They arrived} At noon. - **Temporal adjunct prepositional phrase as answer fragment**
- Q: Why will they resist our help? A: _{They will resist our help} Due to excessive pride. - **Causal adjunct prepositional phrase as answer fragment**

This sort of data could easily be expanded. An answer fragment is possible for any constituent that can be questioned using a question word. An important aspect of the elided material of answer ellipsis is that it usually does not correspond to a constituent. This fact is problematic for theories of ellipsis, a point which is examined below.

Noteworthy traits

Answer ellipsis behaves curiously in a couple of noteworthy ways. The answer fragment should not, for instance, encompass more than the focused constituent:

Q: What did you try to begin to repair?

- a. A: _{I tried to begin to repair} My bike.
- b. A: _{I tried to begin to} *Repair my bike.
- c. A: _{I tried to} *Begin to repair my bike.
- d. A: _I *Tried to begin to repair my bike.
- e. A: I tried to begin to repair my bike.

Either just the focused constituent (i.e. the constituent that is focused by the question word in the question) or the entire sentence must appear as the answer. If an intermediate constituent appears, the answer is unacceptable.

Another noteworthy aspect of answer ellipsis is that a negation can be part of the elided material. Answer ellipsis is like sluicing in this regard, but unlike gapping, stripping, VP-ellipsis, and pseudogapping, e.g.

Q: Who has not done their homework? A: Connor _{has not done his homework}. - **Negation is part of elided material of answer ellipsis.**

Tom did not do the problem, and I don't know why _{he did not do the problem}. - **Negation is part of elided material of sluicing.**

Sam did not say it twice, *and Susan _{did not say it} once. - **Gapping fails to include negation in the ellipsis**

Larry did not pose the question, *and Bill _{did not pose the question}. - Stripping fails to include the negation in the ellipsis

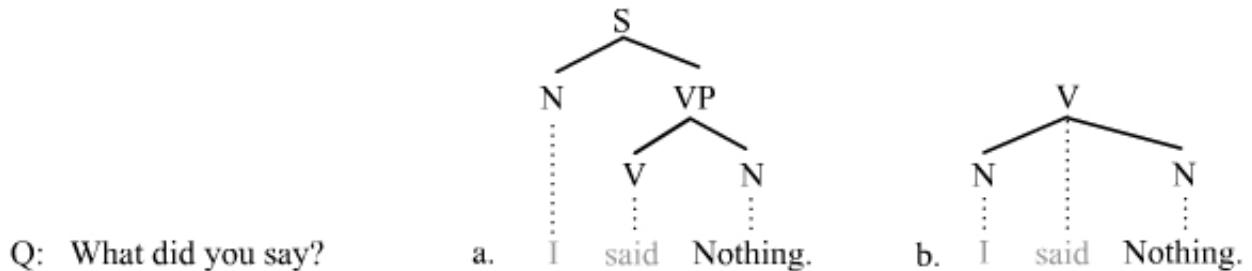
Christine has not exaggerated, *and Jerry has _{not exaggerated}, too. - VP-ellipsis fails to include the negation in the ellipsis

She does not want to date him more than *he does _{not want to date} her. - Pseudogapping fails to include the negation in the ellipsis

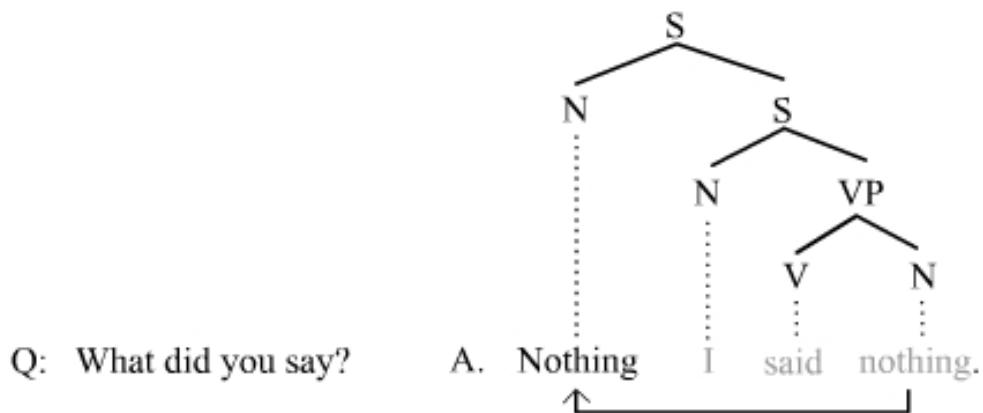
These data demonstrate that answer ellipsis and sluicing have something important in common that distinguishes them from other ellipsis mechanisms.

Theoretical analyses

Theoretical accounts of answer ellipsis are faced with the same basic problem that challenges the accounts of other ellipsis mechanisms. This problem revolves around the fact that the elided material often does not form a constituent in surface syntax. The following trees illustrate the problem. The tree on the left is a constituency-based tree of a phrase structure grammar, and the tree on the right is the corresponding dependency-based tree of a dependency grammar:

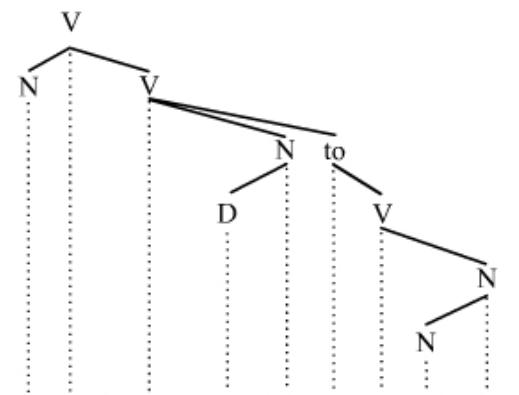


In both trees, the elided material *I said*, which is indicated using the lighter font shade, does not form as a constituent. In other words, it does not qualify as a complete subtree. One prominent means of dealing with this problem is to assume that the answer fragment is moved out of an encompassing constituent so that this constituent can then be elided.^[1] The following tree illustrates such an analysis in a phrase structure grammar:



The object *nothing* is moved to the left out of the constituent S in such a manner that S (the lower S) can then be elided. This sort of analysis allows one to preserve the assumption that ellipsis mechanisms (in this case answer ellipsis) are eliding constituents. A constituent-based theory of syntax can therefore be maintained.

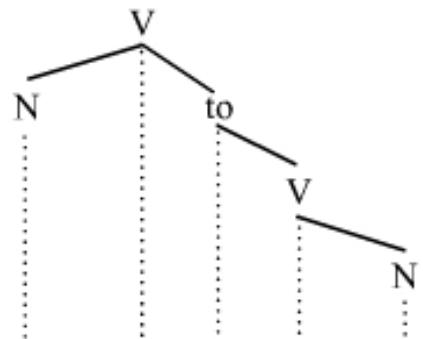
An alternative analysis takes the catena as the fundamental unit of syntactic analysis and assumes that answer ellipsis is eliding catenae. The catena is closely associated with dependency-based theories of syntax. It is defined as ANY WORD OR ANY COMBINATION OF WORDS THAT IS CONTINUOUS WITH RESPECT TO DOMINANCE.^[2] Given this definition, any subtree of a tree qualifies as a catena. In the example above, the word combination *I said* qualifies as a catena in the surface structure (without movement). There is therefore no reason to assume a movement analysis. Two more, more complex examples further illustrate the fact that answer ellipsis is eliding catenae:



Q: Whose dog are you forcing to eat cat food?

A. I am forcing My dog to eat cat food.

While the elided material shown in light gray certainly cannot be construed as a constituent, it does qualify as a catena (because it forms a subtree). The following example shows that even when the answer contains two fragments, the elided material still qualifies as a catena:



Q: Who wants to marry whom?

A. ? Susan wants to marry Larry.

Such answers that contain two (or even more) fragments are rare in English (although they are more common in other languages) and may be less than fully acceptable. A movement analysis of this answer would have to assume that both *Susan* and *Larry* have moved out of the encompassing constituent so that that constituent can be elided. The catena-based analysis, in contrast, assumes no movement and instead points to the fact that elided material is a catena despite the presence of two fragments in the answer.

Notes

[1] For such an analysis, see Merchant (2004).

[2] See Osborne et al. (2013) for analysis of answer ellipsis and other ellipsis mechanisms in terms of catenae.

References

- Merchant, J. 2004. Fragments and ellipsis. *Linguistics and Philosophy*, 27, 661-738.
- Osborne, T., M. Putnam, and T. Groß 2013. Catenae: Introducing a novel unit of syntactic analysis. *Syntax* 16, in press.

Antecedent-contained deletion

Antecedent-contained deletion (= **antecedent-contained ellipsis**, ACD) is a phenomenon found in contexts containing verb phrase ellipsis and a quantifier. The ellipsis appears to be contained inside its antecedent, which should result in an infinite regress and thus ungrammaticality. The problem arises in phrase structure grammars that take the constituent to be the fundamental unit of syntactic analysis.^[1] It does not arise if the catena is taken to be the fundamental unit.^[2] The catena is associated with dependency grammars (DGs).^[3]

The problem in phrase structure grammars

To understand the issue involved, it is necessary to understand how VP-ellipsis works. Consider the following examples, where the expected, but elided, VP is represented with a smaller font and subscripts and the antecedent to the ellipsis is in bold:

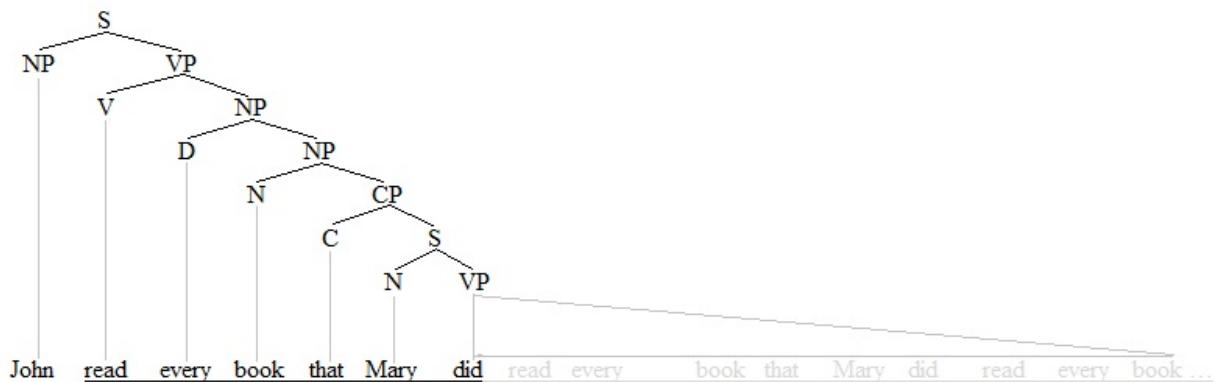
John washed **the dishes**, and Mary did _{wash the dishes}, too.

John washed **the dishes on Tuesday**, and Mary did _{wash the dishes on Tuesday}, too.

In both of these sentences, the VP has been elided in the second half of the sentence. In both cases, the elided VP should be essentially identical to the antecedent in the first clause. That is, the missing VP in the first sentence can only mean *wash the dishes*, and in the second sentence, the missing VP can only mean *wash the dishes on Tuesday*. Assuming that the missing VP must be essentially identical to an antecedent VP leads to a problem, first noticed by Bouton (1970):

John read every book that Mary did _{read every book that Mary did read every book that Mary did read every book etc.}*

Since the elided VP must be essentially identical to its antecedent and assuming that the antecedent is a full VP, an infinite regress occurs, as indicated by the subscripted material, which would continue to repeat itself ad infinitum. That is, if we substitute in the antecedent VP into the position of the ellipsis, we must repeat the substitution process ad infinitum. The difficulty is illustrated further with the tree for the sentence:



The light grey font indicates the elided constituent, i.e. the ellipsis, and the underline marks the antecedent constituent to the ellipsis. Since the antecedent constituent contains the ellipsis itself, resolution of the ellipsis necessitates an infinite regress as the antecedent is substituted ad infinitum into the ellipsis cite. To avoid this problem, Sag (1976) proposed that the NP *every book that Mary did* undergoes *quantifier raising* (QR) to a position above the verb.^[4]

[every book that Mary did...], John read t_i

Now the reference for the elided VP is simply the following:

read t_i

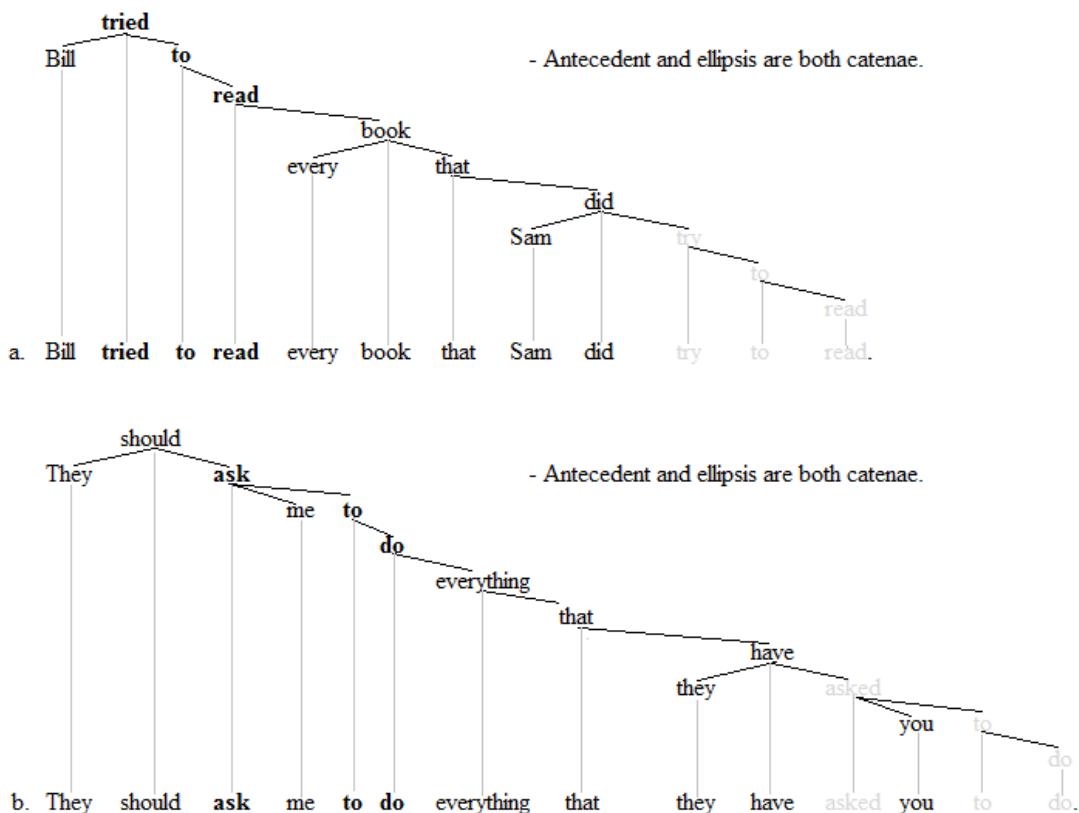
The analysis can now assume that the elided VP in the example corresponds to just *read*, since after QR, the antecedent VP no longer contains the object raised NP. The result is the following analysis:

[every book that Mary did _{read}] John **read**.

The infinite regress is now avoided because after QR, the antecedent VP contains just the verb *read*.

The catena analysis

An analysis of VP-ellipsis that takes the *catena* to be the fundamental unit of syntactic analysis (as opposed to the constituent) is not confronted with the antecedent containment problem. The ellipsis can correspond to a non-constituent catena, which means a movement analysis in terms of QR is not needed.^[5] The catena is a concrete unit of syntactic analysis associated with *dependency grammar* (DG); it is defined as *any word or any word combination that is continuous with respect to dominance*. The subscripted material in the examples above all qualify as catenae. The point is illustrated with the following further examples:



Both the elided material (in light grey) and the antecedent (in bold) to the elided material qualify as catenae. As catenae, both are concrete units of syntactic analysis. The need for a movement-type analysis (in terms of QR or otherwise) does not occur. One can note that the second of the two examples is an instance of pseudogapping, pseudogapping being a particular manifestation of VP-ellipsis.

Notes

- [1] See for instance Bouton (1970), Sag (1976), May (1985), Baltin (1987), Hornstein (1994), and Kennedy (1997).
- [2] Concerning the catena unit in general, see Osborne et al. (2013).
- [3] See for example Ágel et al. (2003/6).
- [4] Culicover (1997:283ff.) provides an overview and critique of the QR analysis of the ACD-phenomenon. Carnie (2013) compares the QR analysis to an alternative movement analysis.
- [5] The extent to which the elided words of VP-ellipsis correspond to catenae is discussed and illustrated in Osborne and Groß (2012).

References

- Ágel, V., L. Eichinger, H.-W. Ermons, P. Hellwig, H. Heringer, and H. Lobin (eds.) 2003/6. Dependency and valency: An international handbook of contemporary research. Berlin: Walter de Gruyter.
- Baltin, M. 1987. Do antecedent-contained deletions exist? *Linguistic Inquiry* 18, 4, 579-595.
- Bouton, L. 1970. Antecedent-contained pro-forms. In *Proceedings of Sixth Regional Meeting of the Chicago Linguistic Society*, ed. M. Campbell Chicago, IL: University of Chicago.
- Carnie, A. 20013. Syntax: A generative introduction. 3rd edition. Malden, MA: Wiley-Blackwell.
- Culicover, P. 1997. Antecedent-contained deletion. Oxford, UK: Oxford University Press.
- Hornstein, N. 1994. An argument for Minimalism: The case of antecedent-contained deletion. *Linguistic Inquiry* 25, 3, 455-480.
- Kennedy, C.. 1997. Antecedent-Created Deletion and the Syntax of Quantification. *Linguistic Inquiry* 28, 4, 662-688.
- May, R. 1985. Logical Form: Its structure and derivation. Cambridge, MA: MIT Press.
- Osborne, T. and T. Groß 2012. Antecedent containment: A dependency grammar solution in terms of catenae. *Studia Linguistica*, 94-127.
- Osborne, T., M. Putnam, and T. Groß 2012. Catenae: Introducing a novel unit of syntactic analysis. *Syntax* 16, in press.
- Sag, I. 1976. Deletion and Logical Form. MIT dissertation.

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".

Traditionally, appositions were called by their Latin name *appositiō*, although the English form is now more commonly used. It is derived from Latin: *ad* ("near") and *positio* ("placement").

Apposition is a figure of speech of the scheme type, and often results when the verbs (particularly verbs of being) in supporting clauses are eliminated to produce shorter descriptive phrases. This makes them often function as hyperbatons, or figures of disorder, because they can disrupt the flow of a sentence. For example, in the phrase: "My wife, a nurse by training, ...", it is necessary to pause before the parenthetical modification "a nurse by training".

Restrictive versus non-restrictive

Apposition can either be *restrictive*, or *non-restrictive* where the second element parenthetically modifies the first.

In a non-restrictive appositive, the second element parenthetically modifies the first without changing its scope. Non-restrictive appositives are not crucial to the meaning of the sentence. In a restrictive appositive, the second element limits or clarifies the foregoing one in some crucial way. For example in the phrase "my friend Alice", "Alice" specifies to which friend the speaker is referring and is therefore restrictive. On the other hand, in the above example: "my wife, a nurse by training, ..." the parenthetical "a nurse by training" does not narrow down the subject, but rather provides additional information about the subject, namely, "my wife". In English, a **non-restrictive appositive** must be preceded or set off by commas, while a **restrictive appositive** is not set off by commas.^[1]

Not all restrictive clauses are appositives. For example, *Alice* in "Bill's friend Alice ..." is an appositive noun; *Alice* in "Bill's friend, whose name is Alice, ..." is not an appositive but, rather, the predicate of a restrictive clause. The main difference between the two is that the second explicitly states what an apposition would omit: that the friend in question is named Alice. If the meaning is clear "Bill's friend Alice" can be used ("Bill was here with his friend. [other remarks] Bill's friend Alice...").

The same words can change from restrictive to non-restrictive (or vice versa) depending on the speaker and context. Consider the phrase "my brother Nathan". If the speaker has more than one brother, the name Nathan is restrictive as it clarifies which brother. However, if the speaker has only one brother, then the brother's name is parenthetical and the correct way to write it is: "my brother, Nathan, ...". If it is not known which is the case, it is safer to omit the commas: "John's brother Nathan" is acceptable whether or not John has more brothers, unlike "John's brother, Nathan".

Examples

In the following examples, the appositive phrases are offset in italics:

- Barry Goldwater, *the junior senator from Arizona*, received the Republican nomination in 1964.
- John and Bob, *both friends of mine*, are starting a band.
- Alexander the Great, *the Macedonian conqueror of Persia*, was one of the most successful military commanders of the ancient world.
- Dean Martin, *a very popular singer*, will be performing at the Sands Hotel.

A kind of appositive phrase that has caused controversy is the "false title", as in "United States Deputy Marshal Jim Hall said Tuesday that *fatally wounded Lawrence County Sheriff Gene Matthews* told him that *fugitive tax protester Gordon W. Kahl* was dead before other law enforcement officials started shooting."^[2] Such phrases are usually non-restrictive, as in the above example.

Appositive genitive

In several languages, the same syntax which is used to express such relations as possession can also be used appositively. Examples include:

- In English:
 - "Appositive oblique", a prepositional phrase with *of* as in: *the month of December*, *the sin of pride*, or *the City of New York*. This has also been invoked as an explanation for the double genitive: *a friend of mine*.^[3]
 - The ending *-'s* as in "In Dublin's Fair City". This is uncommon.
- In classical Greek:
 - "Genitive of explanation" as in ὑὸς μέγα χρῆμα (*hyòs méga chrêma*), "a monster (great affair) of a boar" (*Histories* (Herodotus) 1.36);^[4]
- In Japanese:
 - Postpositive *no* as in: 富士の山 (*Fuji no Yama*), "the Mountain of Fuji";
- In Biblical Hebrew:
 - Construct, "genitive of association" as in: גן עדן (*Gan 'Eden*), "Garden of Eden".^[5]

Notes

- [1] "Commas: Some Common Problems" (<http://www.princeton.edu/writing/center/resources/commas.pdf>), Princeton Writing Program, Princeton University, 1999, *princeton.edu/writing/center/resources/*.
- [2] Reed, Roy (July 25, 1987). "Titles That Aren't Titles" (<http://www.nytimes.com/1987/07/25/opinion/titles-that-aren-t-titles.html?sec=&spon=>). *The New York Times*. . Retrieved 2009-05-23. According to that site, a version of the article appeared in the *New York Times*, July 5, 1987, p. 31. The sentence is quoted from the *Arkansas Gazette*.
- [3] Chapter 5, §14.3 (pages 447–448), Rodney Huddleston, Geoffrey K. Pullum, *The Cambridge Grammar of the English Language*, Cambridge: Cambridge University Press, 2002. ISBN 0-521-43146-8
- [4] §1322 (pages 317–318), Herbert Weir Smyth, revised by Gordon M. Messing, *Greek Grammar*, Cambridge, Mass. : Harvard University Press, 1956 Perseus Digital Library (<http://www.perseus.tufts.edu/cgi-bin/ptext?doc=Perseus:text:1999.04.0007&query=head=#366>)
- [5] §9.5.3h (p. 153), Bruce K. Waltke and M. O'Connor, *An Introduction to Biblical Hebrew Syntax*, Winona Lake, Ind.: Eisenbrauns, 1990. ISBN 0-931464-31-5

References

- A comprehensive treatment of apposition in English is given in §§17.65–93 (pages 1300–1320) and elsewhere in: Randolph Quirk, Sidney Greenbaum, Geoffrey Leech, Jan Svartvik (1985). *A Comprehensive Grammar of the English Language*. London and New York: Longman. ISBN 0-582-51734-6.
- On the apposition vs. double subject issue in Romanian, see: Appositions Versus Double Subject Sentences – What Information the Speech Analysis Brings to a Grammar Debate, by Horia-Nicolai Teodorescu and Diana Trandabăț. In: Lecture Notes in Computer Science, Springer Berlin, Heidelberg, ISSN 0302-9743, Volume 4629/2007, "Text, Speech and Dialogue", pp. 286–293.

External links

- Allen and Greenough's New Latin Grammar, section 282 (<http://ccat.sas.upenn.edu/jod/AG/allgre.282.html>)
- Audio illustrations (<http://www.americanrhetoric.com/figures/appositio.htm>)
- Appositives (<http://www.chompchomp.com/terms/appositive.htm>) at chompchomp.com
- Apposition and double subject in Romanian - a controversial issue (http://www/etc.tuiasi.ro/sibm/romanian_spoken_language/en/fraze_subiect_dublu.htm) in * Sounds of the Romanian Language (http://www/etc.tuiasi.ro/sibm/romanian_spoken_language/index.htm)
- Graphical examples (http://owl.english.purdue.edu/handouts/grammar/g_appos.html)

- Appositions Versus Double Subject Sentences – What Information the Speech Analysis Brings to a Grammar Debate (<http://www.springerlink.com/content/m715jp5734512753/>)

Argument (linguistics)

In linguistics, an **argument** is an expression that helps complete the meaning of a predicate. Most predicates take one, two, or three arguments. A predicate and its arguments form a *predicate-argument structure*. The discussion of predicates and arguments is associated most with (content) verbs and noun phrases (NPs), although other syntactic categories can also be construed as predicates and as arguments. Arguments must be distinguished from adjuncts. While a predicate needs its arguments to complete its meaning, the adjuncts that appear with a predicate are optional; they are not necessary to complete the meaning of the predicate.^[1] Most theories of syntax and semantics acknowledge arguments and adjuncts, although the terminology varies, and the distinction certainly exists in all languages. In syntax, the terms *argument* and *complement* overlap in meaning and use to a large extent. Dependency grammars sometimes call arguments *actants*, following Tesnière (1959).

The area of grammar that explores the nature of predicates, their arguments, and adjuncts is called valency theory. Predicates have a valence; they determine the number and type of arguments that can or must appear in their environment. The valence of predicates is also investigated in terms of subcategorization frames.

Arguments and adjuncts

The basic analysis of the syntax and semantics of clauses relies heavily on the distinction between arguments and adjuncts. The clause predicate, which is often a content verb, demands certain arguments. That is, the arguments are necessary in order to complete the meaning of the verb. The adjuncts that appear, in contrast, are not necessary in this sense. The subject phrase and object phrase are the two most frequently occurring arguments of verbal predicates.^[2] For instance:

Jill likes Jack.

Sam fried the meat.

The old man helped the young man.

Each of these sentences contains two arguments (in bold), the first noun (phrase) being the subject argument, and the second the object argument. *Jill*, for example, is the subject argument of the predicate *likes*, and *Jack* is its object argument. Verbal predicates that demand just a subject argument (e.g. *sleep*, *work*, *relax*) are intransitive, verbal predicates that demand an object argument as well (e.g. *like*, *fry*, *help*) are transitive, and verbal predicates that demand two object arguments are ditransitive (e.g. *give*, *loan*, *send*).

When additional information is added to our three example sentences, one is dealing with adjuncts, e.g.

Jill **really** likes Jack.

Jill likes Jack **most of the time**.

Jill likes Jack **when the sun shines**.

Jill likes Jack **because he's friendly**.

The added phrases (in bold) are adjuncts; they provide additional information that is not centrally necessary to complete the meaning of the predicate *likes*. One key difference between arguments and adjuncts is that the appearance of a given argument is often obligatory, whereas adjuncts appear optionally. While typical verb arguments are subject or object nouns or noun phrases as in the examples above, they can also be prepositional phrases (PPs) (or even other categories). The PPs in bold in the following sentences are arguments:

Sam put the pen **on the chair**.

Larry does not put up **with that**.

Bill is getting **on my case**.

We know that these PPs are (or contain) arguments because when we attempt to omit them, the result is unacceptable:

*Sam put the pen.

*Larry does not put up.

*Bill is getting.

Subject and object arguments are known as *core arguments*; core arguments can be suppressed, added, or exchanged in different ways, using voice operations like passivization, antipassivization, application, incorporation, etc. Prepositional arguments, which are also called *oblique arguments*, however, do not tend to undergo the same processes.

Syntactic vs. semantic arguments

An important distinction acknowledges both syntactic and semantic arguments. Content verbs determine the number and type of syntactic arguments that can or must appear in their environment; they impose specific syntactic functions (e.g. subject, object, oblique, specific preposition, possessor, etc.) onto their arguments. These syntactic functions will vary as the form of the predicate varies (e.g. active verb, passive participle, gerund, nominal, etc.). In languages that have morphological case, the arguments of a predicate must appear with the correct case markings (e.g. nominative, accusative, dative, genitive, etc.) imposed on them by their predicate. The semantic arguments of the predicate, in contrast, remain consistent, e.g.

Jack is liked by Jill.

Jill's liking Jack

Jack's being liked by Jill

the liking of Jack by Jill

Jill's like for Jack

The predicate 'like' appears in various forms in these examples, which means that the syntactic functions of the arguments associated with *Jack* and *Jill* vary. The object of the active sentence, for instance, becomes the subject of the passive sentence. Despite this variation in syntactic functions, the arguments remain semantically consistent. In each case, *Jill* is the experiencer (= the one doing the liking) and *Jack* is the one being experienced (= the one being liked). In other words, the syntactic arguments are subject to syntactic variation in terms of syntactic functions, whereas the thematic roles of the arguments of the given predicate remain consistent as the form of that predicate changes.

The syntactic arguments of a given verb can also vary across languages. For example, the verb *put* in English requires three syntactic arguments: subject, object, locative (e. g. *He put the book into the box*). These syntactic arguments correspond to the three semantic arguments agent, theme, and goal. The Japanese verb *oku* 'put', in contrast, has the same three semantic arguments, but the syntactic arguments differ, since Japanese does not require three syntactic arguments, so it is correct to say *Kare ga hon o oita* ("He put the book"). The equivalent sentence in English is ungrammatical without the required locative argument, as the examples involving *put* above demonstrate.

Distinguishing between arguments and adjuncts

Arguments vs. adjuncts

A large body of literature has been devoted to distinguishing arguments from adjuncts.^[3] Numerous syntactic tests have been devised for this purpose. One such test is the relative clause diagnostic. If the test constituent can appear after the combination *which occurred/happened* in a relative clause, it is an adjunct, not an argument, e.g.

Bill left **on Tuesday**. → Bill left, which happened **on Tuesday**. - *on Tuesday* is an adjunct.

Susan stopped **due to the weather**. → Susan stopped, which occurred **due to the weather**. - *due to the weather* is an adjunct.

Fred tried to say something **twice**. → Fred tried to say something, which occurred **twice**. - *twice* is an adjunct.

The same diagnostic results in unacceptable relative clauses (and sentences) when the test constituent is an argument, e.g.

Bill left **home**. → *Bill left, which happened **home**. - *home* is an argument.

Susan stopped **her objections**. → *Susan stopped, which occurred **her objections**. - *her objections* is an argument.

Fred tried to say **something**. → *Fred tried to say, which happened **something**. - *something* is an argument.

This test succeeds at identifying prepositional arguments as well:

We are waiting **for Susan**. → *We are waiting, which is happening **for Susan**. - *for Susan* is an argument.

Tom put the knife **in the drawer**. → *Tom put the knife, which occurred **in the drawer**. - *in the drawer* is an argument.

We laughed **at you**. → *We laughed, which occurred **at you**. - *at you* is an argument.

The utility of the relative clause test is, however, limited. It incorrectly suggests, for instance, that modal adverbs (e.g. *probably*, *certainly*, *maybe*) and manner expressions (e.g. *quickly*, *carefully*, *totally*) are arguments. If a constituent passes the relative clause test, however, one can be sure that it is NOT an argument.

Obligatory vs. optional arguments

A further division blurs the line between arguments and adjuncts. Many arguments behave like adjuncts with respect to another diagnostic, the omission diagnostic. Adjuncts can always be omitted from the phrase, clause, or sentence in which they appear without rendering the resulting expression unacceptable. Some arguments (obligatory ones), in contrast, cannot be omitted. There are many other arguments, however, that are identified as arguments by the relative clause diagnostic but that can nevertheless be omitted, e.g.

- a. She cleaned **the kitchen**.
- b. She cleaned. - *the kitchen* is an optional argument.
- a. We are waiting **for Larry**.
- b. We are waiting. - *for Larry* is an optional argument.
- a. Susan was working **on the model**.
- b. Susan was working. - *on the model* is an optional argument.

The relative clause diagnostic would identify the constituents in bold as arguments. The omission diagnostic here, however, demonstrates that they are not obligatory arguments. They are, rather, optional. The insight, then, is that a three-way division is needed. On the one hand, one distinguishes between arguments and adjuncts, and on the other hand, one allows for a further division between obligatory and optional arguments.

Arguments and adjuncts in noun phrases

Most work on the distinction between arguments and adjuncts has been conducted at the clause level and has focused on arguments and adjuncts to verbal predicates. The distinction is crucial for the analysis of noun phrases as well, however. If it is altered somewhat, the relative clause diagnostic can also be used to distinguish arguments from adjuncts in noun phrases, e.g.

Bill's bold reading of the poem after lunch

*bold reading of the poem after lunch that was **Bill's** - *Bill's* is an argument.

Bill's reading of the poem after lunch that was **bold** - *bold* is an adjunct

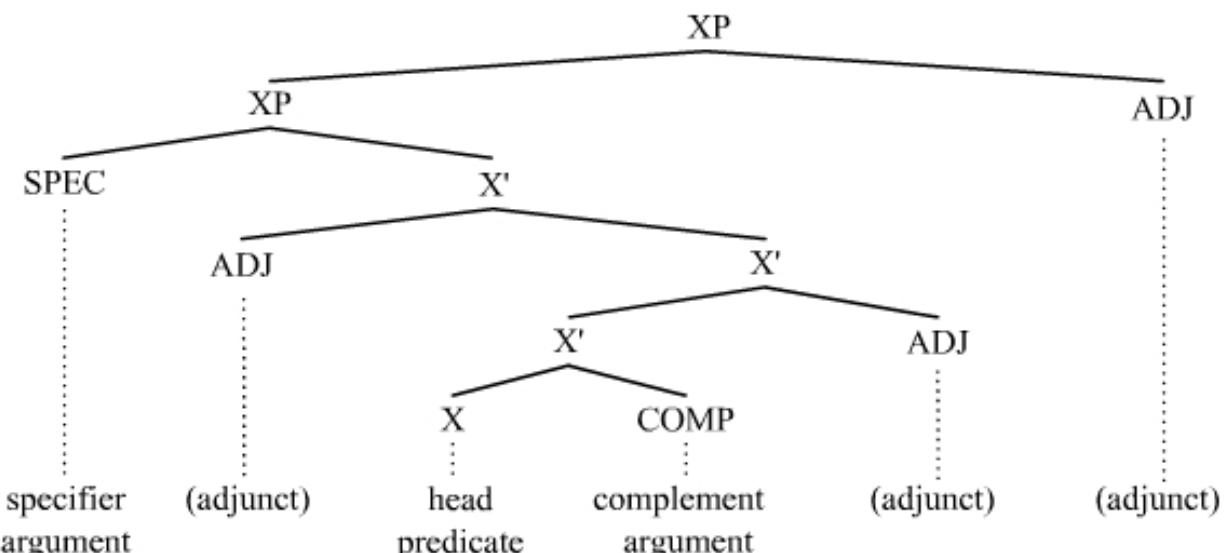
*Bill's bold reading after lunch that was **of the poem** - *of the poem* is an argument

Bill's bold reading of the poem that was **after lunch** - *after lunch* is an adjunct

The diagnostic identifies *Bill's* and *of the poem* as arguments, and *bold* and *after lunch* as adjuncts.

Representing arguments and adjuncts

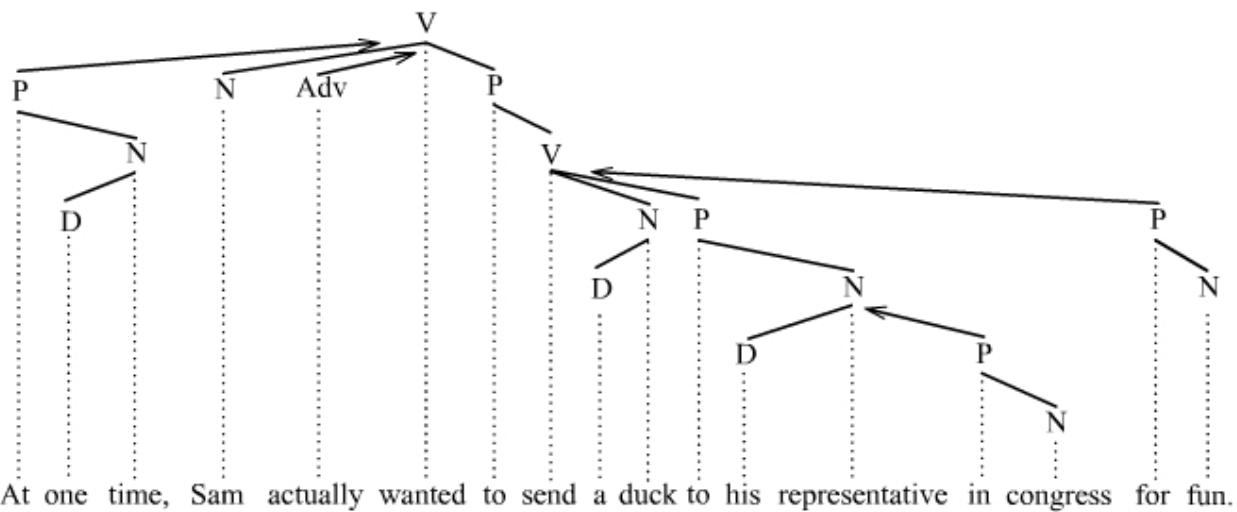
The distinction between arguments and adjuncts is often indicated in the tree structures used to represent syntactic structure. In phrase structure grammars, an adjunct is "adjoined" to a projection of its head predicate in such a manner that distinguishes it from the arguments of that predicate. The distinction is quite visible in theories that employ the X-bar schema, e.g.



The complement argument appears as a sister of the head X, and the specifier argument appears as a daughter of XP.

The optional adjuncts appear in one of a number of positions adjoined to a bar-projection of X or to XP.

Theories of syntax that acknowledge n-ary branching structures and hence construe syntactic structure as being flatter than the layered structures associated with the X-bar schema must employ some other means to distinguish between arguments and adjuncts. In this regard, some dependency grammars employ an arrow convention. Arguments receive a "normal" dependency edge, whereas adjuncts receive an arrow edge.^[4] In the following tree, an arrow points away from an adjunct toward the governor of that adjunct:



The arrow edges in the tree identify four constituents (= complete subtrees) as adjuncts: *At one time*, *actually*, *in congress*, and *for fun*. The normal dependency edges (= non-arrows) identify the other constituents as arguments of their heads. Thus *Sam*, *a duck*, and *to his representative in congress* are identified as arguments of the verbal predicate *wanted to send*.

Importance

The distinction between arguments and adjuncts is crucial to most theories of syntax and grammar. Arguments behave differently from adjuncts in numerous ways. Theories of binding, coordination, discontinuities, ellipsis, etc. must acknowledge and build on the distinction. When one examines these areas of syntax, what one finds is that arguments consistently behave differently from adjuncts and that without the distinction, our ability to investigate and understand these phenomena would be seriously hindered.

Notes

- [1] Concerning the completion of a predicates meaning via its arguments, see for instance Kroeger (2004:9ff.).
- [2] Geeraerts, Dirk; Cuyckens, Hubert (2007). *The Oxford Handbook of Cognitive Linguistics*. Oxford University Press US.
ISBN 0-19-514378-7.
- [3] For instance, see the essays on valency theory in Ágel et al. (2003/6).
- [4] See Eroms (2000) and Osborne and Groß (2012) in this regard.

References

- Ágel, V., L. Eichinger, H.-W. Eroms, P. Hellwig, H. Heringer, and H. Lobin (eds.) 2003/6. Dependency and valency: An international handbook of contemporary research. Berlin: Walter de Gruyter.
- Eroms, H.-W. 2000. Syntax der deutschen Sprache. Berlin: de Gruyter.
- Kroeger, P. 2004. Analyzing syntax: A lexical-functional approach. Cambridge, UK: Cambridge University Press.
- Osborne, T. and T. Groß 2012. Constructions are catenae: Construction Grammar meets dependency grammar. *Cognitive Linguistics* 23, 1, 163-214.
- Tesnière, L. 1959. *Éléments de syntaxe structurale*. Paris: Klincksieck.

Article (grammar)

An **article** (abbreviated **ART**) is a word (or prefix or suffix) that is with a noun to indicate the type of reference being made by the noun. Articles specify the grammatical definiteness of the noun, in some languages extending to volume or numerical scope. The articles in the English language are *the* and *a/an*, and (in some contexts) *some*. 'An' and 'a' are modern forms of the Old English 'an', which in Anglian dialects was the number 'one' (compare 'on', in Saxon dialects) and survived into Modern Scots as the number 'ane'. Both 'on' (respelled 'one' by the Normans) and 'an' survived into Modern English, with 'one' used as the number and 'an' ('a', before nouns that begin with a consonant sound) as an indefinite article.

Traditionally in English, an article is usually considered to be a type of adjective. In some languages, articles are a special part of speech, which cannot easily be combined with other parts of speech. It is also possible for articles to be part of another part of speech category such as a determiner, an English part of speech category that combines articles and demonstratives (such as 'this' and 'that').

In languages that employ articles, every common noun, with some exceptions, is expressed with a certain definiteness (e.g., definite or indefinite), just as many languages express every noun with a certain grammatical number (e.g., singular or plural). Every noun *must* be accompanied by the article, if any, corresponding to its definiteness, and the lack of an article (considered a *zero article*) itself specifies a certain definiteness. This is in contrast to other adjectives and determiners, which are typically optional. This obligatory nature of articles makes them among the most common words in many languages—in English, for example, the most frequent word is *the*.^[1]

Types

Articles are usually characterized as either *definite* or *indefinite*.^[2] A few languages with well-developed systems of articles may distinguish additional subtypes.

Within each type, languages may have various forms of each article, according to grammatical attributes such as gender, number, or case, or according to adjacent sounds.

Definite article

A **definite** article indicates that its noun is a particular one (or ones) identifiable to the listener. It may be something that the speaker has already mentioned, or it may be something uniquely specified. The definite article in English, for both singular and plural nouns, is *the*.

The children know the fastest way home.

The sentence above refers to specific children and a specific way home; it contrasts with the much more general observation that:

Children know the fastest way home.

The latter sentence refers to children in general, perhaps all or most of them.

Likewise,

Give me the book.

refers to a specific book whose identity is known or obvious to the listener; as such it has a markedly different meaning from

Give me a book.

which does not specify what book is to be given.

The definite article can also be used in English to indicate a specific class among other classes:

The cabbage white butterfly lays its eggs on members of the Brassica genus.

The definite article is sometimes also used with proper names, which are already specified by definition (there is just one of them). For example: *the Amazon*, *the Hebrides*. In these cases, the definite article is strictly speaking superfluous. Some languages also use definite articles with personal names. For example, such use is standard in Portuguese: *a Maria*, literally: "the Maria". It also occurs colloquially in Spanish, German and other languages.

Indefinite article

An **indefinite** article indicates that its noun is not a particular one (or ones) identifiable to the listener. It may be something that the speaker is mentioning for the first time, or its precise identity may be irrelevant or hypothetical, or the speaker may be making a general statement about any such thing. English uses *a/an*, from the Old English forms of the number 'one', as its primary indefinite article. The form *an* is used before words that begin with a vowel sound (even if spelled with an initial consonant, as in *an hour*), and *a* before words that begin with a consonant sound (even if spelled with a vowel, as in *a European*).

She had a house so large that an elephant would get lost without a map.

Before some words beginning with a pronounced (not silent) *h* in an unstressed first syllable, such as *hallucination*, *hilarious*, *historic(al)*, *horrendous*, and *horrific*, some (especially older) British writers prefer to use *an* over *a* (*an historical event*, etc.).^[3] *An* is also preferred before *hotel* by some writers of British English (probably reflecting the relatively recent adoption of the word from French, where the *h* is not pronounced).^[4] The use of "an" before words beginning with an unstressed "h" is more common generally in British English than American.^[4] American writers normally use *a* in all these cases, although there are occasional uses of *an historic(al)* in American English.^[5] According to the New Oxford Dictionary of English, such use is increasingly rare in British English too.^[3] Unlike British English, American English typically uses *an* before *herb*, since the *h* in this word is silent for most Americans. The correct usage in respect of the term "hereditary peer" was the subject of an amendment debated in the UK Parliament.^[6]

The word *some* is used as a functional plural of *a/an*. "An apple" never means more than one apple. "Give me *some* apples" indicates more than one is desired but without specifying a quantity. This finds comparison in Spanish, where the singular indefinite article 'un/una' ("one") is completely indistinguishable from the unit number, except where it has a plural form ('unos/unas'): *Dame una manzana*" ("Give me an apple") > "Dame *unas manzanas*" ("Give me *some* apples"). However, *some* also serves as a quantifier rather than as a plural article, as in "There are *some* apples there, but not many."

Some also serves as a singular indefinite article, as in "There is *some* person on the porch". This usage differs from the usage of *a(n)* in that *some* indicates that the identity of the noun is unknown to both the listener and the speaker, while *a(n)* indicates that the identity is unknown to the listener without specifying whether or not it is known to the speaker. Thus *There is some person on the porch* indicates indefiniteness to both the listener and the speaker, while *There is a person on the porch* indicates indefiniteness to the listener but gives no information as to whether the speaker knows the person's identity.

Partitive article

A **partitive** article is a type of indefinite article used with a mass noun such as *water*, to indicate a non-specific quantity of it. Partitive articles are used in French and Italian in addition to definite and indefinite articles. The nearest equivalent in English is *some*, although this is considered a determiner and not an article.

French: *Voulez-vous du café ?*

Do you want (some) coffee? (or, dialectally but more accurately, Do you want some of this coffee?)

See also more information about the French partitive article.

Haida has a partitive article (suffixed -gyaa) referring to "part of something or... to one or more objects of a given group or category," e.g., *tluugyaa uu hal tlaahlhaang* 'he is making a boat (a member of the category of boats).'^[7]

Negative article

A **negative article** specifies *none* of its noun, and can thus be regarded as neither definite nor indefinite. On the other hand, some consider such a word to be a simple determiner rather than an article. In English, this function is fulfilled by *no*, which can appear before a singular or plural noun:

No man is an island.

No dogs are allowed here.

Zero article

The **zero article** is the absence of an article. In languages having a definite article, the lack of an article specifically indicates that the noun is indefinite. Linguists interested in X-bar theory causally link zero articles to nouns lacking a determiner.^[8] In English, the zero article rather than the indefinite is used with plurals and mass nouns, although the word "some" can be used as an indefinite plural article.

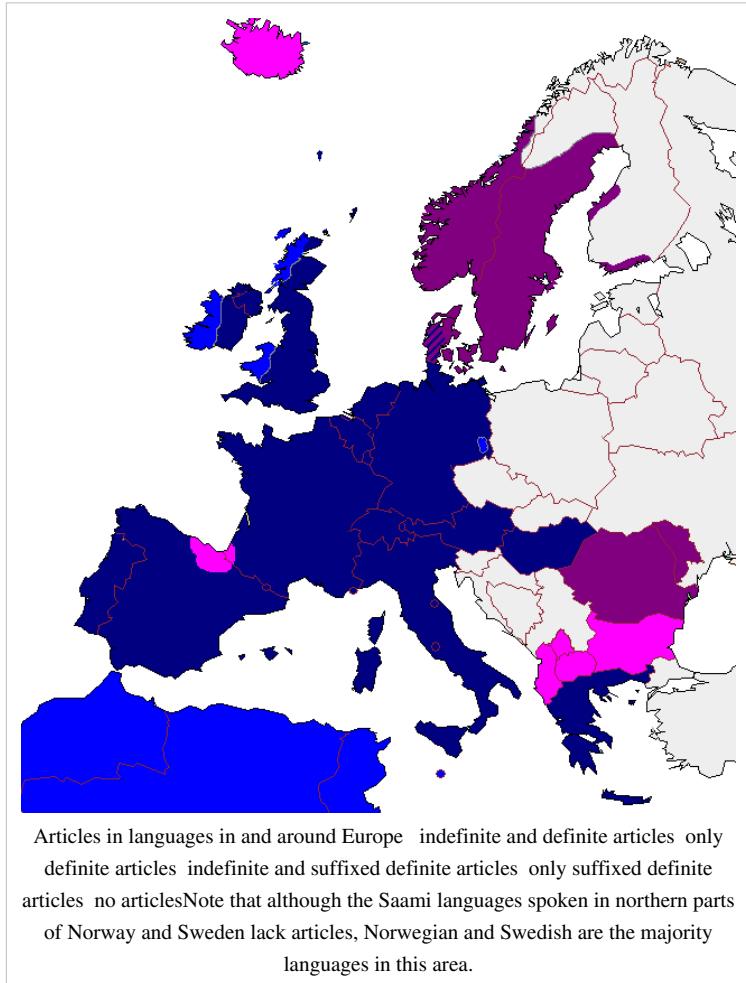
Visitors end up walking in mud.

Variation among languages

Articles are found in many Indo-European and Semitic languages but are absent from some other large languages of the world, such as Indonesian, Japanese, Hindi and Russian.

Linguists believe the common ancestor of the Indo-European languages, Proto-Indo-European, did not have articles. Most of the languages in this family do not have definite or indefinite articles; there is no article in Latin, Sanskrit, nor in some modern Indo-European languages, such as the families of Slavic languages (not including Bulgarian/Macedonian, which are rather distinctive among the Slavic languages in terms of grammar anyway) and Baltic languages. Although Classical Greek has a definite article (which has survived into Modern Greek and which bears strong resemblance to the German definite article), the earlier Homeric Greek did not. Articles developed independently in several language families.

Not all languages have both definite and indefinite articles, and some languages have different types of definite and indefinite articles to distinguish finer shades of meaning; for example, French and Italian have a partitive article used for indefinite mass nouns, while Colognian has two distinct sets of definite articles indicating focus and uniqueness, and Macedonian uses definite articles in a demonstrative sense, distinguishing *this* from *that* (with an intermediate degree). The words *this* and *that* (and their plurals, *these* and



those) can be understood in English as, ultimately, forms of the definite article *the* (whose declension in Old English included *thaes*, an ancestral form of this/that and these/those).

In many languages, the form of the article may vary according to the gender, number, or case of its noun. In some languages the article may be the only indication of the case, e.g., German *Der Hut des Napoleon*, "Napoleon's hat". Many languages do not use articles at all, and may use other ways of indicating old versus new information, such as topic–comment constructions.

Articles used in the world's most widely spoken languages

Language	definite article	indefinite article	partitive article
Arabic	<i>al-</i> or <i>el</i> <i>ʃ</i> (prefix)	None	
Hebrew	<i>ha-</i> <i>ה</i> (prefix)	None	
Greek	<i>o, η, το</i> <i>ot, ot, ta</i>	<i>évaς, μα, éva</i>	
English	<i>the</i>	<i>a, an</i>	<i>some</i>
German	<i>der, die, das</i> <i>des, dem, den</i>	<i>ein, eine, einer,</i> <i>eines</i> <i>einem, einen</i>	
Dutch	<i>de, het</i> <i>de</i>	<i>een</i>	
Tamazight	—	<i>yan, yat</i> <i>ittsn, itsnt</i>	
Spanish	<i>el, la, lo</i> <i>los, las</i>	<i>un, una</i> <i>unos, unas</i>	
Portuguese	<i>o, a</i> <i>os, as</i>	<i>um, uma</i> <i>uns, umas</i>	
French	<i>le, la, l'</i> <i>les</i>	<i>un, une</i> <i>des</i>	<i>du, de la, de l'</i> <i>des</i>
Italian	<i>il, lo, la, l'</i> <i>i, gli, le</i>	<i>'un, uno, una, un</i>	<i>del, dello, della, dell'</i> <i>dei, degli, degl', delle</i>
Urdu	<i>mohtaram, janab</i>	<i>None</i>	
Hungarian	<i>a, az</i>	<i>egy</i>	

In the above examples, the article always precedes its noun (with the exception of the Arabic tanween and the Hebrew *ה ha*-). In some languages, however, the definite article is not always a separate word, but may be suffixed, attached to the end of its noun as a suffix. For example,

- Albanian: *plis*, a white fez; *plisi*, the white fez
- Urdu: *mohtaram*, janab;
- Bengali: "Boi", book; "Boiti/Boita/Boikhana" : "The Book"
- Romanian: *drum*, road; *drumul*, the road (the article is just "l", "u" is a "connection vowel" Romanian: *vocală de legătură*)
- Icelandic: *hestur*, horse; *hesturinn*, the horse
- Persian: *sib*, apple; *sibe*, the apple
- Norwegian: *stol*, chair; *stolen*, the chair
- Swedish: *hus* house; *huset*, the house
- Bulgarian: стол *stol*, chair; столът *stolat*, the chair (subject); стола *stola*, the chair (object)
- Macedonian: стол *stol*, chair; столот *stolot*, the chair; столов *stolov*, this chair; столон *stolon*, that chair

Example of prefixed definite article:

- Hebrew: יֶלֶד, transcribed as *yeled*, a boy; הַיֶּלֶד, transcribed as *ha-yeled*, the boy

A different way, limited to the definitive article, is used by Latvian. The noun doesn't change but the adjective can be defined or undefined: *galds*, a table / the table; *balts galds*, a white table; *baltais galds*, the white table.

Evolution

Articles have developed independently in many different language families across the globe. Generally, articles develop over time usually by specialization of certain adjectives.

Joseph Greenberg in Universals of Human Language^[9] describes "the cycle of the definite article": Definite articles (Stage I) evolve from demonstratives, and in turn can become generic articles (Stage II) that may be used in both definite and indefinite contexts, and later merely noun markers (Stage III) that are part of nouns other than proper names and more recent borrowings. Eventually articles may evolve anew from demonstratives.

Definite articles

Definite articles typically arise from demonstratives meaning *that*. For example, the definite articles in the Romance languages—e.g., *el*, *il*, *le*, *la*—derive from the Latin demonstratives *ille* (masculine) and *illa* (feminine).

The English definite article *the*, written *þe* in Middle English, derives from an Old English demonstrative, which, according to gender, was written *se* (masculine), *seo* (feminine) (*þe* and *þeo* in the Northumbrian dialect), or *þaet* (neuter). The neuter form *þaet* also gave rise to the modern demonstrative *that*. The *ye* occasionally seen in pseudo-archaic usage such as "Ye Olde Englishe Tea Shoppe" is actually a form of *þe*, where the letter thorn (*þ*) came to be written as a *y*.

Multiple demonstratives can give rise to multiple definite articles. Macedonian, for example, in which the articles are suffixed, has *столом* (*stolot*), the chair; *столов* (*stolov*), this chair; and *столон* (*stolon*), that chair. Cognate prepositions articles such as in *dat Auto*, or *et Auto*, the car; the first being specifically selected, focussed, newly introduced, while the latter is not selected, unfocussed, already known, general, or generic.

Indefinite articles

Indefinite articles typically arise from adjectives meaning *one*. For example, the indefinite articles in the Romance languages—e.g., *un*, *una*, *une*—derive from the Latin adjective *unus*. Partitive articles, however, derive from Vulgar Latin *de illo*, meaning *(some) of the*.

The English indefinite article *an* is derived from the same root as *one*. The *-n* came to be dropped before consonants, giving rise to the shortened form *a*. The existence of both forms has led to many cases of juncture loss, e.g., transforming the original *a napron* into the modern *an apron*.

The Persian indefinite article is *yek* meaning one.

References

- [1] World English. "The 500 Most Commonly Used Words in the English Language" (<http://www.world-english.org/english500.htm>). Archived (<http://web.archive.org/web/20070113103028/http://www.world-english.org/english500.htm>) from the original on 13 January 2007. . Retrieved 2007-01-14.
- [2] The Use and Non-Use of Articles (<http://filesmy.com/1Ii3k/handouts/esl/eslart.html>)
- [3] New Oxford Dictionary of English, 1999, usage note for *an*: "There is still some divergence of opinion over the form of the indefinite article to use preceding certain words beginning with **h**- when the first syllable is unstressed: 'a historical document' or '**an** historical document'; 'a hotel' or '**an** hotel'. The form depends on whether the initial **h** is sounded or not: **an** was common in the 18th and 19th centuries, because the initial **h** was commonly not pronounced for these words. In standard modern English the norm is for the **h** to be pronounced in words like **hotel** and **historical**, and therefore the indefinite article **a** is used; however, the older form, with the silent **h** and the indefinite article **an**, is still encountered, especially among older speakers."

- [4] Brown Corpus and Lancaster-Oslo-Bergen Corpus, quoted in Peters (2004: 1)
- [5] Algeo, p. 49.
- [6] www.publications.parliament.uk/pa/ld199899/ldhansrd/vo990427/text/90427-43.htm (<http://www.publications.parliament.uk/pa/ld199899/ldhansrd/vo990427/text/90427-43.htm>).
- [7] Lawrence, Erma (1977). *Haida dictionary* (http://www.eric.ed.gov/ERICWebPortal/search/recordDetails.jsp?ERICExtSearch_SearchValue_0=ED162532&searchtype=keyword&ERICExtSearch_SearchType_0=no&_pageLabel=RecordDetails&acno=ED162532&_nfls=false). Fairbanks: Alaska Native Language Center. p. 64..
- [8] ScienceDirect (http://filesmy.com/1Ii3k/science?_ob=ArticleURL&_udi=B6VCH-3SWY7SY-6&_user=10&_rdoc=1&_fmt=&_orig=search&_sort=d&view=c&_version=1&_urlVersion=0&_userid=10&md5=24a31fefe9224f5077577f2789747377) Master, Peter (1997) "The English Article System: acquisition, function, and pedagogy" in: *System*, Volume 25, Issue 2, pp. 215–232
- [9] Genetic Linguistics (<http://books.google.com/books?id=maft03b0cqUC>)

Grammatical aspect

In linguistics, the **grammatical aspect** of a verb is a grammatical category that defines the temporal flow (or lack thereof) in a given action, event, or state, from the point of view of the speaker. A basic distinction is with regard to whether the speaker looks at a situation as bounded and unitary, without reference to any flow of time during the situation ("I ate"), or with no reference to temporal bounds but with reference to the nature of the flow of time during the situation ("I was eating", "I used to eat"). The unitary view without internal temporal flow is known as the perfective aspect (not to be confused with the perfect), while the non-bounded view with reference to temporal flow is known as the imperfective aspect. Within the imperfective aspect, further common aspectual distinctions include whether the situation is repetitive or habitual ("I used to eat"), is continuous in a particular time frame ("I was eating"), or has continuing relevance in a later time frame ("I have eaten"). Any one language has only a subset of the aspectual distinctions attested in the world's languages, and some languages (such as Standard German; see below) do not have aspects.

Basic concept

History

The Indian linguist Yaska (ca. 7th century BCE) dealt with grammatical aspect, distinguishing actions that are processes (*bhāva*), from those where the action is considered as a completed whole (*mūrtta*). This is the key distinction between the imperfective and perfective. Yaska also applied this distinction to a verb versus an action nominal.

Grammarians of the Greek and Latin languages also showed an interest in aspect, but the idea did not enter into the modern Western grammatical tradition until the 19th century via the study of Slavic grammar. The earliest use of the term recorded in the Oxford English Dictionary dates from 1853.^[1]

Modern usage

Aspect is often confused with the closely related concept of tense, because they both convey information about time. While tense relates the time of referent to some other time, commonly the speech event, aspect conveys other temporal information, such as duration, completion, or frequency, as it relates to the time of action. Thus tense refers to *temporally when* while aspect refers to *temporally how*. Aspect can be said to describe the texture of the time in which a situation occurs, such as a single point of time, a continuous range of time, a sequence of discrete points in time, etc., whereas tense indicates its location in time.

For example, consider the following sentences: "I eat", "I am eating", "I have eaten", and "I have been eating". All are in the present tense, as they describe the present situation, yet each conveys different information or points of view as to how the action pertains to the present. As such, they differ in aspect.

Grammatical aspect is a *formal* property of a language, distinguished through overt inflection, derivational affixes, or independent words that serve as grammatically required markers of those aspects. For example, the K'iche' language spoken in Guatemala has the inflectional prefixes *k-* and *x-* to mark incomplete and complete aspect;^{[2][3]} Mandarin Chinese has the aspect markers *-le* 了, *-zhe* 着, *zài*- 在, and *-guò* 过 to mark the perfective, durative stative, durative progressive, and experiential aspects,^[4] and also marks aspect with adverbs;^[5] and English marks the continuous aspect with the verb *to be* coupled with present participle and the perfect with the verb *to have* coupled with past participle. Even languages that do not mark aspect morphologically or through auxiliary verbs, however, can convey such distinctions by the use of adverbs or other syntactic constructions.^[6]

Grammatical aspect is distinguished from lexical aspect or *aktionsart*, which is an inherent feature of verbs or verb phrases and is determined by the nature of the situation that the verb describes.

Common aspectual distinctions

The most fundamental aspectual distinction, represented in many languages, is between perfective aspect and imperfective aspect. This is the basic aspectual distinction in the Slavic languages. It semantically corresponds to the distinction between the morphological forms known respectively as the aorist and imperfect in Greek, the preterite and imperfect in Spanish, the simple past (passé simple) and imperfect in French, and the perfect and imperfect in Latin (from the Latin "perfectus", meaning "completed").

Essentially, the perfective aspect looks at an event as a complete action, while the imperfective aspect views an event as the process of unfolding or a repeated or habitual event (thus corresponding to the progressive/continuous aspect for events of short-term duration and to habitual aspect for longer terms). For events of short durations in the past, the distinction often coincides with the distinction in the English language between the simple past "X-ed," as compared to the progressive "was X-ing" (compare "I wrote the letters this morning" (i.e. finished writing the letters: an action completed) and "I was writing letters this morning"). In describing longer time periods, English needs context to maintain the distinction between the habitual ("I called him often in the past" - a habit that has no point of completion) and perfective ("I called him once" - an action completed), although the construct "used to" marks both habitual aspect and past tense and can be used if the aspectual distinction otherwise is not clear.

Sometimes, English has a lexical distinction where other languages may use the distinction in grammatical aspect. For example, the English verbs "to know" (the state of knowing) and "to find out" (knowing viewed as a "completed action") correspond to the imperfect and perfect of the French verb "savoir".

Aspect vs. tense

Aspect is a somewhat difficult concept to grasp for the speakers of most modern Germanic languages, because they tend to conflate the concept of grammatical aspect with that of tense. Although English largely separates tense and aspect formally, its generally recognized aspects do not correspond very closely to the traditional notion of perfective vs. imperfective aspectual distinction originally devised to classify aspect in most Classical and Slavic languages (those languages for which the concept of aspect was first proposed in describing non-tense handling of verbal "viewpoint").

Like tense, aspect is a way that verbs represent time. However, rather than locating an event or state **in** time, the way tense does, aspect describes "the internal temporal constituency of a situation", or in other words, aspect is a way "of conceiving the flow of the process itself".^[7] English aspectual distinctions in the past tense include "I went, I used to go, I was going, I had gone"; in the present tense "I lose, I am losing, I have lost, I have been losing, I am going to lose"; and with the future modal "I will see, I will be seeing, I will have seen, I am going to see". What distinguishes these aspects within each tense is not (necessarily) when the event occurs, but how the time in which it occurs is viewed: as complete, ongoing, consequential, planned, etc.

In most dialects of Ancient Greek, aspect is indicated uniquely by verbal morphology. For example, the very frequently used aorist, though a functional preterite in the indicative mood, conveys historic or 'immediate' aspect in the subjunctive and optative. The perfect in all moods is used as an aspectual marker, conveying the sense of a resultant state. E.g. ὄπαω - I see (present); εἶδον - I saw (aorist); οἴδα - I am in a state of having seen = I know (perfect).

Many Sino-Tibetan languages, like Mandarin, lack grammatical tense but are rich in aspect.

Lexical vs. grammatical aspect

There is a distinction between grammatical aspect, as described here, and lexical aspect. Lexical aspect is an inherent property of a verb or verb-complement phrase, and is not marked formally. The distinctions made as part of lexical aspect are different from those of grammatical aspect. Typical distinctions are between states ("I owned"), activities ("I shopped"), accomplishments ("I painted a picture"), achievements ("I bought"), and punctual, or semelfactive, events ("I sneezed"). These distinctions are often relevant syntactically. For example, states and activities, but not usually achievements, can be used in English with a prepositional *for*-phrase describing a time duration: "I had a car for five hours", "I shopped for five hours", but not "*I bought a car for five hours". Lexical aspect is sometimes called *Aktionsart*, especially by German and Slavic linguists. Lexical or situation aspect is marked in Athabaskan languages.

One of the factors in situation aspect is telicity. Telicity might be considered a kind of lexical aspect, except that it is typically not a property of a verb in isolation, but rather a property of an entire verb *phrase*. Achievements, accomplishments and semelfactives have telic situation aspect, while states and activities have atelic situation aspect.

The other factor in situation aspect is duration, which is also a property of a verb phrase. Accomplishments, states, and activities have duration, while achievements and semelfactives do not.

Indicating aspect

In some languages, aspect and time are very clearly separated, making them much more distinct to their speakers. There are a number of languages that mark aspect much more saliently than time. Prominent in this category are Chinese and American Sign Language, which both differentiate many aspects but rely exclusively on optional time-indicating terms to pinpoint an action with respect to time. In other language groups, for example in most modern Indo-European languages (except Slavic languages), aspect has become almost entirely conflated, in the verbal morphological system, with time.

In Russian, aspect is more salient than tense in narrative. Russian, like other Slavic languages, uses different lexical entries for the different aspects, whereas other languages mark them morphologically, and still others with auxiliaries (e.g., English).

In literary Arabic (الفصحي, *al-Fusha*) the verb has two aspect-tenses: perfective (past), and imperfective (non-past). There is some disagreement among grammarians whether to view the distinction as a distinction in aspect, or tense, or both. The "Past Verb" (فعل ماضي, *fi'l maadiy*) denotes an event (حدث, *hadath*) completed in the past, but says nothing about the relation of this past event to present status. For example, "وصل", *wasala*, "he arrived", indicates that arrival occurred in the past without saying anything about the present status of the arriver - maybe he stuck around, maybe he turned around and left, etc. - nor about the aspect of the past event except insofar as completeness can be considered aspectual. This "Past Verb" is clearly similar if not identical to the Greek Aorist, which is considered a tense but is more of an aspect marker. In the Arabic, aorist aspect is the logical consequence of past tense. By contrast, the "Verb of Similarity" (فعل المضارع, *fi'l al-mudaara'ah*), so called because of its resemblance to the active participle noun, is considered to denote an event in the present or future without committing to a specific aspectual sense beyond the incompleteness implied by the tense: يضرب "yadribu", he strikes/is striking/will strike/etc. Those are the only two "tenses" in Arabic (not counting "أمر", "amr", command, which the tradition counts as denoting future

events.) At least that's the way the tradition sees it. To explicitly mark aspect, Arabic uses a variety of lexical and syntactic devices.

Contemporary Arabic dialects are another matter. One major change from al-Fusha is the use of a prefix particle (بـ "bi" in most dialects) to explicitly mark progressive, continuous, or habitual aspect: بـيكتـب, bi-yiktab, he is now writing, writes all the time, etc.

Aspect can mark the stage of an action. The prospective aspect is a combination of tense and aspect that indicates the action is in preparation to take place. The inceptive aspect identifies the beginning stage of an action (e.g. Esperanto uses *ek-*, e.g. *Mi ekmanĝas*, "I am beginning to eat.") and inchoative and ingressive aspects identify a change of state (*The flowers started blooming*) or the start of an action (*He started running*). Aspects of stage continue through progressive, pausative, resumptive, cessive, and terminative.

Important qualifications:

- Although the perfective is often thought of as representing a "momentary action", this is not strictly correct. It can equally well be used for an action that took time, as long as it is *conceived of* as a unit, with a clearly defined start and end, such as "Last summer I visited France".
- Grammatical aspect represents a formal distinction encoded in the grammar of a language. Although languages that are described as having imperfective and perfective aspects agree in most cases in their use of these aspects, they may not agree in every situation. For example:
 - Some languages have additional grammatical aspects. Spanish and Ancient Greek, for example, have a perfect (not the same as the perfective), which refers to a state resulting from a previous action (also described as a previous action with relevance to a particular time, or a previous action viewed from the perspective of a later time). This corresponds (roughly) to the "have X-ed" construction in English, as in "I have recently eaten". Languages that lack this aspect (such as Portuguese, which is closely related to Spanish) often use the past perfective to render the present perfect (compare the roughly synonymous English sentences "Have you eaten yet?" and "Did you eat yet?").
 - In some languages, the formal representation of aspect is optional, and can be omitted when the aspect is clear from context or does not need to be emphasized. This is the case, for example, in Mandarin Chinese, with the perfective suffix *le* and (especially) the imperfective *zhe*.
 - For some verbs in some languages, the difference between perfective and imperfective conveys an additional meaning difference; in such cases, the two aspects are typically translated using separate verbs in English. In Greek, for example, the imperfective sometimes adds the notion of "try to do something" (the so-called *conative imperfect*); hence the same verb, in the imperfective (present or imperfect) and aorist, respectively, is used to convey *look* and *see*, *search* and *find*, *listen* and *hear*. (For example, ηκουομεν *ēkouomen* "we listened" vs. ηκουσαμεν *ēkousamen* "we heard".) Spanish has similar pairs for certain verbs, such as (imperfect and preterite, respectively) *sabía* "I knew" vs. *supe* "I found out", *podía* "I was able to" vs. *pude* "I succeeded (in doing something)", *quería* "I wanted to" vs. *quise* "I tried to", *no quería* "I did not want to" vs. *no quise* "I refused (to do something)". Such differences are often highly language-specific.

Aspect by language

English

The English tense-aspect system has two morphologically distinct tenses, present and past. No marker of a future tense exists on the verb in English; the futurity of an event may be expressed through the use of the auxiliary verbs "will" and "shall", by a present form, as in "tomorrow we go to Newark", or by some other means. Past is distinguished from present-future, in contrast, with internal modifications of the verb. These two tenses may be modified further for progressive aspect (also called *continuous* aspect), for the perfect, or for both. These two aspectual forms are also referred to as BE +ING^[8] and HAVE +EN,^[9] respectively, which avoids what may be

unfamiliar terminology.

Aspects of the present tense:

- Present simple (not progressive, not perfect): "I eat"
- Present progressive (progressive, not perfect): "I am eating"
- Present perfect (not progressive, perfect): "I have eaten"
- Present perfect progressive (progressive, perfect): "I have been eating"

Aspects of the past tense:

- Past simple (not progressive, not perfect): "I ate"
- Past progressive (progressive, not perfect): "I was eating"
- Past perfect (not progressive, perfect): "I had eaten"
- Past perfect progressive (progressive, perfect): "I had been eating"

(While many elementary discussions of English grammar classify the present perfect as a past tense, it relates the action to the present time. One cannot say of someone now deceased that he "has eaten" or "has been eating"; the present auxiliary implies that he is in some way *present* (alive), even if the action denoted is completed (perfect) or partially completed (progressive perfect).)

The uses of the progressive and perfect aspects are quite complex. They may refer to the viewpoint of the speaker:

I was walking down the road when I met Michael Jackson's lawyer. (Speaker viewpoint in middle of action)

I have travelled widely, but I have never been to Moscow. (Speaker viewpoint at end of action)

But they can have other illocutionary forces or additional modal components:

You are being stupid now. (You are doing it deliberately)

You are not having chocolate with your sausages! (I forbid it)

I am having lunch with Mike tomorrow. (It is decided)

English expresses some other aspectual distinctions with other constructions. *Used to + VERB* is a past habitual, as in "I used to go to school", and *going to / gonna + VERB* is a prospective, a future situation highlighting current intention or expectation, as in "I'm going to go to school next year".

Note that the aspectual systems of certain dialects of English, such as African-American Vernacular English (see for example habitual be), and of creoles based on English vocabulary, such as Hawaiian Creole English, are quite different from those of standard English, and often distinguish aspect at the expense of tense.

German vernacular and colloquial

Although Standard German does not have aspects, many Upper German languages, all West Central German languages, and some more vernacular German languages do make one aspectual distinction, and so do the colloquial languages of many regions, the so called German regiolects. While officially discouraged in schools and seen as 'bad language', local English teachers like the distinction, because it corresponds well with the English continuous form. It is formed by the conjugated auxiliary verb "sein" (to be) followed by the preposition "am" and the infinitive, or the nominalized verb. The latter two are phonetically indistinguishable; in writing, capitalization differs: "Ich war am essen" vs. "Ich war am Essen" (I was eating, compared to the Standard German approximation: "Ich war beim Essen"); yet these forms are not standardized and thus are relatively infrequently written down or printed, even in quotations or direct speech. If written, the first form (the infinitive) is preferred.

Romance languages

Modern Romance languages merge the concepts of aspect and tense, but consistently distinguish perfective and imperfective aspects in the past tense. This derives directly from the way the Latin language used to render both aspects and *consecutio temporum*.

Italian language example (verb *mangiare*, to eat):

Mood: *indicativo* (indicative)

- *Presente* (present): io mangio ("I eat", "I'm eating") - merges habitual and continuous aspects, among others
- *Passato prossimo* (recent past): io ho mangiato ("I ate", "I have eaten") - merges perfective and perfect
- *Imperfetto* (imperfect): io mangiavo ("I was eating", or "I usually ate") - merges habitual and progressive aspects
- *Trapassato prossimo* (recent pluperfect): io avevo mangiato ("I had eaten") - tense, not ordinarily marked for aspect
- *Passato remoto* (far past): io mangiai (I "ate") - perfective aspect
- *Trapassato remoto* (far pluperfect): io ebbi mangiato ("I had eaten") - tense
- *Futuro semplice* (simple future): io mangerò ("I shall eat") - tense
- *Futuro anteriore* (future perfect): io avrò mangiato ("I shall have eaten") - future tense and perfect tense/aspect

The *imperfetto/trapassato prossimo* contrasts with the *passato remoto/trapassato remoto* in that *imperfetto* renders an imperfective (continuous) past while *passato remoto* expresses an aorist (punctual/historical) past.

Other aspects in Italian are rendered with other periphrases, like prospective (*io sto per mangiare* "I'm about to eat", *io starò per mangiare* "I shall be about to eat"), or continuous/progressive (*io sto mangiando* "I'm eating", *io starò mangiando* "I shall be eating").

Finnic languages

Finnish and Estonian, among others, have a grammatical aspect contrast of telicity between telic and atelic. Telic sentences signal that the intended goal of an action is achieved. Atelic sentences do not signal whether any such goal has been achieved. The aspect is indicated by the case of the object: accusative is telic and partitive is atelic. For example, the (implicit) purpose of shooting is to kill, such that:

- *Ammuin karhun* -- "I shot the bear (succeeded; it is done)" i.e., "I shot the bear dead".
- *Ammuin karhua* -- "I shot at the bear" i.e., "I shot the bear (and I am not telling if it died)".

Sometimes, corresponding telic and atelic forms have as little to do with each other semantically as "take" has with "take off". For example, *naida* means "to marry" when telic, but "to have sex with" when atelic.

Also, derivational suffixes exist for various aspects. Examples:

- *-ahta-* "do suddenly by itself" as in *ammahtaa* "to shoot up" from *ampua* "to shoot"
- *-ele-* "repeatedly" as in *ammuskella* "to go shooting around"

There are derivational suffixes for verbs, which carry frequentative, momentane, causative, and inchoative aspect meanings also, pairs of verbs differing only in transitivity exist.

Philippine languages

Like many Austronesian languages, the verbs of the Philippine languages follow a complex system of affixes in order to express subtle changes in meaning. However, the verbs in this family of languages are conjugated to express the aspects and not the tenses. Though many of the Philippine languages do not have a fully codified grammar, most of them follow the verb aspects that are demonstrated by Filipino or Tagalog.

Hawaiian

The Hawaiian language conveys aspect as follows:^{[10][11][12]}

- The unmarked verb, frequently used, can indicate habitual aspect or perfective aspect in the past.
- *ke + verb + nei* is frequently used and conveys the progressive aspect in the present.
- *e + verb + ana* conveys the progressive aspect in any tense.
- *ua + verb* conveys the perfective aspect but is frequently omitted.

Creole languages

Creole languages,^[13] typically use the unmarked verb for timeless habitual aspect, or for stative aspect, or for perfective aspect in the past. Invariant pre-verbal markers are often used. Non-stative verbs typically can optionally be marked for the progressive, habitual, completive, or irrealis aspect. The progressive in English-based Atlantic Creoles often uses *de* (from English "be"). Jamaican Creole uses *pan* (from English "upon") for the present progressive and *wa* (from English "was") for the past progressive. Haitian Creole uses the progressive marker *ap*. Some Atlantic Creoles use one marker for both the habitual and progressive aspects. In Tok Pisin, the optional progressive marker follows the verb. Completive markers tend to come from superstrate words like "done" or "finish", and some creoles model the future/irrealis marker on the superstrate word for "go".

American Sign Language

American Sign Language (ASL) is similar to many other sign languages in that it has no grammatical tense but many verbal aspects produced by modifying the base verb sign.

An example is illustrated with the verb TELL. The basic form of this sign is produced with the initial posture of the index finger on the chin, followed by a movement of the hand and finger tip toward the indirect object (the recipient of the telling). Inflected into the unrealized inceptive aspect ('to be just about to tell'), the sign begins with the hand moving from in front of the trunk in an arc to the initial posture of the base sign (i.e. index finger touching the chin) while inhaling through the mouth, dropping of the jaw, directing eye gaze toward the verb's object. The posture is then held rather than moved toward the indirect object. During the hold, the signer also stops the breath by closing the glottis. Other verbs (such as 'look at', 'wash the dishes', 'yell', 'flirt') are inflected into the unrealized inceptive aspect similarly: the hands used in the base sign move in an arc from in front of the trunk to the initial posture of the underlying verb sign while inhaling, dropping the jaw, and directing eye gaze toward the verb's object (if any), but subsequent movements and postures are dropped as the posture and breath are held.

Other aspects in ASL include the following: stative, inchoative ("to begin to..."), predispositional ("to tend to..."), susceptative ("to... easily"), frequentative ("to... often"), protracted ("to... continuously"), incessant ("to... incessantly"), durative ("to... for a long time"), iterative ("to... over and over again"), intensive ("to... very much"), resultative ("to... completely"), approximative ("to... somewhat"), semblitive ("to appear to..."), increasing ("to... more and more"). Some aspects combine with others to create yet finer distinctions.

Aspect is unusual in ASL in that transitive verbs derived for aspect lose their grammatical transitivity. They remain semantically transitive, typically assuming an object made prominent using a topic marker or mentioned in a previous sentence. See Syntax in ASL for details.

Terms for various aspects

The following aspectual terms are found in the literature. Approximate English equivalents are given.

- Perfective: 'I struck the bell' (an event viewed in its entirety, without reference to its temporal structure during its occurrence)
- Momentane: 'The mouse squeaked once' (contrasted to 'The mouse squeaked / was squeaking')
- Perfect (a common conflation of aspect and tense): 'I have arrived' (brings attention to the consequences of a situation in the past)
 - Recent perfect, also known as *after perfect*: 'I just ate' or 'I am after eating' (Hiberno-English)
- Prospective (a conflation of aspect and tense): 'I am about to eat', 'I am going to eat" (brings attention to the anticipation of a future situation)
- Imperfective (an action with ongoing nature: combines the meanings of both the continuous and the habitual aspects): 'I am walking to work' (continuous) or 'I walk to work every day' (habitual).
- Continuous: 'I am eating' or 'I know' (situation is described as ongoing and either evolving or unevolving; a subtype of imperfective)
- Progressive: 'I am eating' (action is described as ongoing and evolving; a subtype of continuous)
- Stative: 'I know French' (situation is described as ongoing but not evolving; a subtype of continuous)
- Habitual: 'I used to walk home from work', 'I would walk home from work every day', 'I walk home from work every day' (a subtype of imperfective)
- Gnomic/generic: 'Fish swim and birds fly' (general truths)
- Episodic: 'The bird flew' (non-gnomic)
- Continuative aspect: 'I am still eating'
- Inceptive or ingressive: 'I started to run' (beginning of a new action: dynamic)
- Inchoative: 'The flowers started to bloom' (beginning of a new state: static)
- Terminative ~ cessative: 'I finished my meal'
- Defective: 'I almost fell'
- Pausative: 'I stopped working for a while'
- Resumptive: 'I resumed sleeping'
- Punctual: 'I slept'
- Durative: 'I slept for a while'
- Delimitative: 'I slept for an hour'
- Protractive: 'The argument went on and on'
- Iterative: 'I read the same books again and again'
- Frequentative: 'It sparkled', contrasted with 'It sparked'. Or, 'I run around', vs. 'I run'
- Experiential: 'I have gone to school many times'
- Intentional: 'I listened carefully'
- Accidental: 'I accidentally knocked over the chair'
- Intensive: 'It glared'
- Moderative: 'It shone'
- Attenuative: 'It glimmered'

Notes

- [1] Robert I. Binnick (1991). *Time and the verb: a guide to tense and aspect* (<http://books.google.com/books?id=A1fSUowGY8kC&pg=PA135>). Oxford University Press US. pp. 135–6. ISBN 978-0-19-506206-9. . Retrieved 12 August 2011.
- [2] Pye, Clifton (2008). Stacey Stowers, Nathan Poell. ed. *Kansas Working Papers in Linguistics* (University of Kansas title=Mayan Morphosyntax) **26**.
- [3] Pye, Clifton (2001). "The Acquisition of Finiteness in K'iche' Maya." *BUCLD 25: Proceedings of the 25th annual Boston University Conference on Language Development*, pp. 645-656. Somerville, MA: Cascadilla Press.
- [4] Li, Charles, and Sandra Thompson (1981). "Aspect." *Mandarin Chinese: A Functional Reference Grammar*. Los Angeles: University of California Press. pp. 184-237.
- [5] Zhang, Yaxu (2 July 2008). "Brain responses to agreement violations of Chinese grammatical aspect". *NeuroReport* **19** (10): 1039–43. doi:10.1097/WNR.0b013e328302f14f. PMID 18580575.
- [6] Gabriele, Alison (2008). "Transfer and Transition in the L2 Acquisition of Aspect". *Studies in Second Language Acquisition*: 6.
- [7] Bernard Comrie, 1976. *Aspect*. Cambridge University Press
- [8] See, for example, Gabriele, Allison; McClure, William (2003). "Why swimming is just as difficult as dying for Japanese learners of English" (https://netfiles.uiuc.edu/tionin/www/MyDownloads/gabriele_2003.pdf). *ZAS Papers in Linguistics* **29**: 1..
- [9] See, for example, Partee, Barbara H (1973). "Some Structural Analogies between Tenses and Pronouns in English". *Journal of Philosophy* (Journal of Philosophy, Inc.) **70** (18): 601. JSTOR 2025024.
- [10] Östen dahl, *Tense and Aspect Systems*, Blackwell, 1985: ch. 6.
- [11] Schütz, Albert J., *All about Hawaiian*, Univ. of Hawaii Press, 1995: pp. 23-25.
- [12] Pukui, Mary Kawena, and Elbert, Samuel H., *New Pocket Hawaiian Dictionary*, Univ. of Hawaii Press, 1992: pp. 228-231.
- [13] Holm, John, *An Introduction to Pidgins and Creoles*, Cambridge Univ. Press, 2000: pp. 173-189.

Other references

- Routledge Dictionary of Language and Linguistics (ISBN 0-415-20319-8), by Hadumod Bussmann, edited by Gregory P. Trauth and Kerstin Kazzazi, Routledge, London 1996. Translation of German *Lexikon der Sprachwissenschaft* Kröner Verlag, Stuttgart 1990.
- Morfologian harjoituksia (<http://www.ling.helsinki.fi/~lcarlson/02-03/ctl104/ctl104h03facit.html>), Lauri Carlson
- Bache, C. (1982). Aspect and Aktionsart: Towards a semantic distinction. *Journal of Linguistics*, 18(01), 57-72.
- Berdinetto, P. M., & Delfitto, D. (2000). Aspect vs. Actionality: Some reasons for keeping them apart. In O. Dahl (Ed.), *Tense and Aspect in the Languages of Europe* (pp. 189–226). Berlin: Mouton de Gruyter.
- Binnick, R. I. (1991). *Time and the verb: A guide to tense and aspect*. New York: Oxford University Press.
- Binnick, R. I. (2006). Aspect and Aspectuality. In B. Aarts & A. M. S. McMahon (Eds.), *The Handbook of English Linguistics* (pp. 244–268). Malden, MA: Blackwell Publishing.
- Chertkova, M. Y. (2004). Vid or Aspect? On the Typology of a Slavic and Romance Category [Using Russian and Spanish Material]. *Vestnik Moskovskogo Universiteta, Filologiya*, 58(9-1), 97-122.
- Comrie, B. (1976). *Aspect: An introduction to the study of verbal aspect and related problems*. Cambridge; New York: Cambridge University Press.
- Frawley, W. (1992). *Linguistic semantics*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Kortmann, B. (1991). The Triad "Tense–Aspect–Aktionsart". *Belgian Journal of Linguistics*, 6, 9-30.
- MacDonald, J. E. (2008). The syntactic nature of inner aspect: A minimalist perspective. Amsterdam; Philadelphia: John Benjamins Pub. Co.
- Maslov, I. S. (1998). Vid glagol'nyj [Aspect of the verb]. In V. N. Yartseva (Ed.), *Jazykoznanie: Bol'shoj entsyklopedicheskij slovar'* (pp. 83–84). Moscow: Bol'shaja Rossijskaja Entsiklopedija.
- Richardson, K. (2007). Case and aspect in Slavic. Oxford; New York: Oxford University Press.
- Sasse, H.-J. (2002). Recent activity in the theory of aspect: Accomplishments, achievements, or just non-progressive state? *Linguistic Typology*, 6(2), 199-271.
- Sasse, H.-J. (2006). Aspect and Aktionsart. In E. K. Brown (Ed.), *Encyclopedia of language and linguistics* (Vol. 1, pp. 535–538). Boston: Elsevier.
- Smith, C. S. (1991). *The parameter of aspect*. Dordrecht; Boston: Kluwer Academic Publishers.

- Tatevosov, S. (2002). The parameter of actionality. *Linguistic Typology*, 6(3), 317-401.
- Travis, L. (in preparation). Inner aspect.
- Verkuyl, H. (2005). How (in-)sensitive is tense to aspectual information? In B. Hollebrandse, A. van Hout & C. Vet (Eds.), *Crosslinguistic views on tense, aspect and modality* (pp. 145–169). Amsterdam: Rodopi.
- Zalizniak, A. A., & Shmelev, A. D. (2000). *Vvedenie v russkuiu aspektologiju* [Introduction to Russian aspectology]. Moskva: IAzyki russkoi kul'tury.

External links

- TAMPA: Aspect Explained (<http://calleteach.wordpress.com/2010/02/01/aspect/>)
- Robert Binnick annotated tense/aspect bibliography (http://www.scar.utoronto.ca/~binnick/old_tense/) (around 9000 entries)
- Anna Katarzyna Mlynarczyk: Aspectual Pairing in Polish (<http://igitur-archive.library.uu.nl/dissertations/2004-0309-140804/inhoud.htm>), a pdf version of the book
- Grammar Tutorials (<http://www.lbt-languages.de/english/lernhilfe/lernhilfe.html>) - a column overview of the English tenses
- Greek tenses (<http://www.bcbsr.com/greek/gtense.html>)
- Verb Aspect (<http://www.rickharrison.com/language/aspect.html>)

Auxiliary verb

An **auxiliary verb** is a verb used to add functional or grammatical meaning to the clause in which it appears – for example, to express tense, aspect, modality, voice, emphasis, etc. Auxiliary verbs usually accompany a main verb, the main verb providing the main semantic content of the clause in which it appears.^[1] An example is the verb *have* in the sentence *I have finished my dinner* – here the main verb is *finish*, and the auxiliary *have* helps to express the perfect aspect. Some sentences contain a chain of two or more auxiliary verbs. Auxiliary verbs are also called **helping verbs**, **helper verbs**, or **(verbal) auxiliaries**. They may be glossed with the abbreviation AUX.

Basic examples

Some sentences containing representative auxiliary verbs from English, German, and French follow, with the auxiliary verb marked in bold:

- a. **Do** you want tea? – *do* is an auxiliary accompanying the main verb *want*, used here to form a question – see *do-support*.
- b. He **had** given his all. – *had* is an auxiliary used in expressing the perfect aspect of *give*.
- c. Das **wurde** mehrmals gesagt. – *wurde* "became" is an auxiliary used to build the passive voice in German.^[2]
That became many.times said = "That was said many times."
- d. Sie **ist** nach Hause gegangen. – *ist* "is" is an auxiliary used with movement verbs to build the perfect tense/aspect in German.^[3]
She is to home gone = "She went home/She has gone home."
- e. J'**ai** vu le soleil. – *ai* "have" is an auxiliary used to build the perfect/tense aspect in French.^[4]
I have seen the sun = "I have seen the sun/I saw the sun."
- f. Nous **sommes** aidés. – *sommes* "are" is an auxiliary used to build the passive voice in French.^[5]
We are helped = "We are being helped."

These auxiliaries help express a question, show tense/aspect, or form passive voice. Auxiliaries like these typically appear with a full verb that carries the main semantic content of the clause.

Traits of auxiliary verbs across languages

Typical uses of auxiliary verbs are to help express grammatical tense, aspect, mood and voice. They typically appear together with a main verb; the auxiliary is said to "help" the main verb. The auxiliary verbs of a language form a closed class, i.e. they are relatively small in number.^[6] They are often among the most frequently occurring verbs in a language.

Widely acknowledged verbs that can serve as auxiliaries in English and many related languages are the equivalents of *be* to express passive voice, and *have* to express perfect aspect or past time reference.^[7]

In some treatments, the copula *be* is classed as an auxiliary even though it does not "help" another verb, e.g.

The bird **is** in the tree. – *is* serves as a copula with a predicative expression not containing any other verb.

Definitions of auxiliary verbs are not always consistent across languages, or even among authors discussing the same language. Modal verbs may or may not be classified as auxiliaries depending on the language. In the case of English, verbs are often identified as auxiliaries based on their grammatical behavior, as described below. In some cases, verbs that have similar functions to auxiliaries, but are not considered full members of that class (perhaps because they carry a certain amount of independent lexical information of their own), are described as *semi-auxiliaries*. In French, for example, verbs such as *devoir* "have to", *pouvoir* "be able to", *aller* "be going to", *vouloir* "want", *faire* "make" and *laisser* "let", when used together with the infinitive of another verb, can be called semi-auxiliaries.^[8]

Auxiliary verbs in English

The following sections consider auxiliary verbs in English. A list of auxiliary verbs is produced, and then the diagnostics that motivate this special class (subject-auxiliary inversion and negation with *not*) are presented. The modal verbs are included in this class due to their behavior with respect to these diagnostics.

A list of auxiliaries in English

A list of verbs that (can) function as auxiliaries in English is as follows:^[9]

be (*am, are, is, was, were, being*), *can, could, dare**, *do* (*does, did*), *have* (*has, had, having*), *may, might, must, need*, ought*, shall, should, will, would*

* The status of *dare, need (not)*, and *ought (to)* is debatable,^[10] and the use of these verbs as auxiliaries can vary across dialects of English.

If the negative forms *can't, don't, won't*, etc. are viewed as separate verbs (and not as contractions), then the number of auxiliaries increases. The verbs *do* and *have* can also function as full verbs or as light verbs, which can be a source of confusion about their status. The modal verbs (*can, could, may, might, must, shall, should, will, would*, and *dare, need* and *ought* when included) form a subclass of auxiliary verbs. Modal verbs are defective insofar as they cannot be inflected, nor do they appear as gerunds, infinitives, or participles.

The following table summarizes the auxiliary verbs in standard English and the meaning contribution to the clauses in which they appear. Many auxiliary verbs are listed more than once in the table based upon discernible differences in use.

Auxiliary verb	Meaning contribution	Example
be ₁	copula (= linking verb)	She is the boss.
be ₂	progressive aspect	He is sleeping.
be ₃	passive voice	They were seen.
can ₁	deontic modality	I can swim.
can ₂	epistemic modality	Such things can help.
could ₁	deontic modality	I could swim.
could ₂	epistemic modality	That could help.
do	do-support/emphasis	You did not understand.
have	perfect aspect	They have understood.
may ₁	deontic modality	May I stay?
may ₂	epistemic modality	That may take place.
might	epistemic modality	We might give it a try.
must ₁	deontic modality	You must not mock me.
must ₂	epistemic modality	It must have rained.
shall	deontic modality	You shall not pass.
should ₁	deontic modality	You should listen.
should ₂	epistemic modality	That should help.
will	epistemic modality	We will eat pie.
would	epistemic modality	Nothing would accomplish that.

Deontic modality expresses an ability, necessity, or obligation that is associated with an agent subject. Epistemic modality expresses the speaker's assessment of reality or likelihood of reality. Distinguishing between the two types of modality can be difficult, since many sentences contain a modal verb that allows both interpretations.

Diagnostics for identifying auxiliary verbs in English

The verbs listed in the previous section can be classified as auxiliaries based upon two diagnostics: they allow subject–auxiliary inversion (the type of inversion used to form questions etc.) and (equivalently) they can take *not* as a postdependent (a dependent that follows its head). The following examples illustrate the extent to which subject–auxiliary inversion can occur with an auxiliary verb but not with a full verb:^[11]

- a. **He was** working today.
- b. **Was he** working today? - Auxiliary verb *was* allows subject–auxiliary inversion.
- a. **He worked** today.
- b. ***Worked he** today? - Full verb *worked* does not allow subject–auxiliary inversion.
- a. **She can** see it.
- b. **Can she** see it? - Auxiliary verb *can* allows subject–auxiliary inversion.
- a. **She sees** it.
- b. ***Sees she** it? - Full verb *sees* does not allow subject–auxiliary inversion.

(The asterisk * is the means commonly used in linguistics to indicate that the example is grammatically unacceptable.) The following examples illustrate that the negation *not* can appear as a postdependent of a finite auxiliary verb, but not as a postdependent of a finite full verb:^[12]

- a. Sam would try that.
- b. Sam would **not** try that. - The negation *not* appears as a postdependent of the finite auxiliary *would*.
- a. Sam tried that.
- b. *Sam tried **not** that. - The negation *not* cannot appear as a postdependent of the finite full verb *tried*.
- a. Tom could help.
- b. Tom could **not** help. - The negation *not* appears as a postdependent of the finite auxiliary *could*.
- a. Tom helped.
- b. *Tom helped **not**. - The negation *not* cannot appear as a postdependent of the finite full verb *helped*.

A third diagnostic that can be used for identifying auxiliary verbs is verb phrase ellipsis. Auxiliary verbs can introduce verb phrase ellipsis, but main verbs cannot. See the article on verb phrase ellipsis for examples.

Note that these criteria lead to the copula *be* being considered an auxiliary (it undergoes inversion and takes postdependent *not*, e.g. *Is she the boss?*, *She is not the boss*). However, if one defines *auxiliary verb* as a verb that somehow "helps" another verb, then the copula *be* is not an auxiliary, because it appears without another verb. The literature on auxiliary verbs is somewhat inconsistent in this area.^[13]

Auxiliary verbs vs. light verbs

Some syntacticians distinguish between auxiliary verbs and light verbs.^{[14][15]} The two are similar insofar as both verb types contribute mainly just functional information to the clauses in which they appear. Hence both do not qualify as separate predicates, but rather they form part of a predicate with another expression - usually with a full verb in the case of auxiliary verbs and usually with a noun in the case of light verbs.

In English, light verbs differ from auxiliary verbs in that they cannot undergo inversion and they cannot take *not* as a postdependent. The verbs *have* and *do* can function as auxiliary verbs or as light verbs (or as full verbs). When they are light verbs, they fail the inversion and negation diagnostics for auxiliaries, e.g.

- a. They **had** a long meeting.
- b. ***Had** they a long meeting? - Light verb *had* fails the inversion test.
- c. *They **had** not a long meeting. - Light verb *had* fails the negation test.
- a. She **did** a report on pandering politicians.
- b. ***Did** she a report on pandering politicians? - Light verb *did* fails the inversion test.
- c. *She **did** not a report on pandering politicians. - Light verb *did* fails the negation test.

(In some cases, though, *have* may undergo auxiliary-type inversion and negation even when it is not used as an auxiliary verb – see Subject–auxiliary inversion: Inversion with other types of verb.)

Sometimes the distinction between auxiliary verbs and light verbs is overlooked or confused. Certain verbs (e.g. *used to*, *have to*, etc.) may be judged as light verbs by some authors, but as auxiliaries by others.^[16]

Multiple auxiliaries

Most clauses contain at least one main verb, and they can contain zero, one, two, three, or perhaps even more auxiliary verbs.^[17] The following example contains three auxiliary verbs and one main verb:

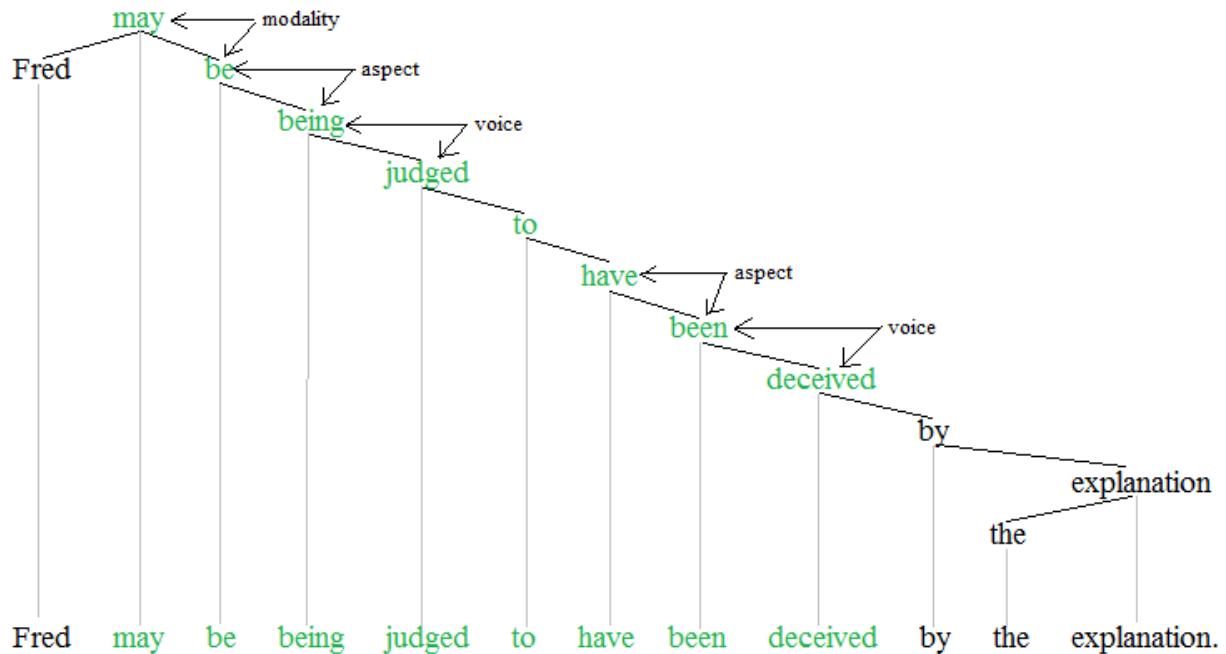
The paper **will have been** scrutinized by Fred.

The auxiliary verbs are in bold and the main verb is underlined. Together these verbs form a verb catena (chain of verbs), i.e. they are linked together in the hierarchy of structure and thus form a single syntactic unit. The main verb *scrutinized* provides the semantic core of sentence meaning, whereby each of the auxiliary verbs contributes some functional meaning. A single finite clause can contain more than three auxiliary verbs, e.g.

Fred **may be being** judged to **have been** deceived by the explanation.

Viewing this sentence as consisting of a single finite clause, there are five auxiliary verbs and two main verbs present. From the point of view of predicates, each of the main verbs constitutes the core of a predicate, and the auxiliary verbs contribute functional meaning to these predicates. These verb catenae are periphrastic forms of English, English being a relatively analytic language. Other languages, such as Latin, are synthetic, which means they tend to express functional meaning with affixes, not with auxiliary verbs.

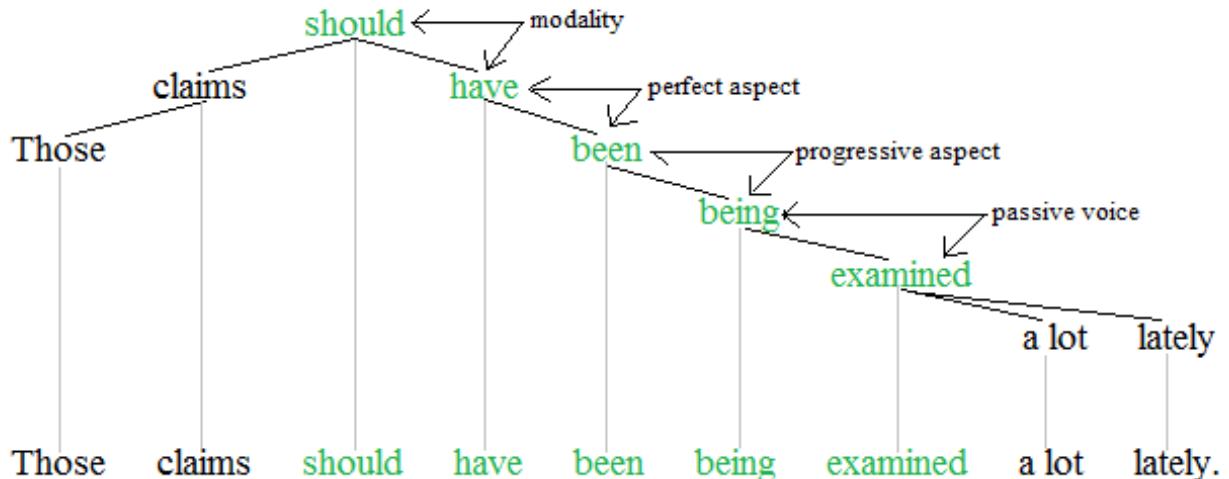
The periphrastic verb combinations in the example just given are represented now using the dependency grammar tree of the sentence; the verb catena is in green.^[18]



The particle *to* is included in the verb catena because its use is often required with certain infinitives. The hierarchy of functional categories is always the same. The verbs expressing modality appear immediately above the verbs expressing aspect, and the verbs expressing aspect appear immediately above the verbs expressing voice. The verb forms for each combination are as follows:

Functional meaning	Verb combination	Example
Modality	finite modal verb + infinitive	<i>may be</i>
Perfect aspect	form of auxiliary verb <i>have</i> + perfect active participle	<i>have been</i>
Progressive aspect	form of auxiliary verb <i>be</i> + progressive active participle	<i>be being</i>
Passive voice	form of auxiliary verb <i>be</i> + passive participle	<i>been deceived</i>

English allows clauses with both perfect and progressive aspect. When this occurs, perfect aspect is superior to progressive aspect, e.g.



Notes

- [1] The *Oxford English Dictionary*, Second Edition, defines an auxiliary verb as "a verb used to form the tenses, moods, voices, etc. of other verbs". OED Second Edition, 1989. Entry for *auxiliary*.
- [2] Concerning the use of *werden* as an auxiliary in German, see for instance Engel (1994:114).
- [3] Concerning *sein* as an auxiliary in German used to form perfect tense/aspect, see Eroms (2000:138f.)
- [4] Concerning the selection of *avoir* or *être* as the auxiliary verb to form perfect tense/aspect in French, see Rowlett (2007:40f.).
- [5] Concerning *être* as the auxiliary used to build the passive voice in French, see Rowlett (2007:44f.).
- [6] Concerning auxiliaries forming a closed class, see Kroeger (2004:251).
- [7] That the equivalents of *have* and *be* are perhaps the most widely acknowledged auxiliaries across languages (related to English) can be verified by glancing at the literature on auxiliaries, e.g. Engel (1994:104ff.), Eroms (2000:137ff.), Rowlett (2007:24ff.).
- [8] Concerning the term *semi-auxiliaries* for French, see Warnant (1982:279).
- [9] For lists of the auxiliary verbs like the one produced here but with minor discrepancies, see for instance Radford (2004:324), Crystal (1997:35), and Jurafsky and Martin (2000:322).
- [10] For some discussion of the status of *dare* as a "marginal modal", see Fowler's Modern English Usage, p. 195f.
- [11] For examples of the inversion diagnostic used to identify auxiliaries, see for instance Radford (1997:50f., 494), Sag and Wasow (1999:308f.), and Kroeger (2004:253).
- [12] The negation diagnostic for identifying auxiliary verbs is employed for instance by Radford (1997:51), Adgar (2003:176f.), and Culicover (2009:177f.).
- [13] Jurafsky and Martin (2000:320) state clearly that copula *be* is an auxiliary verb. Bresnan (2001:18f.) produces and discusses examples of subject-auxiliary inversion using the copula. Tesnière (1959) repeatedly refers to the copula *être* in French as an auxiliary verb, and Eroms (2000:138f.) discusses the copula *sein* in German as a *Hilfsverb* 'helping verb'. Crystal (1997:35) lists *be* as an auxiliary verb without distinguishing between its various uses (e.g. as a copula or not). Other definitions are less clear; Radford (2004:324) suggests that copula *be* is not an auxiliary, but he does not address why it behaves like an auxiliary with respect to the criteria he employs (e.g. inversion) for identifying auxiliaries.
- [14] Concerning light verbs in English, see Allerton (2006:176).
- [15] Light verbs are called *Funktionsverben* 'function verbs' in German - see Engel (1994:105f.) and Eroms (2000:162ff.).
- [16] Jurafsky and Martin (2000:22), for instance, lists *have* as a modal auxiliary when it appears as *have to* and Fowler's Modern English Usage (1996:195) lists *used to* as a "marginal modal".
- [17] See Finch (2000:13) concerning the necessity that a given auxiliary verb should accompany a main verb.

[18] Dependency trees like the ones here can be found, for instance, in Osborne and Groß (2012).

References

- Allerton, D. 2006. Verbs and their Satellites. In *Handbook of English Linguistics*. Aarts 7 MacMahon (eds.). Blackwell.
- Adger, D. 2003. *Core syntax*. Oxford, UK: Oxford University Press.
- Bresnan, J. 2001. *Lexical-Functional Syntax*. Malden, MA: Blackwell Publishers.
- Culicover, P. 2009. *Natural language syntax*. Oxford, UK: Oxford University Press.
- Crystal, D. 1997. *A dictionary of linguistics and phonetics*, 4th edition. Oxford, UK: Blackwell Publishers.
- Engel, U. 1994. *Syntax der deutschen Sprache*, 3rd edition. Berlin: Erich Schmidt Verlag.
- Eroms, H.-W. 2000. *Syntax der deutschen Sprache*. Berlin: de Gruyter.
- Finch, G. 2000. *Linguistic terms and concepts*. New York: St. Martin's Press.
- Fowler's Modern English Usage. 1996. Revised third edition. Oxford, UK: Oxford University Press.
- Jurafsky, M. and J. Martin. 2000. *Speech and language processing*. Dorling Kindersley (India): Pearson Education, Inc.
- Kroeger, P. 2004. *Analyzing syntax: A lexical-functional approach*. Cambridge, UK: Cambridge University Press.
- Lewis, M. The English Verb 'An Exploration of Structure and Meaning'. Language Teaching Publications. ISBN 0-906717-40-X
- Osborne, T. and T. Groß 2012. Constructions are catenae: Construction Grammar meets Dependency Grammar. *Cognitive Linguistics* 23, 1, 165-216.
- Radford, A. 1997. *Syntactic theory and the structure of English: A minimalist approach*. Cambridge, UK: Cambridge University Press.
- Radford, A. 2004. *English syntax: An introduction*. Cambridge, UK: Cambridge University Press.
- Rowlett, P. 2007. *The syntax of French*. Cambridge, UK: Cambridge University Press.
- Sag, I. and T. Wasow. 1999. *Syntactic theory: A formal introduction*. Stanford, CA: CSLI Publications.
- Tesnière, L. 1959. *Éléments de syntaxe structurale*. Paris: Klincksieck.
- Warnant, L. 1982. *Structure syntaxique du français*. Librairie Droz.

Branching (linguistics)

In linguistics, **branching** refers to the shape of the parse trees that represent the structure of sentences.^[1] Parse trees that grow downward as speech and processing proceeds left to right are *right-branching*,^[2] whereas parse trees that grow upwards as speech and processing proceeds left to right are *left-branching*. Taking a top-down perspective, parse trees that grow down and to the right are right-branching, and parse trees that grow down and to the left are left-branching. The direction of branching is a reflex of the position of heads in phrases, and in this regard, *right-branching* structures are *head-initial*, whereas left-branching structures are *head-final*.^[3] English has both right-branching (= head-initial) and left-branching (= head-final) structures, although it is more right-branching than left-branching.^[4] Other languages such as Japanese and Turkish are strongly left-branching (= head-final).

Examples

Languages typically construct phrases with a head word (or nucleus) and zero or more *dependents* (modifiers). The following phrases show the phrase heads in bold.

Examples of left-branching phrases (= head-final phrases):

the **house** - Noun phrase (NP)

very **happy** - Adjective phrase (AP)

too **slowly** - Adverb phrase (AdvP)

Examples of right-branching phrases (= head-initial phrases):

laugh loudly - Verb phrase (VP)

with luck - Prepositional phrase (PP)

that it happened - Subordinator phrase (SP = subordinate clause)

Examples of phrases that contain both left- and right-branching (= head-medial phrases):

the **house** there - Noun phrase (NP)

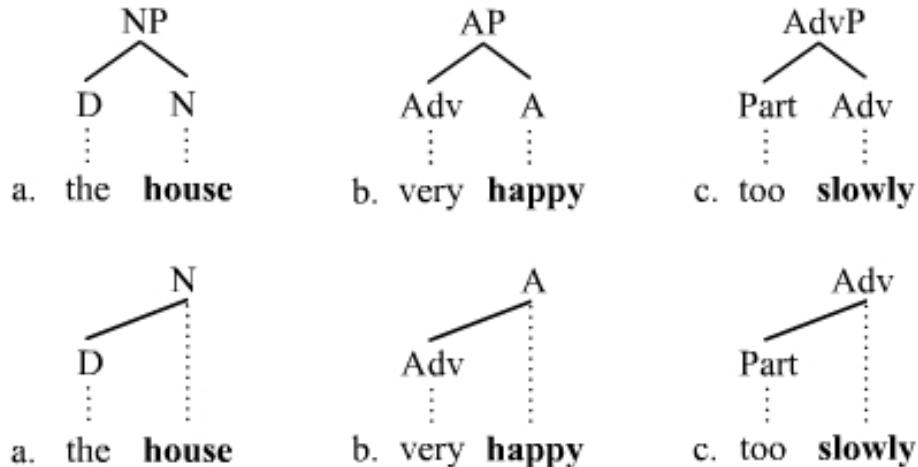
very **happy** with it - Adjective phrase (AP)

only **laugh** loudly - Verb phrase (VP)

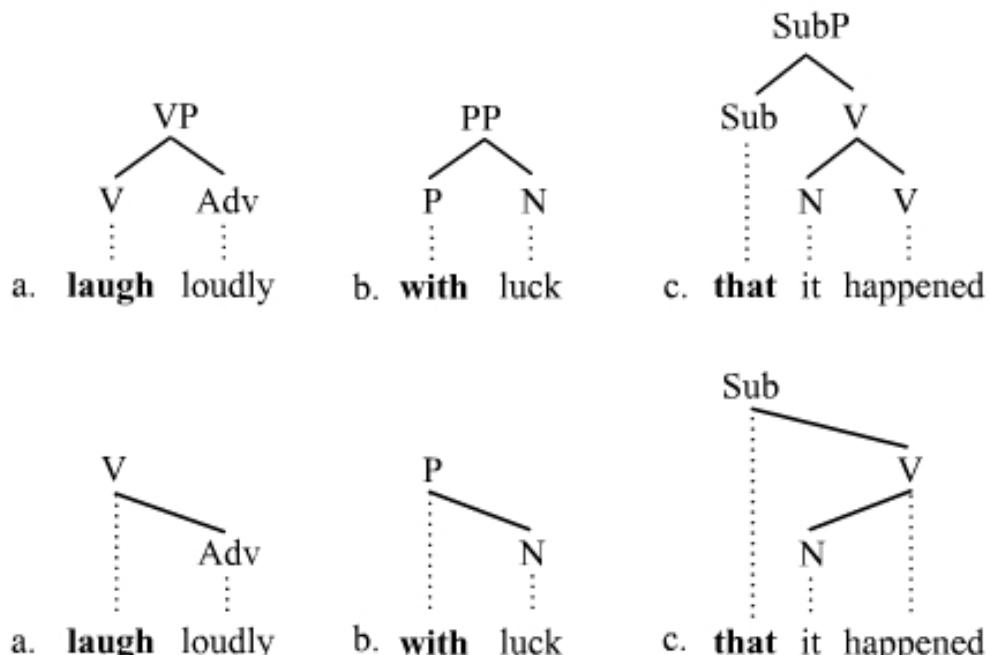
The syntactic structures of most languages combine left- and right-branching, although most languages tend to favor the one or the other.

Tree structures

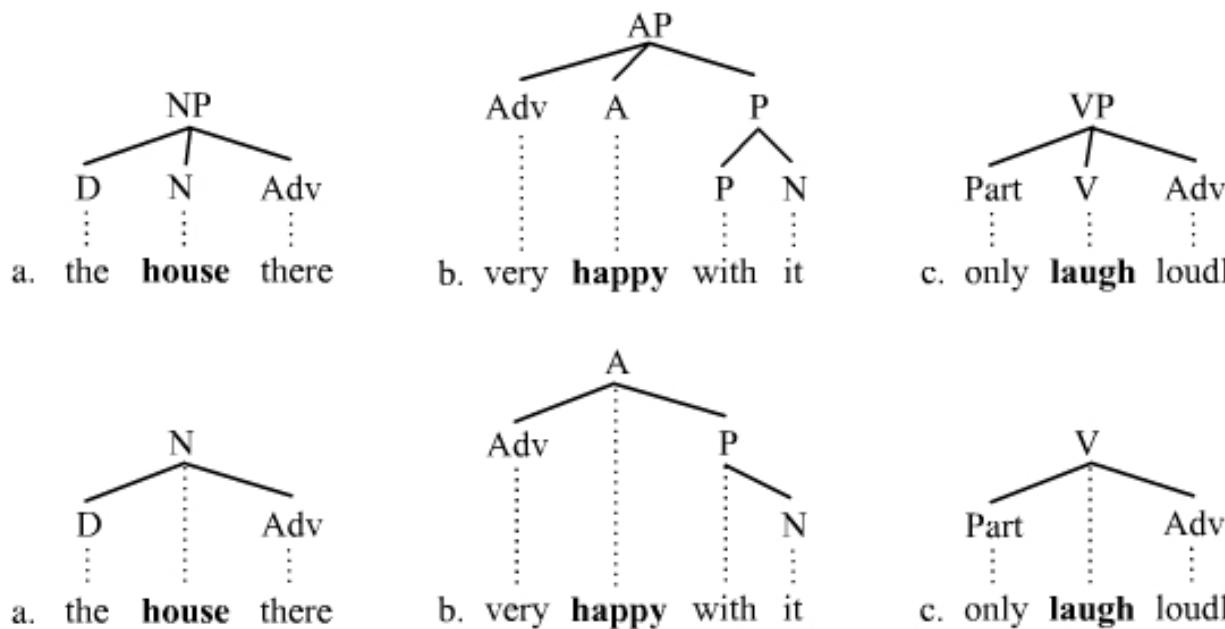
Left- and right-branching structures are illustrated with the trees that follow. Each example appears twice, once according to a constituency-based analysis associated with a phrase structure grammar^[5] and once according to a dependency-based analysis associated with a dependency grammar.^[6] The first group of trees illustrate left-branching:



The upper row shows the constituency-based structures, and the lower row the dependency-based structures. In the constituency-based structures, left-branching is present (but not really visible) insofar as the non-head daughter is to the left of the head. In the corresponding dependency-based structures in the lower row, the left-branching is clear; the dependent appears to the left of its head, the branch extending down to the left. The following structures demonstrate right-branching:



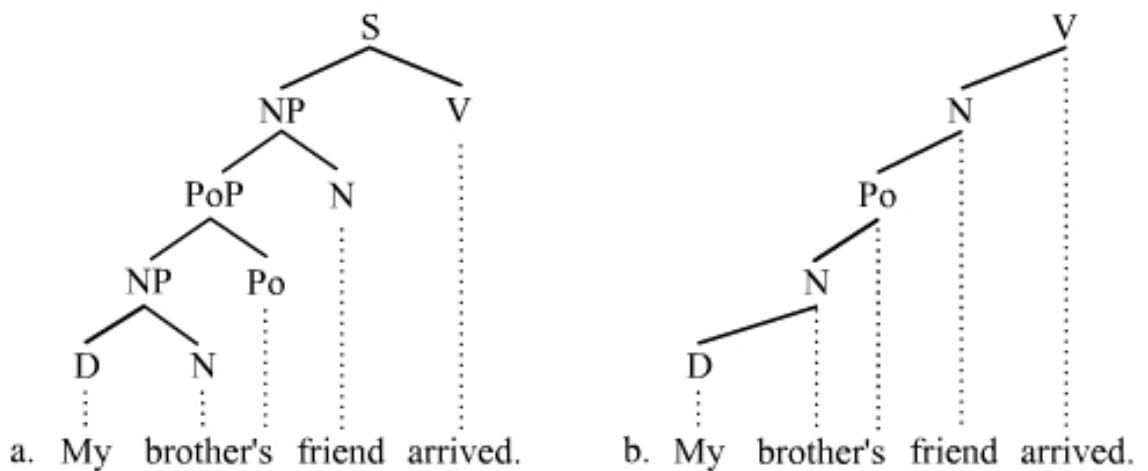
The upper row again shows the constituency-based structures, and the lower row the dependency-based structures. The constituency-based structures are right-branching insofar as the non-head daughter is to the right of the head. This right-branching is completely visible in the lower row of dependency-based structures, where the branch extends down to the right. The (c)-examples contain one instance of right-branching (the upper branch) and one instance of left-branching (the lower branch). The following trees illustrate phrases that combine both types of branching:



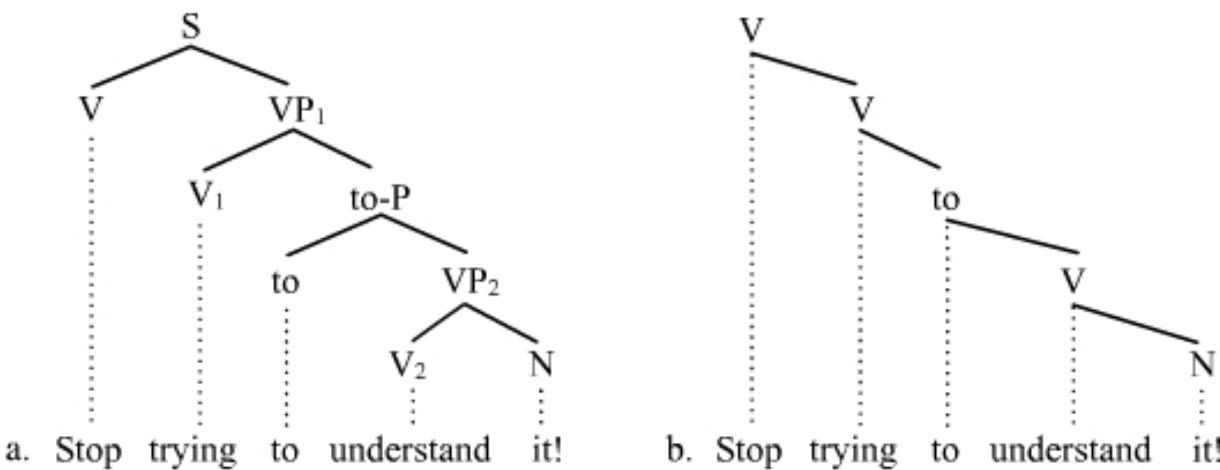
The combination of left- and right-branching is now completely visible in both the constituency- and dependency-based trees. The head appears in a medial position, which means that the phrase combines both types of branching. Note that the (b)-trees also contain a PP phrase that is an instance of pure right-branching.

Full trees

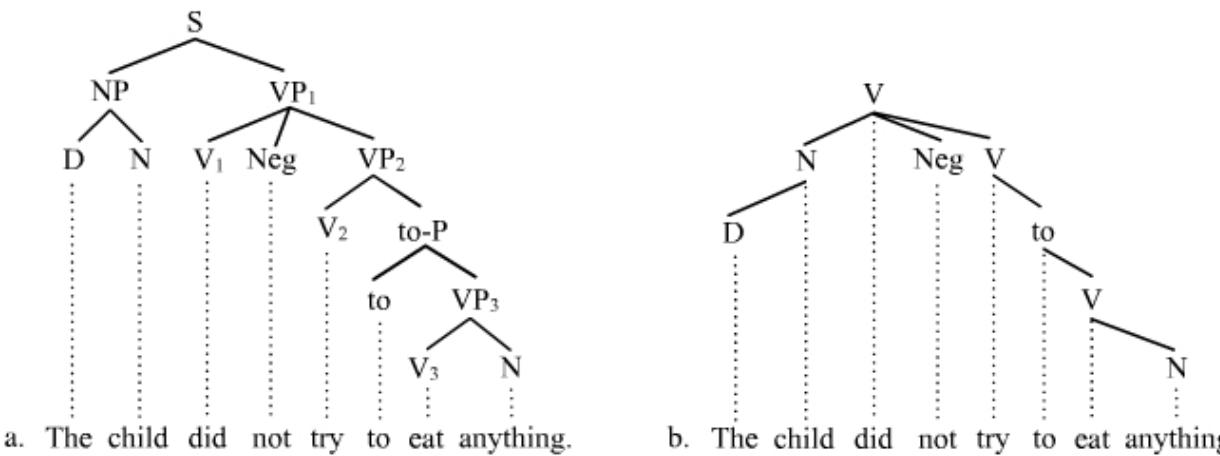
The nature of branching is most visible with full trees. The following trees have been carefully chosen to best illustrate the extent to which a structure can be entirely left- or entirely right-branching. The following sentence is completely left-branching. The constituency-based trees are on the left, and the dependency-based trees are on the right:^[7]



The category Po (= possessive) is used to label possessive 's. The following sentence is completely right-branching:



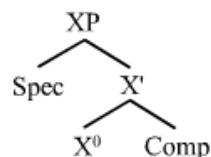
Most structures in English are, however, not completely left- or completely right-branching, but rather they combine both. The following trees illustrate what can be seen as a stereotypical combination of left- and right-branching in English:



Determiners (e.g. *the*) always and subjects (e.g. *the child*) usually appear on left branches in English, but infinitival verbs (e.g. *try, eat*) and the verb particle *to* usually appear on right branches. In the big picture, right-branching structures tend to outnumber the left-branching structures in English, which means that trees usually grow down to the right.

X-bar Schema

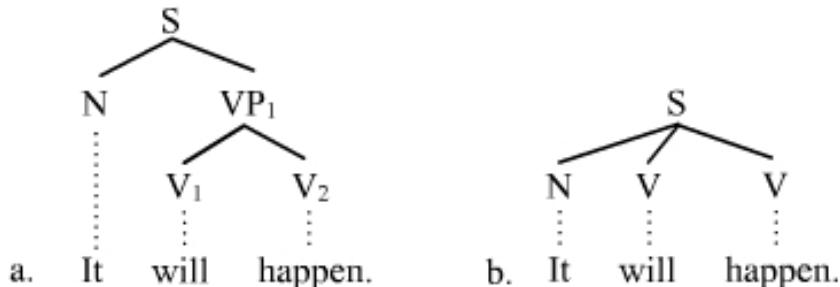
The X-bar schema^[8] combines left- and right-branching. The standard X-bar schema has the following structure:



This structure is both left- and right branching. It is left-branching insofar as the bar-level projection of the head (X') follows the specifier, but it is right-branching insofar as the actual head (X⁰) precedes the complement. Despite these conflicting traits, most standard X-bar structures (in English) are more right-branching than left-branching because specifiers tend to be less complex (i.e. fewer words) than complements.

Binary vs. n-ary branching

Much work in Government and Binding Theory (GB), the Minimalist Program (MP), and Lexical Functional Grammar (LFG) takes all branching to be binary.^[9] Other theories (both constituency- and dependency-based ones), e.g. early Transformational Grammar, Head-Driven Phrase Structure Grammar, Meaning-Text Theory, Word Grammar, etc. allow for n-ary branching. This distinction can have a profound impact on the overall nature of the theory of syntax. The two main possibilities in a phrase structure grammar are illustrated with the following trees:



The binary branching on the left is closely associated with the structures of GB, MP, and LFG, and it is similar to what the X-bar schema assumes. The n-ary branching structure on the right is a more traditional approach to branching. One can muster arguments for both approaches. For instance, the critics of the strictly binary branching structures charge that the strict binarity is motivated more by a desire for theoretical purity than by empirical observation.

Strictly binary branching structures increase the amount of syntactic structure (number of nodes) to the upper limit of what is possible, whereas flatter n-ary branching tends to restrict the amount of structure that the theory can assume. Worth noting in this area is that the more layered the syntactic structures are, the more discontinuities can occur, which means the component of the theory that addresses discontinuities must play a greater role. Given the flatter structures associated with n-ary branching, certain phenomena (e.g. inversion and shifting) do not result in discontinuities, a fact that reduces the role that the component for discontinuities must play in the theory.

Tendencies

As stated above, the main branching trait for a given language is just a tendency and it often shows exceptions. Spanish, for example, while overwhelmingly right-branching, puts numeral modifiers before nouns and, in certain cases, objects before verbs. Languages like English and German - though regarded as being right-branching because the main verbs precede direct objects - place adjectives and numerals before their nouns. Japanese and most other languages of northeastern Asia and the Indian subcontinent, on the other hand, are practically a model for rigidly left-branching languages. The Mon-Khmer and Austronesian languages of southeast Asia and many African languages come close to rigidly right-branching, with numerals as well as adjectives following the adjectives they modify.

Notes

- [1] For a comprehensive discussion of branching, see Berg (2009:34ff.).
- [2] A cultural bias is being taken for granted here. Given a language that is written from right to left, speech and processing proceed right to left, not left to right.
- [3] Concerning the correlation between head position and branching direction, see Payne (2006:194).
- [4] The tendency for English to be right-branching is widely acknowledged, e.g. van Riemsdijk and Williams (1986:211).
- [5] Phrase structure grammars are those grammars that follow in the tradition of Chomsky (1957).
- [6] Dependency grammars are those grammars that follow in the tradition of Tesnière (1959).
- [7] For similar, constituency-based examples of purely left- and then purely right-branching structures, see Fowler (1971:125f.).
- [8] See Chomsky (1970) and Jackendoff (1977) for the discussions of the X-bar schema.
- [9] The work of Larson (1988) and Kayne (1981, 1994) were influential in establishing strictly binary branching structures in the tradition of Chomskyan syntax.

References

- Berg, T. 2009. *Structure in language: A dynamic perspective*. New York: Routledge.
- Chomsky, N. 1957. *Syntactic Structures*. The Hague/Paris: Mouton.
- Chomsky, N. 1970. Remarks on nominalization. In R. Jacobs and P. Rosenbaum (eds.), *Readings in English Transformational Grammar*, 184–221. Waltham: Ginn.
- Fowler, R. 1971. An introduction to transformational syntax. ???
- Jackendoff, R. 1977. X-bar-syntax: A study of phrase structure. *Linguistic Inquiry Monograph* 2. Cambridge, MA: MIT Press.
- Comrie, B 1989. *Language universals and linguistic typology : syntax and morphology*, 2nd edition. Oxford: Basil Blackwell.
- Haspelmath, M., M. Dryer, D. Gil, and B. Comrie (eds.) 2005. *The World Atlas of Language Structures*. Oxford: Oxford University Press.
- Kayne, R. 1981. Unambiguous Paths. In R. May and J. Koster (eds.), *Levels of syntactic representation*, 143–183. Dordrecht: Kluwer.
- Kayne, R. 1994. The antisymmetry of syntax. *Linguistic Inquiry Monograph* Twenty-Five. MIT Press.
- Kayne, R. 2010. Why are there no directionality parameters? In *WCCFL XXVIII*. Available on <http://ling.auf.net/lingBuzz/001100>.
- Larson, R. 1988. On the double object construction. *Linguistic Inquiry* 19, 335–392.
- Payne, T. 2006. *Exploring language structure: A student's guide*. Cambridge, UK: Cambridge University Press.
- van Riemsdijk, H. and E. Williams. 1986. Introduction to the theory of grammar. Cambridge, MA: The MIT Press.
- Tesnière, Lucien 1959. *Éléments de syntaxe structurale*. Paris: Klincksieck.

Grammatical case

In grammar, the **case** of a noun or pronoun is an inflectional form that indicates its grammatical function in a phrase, clause, or sentence. For example, a pronoun may play the role of subject ("I kicked the ball"), of object ("John kicked **me**"), or of possessor ("That ball is **mine**"). Languages such as Ancient Greek, Latin, and Sanskrit had ways of altering or inflecting nouns to mark roles which are not specially marked in English, such as the ablative case ("John kicked the ball **away from the house**") and the instrumental case ("John kicked the ball **with his foot**"). In Ancient Greek those last three words would be rendered *tōi podi* (τῷ ποδί), with the noun *pous* (πούς, foot) changing to *podi* to reflect the fact that John is using his foot as an instrument (any adjective modifying "foot" would also change case to match). As a language evolves, cases can merge (for instance in Ancient Greek genitive and ablative have merged as genitive), a phenomenon formally called syncretism.^[1]

Usually a language is said to "have cases" only if nouns change their form (decline) to reflect their case in this way. Other languages perform the same function in different ways. English, for example, uses prepositions such as "of" or "with" in front of a noun to indicate functions which in Ancient Greek or Latin would be indicated by changing (declining) the ending of the noun itself.

More formally, case has been defined as "a system of marking dependent nouns for the type of relationship they bear to their heads."^{[2]:p.1} Cases should be distinguished from thematic roles such as *agent* and *patient*. They are often closely related, and in languages such as Latin several thematic roles have an associated case, but cases are a morphological notion, while thematic roles are a semantic one. Languages having cases often exhibit free word order, since thematic roles are not dependent on position in a sentence.

Etymology

In many European languages, the word for "case" is cognate to the English word, all stemming from the Latin *casus*, related to the verb *cadere*, "to fall", with the sense that all other cases have fallen away from the nominative. Its proto-Indo-European root is **k^had-*^[3].

Similarly, the word for "declension" and its many European cognates, including its Latin source *declinatio* come from the root **k^hlei-*^[4], "to lean".

Indo-European languages

While not very prominent in modern English, cases featured much more saliently in Old English and other ancient Indo-European languages, such as Latin, Ancient Greek, and Sanskrit. Historically, the Indo-European languages had eight morphological cases, though modern languages typically have fewer, using prepositions and word order to convey information that had previously been conveyed using distinct noun forms. Among modern languages, cases still feature prominently in most of the Balto-Slavic languages, with most having six to eight cases, as well as Icelandic, German and Modern Greek, which have four.^[5] In German, cases are mostly marked on articles and adjectives, and less so on nouns. In Icelandic, articles, adjectives, personal names and nouns are all marked for case, making it, among other things, the closest living Germanic language to Proto-Germanic.

The eight historical Indo-European cases are as follows, with examples either of the English case or of the English syntactic alternative to case:

- The nominative case indicates the subject of a finite verb: *We went to the store.*
- The accusative case indicates the direct object of a verb: *The clerk remembered us.*
- The dative case indicates the indirect object of a verb: *The clerk gave us a discount.* or *The clerk gave a discount to us.*
- The ablative case indicates movement *from* something, or *cause*: *The victim went from us to see the doctor.* and *He was unhappy because of depression.*
- The genitive case, which roughly corresponds to English's possessive case and preposition *of*, indicates the possessor of another noun: *John's book was on the table.* and *The pages of the book turned yellow.*
- The vocative case indicates an addressee: *John, are you all right?* or simply *Hello, John!*
- The locative case indicates a location: *We live in China.*
- The instrumental case indicates an object used in performing an action: *We wiped the floor with a mop.* and *Written by hand.*

All of the above are just rough descriptions; the precise distinctions vary from language to language, and are often quite complex. Case is based fundamentally on changes to the noun to indicate the noun's role in the sentence. This is not how English works, where word order and prepositions are used to achieve this.

Modern English has largely abandoned the inflectional case system of Indo-European in favor of analytic constructions. The personal pronouns of Modern English retain morphological case more strongly than any other word class (a remnant of the more extensive case system of Old English). For other pronouns, and all nouns, adjectives, and articles, grammatical function is indicated only by word order, by prepositions, and by the genitive clitic *'s*.

Taken as a whole, English personal pronouns are typically said to have three morphological cases:

- The *nominative case* (*subjective pronouns* such as *I, he, she, we*), used for the subject of a finite verb and sometimes for the complement of a copula.
- The *oblique case* (*object pronouns* such as *me, him, her, us*), used for the direct or indirect object of a verb, for the object of a preposition, for an absolute disjunct, and sometimes for the complement of a copula.
- The *genitive case* (*possessive pronouns* such as *my/mine, his, her(s), our(s)*), used for a grammatical possessor.



On this sign in Russian memorializing an anniversary of the city of Balakhna, the word *Balakhna* on the right is in the nominative case, while the word *Balakhne* is in the dative case in *Balakhne 500 Let* ('Balakhna is 500 years old') on the front of the sign. Meanwhile *let* is in the genitive (plural) case.

Most English personal pronouns have five forms; in addition to the nominative and oblique case forms, the possessive case has both a *determiner* form (such as *my, our*) and a distinct *independent* form (such as *mine, ours*) (with the exceptions that these are not distinct for the third person singular masculine [*his car, it is his*] and that the third person singular neuter *it* does not have the possessive independent form); and they have a distinct *reflexive* or *intensive* form (such as *myself, ourselves*). The interrogative personal pronoun *who* exhibits the greatest diversity of forms within the modern English pronoun system having definite nominative, oblique, and genitive forms (*who, whom, whose*) and equivalently coordinating indefinite forms (*whoever, whomever, and whosoever*).

Though English *pronouns* can have subject and object forms (he/him, she/her), *nouns* show only a singular/plural and a possessive/non-possessive distinction (e.g., *chair, chairs, chair's, chairs'*). Note that *chair* does not change form between "the chair is here" (subject) and "I saw the chair" (direct object), a distinction made by word order and context.

Hierarchy of cases

Cases can be ranked in the following hierarchy, where a language that does not have a given case will tend to not have any cases to the right of the missing case:^{[2]:p.89}

- Nominative > accusative or ergative > genitive > dative > locative > ablative > instrumental > prepositional > others.

Case concord systems

In the most common^[2] case concord system, only the final word (the noun) in a phrase is marked for case. This system appears in Turkic languages, Mongolian, Quechua, Dravidian languages, many Papuan languages, Indo-Aryan languages, and others. In Basque and various Amazonian and Australian languages, only the phrase-final word (not necessarily the noun) is marked for case. In Hungarian and many Indo-European, Balto-Finnic, and Semitic languages, case is marked on the noun, the determiner, and usually the adjective. Other systems are less common. In some languages, there is double-marking of a word as both genitive (to indicate semantic role) and another case such as accusative (to establish concord with the head noun).

Declension paradigms

Languages with rich nominal inflection typically have a number of identifiable declension classes, or groups of nouns with a similar pattern of case inflection. While Sanskrit has six classes, Latin is traditionally said to have five declension classes, and Ancient Greek three declension classes.^[6]

In Indo-European languages, declension patterns may depend on a variety of factors, such as gender, number, phonological environment, and irregular historical factors. Pronouns sometimes have separate paradigms. In some languages, particularly Slavic languages, a case may contain different groups of endings depending on whether the word is a noun or an adjective. A single case may contain many different endings, some of which may even be derived from different roots. For example, in Polish, the genitive case has *-a, -u, -ów, -i/-y, -e-* for nouns, and *-ej, -ich/-ych* for adjectives. To a lesser extent, a noun's animacy or humanness may add another layer of complication.

Examples

Latin

An example of a Latin case inflection is given below, using the singular forms of the Latin term for "sailor," which belongs to Latin's first declension class.

- *nauta* (nominative) "[the] sailor" [as a subject] (e.g. *nauta ibi stat* the sailor is standing there)
- *nautae* (genitive) "the sailor's / of [the] sailor" (e.g. *nomen nautae Claudius est* the sailor's name is Claudius)
- *nautae* (dative) "to/for [the] sailor" [as an indirect object] (e.g. *nautae donum dedi* I gave a present to the sailor)
- *nautam* (accusative) "[the] sailor" [as a direct object] (e.g. *nautam vidi* I saw the sailor)
- *nautā* (ablative) "by/with/from/in [the] sailor" [in various uses not covered by the above] (e.g. *sum altior nautā* I am taller than the sailor).'
- *nauta* (vocative) "calling to/ addressing the sailor" (e.g. "gratias tibi ago, nauta" I thank you, sailor).

Sanskrit

Grammatical case was analyzed extensively in Sanskrit. The grammarian Pāṇini identified six semantic roles or *karaka*, which are related to the seven Sanskrit cases (nominative, accusative, instrumental, dative, ablative, genitive, and locative),^[7] but not in a one-to-one way. The six *karaka* are:^[8]

- Agent (*kartri*, related to the nominative)
- Patient (*karmān*, related to the accusative)
- Means (*karaṇa*, related to the instrumental)
- Recipient (*sampradāna*, related to the dative)
- Source (*apādāna*, related to the ablative)
- Locus (*adhikaraṇa*, related to the locative)

For example, consider the following sentence:

vrkṣ-āt parṇ-am bhūm-au patati
 from the tree a leaf to the ground falls
 "a leaf falls from the tree to the ground"

Here *leaf* is the agent, *tree* is the source, and *ground* is the locus, the corresponding declensions are reflected in the morphemes *-am* *-at* and *-au* respectively.

Tamil

The Tamil case system is analyzed in native and missionary grammars as consisting of a finite number of cases.^{[9][10]} The usual treatment of Tamil case (Arden 1942)^[11] is one where there are seven cases—the nominative (first case), accusative (second case), instrumental (third), dative (fourth), ablative (fifth), genitive (sixth), and locative (seventh). In traditional analyses there is always a clear distinction made between postpositional morphemes and case endings. The vocative is sometimes given a place in the case system as an eighth case, although vocative forms do not participate in usual morphophonemic alternations, nor do they govern the use of any postpositions. Modern grammarians however argue that this eight-case classification is coarse and artificial,^[10] and that Tamil usage is best understood if each suffix or combination of suffixes is seen as marking a separate case.^[12]

Tamil	English	Significance	Usual Suffixes
First case	Nominative	Subject of sentence	[Zero]
Second case	Accusative	Object of action	-ai
Third case	Instrumental, Social	Means by which action is done (Instrumental), Association, or means by which action is done (Social)	-al, -out
Fourth case	Dative	Object to whom action is performed, Object for whom action is performed	(u)kku,(u)kkāka
Fifth case	Ablative of motion from	Motion from an animate/inanimate object	-il, -ininru, -iliruntu, -iruntu, -itattiliruntu
Sixth case	Genitive	Possessive	[Zero], -in, -utaiya, -inutaiya
Seventh case	Locative	Place in which, On the person of (animate) in the presence of	-il, itam
Eighth case	Vocative	Addressing, calling	e, a

Evolution

As languages evolve, case systems change. In Ancient Greek, for example, the genitive and ablative cases became combined, giving five cases, rather than the six retained in Latin. In modern Hindi, the Sanskrit cases have been reduced to two: a direct case (for subjects and direct objects) and an oblique case.^[13] In English, apart from the pronouns discussed above, case has vanished altogether except for the possessive/non-possessive dichotomy in nouns.

The evolution of the treatment of case relationships can be circular.^{[2]:pp.167-174} Adpositions can become unstressed and sound like they are an unstressed syllable of a neighboring word. A postposition can thus merge into the stem of a head noun, developing various forms depending on the phonological shape of the stem. Affixes can then be subject to various phonological processes such as assimilation, vowel centering to the schwa, phoneme loss, and fusion, and these processes can reduce or even eliminate the distinctions between cases. Languages can then compensate for the resulting loss of function by creating adpositions, thus coming full circle.

Linguistic typology

Languages are categorized into several case systems, based on their *morphosyntactic alignment* — how they group verb agents and patients into cases:

- *Nominative–accusative* (or simply *accusative*): The argument (subject) of an intransitive verb is in the same case as the agent (subject) of a transitive verb; this case is then called the *nominative case*, with the patient (direct object) of a transitive verb being in the *accusative case*.
- *Ergative–absolutive* (or simply *ergative*): The argument (subject) of an intransitive verb is in the same case as the patient (direct object) of a transitive verb; this case is then called the *absolutive case*, with the agent (subject) of a transitive verb being in the *ergative case*.
- *Ergative–accusative* (or *tripartite*): The argument (subject) of an intransitive verb is in its own case (the *intransitive case*), separate from that of the agent (subject) or patient (direct object) of a transitive verb (which is in the ergative case or accusative case, respectively).
- *Active–stative* (or simply *active*): The argument (subject) of an intransitive verb can be in one of two cases; if the argument is an *agent*, as in "He ate," then it is in the same case as the agent (subject) of a transitive verb (sometimes called the *agentive case*), and if it's a *patient*, as in "He tripped," then it is in the same case as the

patient (direct object) of a transitive verb (sometimes called the *patientive case*).

- *Trigger*: One noun in a sentence is the topic or focus. This noun is in the trigger case, and information elsewhere in the sentence (for example a verb affix in Tagalog) specifies the role of the trigger. The trigger may be identified as the agent, patient, etc. Other nouns may be inflected for case, but the inflections are overloaded; for example, in Tagalog, the subject and object of a verb are both expressed in the genitive case when they are not in the trigger case.

The following are systems that some languages use to mark case instead of, or in addition to, declension:

- *Positional*: Nouns are not inflected for case; the position of a noun in the sentence expresses its case.
- *Adpositional*: Nouns are accompanied by words that mark case.

Some languages have very many cases. For example, Tsez, a Northeast Caucasian language, can be analyzed as having 128 cases, 64 for the singular and 64 for the plural, with a few exceptions.

With a few exceptions, most languages in the Finno-Ugric group make extensive use of cases. Finnish has 15 cases according to the traditional understanding (or up to 30 depending on the interpretation).^[14] However, only 12 are commonly used in speech (see Finnish noun cases). Estonian has 14 and Hungarian has 18.

John Quijada's constructed language Ithkuil has 81 noun cases, and its descendent Ilaksh has a total of 96 noun cases.^{[15][16]}

The lemma form of words, which is the form chosen by convention as the canonical form of a word, is usually the most unmarked or basic case, which is typically the nominative, trigger, or absolute case, whichever a language may have.

Notes

- [1] Clackson (2007) p.91
- [2] Blake, Barry J. *Case*. Cambridge University Press: 2001.
- [3] http://www.ieed.nl/cgi-bin/response.cgi?flags=eygnrl&single=1&basename=/data/ie/pokorny&text_recono=804&root=leiden
- [4] http://www.ieed.nl/cgi-bin/response.cgi?flags=eygnrl&single=1&basename=/data/ie/pokorny&text_recono=972&root=leiden
- [5] Among Slavic languages, Bulgarian and Macedonian are exceptions. Slavic Languages (http://www.questia.com/library/encyclopedia/slavic_languages.jsp) on quickia.com
- [6] Frank Beetham, *Learning Greek with Plato*, Bristol Phoenix Press, 2007.
- [7] Amba Kulkarni and Peter Scharf (eds), *Sanskrit Computational Linguistics: First and Second International Symposia Rocquencourt, France, October 29-31, 2007 and Providence, RI, USA, May 15-17, 2008, Revised Selected Papers* (<http://books.google.com.au/books?id=t2f1hneiV08C&pg=PA68>), Volume 5402 of Lecture notes in artificial intelligence, Springer, 2009, ISBN 3-642-00154-8, pp. 64–68.
- [8] Pieter Cornelis Verhagen, *Handbook of oriental studies: India. A history of Sanskrit grammatical literature in Tibet, Volume 2* (http://books.google.com.au/books?id=5vmaX_JQzc4C&pg=PA281), BRILL, 2001, ISBN 90-04-11882-9, p. 281.
- [9] http://ccat.sas.upenn.edu/~haroldfs/public/h_sch_9a.pdf
- [10] K. V. Zvelebil (1972). "Dravidian Case-Suffixes: Attempt at a Reconstruction". *Journal of the American Oriental Society* 92 (2): 272-276. JSTOR 600654.
- [11] Arden, A. H. 1942, repr. 1969. *A Progressive Grammar of the Tamil Language*. Madras: Christian Literature Society.
- [12] Harold F. Schiffman (June 1998). "Standardization or restandardization: The case for "Standard" Spoken Tamil". *Language in Society* 27 (3): 359-385. doi:10.1017/S0047404598003030.
- [13] R. S. McGregor, *Outline of Hindi Grammar*, Oxford University Press, 1972.
- [14] <http://users.jyu.fi/~pamakine/kieli-suomi/sijat/sijatadverbien.html>
- [15] http://www.ithkuil.net/ilaksh/Ilaksh_Intro.html
- [16] http://www.ithkuil.net/ilaksh/Chapter_4.html

References

- James Clackson (2007) *Indo-European linguistics: an introduction* (<http://books.google.com/books?id=DJDjNp6wODoC&pg=PA90>)

Syntactic category

A **syntactic category** is a type of syntactic unit that theories of syntax assume.^[1] The traditional parts of speech (e.g. noun, verb, preposition, etc.) are syntactic categories, and in phrase structure grammars, the phrasal categories (e.g. noun phrase NP, verb phrase VP, preposition phrase PP, etc.) are also syntactic categories. Phrase structure grammars draw an important distinction between *lexical categories* and *phrasal categories*. Dependency grammars, in contrast, do not acknowledge phrasal categories (at least not in the traditional sense), which means they work with lexical categories alone. Many grammars also draw a distinction between *lexical categories* and *functional categories*. In this regard, the terminology is by no means consistent. The one opposition (*lexical category* vs. *phrasal category*) and the other opposition (*lexical category* vs. *functional category*) are orthogonal to each other.

Defining criteria

At least three criteria are used in defining syntactic categories:

1. The type of meaning it expresses
2. The type of affixes it takes
3. The structure in which it occurs

For instance, many nouns in English denote concrete entities, they are pluralized with the suffix *-s*, and they occur as subjects and objects in clauses. Many verbs denote actions or states, they are conjugated with agreement suffixes (e.g. *-s* of the third person singular in English), and in English they tend to show up in medial positions of the clauses in which they appear.

The third criterion is also known as *distribution*. The distribution of a given syntactic unit determines the syntactic category to which it belongs. The distributional behavior of syntactic units is identified by substitution.^[2] Like syntactic units can be substituted for each other.

Lexical categories vs. phrasal categories

The traditional parts of speech are lexical categories.^[3] Traditional grammars tend to acknowledge approximately eight to twelve lexical categories, e.g.

Lexical categories

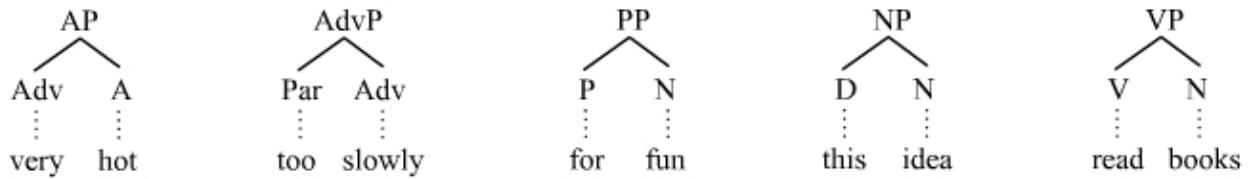
adjective (A), adposition (preposition, postposition, circumposition) (P), adverb (Adv), coordinate conjunction (C), determiner (D), interjection (I), noun (N), particle (Par), pronoun (Pr), subordinate conjunction (Sub), verb (V), etc.

The lexical categories that a given grammar assumes will likely vary from this list. Certainly numerous subcategories can be acknowledged. For instance, one can view pronouns as a subtype of noun, and verbs can be divided into finite verbs and non-finite verbs (e.g. gerund, infinitive, participle, etc.). The central lexical categories give rise to corresponding phrasal categories:^[4]

Phrasal categories

Adjective phrase (AP), adverb phrase (AdvP), adposition phrase (PP), noun phrase (NP), verb phrase (VP), etc.

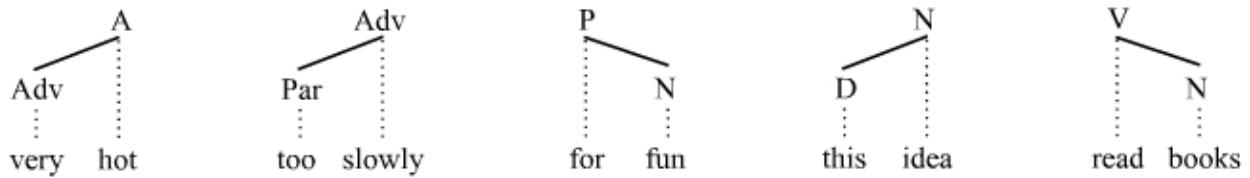
In terms of phrase structure rules, phrasal categories can occur to the left of the arrow while lexical categories cannot, e.g. $NP \rightarrow D\ N$. Traditionally, a phrasal category should consist of two or more words, although conventions vary in this area. X-bar theory, for instance, often sees individual words corresponding to phrasal categories. Phrasal categories are illustrated with the following trees:



The lexical and phrasal categories are identified according to the node labels, phrasal categories receiving the "P" designation.

Lexical categories only

Dependency grammars do not acknowledge phrasal categories in the way that phrase structure grammars do. What this means is that the distinction between lexical and phrasal categories disappears, the result being that only lexical categories are acknowledged. The tree representations are simpler because the number of nodes and categories is reduced, e.g.



The distinction between lexical and phrasal categories is absent here. The number of nodes is reduced by removing all nodes marked with "P". Note, however, that phrases can still be acknowledged insofar as any subtree that contains two or more words will qualify as a phrase.

Lexical categories vs. functional categories

Many grammars draw a distinction between *lexical categories* and *functional categories*.^[5] This distinction is orthogonal to the distinction between lexical categories and phrasal categories. In this context, the term *lexical category* applies only to those parts of speech and their phrasal counterparts that form open classes and have full semantic content. The parts of speech that form closed classes and have mainly just functional content are called *functional categories*:

Lexical categories

Adjective (A) and adjective phrase (AP), adverb (Adv) and adverb phrase (AdvP), Noun (N) and noun phrase (NP), verb and verb phrase (VP), preposition and prepositional phrase (PP)

Functional categories

Coordinate conjunction (C), determiner (D), negation (Neg), particle (Par), preposition (P) and prepositional phrase (PP), subordinate conjunction (Sub), etc.

There is disagreement in certain areas, for instance concerning the status of prepositions. The distinction between lexical and functional categories plays a big role in Chomskyan grammars (Transformational Grammar, Government and Binding Theory, Minimalist Program), where the role of the functional categories is large. Many phrasal categories are assumed that do not correspond directly to a specific part of speech, e.g. agreement phrase (AgrP), focus phrase (FP), inflection phrase (IP), tense phrase (TP), etc. In order to acknowledge such functional categories, one has to assume that the constellation is a primitive of the theory and that it exists separately from the words that appear. As a consequence, many grammar frameworks do not acknowledge such functional categories, e.g. Head

Driven Phrase Structure Grammar, Dependency Grammar, etc.

Notes

- [1] For the general reasoning behind syntactic categories, see Bach (1974:70-71) and Haegeman (1994:36).
- [2] See Culicover (1982:8ff.).
- [3] See for instance Emonds (1976:14), Culicover (1982:12), Brown and Miller (1991:24, 105), Cowper (1992:20, 173), Napoli (1993:169, 52), Haegeman (1994:38), Culicover (1997:19), Brinton (2000:169).
- [4] See for instance Emonds (1976:12), Culicover (1982:13), Brown and Miller (1991:107), Cowper (1992:20), Napoli(1993:165), Haegeman (1994:38).
- [5] For examples of grammars that draw a distinction between lexical and functional categories, see for instance Fowler (1971:36, 40), Emonds (1976:13), Cowper (1992:173ff.), Culicover (1997:142), Haegeman and Guéron (1999:58), Falk (2001:34ff.), Carnie (2007:45f.).

References

- Bach, E. 1974. Syntactic theory. New York: Holt, Rinehart and Winston, Inc.
- Brinton, L. 2000. The structure of modern English. Amsterdam: John Benjamins Publishing Company.
- Brown, K. and J. Miller. 1991. Syntax: A linguistic introduction to sentence structure, 2nd edition. London: UK: HarperCollins *Academic*.
- Carnie, A. 2007. Syntax: A generative introduction, 2nd edition. Malden, MA: Blackwell Publishing.
- Cowper, E. 1992. A concise introduction to syntactic theory: The government-binding approach. Chicago: The University of Chicago Press.
- Culicover, P. 1982. Syntax, 2nd edition. New York: Academic Press.
- Culicover, P. 1997. Principles and Parameters: An introduction to syntactic theory. Oxford University Press.
- Emonds, J. 1976. A transformational approach to English syntax: Root, structure-preserving, and local-transformations. New York: Academic-Press.
- Falk, Y. 2001. Lexical-Functional Grammar: An introduction to parallel constraint-based syntax. Stanford, CA: CSLI Publications.
- Fowler, R. 1971. An introduction to transformational syntax. New York: Barnes and Noblles Inc.
- Haegeman, L. 1994. Introduction to government and binding theory, 2nd edition. Oxford, UK: Blackwell.
- Haegeman, L. and J. Guéron. 1999. English grammar: A generative perspective. Oxford, UK: Blackwell Publishers.

Catena (linguistics)

In linguistics the **catena** (Latin for 'chain', plural **catenae**) is a unit of syntax and morphology, closely associated with dependency grammars. It is a more flexible and inclusive unit than the constituent and may therefore be better suited than the constituent to serve as the fundamental unit of syntactic and morphosyntactic analysis. The catena concept was introduced to linguistics by William O'Grady in 1998^[1] and has been seized upon by some other linguists^[2] and applied to the syntax of idiosyncratic meaning of all sorts, to the syntax of ellipsis mechanisms (e.g. gapping, stripping, VP-ellipsis, pseudogapping, sluicing, answer ellipsis, comparative deletion), to the syntax of predicate-argument structures, and to the syntax of discontinuities (topicalization, wh-fronting, scrambling, extraposition, etc.).

Definition

The catena is defined as follows:

Catena

Any element (word or morph) or any combination of elements that are continuous in the vertical dimension (y-axis)

Graph-theoretic definition

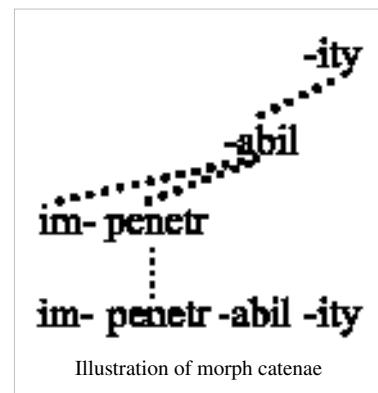
In terms of graph theory, any syntactic tree or subgraph of a tree is a catena. In this regard, every constituent is a catena, but there are many catenae that are not constituents. The constituent is therefore a subtype of catena. Any individual element (word or morph) or combination of elements linked together in the vertical dimension is a catena. Sentence structure is conceived of as existing in two dimensions. Combinations organized along the horizontal dimension (in terms of precedence) are called *strings*, whereas combinations organized along the vertical dimension (in terms of dominance) are catenae. In terms of a cartesian coordinate system, strings exist along the x-axis, and catenae along the y-axis.

Four units

An understanding of the catena is established by distinguishing between the catena and other, similarly defined units. There are four units (including the catena) that are pertinent in this regard: *string*, *catena*, *component*, and *constituent*. The definition of the catena is repeated for easy comparison with the definitions of the other three units:

String

Any element (word or morph) or any combination of elements that is continuous in the horizontal dimension (x-axis)



Catena

Any element (word or morph) or any combination of elements that is continuous in the vertical dimension (y-axis)

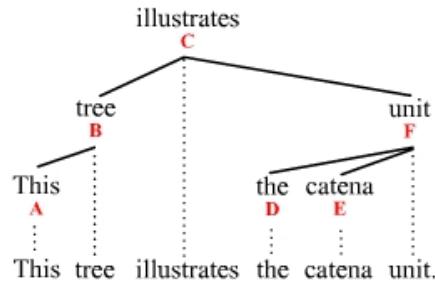
Component

Any element (word or morph) or any combination of elements that is both a string and a catena

Constituent

Any component that is *complete*

A component is complete if it includes all the elements that its root node dominates. The string and catena complement each other in an obvious way, and the definition of the constituent is essentially the same as one finds in most theories of syntax, where a constituent is understood to consist of *any node plus all the nodes that that node dominates*. These definitions will now be illustrated with the help of the following dependency tree. The capital letters serve to abbreviate the words:



All of the distinct strings, catenae, components, and constituents in this tree are listed here:

21 distinct strings

A, B, C, D, E, F, AB, BC, CD, DE, EF, ABC, BCD, CDE, DEF, ABCD, BCDE, CDEF, ABCDE, BCDEF, and ABCDEF

24 distinct catenae

A, B, C, D, E, F, AB, BC, CF, DF, EF, ABC, BCF, CDF, CEF, DEF, ABCF, BCDF, BCEF, CDEF, ABCDF, ABCEF, BCDEF, and ABCDEF.

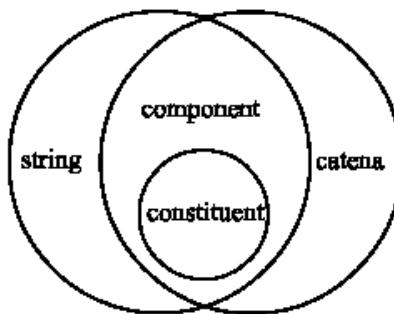
14 distinct components

A, B, C, D, E, F, AB, BC, EF, ABC, DEF, CDEF, BCDEF, and ABCDEF

6 distinct constituents

A, D, E, AB, DEF, ABCDEF

Noteworthy is the fact that the tree contains 39 distinct word combinations that are not catenae, e.g. AC, BD, CE, BCE, ADF, ABEF, ABDEF, etc. Observe as well that there are a mere six constituents, but 24 catenae. There are therefore four times more catenae in the tree than there are constituents. The inclusivity and flexibility of the catena unit becomes apparent. The following Venn diagram provides an overview of how the four units relate to each other:



Venn-diagram showing the relationships of
string, catena, component, and constituent

While all four units are important, the discussion below focuses most directly on the catena.

Idiosyncratic language

Idiosyncratic language of all sorts can be captured in terms of catenae. When meaning is constructed in such a manner that does not allow one to acknowledge meaning chunks as constituents, the catena is involved. The meaning bearing units are catenae, not constituents. This situation is illustrated here in terms of various collocations and proper idioms.

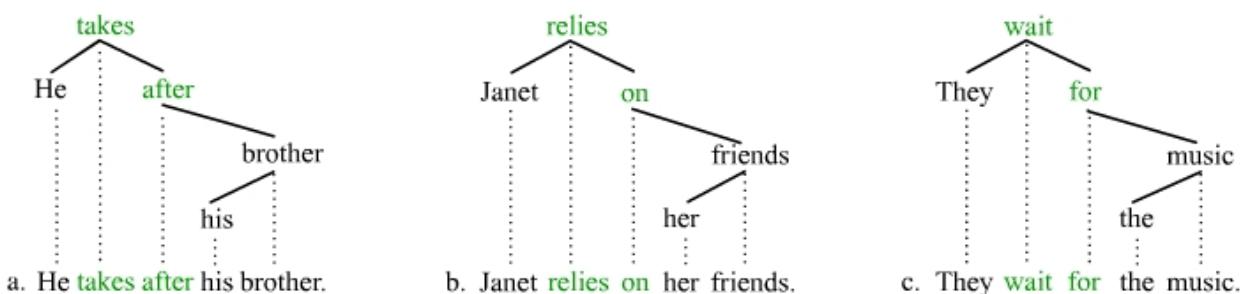
Some collocations

Simple collocations (i.e. the co-occurrence of certain words) demonstrate well the catena concept. The idiosyncratic nature of particle verb collocations provide the first group of examples: *take after*, *take in*, *take on*, *take over*, *take up*, etc. In its purest form, the verb *take* means 'seize, grab, possess'. In these collocations with the various particles, however, the meaning of *take* shifts significantly each time depending on the particle. The particle and *take* convey a distinct meaning together, whereby this distinct meaning cannot be understood as a straightforward combination of the meaning of *take* alone and the meaning of the preposition alone. In such cases, one says that the meaning is *non-compositional*. Non-compositional meaning can be captured in terms of catenae. The word combinations that assume non-compositional meaning form catenae (but not constituents):



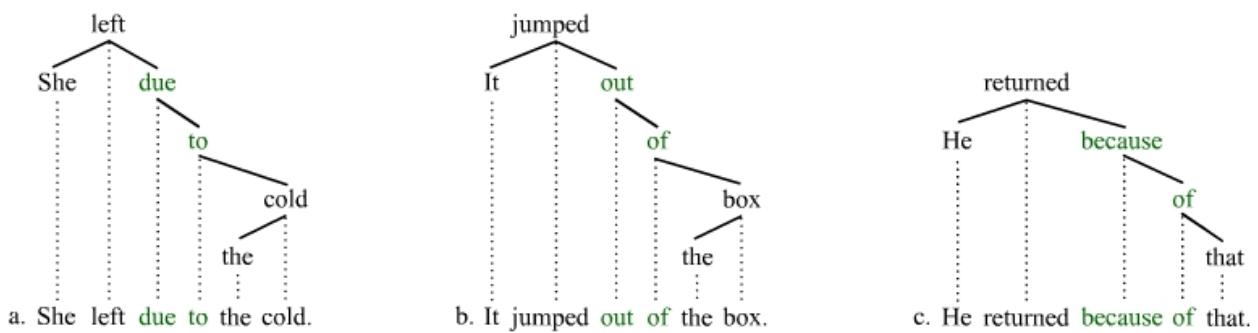
Both the a- and b-sentences show that while the verb and its particle do not form a constituent, they do form a catena each time. The contrast in word order across the sentences of each pair illustrates what is known as shifting. Shifting occurs to accommodate the relative weight of the constituents involved. Heavy constituents prefer to appear to the right of lighter sister constituents. The shifting does not change the fact that the verb and particle form a catena each time, even when they do not form a string.

Numerous verb-preposition combinations are idiosyncratic collocations insofar as the choice of preposition is strongly restricted by the verb, e.g. *account for*, *count on*, *fill out*, *rely on*, *take after*, *wait for*, etc. The meaning of many of these combinations is also non-compositional, as with the particle verbs. And also as with the particle verbs, the combinations form catenae (but not constituents) in simple declarative sentences:



The verb and the preposition that it demands preposition form a single meaning-bearing unit, whereby this unit is a catena. These meaning-bearing units can thus be stored as catenae in the mental lexicon of speakers. As catenae, they are concrete units of syntax.

The final type of collocations produced here to illustrate catenae is the complex preposition, e.g. *because of*, *due to*, *inside of*, *in spite of*, *out of*, *outside of*, etc. The intonation pattern for these prepositions suggests that orthographic conventions are correct in writing them as two words. This situation, however, might be viewed as a problem, since it is not clear that the two words each time can be viewed as forming a constituent. In this regard, they do of course qualify as a catena, e.g.

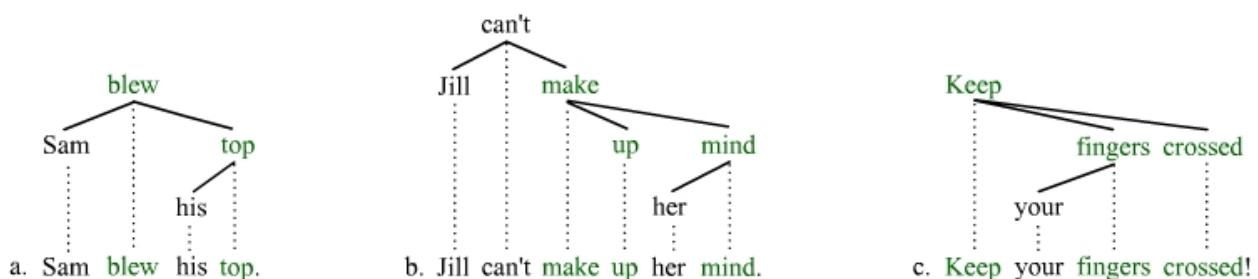


The collocations illustrated in this section have focused mainly on prepositions and particles and they are therefore just a small selection of meaning-bearing collocations. They are, however, quite suggestive. It seems likely that all meaning-bearing collocations are stored as catenae in the mental lexicon of language users.

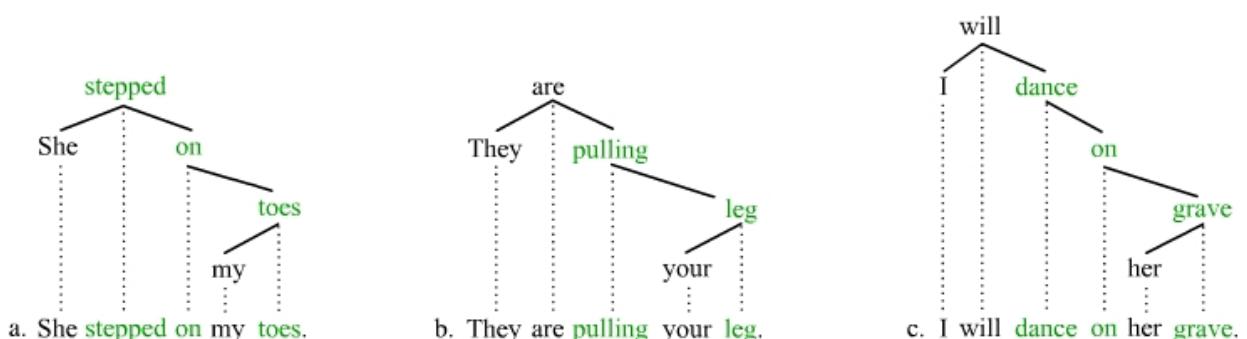
Proper idioms

Full idioms are the canonical cases of non-compositional meaning. The fixed words of idioms do not bear their productive meaning, e.g. *take it on the chin*. Someone who "takes it on the chin" does not actually experience any physical contact to their chin, which means that *chin* does not have its normal productive meaning and must hence be part of a greater collocation. This greater collocation is the idiom, which consists of five words in this case. While the idiom *take it on the chin* can be stored as a VP constituent (and is therefore not a problem for constituent-based theories), there are many idioms that clearly cannot be stored as constituents. These idioms are a problem for constituent-based theories precisely because they do not qualify as constituents. However, they do of course qualify as catenae. The discussion here focuses on these idioms since they illustrate particularly well the value of the catena concept.

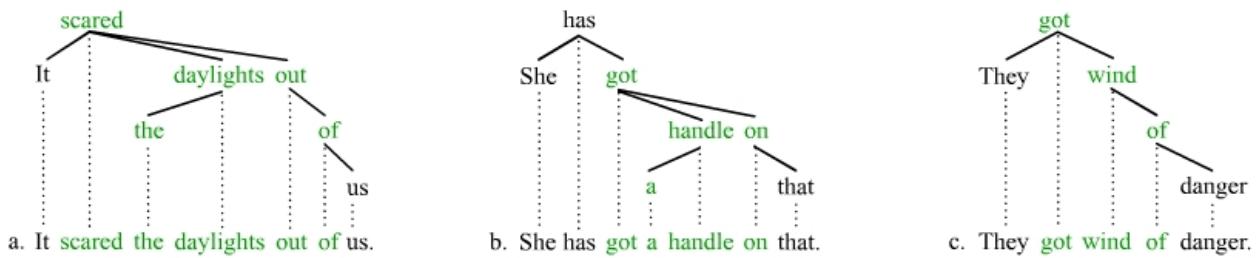
Many idioms in English consist of a verb and a noun (and more), whereby the noun takes a possessor that co-indexed with the subject and will thus vary with subject. These idioms are stored as catenae but clearly not as constituents, e.g.



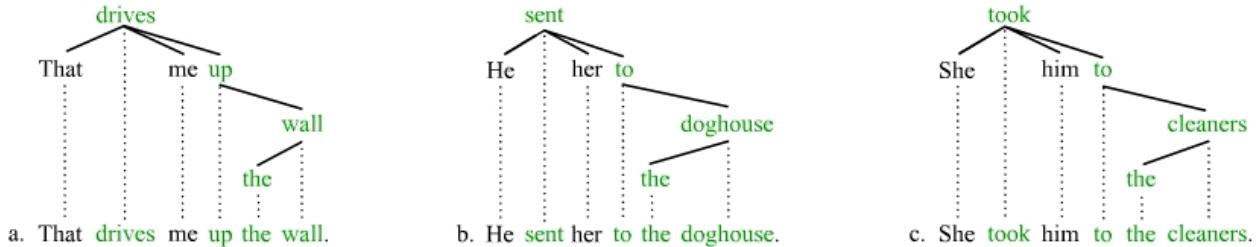
Similar idioms have a possessor that is freer insofar it is not necessarily co-indexed with the subject. These idioms are also stored as catenae (but not as constituents), e.g.



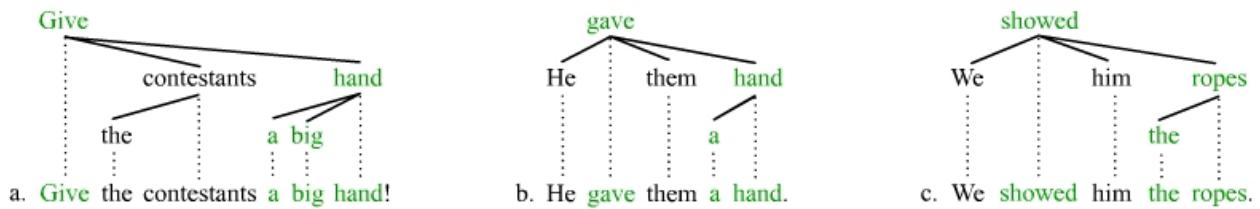
The following idioms include the verb, and object, and at least one preposition. It should again be obvious that the fixed words of the idioms can in no way be viewed as forming constituents:



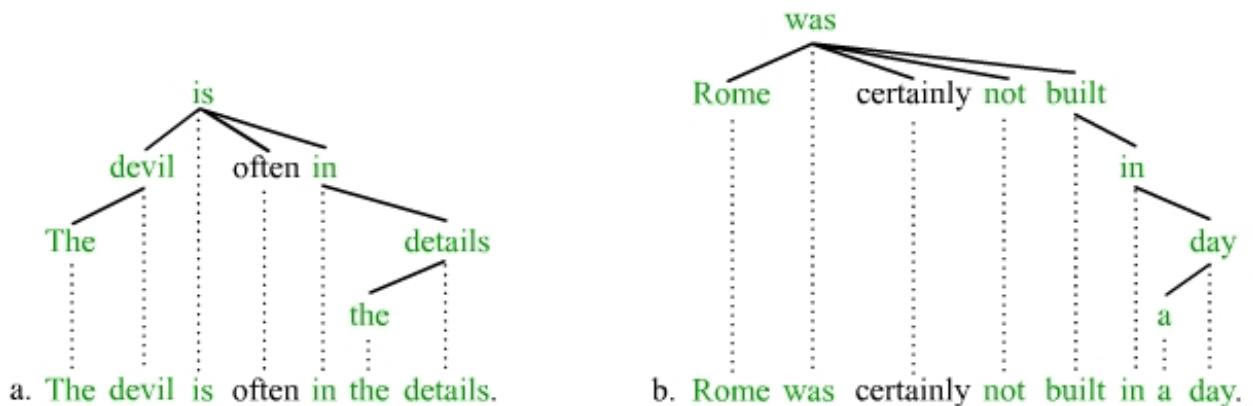
The following idioms include the verb and the prepositional phrase at the same time that the object is free:



And the following idioms involving a ditransitive verb include the second object at the same time that the first object is free:

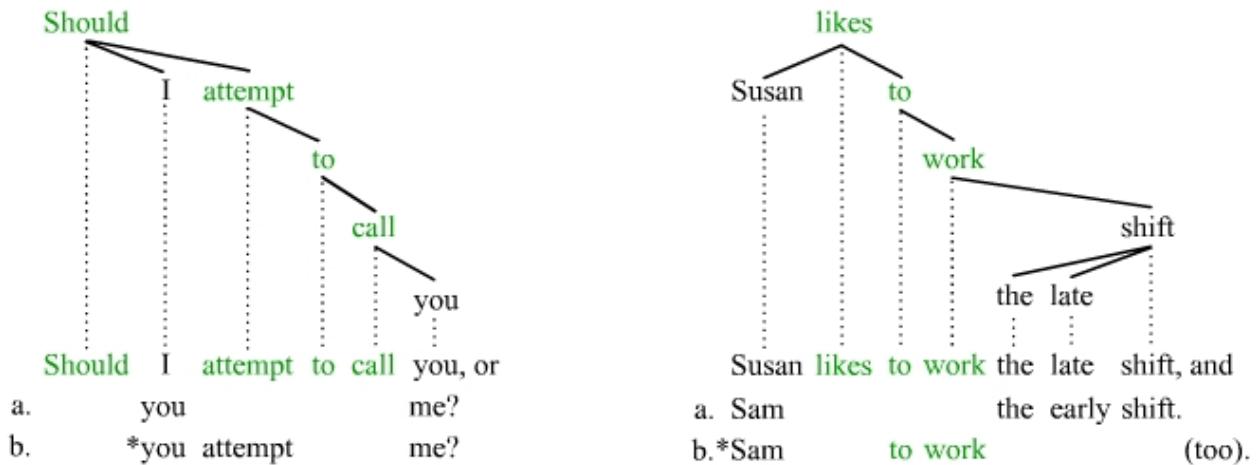


Certainly sayings are also idiomatic. When an adverb (or some other adjunct) appears in a saying, it is not part of the saying. Nevertheless, the words of the saying still form a catena:

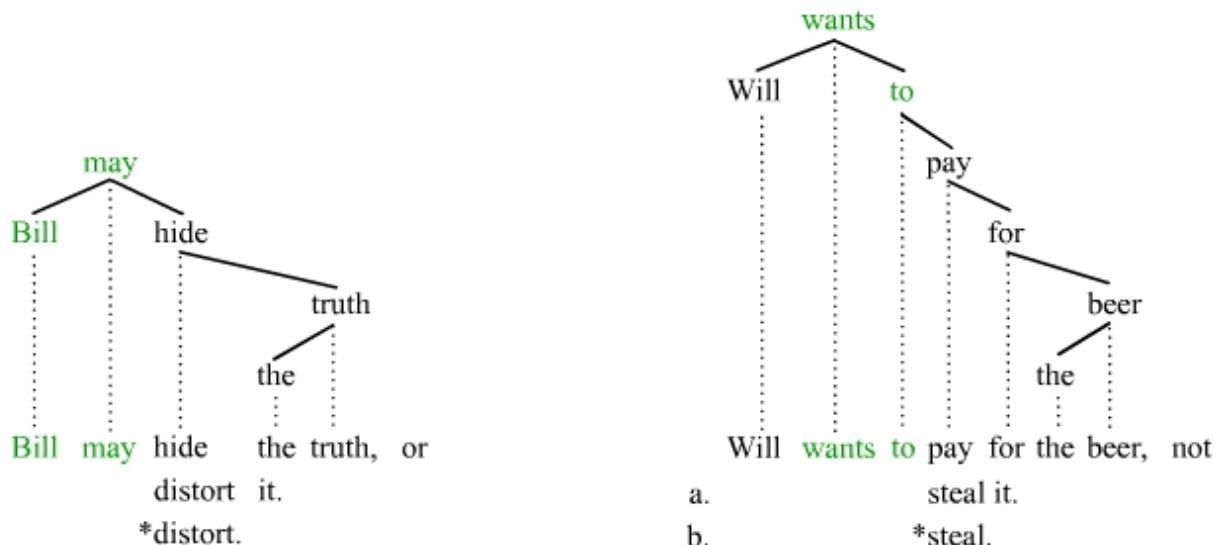


Ellipsis

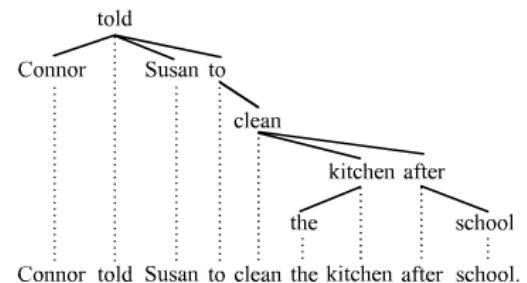
Ellipsis mechanisms (gapping, stripping, VP-ellipsis, pseudogapping, answer fragments, sluicing, comparative deletion) are eliding catenae, whereby many of these catenae are non-constituents. The following examples illustrate gapping:



The a-clauses are acceptable instances of gapping; the gapped material corresponds to the catena in green. The b-clauses are failed attempts at gapping; they fail because the gapped material does not correspond to a catena. The following examples illustrate stripping. Many linguists see stripping as a particular manifestation of gapping where just a single remnant remains in the gapped/stripped clause:



The a-clauses are acceptable instances of stripping, in part because the stripped material corresponds to a catena (in green). The b-clauses again fail; they fail because the stripped material does not qualify as a catena. The following examples illustrate answer ellipsis:



- a. Who told Susan to clean the kitchen after school?
- b. Who did Connor tell to clean the kitchen after school?
- c. What did Connor tell Susan to do?
- d. What did Connor tell Susan to clean after school?
- e. When did Connor tell Susan to clean the kitchen?
- f. What did Connor do concerning Susan and cleaning the kitchen after school? *Told.
- g. What did Connor tell Susan to do concerning the kitchen after school?
- h. When in relation to school did Connor tell Susan to clean the kitchen?

Connor.

Susan.

Clean the kitchen after school.

The kitchen.

After school.

*Clean.

*After.

In each of the acceptable answer fragments (a-e), the elided material corresponds to a catena. In contrast, the elided material corresponds to a non-catena in each of the unacceptable answer fragments (f-h).

Predicate-argument structures

(under construction)

Notes

- [1] O'Grady (1998) introduced the catena concept as a basis for his analysis of the syntax of idioms. O'Grady called the relevant syntactic unit a "chain", however, not a "catena". The term *catena* was introduced later by Osborne et al. (2013) as a means of avoiding confusion with the preexisting chain concept of Minimalist theory.
- [2] The catena concept has been developed beyond O'Grady's (1998) analysis of idioms. See the following articles: Osborne (2005), Osborne et al. (2011), Osborne (2012), Osborne and Groß (2012a), Osborne and Groß (2012b), and Osborne et al. (2013).

References

- O'Grady, W. 1998. The syntax of idioms. *Natural Language and Linguistic Theory* 16. 79-312.
- Osborne, T. 2005. Beyond the constituent: A DG analysis of chains. *Folia Linguistica* 39, 3-4. 251-297.
- Osborne, T. 2012. Edge features, catenae, and dependency-based Minimalism. *Linguistic Analysis* 34, 3-4, 321-366.
- Osborne, T., M. Putnam, and T. Groß. 2011. Bare phrase structure, label-less trees, and specifier-less syntax: Is Minimalism becoming a dependency grammar? *The Linguistic Review* 28: 315-364.
- Osborne, T. and T. Groß 2012a. Constructions are catenae: Construction Grammar meets Dependency Grammar. *Cognitive Linguistics* 23, 1, 163-214.
- Osborne, T. and T. Groß 2012b. Antecedent containment: A dependency grammar solution in terms of catenae. *Studia Linguistica*, 94-127.
- Osborne, T., M. Putnam, and T. Groß 2013. Catenae: Introducing a novel unit of syntactic analysis. *Syntax* 16, in press.

c-command

In syntax, **c-command** is a relationship between nodes in constituency-based parse trees. Originally defined by Tanya Reinhart (1976, 1983),^[1] It is analogous to "siblings and all their descendants" in family trees. C-command is closely associated with the phrase structure grammars (= constituency grammars) of the Chomskyan tradition (Government and Binding, Minimalist Program). It is not valid for or applicable to the tree structures of other theories of syntax. For instance, c-command as it is commonly understood can hardly be applied to the dependency-based structures of dependency grammars.

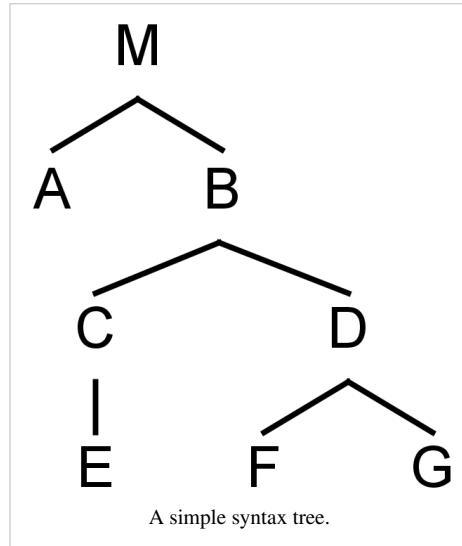
Definition and Example

The definition of c-command is based partly on the relationship of *dominance*. A node "dominates" another node if it is above it in the tree (it is a parent, grandparent, etc.). Using this definition of dominance, node *A* c-commands node *B* if and only if:

- *A* does not dominate *B*
- *B* does not dominate *A*
- The first branching node that dominates *A*, also dominates *B*^{[2][3]}

For example, according to this definition, in the tree at the right,

- *M* **does not** c-command any node because it dominates all other nodes.
- *A* c-commands *B*, *C*, *D*, *E*, *F*, and *G*.
- *B* c-commands *A*.
- *C* c-commands *D*, *F*, and *G*.
- *D* c-commands *C* and *E*.
- *E* c-commands *D*, *F*, and *G*.
- *F* c-commands *G*.
- *G* c-commands *F*.



Origin of term

The term "c-command" was introduced by Reinhart in her 1976 MIT dissertation (p. 32), and is a shortened form of "constituent command." Reinhart herself thanks Nick Clements for suggesting both the term and its abbreviation. As discussed by Andrew Carnie,^[4] the term "c-command" may also have been chosen so as to contrast with the similar notion *kommand* (often read as "k-command"), proposed by Howard Lasnik in 1976.^[5]

C-command and the first branching node

The above definition specified that the domain of c-command is the first *branching* node that dominates *A*. This relationship is sometimes known as *strict c-command*.^[6] Without this specification, c-command would be limited to cases in which the first node of any sort dominating *A* also dominates *B*. The following tree illustrates how these two accounts differ in their result. If all nodes are considered, then *A* does not c-command any other nodes, because *B* dominates it and does not dominate any other nodes; if only branching nodes are considered, then *B* is irrelevant in evaluating the third criterion, and *A* does c-command *D*, *E*, and *F*.



References

- [1] See also Howard Lasnik (1975) and Noam Chomsky (1981).
- [2] Haegeman, Liliane (1994). *Introduction to Government and Binding Theory* (2nd ed.). Oxford: Blackwell Publishing. p. 147.
- [3] Carnie, Andrew (2002). *Syntax: A Generative Introduction* (1st ed.). Oxford: Blackwell Publishing. p. 75.
- [4] Carnie, Andrew (2002). *Syntax: A Generative Introduction* (1st ed.). Oxford: Blackwell Publishing. p. 77.
- [5] Keshet, Ezra (2004-05-20). "24.952 Syntax Squib" (<http://web.mit.edu/ekeshet/www/Papers/phase.pdf>). MIT. .
- [6] Haegeman, Liliane (1994). *Introduction to Government and Binding Theory* (2nd ed.). Oxford: Blackwell Publishing. p. 137.
- Harris, C. L. and Bates, E. A. (2002) 'Clausal backgrounding and pronominal reference: A functionalist approach to c-command'. *Language and Cognitive Processes* 17(3):237-269.
- Lasnik, Howard. 1976. Remarks on Coreference. *Linguistic Analysis* 2, 1-22
- *Contemporary Linguistics* by William O'Grady, Michael Dobrovolsky, and Mark Aronoff. Bedford/St. Martin's. 1997 (third edition).
- Reinhart, Tanya M. (1976). *The Syntactic Domain of Anaphora*. (Doctoral dissertation, Massachusetts Institute of Technology). (Available online at <http://dspace.mit.edu/handle/1721.1/16400>).

External links

- c-command and pronouns (http://www.ling.upenn.edu/courses/Fall_1999/ling550/ch1.html)
- Node relations (<http://www.ling.upenn.edu/~beatrice/syntax-textbook/box-nodes.html>), University of Pennsylvania
- Some Basic Concepts in Government and Binding Theory (<http://www.criticism.com/linguistics/govt-binding-basics1.php>)

Clause

In grammar, a **clause** is the smallest grammatical unit that can express a complete proposition.^[1] A typical clause in English contains minimally a subject and a predicate.^[2] In other languages, the subject is often omitted if it is retrievable from context. 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 (= *matrix clauses, independent clauses*) are those that could stand as a sentence by themselves. Subordinate clauses (= *embedded clauses, dependent clauses*) are those that would be awkward or nonsensical if used alone.

Two major distinctions

A primary division for the discussion of clauses is the distinction between main clauses (= *matrix clauses, independent clauses*) and subordinate clauses (= *embedded clauses, dependent clauses*).^[3] A main clause can stand alone, i.e. it can constitute a complete sentence by itself. A subordinate clause (= *embedded clause*), in contrast, is reliant on the appearance of a main clause; it depends on the main clause and is therefore a dependent clause, whereas the main clause is an independent clause.

A second major distinction concerns the difference between finite and non-finite clauses. A finite clause contains a structurally central finite verb, whereas the structurally central word of a non-finite clause is often a non-finite verb. Traditional grammar focuses on finite clauses, the awareness of non-finite clauses having arisen much later in connection with the modern study of syntax. The discussion here also focuses on finite clauses, although some aspects of non-finite clauses are considered further below.

Clauses according to a distinctive syntactic trait

Clauses can be classified according to a distinctive trait that is a prominent characteristic of their syntactic form. The position of the finite verb is one major trait used for classification, and the appearance of a specific type of focusing word (e.g. *wh-word*) is another. These two criteria overlap to an extent, which means that often no single aspect of syntactic form is always decisive in determining how the clause functions. There are, however, strong tendencies.

Standard SV-clauses

Standard SV-clauses (subject-verb) are the norm in English. They are usually declarative (as opposed to exclamative, imperative, or interrogative); they express information in a neutral manner, e.g.

The pig has not yet been fed. - Declarative clause, standard SV order

I've been hungry for two hours. - Declarative clause, standard SV order

...that I've been hungry for two hours. - Declarative clause, standard SV order, but functioning as a subordinate clause due to the appearance of the subordinator *that*

Declarative clauses like these are by far the most frequently occurring type of clause in any language. They can be viewed as basic, other clause types being derived from them. Standard SV-clauses can also be interrogative or exclamative, however, given the appropriate intonation contour and/or the appearance of a question word, e.g.

- a. The pig has not yet been fed? - Rising intonation on *fed* makes the clause a yes/no-question.
- b. The pig has not yet been fed! - Spoken forcefully, this clause is exclamative.
- c. You've been hungry for how long? - Appearance of interrogative word *how* and rising intonation make the clause a constituent question

Examples like these demonstrate that how a clause functions cannot be known based entirely on a single distinctive syntactic criterion. SV-clauses are usually declarative, but intonation and/or the appearance of a question word can render them interrogative or exclamative.

Verb first clauses

Verb first clauses in English usually play one of three roles: 1. They express a yes/no-question via subject-auxiliary inversion, 2. they express a condition as an embedded clause, or they express a command via imperative mood, e.g.

- a. He **should** stop laughing. - Standard declarative SV-clause (verb second order)
- b. **Should** he stop laughing? - Yes/no-question expressed by verb first order
- c. **Had** he stopped laughing,... - Condition expressed by verb first order
- d. **Stop** laughing! - Imperative formed with verb first order

- a. They **have** done the job. - Standard declarative SV-clause (verb second order)
- b. **Have** they done the job? - Yes/no-question expressed by verb first order
- c. **Had** they done the job,... - Condition expressed by verb first order
- d. **Do** the job! - Imperative formed with verb first order

Most verb first clauses are main clauses. Verb first conditional clauses, however, must be classified as embedded clauses because they cannot stand alone.

Wh-clauses

Wh-clauses contain a *wh*-word. *Wh*-words often serve to help express a constituent question. They are also prevalent, though, as relative pronouns, in which case they serve to introduce a relative clause and are not part of a question. The *wh*-word focuses a particular constituent and most of the time, it appears in clause-initial position. The following examples illustrate standard interrogative *wh*-clauses. The b-sentences are direct questions (main clauses), and the c-sentences contain the corresponding indirect questions (embedded clauses):

- a. Sam likes the meat. - Standard declarative SV-clause
- b. **Who** likes the meat? - Matrix interrogative *wh*-clause focusing on the subject
- c. They asked **who** likes the meat. - Embedded interrogative *wh*-clause focusing on the subject

- a. Larry sent Susan to the store. - Standard declarative SV-clause
- b. **Who** did Larry send to the store? - Matrix interrogative *wh*-clause focusing on the object, subject-auxiliary inversion present
- c. We know **who** Larry sent to the store. - Embedded *wh*-clause focusing on the object, subject-auxiliary inversion absent

- a. Larry sent Susan to the store. - Standard declarative SV-clause
- b. **Where** did Larry send Susan? - Matrix interrogative *wh*-clause focusing on the oblique object, subject-auxiliary inversion present
- c. Someone is wondering **where** Larry sent Susan. - Embedded *wh*-clause focusing on the oblique object, subject-auxiliary inversion absent

One important aspect of matrix *wh*-clauses is that subject-auxiliary inversion is obligatory when something other than the subject is focused. When it is the subject (or something embedded in the subject) that is focused, however, subject-auxiliary inversion does not occur.

- a. **Who** called you? - Subject focused, no subject-auxiliary inversion
- b. **Who** did you call? - Object focused, subject-auxiliary inversion occurs

Another important aspect of *wh*-clauses concerns the absence of subject-auxiliary inversion in embedded clauses, as illustrated in the c-examples just produced. Subject-auxiliary inversion is obligatory in matrix clauses when something other than the subject is focused, but it never occurs in embedded clauses regardless of the constituent that is focused. A systematic distinction in word order emerges across matrix *wh*-clauses, which can have VS order, and

embedded *wh*-clauses, which always maintain SV order, e.g.

- a. **Why** are they doing that? - Subject-auxiliary inversion results in VS order in matrix *wh*-clause.
- b. They told us why they are doing that. - Subject-auxiliary inversion is absent in embedded *wh*-clause.
- c. *They told us why are they doing that. - Subject-auxiliary inversion is blocked in embedded *wh*-clause.
- a. **Who** is he trying to avoid? - Subject-auxiliary inversion results in VS order in matrix *wh*-clause.
- b. We know who he is trying to avoid? - Subject-auxiliary inversion is absent in embedded *wh*-clause.
- c. *We know who is he trying to avoid. - Subject-auxiliary inversion is blocked in embedded *wh*-clause.

Relative clauses

Relative clauses are a mixed group. In English they can be standard SV-clauses if they are introduced by *that* or lack a relative pronoun entirely, or they can be *wh*-clauses if they are introduced by a *wh*-word that serves as a relative pronoun.

- a. Something happened twice. - Standard declarative SV-clause
- b. something that happened twice - Relative clause introduced by the relative pronoun *that* and modifying the indefinite pronoun *something*
- a. I know everyone. - Standard declarative SV-clause
- b. everyone I know - Relative clause lacking a relative pronoun entirely and modifying the indefinite pronoun *everyone*
- a. They left early - Standard declarative clause
- b. the time when they left early - Relative clause introduced by the relative proform *when* and modifying the noun *time*
- a. The woman sang a song. - Standard declarative SV-clause
- b. the woman who sang a song. - Relative clause introduced by the relative pronoun *who* and modifying the noun *woman*

Being embedded clauses, relative clauses in English cannot display subject-auxiliary inversion.

A particular type of *wh*-relative-clause is the so-called *free relative clause*. Free relatives typically function as arguments, e.g.

- a. What he did was unexpected. - Free relative clause functioning as subject argument
- b. He will flatter whoever is present. - Free relative clause functioning as object argument

These relative clauses are "free" because they can appear in a variety of syntactic positions; they are not limited to appearing as modifiers of nominals. The suffix *-ever* is often employed to render a standard relative pronoun as a pronoun that can introduce a free relative clause.

Clauses according to semantic predicate-argument function

Embedded clauses can be categorized according to their syntactic function in terms of predicate-argument structures. They can function as arguments, as adjuncts, or as predicative expressions. That is, embedded clauses can be an argument of a predicate, an adjunct on a predicate, or (part of) the predicate itself. The predicate in question is usually the matrix predicate of a main clause, but embedding of predicates is also frequent.

Argument clauses

A clause that functions as the argument of a given predicate is known as an *argument clause*. Argument clauses can appear as subjects, as objects, and as obliques. They can also modify a noun predicate, in which case they are known as *content clauses*.

- That they actually helped was really appreciated. - SV-clause functioning as the subject argument
- They mentioned that they had actually helped. - SV-clause functioning as the object argument

What he said was ridiculous. - *Wh*-clause functioning as the subject argument

We know what he said. - *Wh*-clause functioning as an object argument

He talked about what he had said. - *Wh*-clause functioning as an oblique object argument

The following examples illustrate argument clauses that provide the content of a noun. Such argument clauses are content clauses:

- a. the claim that he was going to change it - Argument clause that provides the content of a noun (= content clause)
- b. the claim that he expressed - Adjunct clause (relative clause) that modifies a noun
- a. the idea that we should alter the law - Argument clause that provides the content of a noun (= content clause)
- b. the idea that came up - Adjunct clause (relative clause) that modifies a noun

The content clauses like these in the a-sentences are arguments. Relative clauses introduced by the relative pronoun *that* as in the b-clauses here have an outward appearance that is closely similar to that of content clauses. The relative clauses are adjuncts, however, not arguments.

Adjunct clauses

Adjunct clauses are embedded clauses that modify an entire predicate-argument structure. All clause types (SV-, verb first, *wh*-) can function as adjuncts, although the stereotypical adjunct clause is SV and introduced by a subordinator (= subordinate conjunction, e.g. *after*, *because*, *before*, *when*, etc.), e.g.

- a. Fred arrived before you did. - Adjunct clause modifying matrix clause
- b. After Fred arrived, the party started. - Adjunct clause modifying matrix clause
- c. Susan skipped the meal because she is fasting. - Adjunct clause modifying matrix clause

These adjunct clauses modify the entire matrix clause. Thus *before you did* in the first example modifies the matrix clause *Fred arrived*. Adjunct clauses can also modify a nominal predicate. The typical instance of this type of adjunct is a relative clause, e.g.

- a. We like the music that you brought. - Relative clause functioning as an adjunct that modifies the noun *music*
- b. The people who brought music were singing loudly. - Relative clause functioning as an adjunct that modifies the noun *people*
- c. They are waiting for some food that will not come. - Relative clause functioning as an adjunct that modifies the noun *people*

Predicative clauses

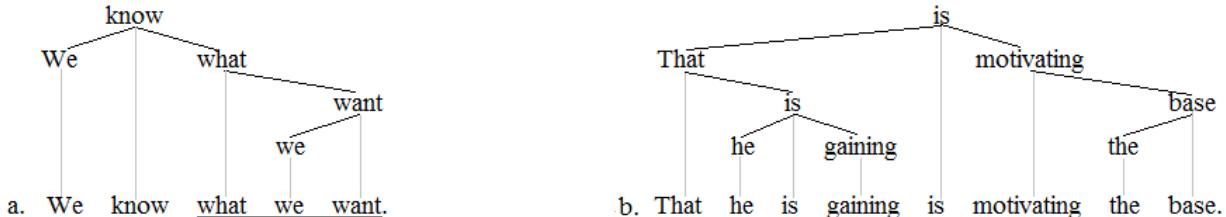
An embedded clause can also function as a predicative expression. That is, it can form (part of) the predicate of a greater clause.

- a. That was when they laughed. - Predicative SV-clause, i.e. a clause that functions as (part of) the main predicate
- b. He became what he always wanted to be. - Predicative *wh*-clause, i.e. *wh*-clause that functions as (part of) the main predicate

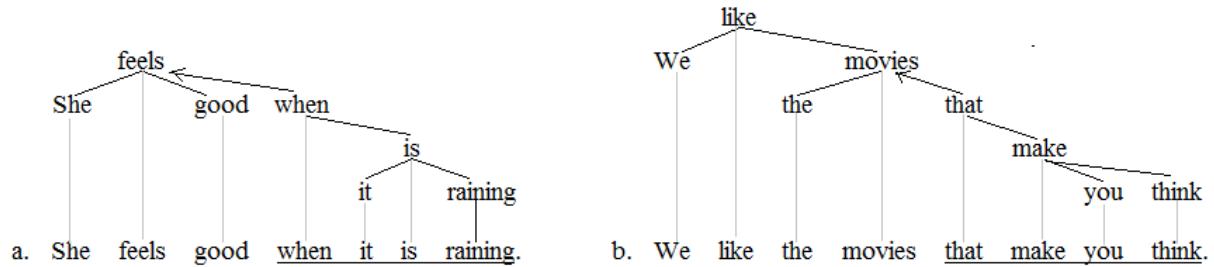
These predicative clauses are functioning just like other predicative expressions, e.g. predicative adjectives (*That was good*) and predicative nominals (*That was the truth*). They form the matrix predicate together with the copula.

Representing clauses

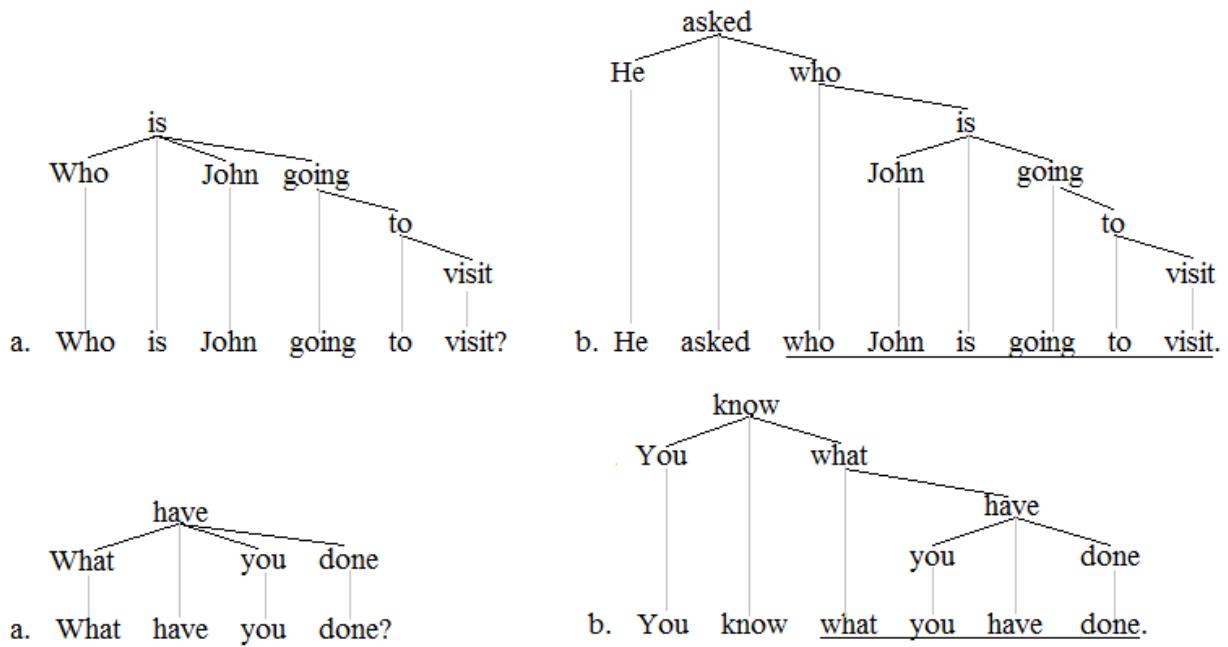
Some of the distinctions presented above are represented in syntax trees. These trees make the difference between main and subordinate clauses very clear, and they also illustrate well the difference between argument and adjunct clauses. The following dependency grammar trees show that embedded clauses are dependent on an element in the main clause, often on a verb:^[4]



The main clause encompasses the entire tree each time, whereas the embedded clause is contained within the main clause. These two embedded clauses are arguments. The embedded *wh*-clause *what he wanted* is the object argument of the predicate *know*. The embedded clause *that he is gaining* is the subject argument of the predicate *is motivating*. Both of these argument clauses are directly dependent on the main verb of the matrix clause. The following trees identify adjunct clauses using an arrow dependency edge:



These two embedded clauses are adjunct clauses because they provide circumstantial information that modifies a superordinate expression. The first is a dependent of the main verb of the matrix clause and the second is a dependent of the object noun. The arrow dependency edges identify them as adjuncts. The arrow points away from the adjunct towards its governor to indicate that semantic selection is running counter to the direction of the syntactic dependency; the adjunct is selecting its governor. The next four trees illustrate the distinction mentioned above between matrix *wh*-clauses and embedded *wh*-clauses



The embedded *wh*-clause is an object argument each time. The position of the *wh*-word across the matrix clauses (a-trees) and the embedded clauses (b-trees) captures the difference in word order. Matrix *wh*-clauses have V2 word order, whereas embedded *wh*-clauses have (what amounts to) V3 word order. In the matrix clauses, the *wh*-word is a dependent of the finite verb, whereas it is the head over the finite verb in the embedded *wh*-clauses.

Clauses vs. phrases

There has been confusion about the distinction between clauses and phrases. This confusion is due in part to how these concepts are employed in the phrase structure grammars of the chomskyan tradition. In the 1970s, chomskyan grammars began labeling many clauses as CPs (= complementizer phrases) or as IPs (= inflection phrases), and then later as TPs (= tense phrases), etc. The choice of labels was influenced by the theory-internal desire to use the labels consistently. The X-bar schema acknowledged at least three projection levels for every lexical head: a minimal projection (e.g. N, V, P, etc.), an intermediate projection (e.g. N', V', P', etc.), and a phrase level projection (e.g. NP, VP, PP, etc.). Extending this convention to the clausal categories occurred in the interest of the consistent use of labels.

This use of labels should not, however, be confused with the actual status of the syntactic units to which the labels are attached. A more traditional understanding of clauses and phrases maintains that phrases are not clauses, and clauses are not phrases. There is a progression in the size and status of syntactic units: *words < phrases < clauses*. The characteristic trait of clauses, i.e. the presence of a subject and a (finite) verb, is absent from phrases. Clauses can be, however, embedded inside phrases.

Non-finite clauses

The central word of a non-finite clause is usually a non-finite verb (as opposed to a finite verb). There are various types of non-finite clauses that can be acknowledged based in part on the type of non-finite verb at hand. Gerunds are widely acknowledged to constitute non-finite clauses, and some modern grammars also judge many *to*-infinitives to be the structural locus of non-finite clauses. Finally, some modern grammars also acknowledge so-called small clauses, which often lack a verb altogether. It should be apparent that non-finite clauses are (by and large) embedded clauses.

Gerund clauses

The underlined words in the following examples are judged to be non-finite clauses, e.g.

- a. Bill stopping the project was a big disappointment. - Non-finite gerund clause
- b. Bill's stopping the project was a big disappointment. - Gerund with noun status
- a. We've heard about Susan attempting a solution. - Non-finite gerund clause
- b. We've heard about Susan's attempting a solution. - Gerund with noun status
- a. They mentioned him cheating on the test. - Non-finite gerund clause
- b. They mentioned his cheating on the test. - Gerund with noun status

Each of the gerunds in the a-sentences (*stopping*, *attempting*, and *cheating*) constitutes a non-finite clause. The subject-predicate relationship that has long been taken as the defining trait of clauses is fully present in the a-sentences. The fact that the b-sentences are also acceptable illustrates the enigmatic behavior of gerunds. They seem to straddle two syntactic categories: they can function as non-finite verbs or as nouns. When they function as nouns as in the b-sentences, it is debatable whether they constitute clauses, since nouns are not generally taken to be constitutive of clauses.

to-infinitive clauses

Some modern theories of syntax take many *to*-infinitives to be constitutive of non-finite clauses.^[5] This stance is supported by the clear predicate status of many *to*-infinitives. It is challenged, however, by the fact that *to*-infinitives do not take an overt subject, e.g.

- a. She refuses to consider the issue.
- a. He attempted to explain his concerns.

The *to*-infinitives *to consider* and *to explain* clearly qualify as predicates (because they can be negated). They do not, however, take overt subjects. The subjects *she* and *he* are dependents of the matrix verbs *refuses* and *attempted*, respectively, not of the *to*-infinitives. Data like these are often addressed in terms of control. The matrix predicates *refuses* and *attempted* are control verbs; they control the embedded predicates *consider* and *explain*, which means they determine which of their arguments serves as the subject argument of the embedded predicate. Some theories of syntax posit the null subject PRO (=pronoun) to help address the facts of control constructions, e.g.

- b. She refuses PRO to consider the issue.
- b. He attempted PRO to explain his concerns.

With the presence of PRO as a null subject, *to*-infinitives can be construed as complete clauses, since both subject and predicate are present.

One must keep in mind, though, that PRO-theory is particular to one tradition in the study of syntax and grammar (Government and Binding Theory, Minimalist Program). Other theories of syntax and grammar (e.g. Head-Driven Phrase Structure Grammar, Construction Grammar, dependency grammar) reject the presence of null elements such as PRO, which means they are likely to reject the stance that *to*-infinitives constitute clauses.

Small clauses

Another type of construction that some schools of syntax and grammar view as non-finite clauses is the so-called small clause. A typical small clause consists of a noun phrase and a predicative expression,^[6] e.g.

We consider that a joke. - Small clause with the predicative noun phrase *a joke*

Something made him angry. - Small clause with the predicative adjective *angry*

She wants us to stay. - Small clause with the predicative non-finite *to-infinitive* *to stay*

The subject-predicate relationship is clearly present in the underlined strings. The expression on the right is a predication over the noun phrase immediately to its left. While the subject-predicate relationship is indisputably present, the underlined strings do not behave as single constituents, a fact that undermines their status as clauses. Hence one can debate whether the underlined strings in these examples should qualify as clauses. The layered structures of the chomskyan tradition are again likely to view the underlined strings as clauses, whereas the schools of syntax that posit flatter structures are likely to reject clause status for them.

Notes

- [1] For this basic definition in terms of a proposition, see Kroeger (2005:32).
- [2] For a definition of the clause that emphasizes the subject-predicate relationship, see Radford (2004:327f.).
- [3] Most basic discussions of the clause emphasize the distinction between main and subordinate clauses. See for instance Crystal (1997:62).
- [4] Numerous dependency grammar trees like the ones produced here can be found, for instance, in Osborne and Groß (2012).
- [5] For an example of a grammar that acknowledges non-finite *to-infinitive* clauses, see Radford (2004:23).
- [6] For the basic characteristics of small clauses, see Crystal (1997:62).

References

- Crystal, D. 1997. A dictionary of linguistics and phonetics, fourth edition. Oxford, UK: Blackwell Publishers.
- Kroeger, P. 2005. Analysing Grammar: An Introduction. Cambridge, UK: Cambridge University Press.
- Osborne, T. and T. Groß 2012. Constructions are catenae: Construction Grammar meets Dependency Grammar. Cognitive Linguistics 23, 1, 163-214.
- Radford, A. 2004. English syntax: An introduction. Cambridge, UK: Cambridge University Press.

Closed class

In linguistics, a **closed class** (or **closed word class**) is a word class to which no new items can normally be added, and that usually contains a relatively small number of items. Typical closed classes found in many languages are adpositions (prepositions and postpositions), determiners, conjunctions, and pronouns.^[1]

Contrastingly, an open class offers possibilities for expansion. Typical open classes such as nouns and verbs can and do get new words often, through the usual means such as compounding, derivation, coining, borrowing, etc.^[2]

A closed class may get new items through these same processes, but the change takes much more time. The closed class is normally viewed as part of the core language and is not expected to change. Most readers can undoubtedly think of new nouns or verbs entering their lexicon, but it's very unlikely that they can recall any new prepositions or pronouns appearing in the same fashion.

Different languages have different word classes as open class and closed class – for example, in English, pronouns are closed class and verbs are open class (see for example the contentious topic of gender-neutral pronouns in English and how common verbing is), while in Japanese, pronouns are open class, while verbs are closed class – to form a new verb, one suffixes する (-suru, "to do") to a noun – for example, "to exercise" is 運動する – "to do exercise".

References

- [1] <http://strazny.com/encyclopedia/sample-function-words.html> Closed class words
- [2] <http://www.ucl.ac.uk/internet-grammar/wordclas/wordclas.htm> Both open and closed class words

Further reading

- Dixon, R. M. W. (1977). Where have all the adjectives gone?. *Studies in language*, 1, 19–80.

External links

- Open and Closed Word Classes (<http://www.ucl.ac.uk/internet-grammar/wordclas/open.htm>)

Comparative

In grammar, the **comparative** is the form of an adjective or adverb which denotes the degree or grade by which a person, thing, or other entity has a property or quality greater or less in extent than that of another, and is used in this context with a subordinating conjunction, such as *than*.^[1] The comparative is one of the degrees of comparison, along with the positive and the superlative.

Structure

The structure of a comparative in English consists normally of the positive form of the adjective or adverb, plus the suffix *-er*, or (in the case of polysyllabic words borrowed from foreign languages) the modifier *more* (or *less/fewer*) before the adjective or adverb. The form is usually completed by *than* and the noun which is being compared, e.g. "He is taller *than* his father", or "The village is *less* picturesque than the town nearby". *Than* is used as a subordinating conjunction to introduce the second element of a comparative sentence while the first element expresses the difference, as in "Our new house is larger *than* the old one", "There is *less* water in Saudi Arabia *than* in the United States", "There are *fewer* people in Canada *than* in California."

Some adjectives and adverbs that deal with the concept of distance use the modifiers *further* and *furthest* (or *farther* and *farthest*) instead of *more*, for example, "The boy ran *farther away*" or "The expedition was the *furthest up* the river ever recorded".

Comparison normally applies only to gradable adjectives and adverbs, not to ungradable ones like *dead* and *unique*.

Two-clause sentences

For sentences with the two clauses other two-part comparative subordinating conjunctions may be used:^{[2][3]}

1. *as...as* "The house was *as* large *as* two put together."
2. *not so / not as ...as* "The coat of paint is *not as* [*not so*] fresh *as* it used to be."
3. *the same ... as* "This car is *the same size as* the old one."
4. *less / more ... than* "It cost me *more to rent* than I had hoped."
5. *less / more ... than* "His house is *better than* mine"

Adverbs

In English, adverbs are usually formed by adding *-ly* to the end of an adjective. In the comparative, *more* (or *less*) is added before the adverb, as in "This sofa seats three people *more* comfortably than the other one." Some irregular adverbs such as *fast* or *hard* do not use *more*, but add an *-er* suffix, as the adjectives do. Thus: "My new car starts *faster* than the old one" or "She studies *harder* than her sister does."

For some one-syllable adjectives, the comparative of adjectives may be used interchangeably with the comparative of adverbs, with no change in meaning: "My new car starts more *quickly* than the old one" or "My new car starts *quicker* than the old one".

However, if the adjective has an irregular comparative, then the adverb must use it: "She writes *better* than I do" or "He threw the ball *farther* than his brother did."

Absolute comparative

A number of fixed expressions use a comparative form where no comparison is being asserted, such as *higher education* or *younger generation*.

Null comparative

The **null comparative** is a comparative in which the starting point for comparison is not stated. These comparisons are frequently found in advertising.

For example, in typical assertions such as "our burgers have more flavor", "our picture is sharper" or "50% more", there is no mention of what it is they are comparing to. In some cases it is easy to infer what the missing element in a null comparative is. In other cases the speaker or writer has been deliberately vague in this regard, for example "Glasgow's miles better".

Greater/lesser

Scientific classification, taxonomy and geographical categorization conventionally include the adjectives *greater* and *lesser*, when a *large* or *small* variety of an item is meant, as in the greater celandine as opposed to the lesser celandine. These adjectives may at first sight appear as a kind of *null comparative*, when as is usual, they are cited without their opposite counterpart. It is clear however, when reference literature is consulted that an entirely different variety of animal, scientific or geographical object is intended. Thus it may be found, for example, that the lesser panda entails a giant panda variety, and a gazetteer would establish that there are the Lesser Antilles as well as the Greater Antilles.

It is in the nature of grammatical conventions evolving over time that it is difficult to establish when they first became widely accepted, but both *greater* and *lesser* in these instances have over time become mere adjectives (or adverbial constructs), so losing their *comparative* connotation.

When referring to metropolitan areas, *Greater* indicates that adjacent areas such as suburbs are being included. Although it implies a comparison with a narrower definition that refers to a central city only, such as Greater London versus the City of London, or Greater New York versus New York City, it is not part of the "comparative" in the grammatical sense this article describes. A comparative always compares something directly with something else.

References

- [1] John Sinclair, (ed. in chief) (1987) "Collins Cobuild English Language Dictionary", Collins ELT. ISBN 0-00-375021-3 for the definition *subordinating conjunction*
- [2] Tom McArthur (1992) "The Oxford Companion to the English Language", Oxford University Press. ISBN 0-19-214183-X
- [3] Marco Sucupira Language Materials (<http://www.webcitation.org/query?url=http://www.geocities.com/CollegePark/Square/6264/index162.htm&date=2009-10-25+07:01:20>) for the forms of comparisons

Complement (linguistics)

In grammar and linguistics, the term **complement** is used with different meanings, so it is difficult to give a single precise definition and explanation.^[1] 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.^[2] The terms *complement* and *argument* overlap in meaning and use. A given complement is therefore often also an argument. Complements are not adjuncts, however.

Predicative subject and object complements

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,^[3] e.g.

- Larry is **upset**. - Predicative adjective as subject complement
- Susan is **the boss**. - Predicative nominal as subject complement
- That made Fred **lazy**. - Predicative adjective as object complement
- We call Susan **the boss**. - Predicative nominal as object complement

Although widespread in school grammar, this use of terminology is not employed by many modern theories of syntax. The expressions in bold are viewed as part of the clause predicate, which means they are not complements of the subject or object, but rather they are properties that are predicated of the subject or object.

Complements as arguments

In many modern grammars (for instance in those that build on the X-bar schema), the object argument of a verbal predicate is called a complement. In fact, this use of the term is the one that currently dominates in linguistics. A main aspect of this understanding of complements is that the subject is usually NOT a complement of the predicate,^[4] e.g.

- He wiped **the counter**. - *the counter* is the object complement of the verb *wiped*.
- She scoured **the tub**. - *the tub* is the object complement of the verb *scoured*.

The noun phrases (NPs) *the counter* and *the tub* are necessary to complete the meaning of the verbs *wiped* and *scoured*, respectively, hence they are complements.

While it is less common to do so, one sometimes extends this reasoning to subject arguments:^[5]

- He** wiped the counter. - *He* is the subject complement of the verb *wiped*.
- She** scoured the tub. - *She* is the subject complement of the verb *scoured*.

In these examples, the subject and object arguments are taken to be complements. In this area then, the terms *complement* and *argument* overlap in meaning and use. Note that this practice takes a subject complement to be something much different from the subject complements of traditional grammar, which are predicative expressions, as just mentioned above.

Complements broadly construed

Construed in the broadest sense, any time a given expression is somehow necessary in order to render another expression "complete", it can be characterized as a complement of that expression, e.g.^[6]

with **the class** - The NP *the class* is the complement of the preposition *with*.

Jim will **help**. - The main verb *help* is the complement of the auxiliary verb *will*.

Chris gave **up**. - The particle *up* is the complement of the verb *gave*.

as **a friend** - The NP *a friend* is the complement of the particle of comparison *as*.

Construed in this broad sense, many complements cannot be understood as arguments. The argument concept is tied to the predicate concept in a way that the complement concept is not.

Complements vs. adjuncts

Adjuncts appear optionally in the clauses and phrases that contain them. They are NOT necessary to complete the meaning; they are therefore NOT complements, e.g.

a. **right** after the game

b. after the game - The adjunct *right* is not a complement of the preposition *after*.

a. fix the bike **tomorrow**

b. fix the bike - The adjunct *tomorrow* is not a complement of the verb *fix*.

a. the **old** house

b. the house - The adjunct *old* is not a complement of the noun *house*.

a. Stop **immediately!**

b. Stop! - The adjunct *immediately* is not a complement of the verb *stop*.

Since the adjuncts in these examples are not necessary to make the expressions "complete", they cannot be viewed as complements.

Notes

[1] See Matthews (1981:142f.) and Huddleston (1988:note 2) for good overviews of the different uses of the term *complement*.

[2] See Crystal (1997:75).

[3] For examples of grammars that employ the terms *subject complement* and *object complement* to denote predicative expressions, see Matthews (1981:3ff.), Downing and Locke (1992:64f.), Thomas (1993:46, 49), Brinton (2000:183f.).

[4] For examples of this "narrow" understanding of complements, see for instance Lester (1971:83), Horrocks (1987:63), Borsley (1991:60ff.), Cowper (1992:67), Burton-Roberts (1997:41), Fromkin et al. (2000:119).

[5] For examples of theories that take the subject to be a complement of the matrix verb/predicate, see for instance Matthews (1981:101), Pollard and Sag (1994:23), Miller (2011:56).

[6] See Radford (2004:329) for an explanation of complements along these lines.

References

- Borsley, R. 1991. Syntactic theory: A unified approach. Cambridge, MA: Blackwell Publishers.
- Brinton, L. 2000. The structure of modern English. Amsterdam: John Benjamins Publishing Company.
- Burton-Roberts, N. 1997. Analysing sentences: An introduction to English grammar. London: Longman.
- Cowper, E. 1992. A concise introduction to syntactic theory: The government-binding approach. Chicago: The University of Chicago Press.
- Crystal, D. 1997. A dictionary of linguistics and phonetics, 4th edition, Oxford, UK: Blackwell.
- Downing, A. and P. Locke. 1992. English grammar: A university course, second edition. London: Routledge.
- Fromkin, V. et al. 2000. Linguistics: An introduction to linguistic theory. Malden, MA: Blackwell Publishers.

- Horrocks, G. 1986. Generative Grammar. Longman: London.
- Huddleston, R. 1988. English grammar: An outline. Cambridge, UK: Cambridge University Press.
- Lester, M. 1971. Introductory transformational grammar of English. New York: Holt, Rinehart and Winston, Inc.
- Matthews, P. 1981. Syntax. Cambridge, UK: Cambridge University Press.
- Miller, J. 2011. A critical introduction to syntax. London: continuum.
- Pollard, C. and I. Sag. 1994. Head-Driven Phrase Structure Grammar. Chicago: The University Press of Chicago.
- Radford, A. 2004. English syntax: An introduction. Cambridge, UK: Cambridge University Press.
- Thomas, L. 1993. Beginning syntax. Oxford, UK: Blackwell.

External links

- <http://www.arts.uottawa.ca/writcent/hypergrammar/objcompl.html>
- <http://grammar.ccc.commnet.edu/grammar/objects.htm>
- <http://englishplus.com/grammar/00000020.htm>
- http://papyr.com/hypertextbooks/grammar/cl_oc.htm

Compound (linguistics)

In linguistics, a **compound** is a lexeme (less precisely, a word) that consists of more than one stem. **Compounding** or **composition** is the word formation that creates compound lexemes (the other word-formation process being derivation). **Compounding** or **Word-compounding** refers to the faculty and device of language to form new words by combining or putting together old words. In other words, **compound**, **compounding** or **word-compounding** occurs when a person attaches two or more words together to make them one word. The meanings of the words interrelate in such a way that a new meaning comes out which is very different from the meanings of the words in isolation.

Formation of compounds

Compound formation rules vary widely across language types.

In a synthetic language, the relationship between the elements of a compound may be marked with a case or other morpheme. For example, the German compound *Kapitänspatent* consists of the lexemes *Kapitän* (sea captain) and *Patent* (license) joined by an *-s-* (originally a genitive case suffix); and similarly, the Latin lexeme *paterfamilias* contains the archaic genitive form *familias* of the lexeme *familia* (family). Conversely, in the Hebrew language compound, the word בֵּית סְפִּיר bet sefer (school), it is the head that is modified: the compound literally means "house-of book", with בַּיִת bayit (house) having entered the construct state to become בֵּית bet (house-of). This latter pattern is common throughout the Semitic languages, though in some it is combined with an explicit genitive case, so that both parts of the compound are marked.

Agglutinative languages tend to create very long words with derivational morphemes. Compounds may or may not require the use of derivational morphemes also. The longest compounds in the world may be found in the Finnic and Germanic languages. In German, extremely extendable compound words can be found in the language of chemical compounds, where in the cases of biochemistry and polymers, they can be practically unlimited in length. German examples include *Farbfernsehgerät* (color television set), *Funkfernbedienung* (radio remote control), and the jocular word *Donaudampfschiffahrtsgesellschaftskapitänsmütze* (Danube steamboat shipping company Captain's hat).

In Finnish there is no theoretical limit to the length of compound words, but in practice words consisting of more than three components are rare. Even those can look mysterious to non-Finnish, take *häätäuloskäytävä* (emergency exit) as an example. Internet folklore sometimes suggests that *lentokonesuihkuturbiinimoottoriapumekaanikkoaliupseerioppilas* (Airplane jet turbine engine auxiliary mechanic

non-commissioned officer student) would be the longest word in Finnish, but evidence of it actually being used is scant and anecdotic at best.

Compounds can be rather long when translating technical documents from English to some other language, for example, Swedish. "Motion estimation search range settings" can be directly translated to *rörelseuppskattningssökintervallsinställningar*; the length of the words are theoretically unlimited, especially in chemical terminology.

Subclasses

Semantic classification

A common semantic classification of compounds yields four types:

- endocentric
- exocentric (also *bahuvrihi*)
- copulative (also *dvandva*)
- appositional

An **endocentric compound** consists of a *head*, i.e. the categorical part that contains the basic meaning of the whole compound, and modifiers, which restrict this meaning. For example, the English compound *doghouse*, where *house* is the head and *dog* is the modifier, is understood as a house intended for a dog. Endocentric compounds tend to be of the same part of speech (word class) as their head, as in the case of *doghouse*. (Such compounds were called *tatpuruṣa* in the Sanskrit tradition.)

Exocentric compounds (called a *bahuvrihi* compound in the Sanskrit tradition) are hyponyms of some unexpressed semantic head (e.g. a person, a plant, an animal...), and their meaning often cannot be transparently guessed from its constituent parts. For example, the English compound *white-collar* is neither a kind of collar nor a white thing. In an exocentric compound, the word class is determined lexically, disregarding the class of the constituents. For example, a *must-have* is not a verb but a noun. The meaning of this type of compound can be glossed as "(one) whose B is A", where B is the second element of the compound and A the first. A *bahuvrihi* compound is one whose nature is expressed by neither of the words: thus a *white-collar* person is neither white nor a collar (the collar's colour is a metaphor for socioeconomic status). Other English examples include *barefoot* and *Blackboard*.

Copulative compounds are compounds which have two semantic heads.

Appositional compounds refer to lexemes that have two (contrary) attributes which classify the compound.

Type	Description	Examples
endocentric	A+B denotes a special kind of B	<i>darkroom, smalltalk</i>
exocentric	A+B denotes a special kind of an unexpressed semantic head	<i>skinhead, paleface</i> (head: 'person')
copulative	A+B denotes 'the sum' of what A and B denote	<i>bittersweet, sleepwalk</i>
appositional	A and B provide different descriptions for the same referent	<i>actor-director, maidservant</i>

Formal classification

Noun–noun compounds

Most natural languages have compound nouns. The positioning of the words (i. e. the most common order of constituents in phrases where nouns are modified by adjectives, by possessors, by other nouns, etc.) varies according to the language. While Germanic languages, for example, are left-branching when it comes to noun phrases (the modifiers come before the head), the Romance languages are usually right-branching.

In French, compound nouns are often formed by left-hand heads with prepositional components inserted before the modifier, as in *chemin-de-fer* 'railway' lit. 'road of iron' and *moulin à vent* 'windmill', lit. 'mill (that works)-by-means-of wind'.

In Turkish, one way of forming compound nouns is as follows: *yeldeğirmeni* 'windmill' (yel: wind, değirmen-i:mill+possessive); *demiryolu* 'railway'(demir: iron, yol-u: road+possessive).

Verb–noun compounds

A type of compound that is fairly common in the Indo-European languages is formed of a verb and its object, and in effect transforms a simple verbal clause into a noun.

In Spanish, for example, such compounds consist of a verb conjugated for third person singular, present tense, indicative mood followed by a noun (usually plural): e.g., *rascacielos* (modelled on "skyscraper", lit. 'scratches skies'), *sacacorchos* ('corkscrew', lit. 'removes corks'), *guardarropas* ('wardrobe', lit. 'stores clothing'). These compounds are formally invariable in the plural (but in many cases they have been reanalyzed as plural forms, and a singular form has appeared). French and Italian have these same compounds with the noun in the singular form: Italian *grattacielo*, 'skyscraper'; French *grille-pain*, 'toaster' (lit. 'toasts bread').

This construction exists in English, generally with the verb and noun both in uninflected form: examples are *spoilsport*, *killjoy*, *breakfast*, *cutthroat*, *pickpocket*, *dreadnought*, and *know-nothing*.

Also common in English is another type of verb–noun (or noun–verb) compound, in which an argument of the verb is incorporated into the verb, which is then usually turned into a gerund, such as *breastfeeding*, *finger-pointing*, etc. The noun is often an instrumental complement. From these gerunds new verbs can be made: (*a mother*) *breastfeeds* (*a child*) and from them new compounds *mother-child breastfeeding*, etc.

In the Australian Aboriginal language Jingulu, (a Pama–Nyungan language), it is claimed that all verbs are V+N compounds, such as "do a sleep", or "run a dive", and the language has only three basic verbs: *do*, *make*, and *run*.^[1]

A special kind of composition is incorporation, of which noun incorporation into a verbal root (as in English *backstabbing*, *breastfeed*, etc.) is most prevalent (see below).

Verb–verb compounds

Verb–verb compounds are sequences of more than one verb acting together to determine clause structure. They have two types:

- In a **serial verb**, two actions, often sequential, are expressed in a single clause. For example, Ewe *trɔ dzo*, lit. "turn leave", means "turn and leave", and Hindi जाकर देखो *jā-kar dekh-o*, lit. "go-CONJUNCTIVE PARTICIPLE see-IMPERATIVE", means "go and see". In Tamil, a Dravidian language, *vantu pa:r*, lit. "come see". In each case, the two verbs together determine the semantics and argument structure.

Serial verb expressions in English may include *What did you go and do that for?*, or *He just upped and left*; this is however not quite a true compound since they are connected by a conjunction and the second missing arguments may be taken as a case of ellipsis.

- In a **compound verb** (or *complex predicate*), one of the verbs is the primary, and determines the primary semantics and also the argument structure. The secondary verb, often called a vector verb or explicator, provides

fine distinctions, usually in temporality or aspect, and also carries the inflection (tense and/or agreement markers). The main verb usually appears in conjunctive participial (sometimes *zero*) form. For examples, Hindi नकिल गया *nikal gayā*, lit. "exit went", means 'went out', while नकिल पड़ा *nikal paRā*, lit. "exit fell", means 'departed' or 'was blurted out'. In these examples नकिल *nikal* is the primary verb, and गया *gayā* and पड़ा *paRā* are the vector verbs. Similarly, in both English *start reading* and Japanese 読み始める *yomihajimeru* "start-CONJUNCTIVE-read" "start reading," the vector verbs *start* and 始める *hajimeru* "start" change according to tense, negation, and the like, while the main verbs *reading* and 読み *yomi* "reading" usually remain the same. An exception to this is the passive voice, in which both English and Japanese modify the main verb, i.e. *start to be read* and 読まれ始める *yomarehajimeru* lit. "read-PASSIVE-(CONJUNCTIVE)-start" *start to be read*. With a few exceptions all compound verbs alternate with their simple counterparts. That is, removing the vector does not affect grammaticality at all nor the meaning very much: नकिला *nikalā* '(He) went out.' In a few languages both components of the compound verb can be finite forms: Kurukh *kecc-ar ker-ar* lit. "died-3pl went-3pl" '(They) died.'

- Compound verbs are very common in some languages, such as the northern Indo-Aryan languages Hindi-Urdu and Panjabi, and Dravidian languages like Tamil, where as many as 20% of verb forms in running text are compound. They exist but are less common in other Indo-Aryan languages like Marathi and Nepali, in Tibeto-Burman languages like Limbu and Newari, in Turkic languages like Turkish and Kyrgyz, in Korean and Japanese, and in northeast Caucasian languages like Tsez and Avar.
- Under the influence of a Quichua substrate speakers living in the Ecuadorian altiplano have innovated compound verbs in Spanish:

De rabia puso rompiendo la olla, 'In anger (he/she) smashed the pot.' (Lit. from anger **put breaking** the pot)

Botaremos matándote 'We will kill you.' (Cf. Quichua *huañuchi-shpa shitashun*, lit. kill-CP throw.1plFut.

Likewise in Hindi: तेरे को मार डालेंगे *tere ko mār DāleNge*, lit. "we will kill-throw you").

- Compound verb equivalents in English (examples from the internet):

What did you go and do that for?

If you are not giving away free information on your web site then a huge proportion of your business is just upping and leaving.

Big Pig, she took and built herself a house out of brush.

- Caution: In descriptions of Persian and other Iranian languages the term 'compound verb' refers to noun-plus-verb compounds, not to the verb–verb compounds discussed here.

Compound adpositions

Compound prepositions formed by prepositions and nouns are common in English and the Romance languages (consider English *on top of*, Spanish *encima de*, etc.). Japanese shows the same pattern, except the word order is the opposite (with postpositions): *no naka* (lit. "of inside", i.e. "on the inside of"). Hindi has a small number of simple (i.e., one-word) postpositions and a large number of compound postpositions, mostly consisting of simple postposition *ke* followed by a specific postposition (e.g., *ke pas*, "near"; *ke niche*, "underneath").

Examples from different languages

Anishinaabemowin/Ojibwe:

- *mashkikiwaaboo* 'tonic': *mashkiki* 'medicine' + *waaboo* 'liquid'
- *miskomin* 'raspberry': *misko* 'red' + *miin* 'berry'
- *dibik-giizis* 'moon': *dibik* 'night' + *giizis* 'sun'
- *gichi-mookomaan* 'white person/American': *gichi* 'big' + *mookomaan* 'knife'

Chinese (Cantonese Jyutping):

- 學生 'student': 學 *hok6* learn + 生 *sang1* grow
- 太空 'universe': 太 *taai3* great + 空 *hung1* emptiness
- 摩天樓 'skyscraper': 摩 *mo1* touch + 天 *tin1* sky + 樓 *lau2* building (with more than 1 storey)
- 打印機 'printer': 打 *daa2* strike + 印 *yan3* stamp/print + 機 *gei1* machine
- 百科全書 'encyclopaedia': 百 *baak3* 100 + 科 *fo1* (branch of) study + 全 *cyun4* entire/complete + 書 *syu1* book

Dutch:

- *Arbeidsongeschiktheidsverzekering* 'disability insurance': *arbeid* 'labour', + *ongeschiktheid* 'inaptitude', + *verzekering* 'insurance'.
- *Rioolwaterzuiveringsinstallatie* 'wastewater treatment plant': *riool* 'sewer', + *water* 'water', + *zuivering* 'cleaning', + *installatie* 'installation'.
- *Verjaardagskalender* 'birthday calendar': *verjaardag* 'birthday', + *kalender* 'calendar'.
- *Klantenservicemedewerker* 'customer service representative': *klanten* 'customers', + *service* 'service', + *medewerker* 'worker'.
- *Universiteitsbibliotheek* 'university library': *universiteit* 'university', + *bibliotheek* 'library'.
- *Doorgroeimogelijkheden* 'possibilities for advancement': *door* 'through', + *groei* 'grow', + *mogelijkheden* 'possibilities'.

Finnish:

- *sanakirja* 'dictionary': *sana* 'word', + *kirja* 'book'
- *tietokone* 'computer': *tieto* 'knowledge, data', + *kone* 'machine'
- *keskiviikko* 'Wednesday': *keski* 'middle', + *viikko* 'week'
- *maailma* 'world': *maa* 'land', + *ilma* 'air'
- *rautatieasema* 'railway station': *rauta* 'iron' + *tie* 'road' + *asema* 'station'
- *kolmivaihekilowattituntimittari* 'electricity meter': 'three-phase kilowatt hour meter'
- *suihkuturbiiniapumekaanikkoaliupseerioppilas*: 'Jet engine assistant mechanic NCO student'
- *atomiydinenergiareaktorigeneraattorilauhduttajaturbiiniratasvaihde*: some part of a nuclear plant

German:

- *Wolkenkratzer* 'skyscraper': *wolken* 'clouds', + *kratzer* 'scraper'
- *Eisenbahn* 'railway': *Eisen* 'iron', + *bahn* 'track'
- *Kraftfahrzeug* 'automobile': *Kraft* 'power', + *fahren/fahr* 'drive', + *zeug* 'machinery'



The German language has many compounds

- *Stacheldraht* 'barbed wire': *stachel* 'barb/barbed', + *draht* 'wire'
- *Rinderkennzeichnungs- und Rindfleischetikettierungsaufgabenübertragungsgesetz*: literally, Cattle marking and beef labeling supervision duties delegation law

Icelandic:

- *járnbraut* 'railway': *járn* 'iron', + *braut* 'path' or 'way'
- *farartæki* 'vehicle': *farar* 'journey', + *tæki* 'apparatus'
- *alfræðiorðabók* 'encyclopaedia': *al* 'everything', + *fræði* 'study' or 'knowledge', + *orða* 'words', + *bók* 'book'
- *símtal* 'telephone conversation': *sím* 'telephone', + *tal* 'dialogue'

Italian:

- *Millepiedi* 'centipede': *mille* 'thousand', + *piedi* 'feet'
- *Ferrovia* 'railway': *ferro* 'iron', + *via* 'way'
- *Tericristallo* 'windscreen wiper': *tergere* 'to wash', + *cristallo* 'crystal, (pane of) glass'

Japanese:

- 目まし (時計) *mezamashi(dokei)* 'alarm clock': 目 *me* 'eye' + まし *samashi* (-zamashi) 'awakening (someone)' (+ 時計 *tokei* (-dokei) clock)
- お好み焼き *okonomiyaki*: お好み *okonomi* 'preference' + 焼き *yaki* 'cooking'
- 日入り *higaeri* 'day trip': 日 *hi* 'day' + 入り *kaeri* (-gaeri) 'returning (home)'
- 国会議事堂 *kokkaigijidō* 'national diet building': 国会 *kokai* 'national diet' + 議事 *giji* 'proceedings' + 堂 *dō* 'hall'

Korean:

- 안팎 *anpak* 'inside and outside': 안 *an* 'inside' + 밖 *bak* 'outside' (As two nouns compound, the consonant sound 'b' fortifies into 'p,' becoming 안팎 *anpak* rather than 안밖 *anbak*)

Spanish:

- *Ciencia-ficción* 'science fiction': *ciencia*, 'science', + *ficción*, 'fiction' (This word is a calque from the English expression *science fiction*. In English, the head of a compound word is the last morpheme: *science fiction*. Conversely, the Spanish head is located at the front, so *ciencia ficción* sounds like a kind of fictional science rather than scientific fiction.)
- *Ciempieś* 'centipede': *cien* 'hundred', + *pies* 'feet'
- *Ferrocarril* 'railway': *ferro* 'iron', + *carril* 'lane'
- *Paraguas* 'umbrella': *para* 'to stop, stops' + *aguas* '(the) water'
- *Cabizbajo* 'keeping the head low, in a bad mood'
- *Subibaja* 'seesaw'

Germanic languages

In Germanic languages, compound words are formed by prepending a descriptive word in front of the main word. For example, "starfish" is a specific "fish" with a "star" shape. Likewise, the noun phrase "star shape" means a "star"like "shape" (whatever a star is). Whereas "starfish" has an explicit definition, this is not required, as compounds like "star shape" and "starlike" can be composed when needed and understood by their implicit meaning. The compound word is understood as a word in itself. Therefore, it may in turn be used in new compound words, so forming an arbitrarily long word is trivial. This contrasts to Romance languages, where prepositions are more used to specify word relationships instead of concatenating the words.

As a member of the Germanic family of languages, English is special in that compound words are usually written in their separate parts. Although English does not form compound nouns to the extent of Dutch or German, noun phrases like "Girl Scout troop", "city council member", and "cellar door" are arguably compound nouns and used as such in speech. Writing them as separate words is merely an orthographic convention, possibly a result of influence from French.

Russian language

In the Russian language compounding is a common type of word formation, and several types of compounds exist, both in terms of compounded parts of speech and of the way of the formation of a compound.^[2]

Compound nouns may be agglutinative compounds, hyphenated compounds (стол-книга 'folding table' lit. 'table-book', i.e., "book-like table"), or abbreviated compounds (portmanteaux: колхоз 'kolkhoz'). Some compounds look like portmanteaux, while in fact they are an agglutinations of type stem + word: Академгородок 'Akademgorodok' (from *akademichesky gorodok* 'academic village'). In agglutinative compound nouns, an agglutinating infix is typically used: пароход 'steamship': пар + о + ход. Compound nouns may be created as noun+noun, adjective + noun, noun + adjective (rare), noun + verb (or, rather, noun + verbal noun).

Compound adjectives may be formed either per se, e.g., бело-розовый 'white-pink', or as a result of compounding during the derivation of an adjective from a multiword term: Каменноостровский проспект ([kəm'Innʌʌ'strobvsk̩i prʌ'spɛkt]) 'Stone Island Avenue', a street in St.Petersburg.

Reduplication in Russian language is also a source of compounds.

Quite a few Russian words are borrowed from other languages in an already compounded form, including numerous "classical compounds" or internationalisms: автомобиль 'automobile'.

Sanskrit language

Sanskrit is very rich in compound formation with seven major compound types and as many as 55 sub-types.^[3] The compound formation process is an open-set, and it is not possible to list all Sanskrit compounds in a dictionary. Compounds of two or three words are more frequent, but longer compounds with some *running through pages* are not rare in Sanskrit literature.^[3] Some examples are below (hyphens below show individual word boundaries for ease of reading but are not required in original Sanskrit).

- हिमालय (IAST Himālaya, decomposed as hima-ālaya): Name of the Himalaya mountain range. Literally *the abode of snow*.^[4] A compound of two words and four syllables.
- प्रवरा-मुकुट-मणि-मरीच-मञ्जरी-चय-चरचति-चरण-युगल (IAST pravara-mukuṭa-maṇi-marīci-mañjarī-caya-carcita-caraṇa-yugala): Literally, *O the one whose dual feet are covered by the cluster of brilliant rays from the gems of the best crowns*, from the Sanskrit work Panchatantra.^[3] A compound of nine words and 25 syllables.
- कमला-कुच-कुड़कुम-पिन्जरीकृत-वक्षः-स्थल-वरिजन्ति-महा-कौस्तुभ-मणि-मरीच-माला-नशिकृत-त्र्य-भुवन-तमिरि (IAST kamalā-kuca-kuḍkuma-piñjarīkṛta-vakṣaḥ-sthala-virajita-mahā-kaustubha-maṇi-marīci-mālā-nirākṛta-tri-bhuvana-timira): Literally *O the one who dispels the darkness of three worlds by the shine of Kaustubha jewel hanging on the chest which has been made reddish-yellow by the saffron from the bosom of Kamalā (Lakshmi)*, an adjective of Rama in the Kakabhushundi Rāmāyaṇa.^[5] A compound of 16 words and 44 syllables.
- साङ्ख्य-योग-न्याय-वैशेषिक-पूर्व-मीमांसा-वेदान्त-नारद-शाण्डलिय-भक्ति-सूत्र-गीता-वाल्मीकीय-रामायण-भागवताद-सद्धिधानन्त-बोध-पुरः-सर-समधिकृताशेष-तुलसी-दास-साहतिय-सौहत्रिय-स्वाध्या (IAST sāṅkhy-a-yoga-nyāya-vaiśeṣika-pūrva-mīmāṃsā-vedānta-nārada-sāṅḍilya-bhakti-sūtra-gītā-vālmīkiya-rāmāyaṇa-bhāgavatādi-siddhi Literally *the acclaimed forerunner in understanding of the canons of Sāṅkhyā, Yoga, Nyāya, Vaiśeṣika, Pūrva Mīmāṃsā, Vedānta, Nārada Bhakti Sūtra, Śāṅḍilya Bhakti Sūtra, Bhagavad Gītā, the Ramayana of Vālmīki, Śrīmadbhāgavata; and the most skilled in comprehensive self-study, discoursing and expounding of the complete works of Gosvāmī Tulasīdāsa*.^[6] An adjective used in a panegyric of Jagadguru Rambhadra Charya. The hyphens show only those word boundaries where there is no Sandhi. On including word boundaries with Sandhis (vedānta=veda-anta, rāmāyaṇa=rāma-ayana, bhāgavatādi=bhāgavata-ādi, siddhānta=siddha-anta, samadhiकृताशेष=samadhiकृता-aśeṣa, svādhīया=sva-adhyāya), this is a compound of 35 words and 86 syllables.

Recent trends

Although there is no universally agreed-upon guideline regarding the use of compound words in the English language, in recent decades written English has displayed a noticeable trend towards increased use of compounds. Recently, many words have been made by taking syllables of words and compounding them, such as pixel (picture element) and bit (binary digit). This is called a syllabic abbreviation.

There is a trend in Dutch and the Scandinavian languages towards splitting compound words, known in Norwegian as "særskrivingsfeil" (separate writing error) and in Dutch as "Engelse ziekte" (English disease). Because the Norwegian language relies heavily on the distinction between the compound word and the sequence of the separate words it consists of, this has dangerous implications. For example "røykfritt" (smokefree, meaning no smoking) has been seen confused with "røyk fritt" (smoke freely). In Dutch, compounds written with spaces may be confused as they are in Norwegian, but can also be interpreted as a sequence of a noun and a genitive (which is unmarked in Dutch) in formal abbreviated writing. This may lead to, for example, *commissie vergadering* "commission meeting" being read as "commission of the meeting" rather than "meeting of the commission" (normally spelled *commissievergadering*).

The German spelling reform of 1996 introduced the option of hyphenating compound nouns when it enhances comprehensibility and readability. This is done mostly with very long compound words by separating them into two or more smaller compounds, like *Eisenbahn-Unterführung* (railway underpass) or *Kraftfahrzeugs-Betriebsanleitung* (car manual). Such practice is also permitted in Norwegian (Bokmål and Nynorsk), and encouraged between parts of the word that have very different pronunciation, such as when one part is a loan word or an acronym.

Compounding by language

- Classical compounds
- English compounds
- Sanskrit compounds

Notes

- [1] Pensalfini, R. (1992) *Jingulu Grammar, Dictionary and Texts*, pp. 138-139. Unpublished PhD thesis submitted to the Massachusetts Institute of Technology, May 12, 1992.
- [2] *Student Dictionary of Compound Words of the Russian Language*(1978) ISBN 0-8285-5190-1
- [3] Kumar, Anil; Mittal, Vipul; Kulkarni, Amba (2010). "Sanskrit Compound Processor". In Jha, Girish Nath (ed.). *Sanskrit Computational Linguistics: 4th International Symposium, New Delhi, India, December 10–12, 2010: Proceedings (Volume 6465 of Lecture Notes in Computer Science / Lecture Notes in Artificial Intelligence Series)*. Springer. pp. 57–69. ISBN 3-642-17527-9, 9783642175275.
- [4] Harper, Douglas. "Himalaya" (<http://www.etymonline.com/index.php?term=Himalaya>). *Online Etymology Dictionary*. . Retrieved 2011-07-17.
- [5] Kumar, Animesh (May 23, 2007). "Sruti Krta Rama Stuti" (<http://www.stutimandal.com/new/poemgen.php?id=209>). Stutimandal.com. . Retrieved July 1, 2011.
- [6] "Virudavali – Jagadguru Rambhadracharya" (<http://jagadgururambhadracharya.org/virudavali.php>). Shri Tulsi Peeth Seva Nyas. . Retrieved October 25, 2011.

References

- Kortmann, Bernd: *English Linguistics: Essentials*, Cornelsen, Berlin 2005.
- *The Oxford Handbook of Compounding*, eds. Lieber, Rochelle & Pavol Štekauer, 2009. Oxford: Oxford University Press.
- Plag, Ingo: *Word-formation in English*, Cambridge University Press, Cambridge 2003.
- Scalise Sergio & Irene Vogel (eds.) (2010), *Cross-Disciplinary Issues in Compounding*, Amsterdam, Benjamins.

External links

- Compound Words: When to Hyphenate (<http://www.getitwriteonline.com/archive/042703CompWdsHyph.htm>)

Constituent (linguistics)

In syntactic analysis, 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.

Constituency tests

Constituency tests are diagnostics employed to identify the constituent structure of sentences.^[1] There are numerous constituency tests applied to English sentences, many of which are listed here: 1. topicalization (fronting), 2. clefting, 3. pseudoclefting, 4. pro-form substitution (replacement), 5. answer ellipsis (question test), 6. passivization, 7. omission (deletion), 8. coordination, etc. These tests are rough-and-ready tools that grammarians employ to reveal clues about syntactic structure. A word of caution is warranted when employing these tests, since they often deliver contradictory results. Some syntacticians even arrange the tests on a scale of reliability, with less-reliable tests treated as useful to confirm constituency though not sufficient on their own.^[2] Failing to pass a single test does not mean that the unit is not a constituent, and conversely, passing a single test does not mean necessarily that the unit is a constituent. It is best to apply as many tests as possible to a given unit in order to prove or to rule out its status as a constituent.

Topicalization (fronting)

Topicalization involves moving the test sequence to the front of the sentence. It is a simple movement operation.^[3]

He is going to attend another course **to improve his English**.

To improve his English, he is going to attend another course.

Clefting

Clefting involves placing a sequence of words X within the structure beginning with *It is/was: It was X that...*^[4]

She bought **a pair of gloves with silk embroidery**.

It was a pair of gloves with silk embroidery that she bought.

Pseudoclefting

Pseudoclefting (also **preposing**) is similar to clefting in that it puts emphasis on a certain phrase in a sentence. It involves inserting a sequence of words before *is/are what* or *is/are who*.^[5]

She bought **a pair of gloves with silk embroidery**.

A pair of gloves with silk embroidery is what she bought.

Pro-form substitution (replacement)

Pro-form substitution, or replacement, involves replacing the test constituent with the appropriate pro-form (e.g. pronoun). Substitution normally involves using a definite pro-form like *it*, *he*, *there*, *here*, etc. in place of a phrase or a clause. If such a change yields a grammatical sentence where the general structure has not been altered, then the test sequence is a constituent.^[6]

I don't know **the man who is sleeping in the car**.

*I don't know **him who is sleeping in the car**. (ungrammatical)

I don't know **him**.

The ungrammaticality of the first changed version and the grammaticality of the second one demonstrates that the whole sequence, *the man who is sleeping in the car*, and not just *the man* is a constituent functioning as a unit.

Answer ellipsis (answer fragments, question test)

The answer ellipsis test refers to the ability of a sequence of words to stand alone as a reply to a question. It is often used to test the constituency of a verbal phrase but can also be applied to other phrases:^[7]

What did you do yesterday? - **Worked on my new project**.

What did you do yesterday? - ***Worked on**. (unacceptable, so *worked on* is not a constituent).

Linguists do not agree whether passing the answer ellipsis test is sufficient, though at a minimum they agree that it can help confirm the results of another constituency test.

Passivization

Passivization involves changing an active sentence to a passive sentence, or vice versa. The object of the active sentence is changed to the subject of the corresponding passive sentence:^[8]

A car driving at breakneck speed nearly hit **the little dog**.

The little dog was nearly hit by **a car driving at breakneck speed**.

In case passivization results in a grammatical sentence, the phrases that have been moved can be regarded as constituents.

Omission (deletion)

Omission checks whether a sequence of words can be omitted without influencing the grammaticality of the sentence — in most cases, local or temporal adverbials can be safely omitted and thus qualify as constituents.^[9]

Fred relaxes **at night on his couch**.

Fred relaxes **on his couch**.

Fred relaxes **at night**.

Since they can be omitted, the prepositional phrases *at night* and *on his couch* are constituents.

Coordination

The coordination test assumes that only constituents can be coordinated, i.e., joined by means of a coordinator such as *and*:^[10]

He enjoys [**writing sentences**] and [**reading them**].

[He enjoys writing] and **[she enjoys reading]** sentences.

[He enjoys] but **[she hates]** writing sentences.

Based on the fact that *writing sentences* and *reading them* are coordinated using *and*, one can conclude that they are constituents. The validity of the coordination test is challenged by additional data, however. The latter two sentences, which are instances of so-called right node raising, suggest that the sequences in bold should be understood as constituents. Most grammars do not view sequences such as *He enjoys* to the exclusion of the VP *writing sentences* as a constituent. Thus while the coordination test is widely employed as a diagnostic for constituent structure, it is faced with major difficulties and is therefore perhaps the least reliable of all the tests mentioned.^[11]

Constituency tests and disambiguation

Syntactic ambiguity characterizes sentences which can be interpreted in different ways depending solely on how one perceives syntactic connections between words and arranges them into phrases. Possible interpretations of the sentence *They killed the man with a gun*:

'The man was shot'.

'The man who was killed had a gun with him'.

The ambiguity of this sentence results from two possible arrangements into constituents:

They killed [the man] [with a gun].

They killed [the man with a gun].

In the first sentence, *with a gun* is an independent constituent with instrumental meaning. In the second sentence, it is embedded in the noun phrase *the man with a gun* and is modifying the noun *man*. The autonomy of the unit *with a gun* in the first interpretation can be tested by the answer ellipsis test:

How did they kill the man? - **With a gun**.

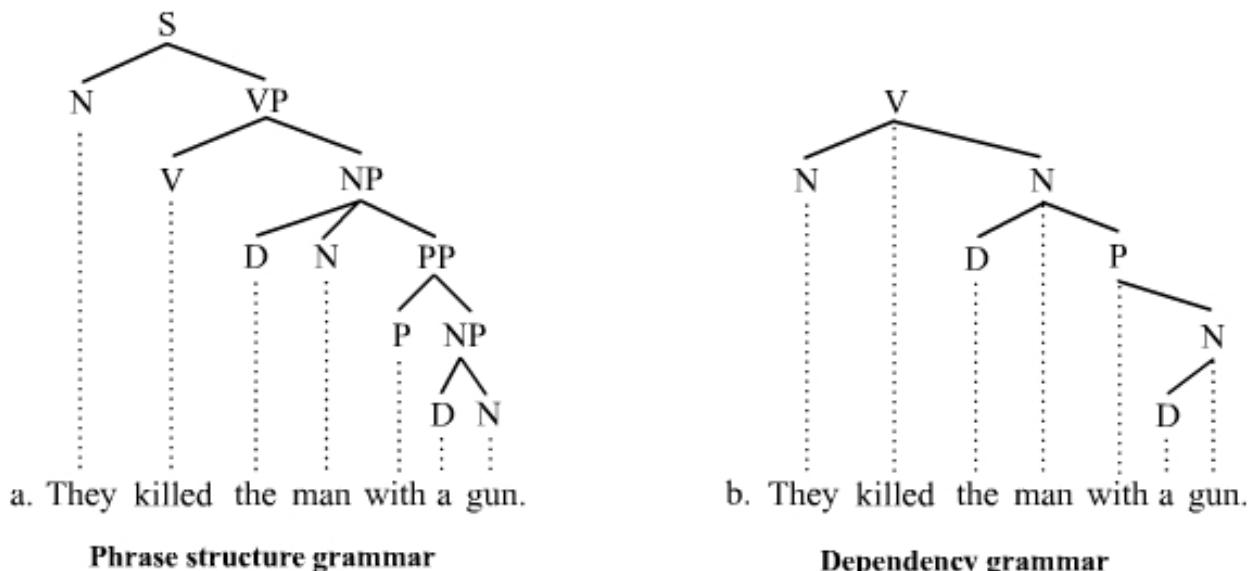
However, the same test can be used to prove that *the man with a gun* in the second sentence should be treated as a unit:

Who(m) did they kill? - **The man with a gun**.

The ability of constituency tests to disambiguate certain sentence in this manner bears witness to their utility. Most if not all syntacticians employ constituency tests in some form or another to arrive at the structures that they assign to sentences.

Competing theories

Alternate theoretical approaches to syntax make different assumptions regarding what is considered a constituent. In mainstream phrase structure grammar (and its derivatives), individual words are constituents in and of themselves as well as being parts of other constituents, whereas in dependency grammar,^[12] certain core words in each phrase are not a constituent by themselves, but only members of a phrasal constituent. The following trees show the same sentence in two different theoretical representations, with a phrase structure representation on the left and a dependency grammar representation on the right. In both trees, a constituent is understood to be the entire tree or any labelled subtree (a node plus all the nodes dominated by that node); note that words like *killed* and *with*, for instance, form subtrees (and are considered constituents) in the phrase structure representation but not in the dependency structure representation.^[13]

**Phrase structure grammar****Dependency grammar**

Notes

- [1] See for instance Burton-Roberts (1997:7–23) and Carnie (2002:51-53).
- [2] April 22, 2006 Language Log posting (<http://itre.cis.upenn.edu/~myl/languagelog/archives/003053.html>) by Eric Bakovic of University of California, San Diego
- [3] For examples of topicalization used as a constituency test, see for instance Allerton (1979:114), Borsley (1991:24), Napoli (1993:422), Burton-Roberts (1997:17), Poole (2002:32), Radford (2004:72), Haegeman (2006:790).
- [4] For examples of clefting used as a constituency test, see Brown and Miller (1980:25), Borsley (1991:24), Napoli (1993:148), McCawley (1997:64), Haegeman and Guérón (1999:49), Santorini and Kroch (2000), Akmajian et al. (2001:178); Carnie (2002:52), Haegeman (2006:85).
- [5] For examples of pseudoclefting used as a constituency test, see Brown and Miller (1980:25), Borsley (1991:24), McCawley (1997:661), Haegeman and Guérón (1999:50), Haegeman (2006).
- [6] For examples of pro-form substitution used as a constituency test, see Radford (1988:92, 1997:109), Haegeman and Guérón (1999:46), Lasnik (2000:9), Santorini and Kroch (2000), Dalrymple (2001:48), Carnie (2002:51), Poole (2002:29), Radford (2004:71), Haegeman (2006:74).
- [7] For examples of answer ellipsis used as a constituency test, see Brown and Miller (1980:25), Radford (1988:91, 96), Burton-Roberts (1997:16), Radford (1997:107), Haegeman and Guérón (1999:46), Santorini and Kroch (2000), Carnie (2002:52), Haegeman (2006:82).
- [8] For an example of passivization used as a test for constituent structure, see Borsley (1991:24).
- [9] For examples of omission used as a constituency test, see Allerton (1979:101f.), Burton-Roberts (1997:15), and Haegeman and Guérón (1999:49).
- [10] For examples of coordination used as a test for constituent structure, see Radford (1988:90), Borsley (1991:25), Cowper (1992:34), Napoli (1993:165), Ouhalla (1994:17), Jacobson (1996:60), McCawley (1997:58), Radford (1997:104), Lasnik (2000:11), Akmajian et al. (2001:179), Poole (2002:31).
- [11] The problems with coordination as a test for constituent structure have been pointed out in numerous places in the literature. See for instance Brinker (1972:52), Dalrymple (2001:48), Nerbonne (1994:120f.), Carnie (2002:53).
- [12] Two prominent sources on dependency grammar are Tesnière (1959) and Ágel, et al. (2003/2006).
- [13] For a comparison of these two competing views of constituent structure, see Osborne (2008:1126-32).

References

- Ágel, V., L. Eichinger, H.-W. Eroms, P. Hellwig, H. Heringer, and H. Lobin (eds.) 2003/6. Dependency and valency: An international handbook of contemporary research. Berlin: Walter de Gruyter.
- Akmajian, A., R. Demers, A. Farmer and R. Harnish. 2001. Linguistics: An introduction to language and communication, 5th edn. Cambridge: MIT Press.
- Allerton, D. 1979. Essentials of grammatical theory: A consensus view of syntax and morphology. London: Routledge and Kegan Paul.
- Borsley, R. 1991. Syntactic theory: A unified approach. London: Edward Arnold.
- Brinker, K. 1972. Konstituentengrammatik und operationale Satzgliedanalyse: Methodenkritische Untersuchungen zur Syntax des einfachen deutschen Satzes. Frankfurt a. M.: Athenäum.
- Brown, K. and J. Miller 1980. Syntax: A linguistic introduction to sentence structure. London: Hutchinson.
- Burton-Roberts, N. 1997. Analysing sentences: An introduction to English syntax. 2nd Edition. Longman.
- Carnie, A. 2002. Syntax: A generative introduction. Oxford: Blackwell.
- Carnie, A. 2010. Constituent Structure. Oxford: Oxford University Press.
- Cowper, E. 1992. A concise introduction to syntactic theory: The government-binding approach. Chicago: The University of Chicago Press.
- Dalrymple, M. 2001. Lexical functional grammar. Syntax and semantics 34. San Diego: Academic Press.
- Haegeman, L. 2006. Thinking syntactically: A guide to argumentation and analysis. Malden, MA: Blackwell.
- Haegeman, L. and J. Guéron 1999. English grammar: A generative perspective. Oxford: Basil Blackwell.
- Jacobson, P. 1996. Constituent structure. In Concise encyclopedia of syntactic theories. Cambridge: Pergamon.
- Lasnik, H. 2000. Syntactic structures revisited: Contemporary lectures on classic transformational theory. Cambridge: MIT Press.
- McCawley, J. 1997. The syntactic phenomena of English, 2nd edn. Chicago: University of Chicago Press.
- Napoli, D. 1993. Syntax: Theory and problems. New York: Oxford University Press.
- Nerbonne, J. 1994. Partial verb phrases and spurious ambiguities. In: J. Nerbonne, K. Netter and C. Pollard (eds.), German in Head-Driven Phrase Structure Grammar, CSLI Lecture Notes Number 46. 109-150. Stanford: CSLI Publications.
- Osborne, T. 2008. Major constituents: And two dependency grammar constraints on sharing in coordination. *Linguistics* 46, 6, 1109-1165.
- Ouhalla, J. 1994. Introducing transformational grammar: From rules to principles and parameters. Oxford: Oxford University Press.
- Poole, G. 2002. Syntactic theory. New York: Palgrave.
- Radford, A. 1988. Transformational grammar: A first course. Cambridge, UK: Cambridge University Press.
- Radford, A. 1997. Syntactic theory and the structure of English: A minimalist approach. Cambridge, UK: Cambridge University Press.
- Radford, A. 2004. English syntax: An introduction. Cambridge, UK: Cambridge University Press.
- Santorini, B. and A. Kroch 2000. The syntax of natural language: An online introduction using the trees program. Available at (accessed on March 14, 2011): <http://www.ling.upenn.edu/~beatrice/syntax-textbook/00/index.html>.
- Tesnière, L. 1959. Éléments de syntaxe structurale. Paris: Klincksieck.

Grammatical conjugation

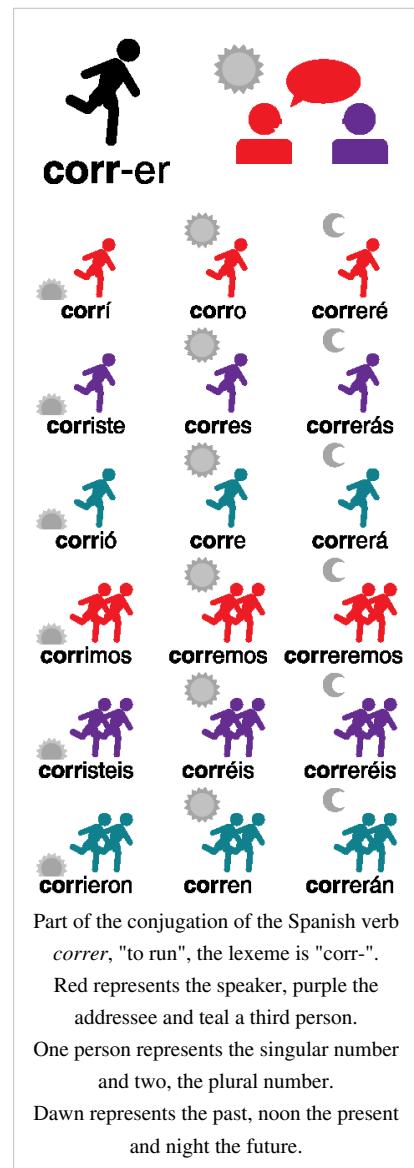
In linguistics, **conjugation** is the creation of derived forms of a verb from its principal parts by inflection (alteration of form according to rules of grammar). Conjugation may be affected by person, number, gender, tense, aspect, mood, voice, or other grammatical categories. Typically the principal parts are the root and/or several modifications of it (stems). All the different forms of the same verb constitute a lexeme, and the canonical form of the verb that is conventionally used to represent that lexeme (as seen in dictionary entries) is called a lemma.

The term *conjugation* is applied only to the inflection of verbs, and not of other parts of speech (inflection of nouns and adjectives is known as declension). Also it is often restricted to denoting the formation of finite forms of a verb – these may be referred to as *conjugated forms*, as opposed to non-finite forms, such as the infinitive or gerund, which tend not to be marked for most of the grammatical categories.

Conjugation is also the traditional name for a group of verbs that share a similar conjugation pattern in a particular language (a *verb class*). For example, Latin is said to have four conjugations of verbs. This means that any regular Latin verb can be conjugated in any person, number, tense, mood, and voice by knowing which of the four conjugation groups it belongs to, and its principal parts. A verb that does not follow any of the standard conjugation patterns of the language is said to be an irregular verb. The system of all conjugated variants of a particular verb or class of verbs is called a **verb paradigm**; this may be presented in the form of a **conjugation table**.

Examples

Indo-European languages usually inflect verbs for several grammatical categories in complex paradigms, although some, like English, have simplified verb conjugation to a large extent. Afrikaans, Norwegian and Swedish have gone even further and virtually abandoned verb conjugation altogether. Below is the conjugation of the verb *to be* in the present tense (of the infinitive, if it exists, and indicative moods), in English, German, Dutch, Afrikaans, Icelandic, Swedish, Norwegian, Latvian, Bulgarian, Bosnian, Serbian, Croatian, Polish, Slovenian, Hindi, Persian, Latin, French, Italian, Spanish, Portuguese, Russian, Albanian, Armenian, Irish, Ancient Attic Greek and Modern Greek. This is usually the most irregular verb. The similarities in corresponding verb forms may be noticed. Some of the conjugations may be disused, like the English *thou*-form, or have additional meanings, like the English *you*-form, which can also stand for second person singular or be impersonal.



"To be" in several Indo-European languages

Branch	Language	Present infinitive	Present indicative								
			Singular persons			Plural persons					
			1st	2nd	3rd	1st	2nd	3rd			
Germanic	English	be	am	are art ¹ be'st ¹	is	are					
	German	sein	bin	bist	ist	sind	seid	sind			
	Dutch	zijn	ben	bent zijt ²	is	zijn	zijn	zijn			
	Afrikaans	wees	is								
	Icelandic	vera	er	ert	er	erum	eruð	eru			
	Norwegian	være	er								
	Swedish	vara	är			är(o)					
Italic	Latin	esse	sum	es	est	sumus	estis	sunt			
	Italian	essere	sono	sei	è	siamo	siete	sono			
	French	être	suis	es	est	sommes	êtes	sont			
	Catalan	ser	sóc	ets	és	som	sou	són			
	Spanish	ser	soy	eres	es	somos	sois	son			
	Portuguese	ser	sou	és	é	somos	sois	são			
	Friulian	jessi	soi	sêš	è	sin	sêš	son			
	Romanian	fi	sunt	ești	este	suntem	sunteți	sunt			
Celtic	Irish	bheith	bím	bíonn	bíonn	bímid	bíonn	bíonn			
	Welsh (standard form)	bod	rydw i	rwyt ti	mae e/hi (he/she is)	rydych chi	rydyn ni	maen nhw			
Greek	Ancient ³ <i>transliterated</i>	εἶναι eînai	εἰμί ⁴ eimí	εĩ eî	ἐστί ⁴ estí	ἐσμέν esmén	ἐστέ ⁴ esté	εἰοί ⁴ eisí			
	Modern <i>transliterated</i>	none ⁴	είμασι eímai	είσαι eísai	είναι eínai	είμαστε eímaste	είσι(ασ)τε eís(as)te	είναι eínai			
Albanian			jam	je	është	jemi	jeni	janë			
Armenian	Western <i>transliterated</i>	յլլալ ěllal	Ե	Ե	Ւ	Ե	Ե	Ե	Ե		
	Eastern <i>transliterated</i>	լինել linel	Ե	Ե	Ե	Ե	Ե	Ե	Ե		
Slavic	Czech	být	jsem	jsi	je	jsme	jste	jsou			
	Slovak	byť	som	si	je	sme	ste	sú			
	Polish	być	jestem	jesteś	jest	jesteśmy	jesteście	są			

	Russian transliterated	быть byt'	- ⁷	- ⁷	есть jest'	- ⁷	- ⁷	- ⁷
	Serbian strong transliterated	бити biti	јесам jesam	јеси jesi	јест(е) jest(e)	јесмо jesmo	јечре jeste	јечи jesu
	Serbian clitic transliterated	none	сам sam	си si	је je	смо smo	сте ste	су su
	Croatian strong	biti	jesam	jesi	jest(e)	jesmo	jeste	jesu
	Croatian clitic	none	sam	si	je	smo	ste	su
	Slovenian	biti	sem	si	je	smo	ste	so
	Bulgarian transliterated	none	съм sъm	си si	е e	сме sme	сте ste	са să
	Macedonian transliterated	none	сум sum	си si	е e	сме sme	сте ste	се se
Baltic	Latvian	būt	esmu	esi	ir	esam	esat	ir
	Lithuanian	būti	esu	esi	yra	esame	esate	yra
Indo-Iranian	Persian	būdan	hastam -am	hasti -i	hast ast, -e	hastim -im	hastid -id	hastand -and
	Sanskrit		asmi	asi	asti	smah	sth	santi
	Hindi		हुँ hū̄	ho	hai	हाँ hā̄	ho	हाँ hā̄

¹ Obsolete; used only with the obsolete pronoun 'thou'.

² In Flemish dialects.

³ Attic.

⁴ 'eínaí' is only used as a noun ("being, existence").

⁵ Ptc: qenē.

⁶ In the Tosk and Geg dialects, respectively.

⁷ 3rd person singular form is used.

Verbal agreement

Verbal agreement or **concord** is a morpho-syntactic construct in which properties of the subject and/or objects of a verb are indicated by the verb form. Verbs are then said to agree with their subjects (resp. objects).

Many English verbs exhibit subject agreement of the following sort: whereas *I go*, *you go*, *we go*, *they go* are all grammatical in standard English, *she go* is not (except in the subjunctive, as "They requested that *she go* with them"). Instead, a special form of the verb *to go* has to be used to produce *she goes*. On the other hand *I goes*, *you goes* etc. are not grammatical in standard English. (Things are different in some English dialects that lack agreement.) A few English verbs have no special forms that indicate subject agreement (*I may*, *you may*, *she may*), and the verb *to be* has an additional form *am* that can only be used with the pronoun *I* as the subject.

Verbs in written French exhibit more intensive agreement morphology than English verbs: *je suis* (I am), *tu es* ("you are", singular informal), *elle est* (she is), *nous sommes* (we are), *vous êtes* ("you are", plural), *ils sont* (they are). Historically, English used to have a similar verbal paradigm. Some historic verb forms are used by Shakespeare as slightly archaic or more formal variants (*I do*, *thou dost*, *she doth*, typically used by nobility) of the modern forms.

Some languages with verbal agreement can leave certain subjects implicit when the subject is fully determined by the verb form. In Spanish, for instance, subject pronouns do not need to be explicitly present, even though in French,

its close relative, they are obligatory. The Spanish equivalent to the French *je suis* (I am) can be simply *soy* (lit. "am"). The pronoun *yo* (I) in the explicit form *yo soy* is only required for emphasis or to clear ambiguity in complex texts.

Some languages have a richer agreement system in which verbs also agree with some or all of their objects. Ubykh exhibits verbal agreement for the subject, direct object, indirect object, benefaction and ablative objects (*a.w3.s.xe.n.t'u.n, you gave it to him for me*).

Basque can show agreement not only for subject, direct object and indirect object, but it also on occasion exhibits agreement for the listener as the implicit benefactor: *autoa ekarri digute* means "they brought us the car" (neuter agreement for listener), but *autoa ekarri ziguten* means "they brought us the car" (agreement for feminine singular listener).

Languages with a rich agreement morphology facilitate relatively free word order without leading to increased ambiguity. The canonical word order in Basque is subject–object–verb. However, all permutations of subject, verb and object are permitted.

Nonverbal person agreement

In some languages,^[1] predicative adjectives and copular complements receive a form of person agreement that is distinct from that used on ordinary predicative verbs. Although this is a form of conjugation in that it refers back to the person of the subject, it is not "verbal" because it always derives from pronouns that have become cliticised to the nouns to which they refer.^[2] An example of nonverbal person agreement, along with contrasting verbal conjugation, can be found from Beja^[3] (person agreement morphemes in bold):

- *wun.tu.wi*, "you (fem.) are big"
- *hadá.b.wa*, "you (masc.) are a sheik"
- *e.n.fór*, "he flees"

Another example can be found from Ket^[3]:

- *fèmba.di*, "I am a Tungus"
- *dífen*, "I am standing"

In Turkic, and a few Uralic and Australian Aboriginal languages, predicative adjectives and copular complements take affixes that are identical to those used on predicative verbs, but their negation is different. For example, in Turkish:

- *koş.u.yor.sun* "you are running"
- *çavuş.sun* "you are a sergeant"

but under negation this becomes (negative morphemes boldface):

- *koş.mu.yor.sun* "you are not running"
- *çavuş **değil**.sin* "you are not a sergeant"

For this reason, the person agreement morphemes used with predicative adjectives and nominals in Turkic languages are considered to be nonverbal in character. In some analyses, they are viewed as a form of verbal takeover by a copular strategy.

Factors that affect conjugation

Common grammatical categories according to which verbs can be conjugated are the following:

- Finite verb forms:
 - Grammatical person
 - Grammatical number
 - Grammatical gender
 - Grammatical tense
 - Grammatical aspect
 - Grammatical mood
 - Grammatical voice
- Non-finite verb forms.

Other factors which may affect conjugation are:

- Degree of formality (see T-V distinction, Honorific speech in Japanese, Korean speech levels)
- Inclusiveness and exclusiveness in the 1st. person plural
- Transitivity
- Valency

Notes

- [1] Stassen, Leon; **Intransitive Predication** (*Oxford Studies in Typology and Linguistic Theory*); published 1997 by Oxford University Press;
p. 39. ISBN 0-19-925893-2
- [2] Stassen; **Intransitive Predication**; pp. 77 & 284-288
- [3] Stassen, **Intransitive Predication**; p. 40

External links

- Conjugations at Wiktionary, Wikipedia's sister project
- the conjugation (<http://www.the-conjugation.com>) English, Spanish and French conjugator.
- Onoma (<http://conjugador.onoma.es>) Spanish conjugator. It provides information about the irregularities and conjugates invented verbs.
- Excellent English Verb Conjugation Site (<http://www.conjugation.com>) All verbs - all forms - all tenses, Many variants, No mistakes: www.conjugation.com (<http://www.conjugation.com>)
- English Verb Conjugations (<http://www.scientificpsychic.com/verbs1.html>) • English verb phonetic and orthographic constraints (<http://www.scientificpsychic.com/grammar/regular.html>)
- Lexicon of Linguistics: Conjugation (<http://www2.let.uu.nl/UiL-OTS/Lexicon/zoek.pl?lemma=Conjugation>)
- Verbix (<http://www.verbix.com/languages/>) (Spanish, Portuguese, French, Italian, English, &c.)
- Multi-Language conjugation (<http://www.verbomatic.com>) (English and Portuguese)
- French conjugation (<http://www.conjugation-fr.com>) (More 12000 verbs)
- Italian Verbs Conjugator and Analyzer (http://www.archivium.biz/index_EN.php) Regular and Irregular Verbs, and also Neologisms
- spanish.verbconjugation.net (<http://spanish.verbconjugation.net>) shows you how to conjugate Spanish verbs
- Korean conjugation (<http://dongsa.net>) A Korean verb conjugation tool that explains the conjugations for learners of Korean
- Online verb conjugation (<http://www.idiomax.com/online-verb-conjugation.aspx>) online English, Spanish, Italian, French and German verb conjugation
- Kaso Verb Conjugation System (FOSS) (<http://kasoverb.org>) Side by side conjugations in English, Italian, and Spanish

Conjunction (grammar)

In grammar, a **conjunction** (abbreviated **CONJ** or **CNJ**) is a part of speech that connects two words, sentences, phrases or clauses together. A **discourse connective** is a conjunction joining sentences. This definition may overlap with that of other parts of speech, so what constitutes a "conjunction" must be defined for each language. In general, a conjunction is an invariable grammatical particle, and it may or may not stand between the items it conjoins.

The definition may also be extended to idiomatic phrases that behave as a unit with the same single-word conjunction (*as well as, provided that, etc.*).

Many students are taught that certain conjunctions (such as "and", "but", and "so") should not begin sentences, although authorities such as the *Chicago Manual of Style* state that this teaching has "no historical or grammatical foundation".^[1]

Coordinating conjunctions

Coordinating conjunctions, also called coordinators, are conjunctions that join two or more items of equal syntactic importance, such as words, main clauses, or sentences. In English the mnemonic acronym *FANBOYS* can be used to remember the coordinators *for, and, nor, but, or, yet, and so*.^{[2][3]} These are not the only coordinating conjunctions; various others are used, including^{[4]:ch. 9[5]:p. 171} "and nor" (British), "but nor" (British), "or nor" (British), "neither" ("They don't gamble; neither do they smoke"), "no more" ("They don't gamble; no more do they smoke"), and "only" ("I would go, only I don't have time").

Here are some examples of coordinating conjunctions in English and what they do:

- **For** presents a reason ("He is gambling with his health, for he has been smoking far too long.").
- **And** presents non-contrasting item(s) or idea(s) ("They gamble, and they smoke.").
- **Nor** presents a non-contrasting negative idea ("They do not gamble nor do they smoke.").
- **But** presents a contrast or exception ("They gamble, but they don't smoke.").
- **Or** presents an alternative item or idea ("Every day they gamble or they smoke.").
- **Yet** presents a contrast or exception ("They gamble, yet they don't smoke.").
- **So** presents a consequence ("He gambled well last night so he smoked a cigar to celebrate.").

Correlative conjunctions

Correlative conjunctions work in pairs to join words and groups of words of equal weight in a sentence. There are six different pairs of correlative conjunctions:

1. either...or
2. not only...but (also)
3. neither...nor (or increasingly *neither...or*)
4. both...and
5. whether...or
6. just as...so

Examples:

- You **either** do your work **or** prepare for a trip to the office.
- **Not only** is he handsome, **but** he is **also** brilliant.
- **Neither** the basketball team **nor** the football team is doing well.
- **Both** the cross country team **and** the swimming team are doing well.
- **Whether** you stay **or** you go, it's your decision.
- **Just as** Aussies love Aussie rules football, **so** many Canadians love ice hockey.

Subordinating conjunctions

Subordinating conjunctions, also called subordinators, are helpful in writing paragraphs with an independent clause and a dependent clause. The most common subordinating conjunctions in the English language include *after*, *although*, *as*, *as far as*, *as if*, *as long as*, *as soon as*, *as though*, *because*, *before*, *if*, *in order that*, *since*, *so*, *so that*, *than*, *though*, *unless*, *until*, *when*, *whenever*, *where*, *whereas*, *wherever*, and *while*. Complementizers can be considered to be special subordinating conjunctions that introduce complement clauses (e.g., "I wonder *whether* he'll be late. I hope *that* he'll be on time"). Some subordinating conjunctions (*until* and *while*), when used to introduce a phrase instead of a full clause, become prepositions with identical meanings.

In many verb-final languages, subordinate clauses *must precede* the main clause on which they depend. The equivalents to the subordinating conjunctions of non-verb-final languages such as English are either

- *clause-final conjunctions* (e.g., in Japanese), or
- *suffixes* attached to the verb and *not* separate words^[6]

Such languages in fact often lack conjunctions as a part of speech because:

1. the form of the verb used is formally nominalised and cannot occur in an independent clause
2. the clause-final conjunction or suffix attached to the verb is actually formally a marker of case and is also used on nouns to indicate certain functions. In this sense, the subordinate clauses of these languages have much in common with postpositional phrases.

In other West-Germanic languages like German or Dutch, the word order after a subordinating conjunction is different from the one in an independent clause, e.g., in Dutch *want* (for) is coordinating, but *omdat* (because) is subordinating. The clause after the coordinating conjunction has normal word order, but the clause after the subordinating conjunction has verb-final word order. Compare:

Hij gaat naar huis, *want* hij **is** ziek. ("He goes home, for he is ill.")

Hij gaat naar huis, *omdat* hij ziek **is**. ("He goes home because he is ill.")

Similarly, in German, "*denn*" (for) is coordinating, but "*weil*" (because) is subordinating:

Er geht nach Hause, **denn** er **ist** krank. ("He goes home, for he is ill.")

Er geht nach Hause, **weil** er krank **ist**. ("He goes home because he is ill.")

References

- [1] University of Chicago (2010). *The Chicago Manual of Style* (16th ed.). Chicago: Univ. of Chicago Press. p. 257. ISBN 978-0-226-10420-1.
- [2] Paul, Anne; Adams, Michael (2009), *How English Works: A Linguistic Introduction* (2nd ed.), New York: Pearson Longman, p. 152, ISBN 978-0-205-60550-7
- [3] Merriam-webster.com (<http://www.merriam-webster.com/dictionary>)
- [4] Algeo, John. *British or American English? A Handbook of Word and Grammar Patterns*, 2006, Cambridge Univ. Press.
- [5] Burchfield, R. W., editor, *Fowler's Modern English Usage*, third edition, 1996.
- [6] Dryer, Matthew S. 2005. "Order of adverbial subordinator and clause". In *The World Atlas of Language Structures*, edited by Martin Haspelmath, Matthew S. Dryer, David Gil, and Bernard Comrie. Oxford University Press. ISBN 0-19-925591-1

Coordination (linguistics)

In linguistics, **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.^[1] 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.

Basic examples

Coordination is a very flexible mechanism of syntax. Any given lexical or phrasal category can be coordinated. The examples throughout this article 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.

Coordinators

A *coordinator* (= coordinating conjunction) often appears between the conjuncts, usually at least between the penultimate (second to last) and ultimate (last) conjunct of the *coordinate structure*. The words *and* and *or* are by far the most frequently occurring coordinators in English. Other coordinators occur less often and have unique properties, e.g. *but*, *as well as*, *then*, etc. The coordinator usually serves to link the conjuncts and indicate the presence of a coordinate structure. Depending on the number of coordinators used, coordinate structures can be classified as *syndetic*, *asyndetic*, or *polysyndetic*.

Unique behavior

Most coordinate structures are like those just produced above; the coordinated strings are alike in syntactic category. There are a number of unique traits of coordination, however, that demonstrate that what can be coordinated is not limited to the standard syntactic categories. Each of the following subsections briefly draws attention to a perhaps unexpected aspect of coordination. These aspects are less than fully understood, despite the attention that coordination has received in theoretical syntax.

Nested coordinate structures

One coordinate structure can easily be nested inside another. Ambiguity is sometimes the result, e.g.

- Fred and Bill and Sam came.
- a. **[Fred] and [Bill] and [Sam]** came.
- b. **[Fred] and Bill**"' and "'[Sam] came.
- c. **Fred] and [Bill and [Sam]** came.

The brackets indicate the three possible readings for the sentence. The (b)- and (c)-readings show one coordinate structure being embedded inside another. Which of the three readings is understood depends on intonation and context. The (b)-reading could be preferred in a situation where Bill and Sam arrived together, but Fred arrived separately. Similarly, the (c)-reading could be preferred in a situation where Fred and Bill arrived together, but Sam arrived separately. That the indicated groupings are indeed possible becomes evident when *or* is employed:

- b'. **[Fred] or Bill**"' and "'[Sam] came.
- c'. **Fred] and [Bill or [Sam]** came.

A theory of coordination needs to be in a position to address nesting of this sort.

Mismatch in syntactic category

The examples above illustrate that the conjuncts are often alike in syntactic category.^[2] There are, though, many instances of coordination where the coordinated strings are NOT alike, e.g.

- Sarah is **[a CEO] and [proud of her job]**. - NP + AP
- Is Jim **[conservative] and [a closet Republican]**? - A + NP
- Bill is **[in trouble] and [trying to come up with an excuse]**. - PP + VP
- Sam works **[evenings] and [on weekends]**. - Adv + PP
- They are leaving **[due to the weather] and [because they want to save money]**. - PP + Clause

Data like these have been explored in detail.^[3] They illustrate that the theory of coordination should not rely too heavily on syntactic category to explain the fact that in most instances of coordination, the coordinated strings are alike. Syntactic function is more important, that is, the coordinated strings should be alike in syntactic function. In the former three sentences here, the coordinated strings are, as complements of the copula *is*, predicative expressions, and in the latter two sentences, the coordinated strings are adjuncts that are alike in syntactic function (temporal adjunct + temporal adjunct, causal adjunct + causal adjunct).

Non-constituent conjuncts

The aspect of coordination that is perhaps most vexing for theories of coordination concerns non-constituent conjuncts.^[4] Coordination is, namely, not limited to coordinating just constituents, but rather it is quite capable of coordinating non-constituent strings:

[When did he] and [why did he] do that?

[She has] but [he has not] understood the task.

Susan [asked you] but [forced me] to read the book on syntax.

[Jill has been promising] but [Fred is actually trying] to solve the problem.

[The old] and [the new] submarines submerged side-by-side.

[Before the first] and [after the second] presentation, there will be coffee.

Fred sent [Uncle Willy chocolates] and [Aunt Samantha ear rings].

We expect [Connor to laugh] and [Jilian to cry].

While some of these coordinate structures require a non-standard intonation contour, they can all be acceptable. This situation is problematic for theories of syntax because most of the coordinated strings do not qualify as constituents. Hence since the constituent is widely assumed to be the fundamental unit of syntactic analysis, such data seem to require that the theory of coordination admit additional theoretical apparatus. Two examples of the sort of apparatus that has been posited are so-called *conjunction reduction* and *right node raising* (RNR).^{[5][6]} Conjunction reduction is an ellipsis mechanism that takes non-constituent conjuncts to be complete phrases or clauses at some deep level of syntax. These complete phrases or clauses are then reduced down to their surface appearance by the conjunction reduction mechanism. The traditional analysis of the phenomenon of right node raising assumed that in cases of non-constituent conjuncts, a shared string to the right of the conjuncts is raised out of VP in such a manner that the material in the conjuncts ends up as constituents. The plausibility of these mechanisms is NOT widely accepted, but rather one can argue that they are *ad hoc* attempts to solve a problem that plagues theories that take the constituent to be fundamental unit of syntactic analysis.

Coordination has been widely employed as a test or for the constituent status of a given string, i.e. as a constituency test. In light of non-constituent conjuncts however, the helpfulness of coordination as a diagnostic for identifying constituents can be doubted.

Gapping or not?

Gapping (and stripping) is an ellipsis mechanism that seems to occur in coordinate structures only. While gapping itself is widely acknowledged to involve ellipsis, just which instances of coordination do and do not involve gapping is a matter of debate.^[7] Most theories of syntax agree that gapping is involved in the following cases. A subscript and a smaller font are used to indicate the "gapped" material:

[Brent ate the beans], and [Bill_{ate} the rice]. - Gapping

[You should call me more], and [I_{should call} you_{more}]. - Gapping

[Mary always orders wine], and [Sally_{always orders} beer]. - Gapping

Accounts of gapping and coordination disagree, however, concerning data like the following:

a. [They saw him first] and [they_{saw} her second]. - Gapping analysis

b. They saw [him first] and [her second]. - Non-gapping analysis

a. [Tanya expects the dog to eat cat food] and [she_{expects} the cat to eat dog food]. - Gapping analysis

b. Tanya expects [the dog to eat cat food] and [the cat to eat dog food]. - Non-gapping analysis

The gapping analysis shown in the a-sentences is motivated above all by the desire to avoid the non-constituent conjuncts associated with the b-sntences. No consensus has been reached about which analysis is better.

Forward vs. backward sharing

Coordination is sensitive to the linear order of words, a fact that is evident with differences between forward and backward sharing. There is a limitation on material that precedes the conjuncts of a coordinate structure that does restrict the material that follows it.^[8]

*After Wallace fed [his dog the postman] and [his sheep the milkman] arrived. - Forward sharing fails.

*The man [who built the rocket has] and [who studied robots designed] a dog. - Forward sharing fails.

*After [Sue's presentation, I was sad] and [Fred's presentation, I was angry]. - Forward sharing fails.

The star * indicates that the sentence is bad. Each of these coordinate structures is disallowed. The underline draws attention to a constituent that mostly precedes the coordinate structure but that the initial conjunct "cuts into". There is apparently a restriction on the constituents that mostly precede a coordinate structure. The same restriction does not limit similar constituents that mostly follow the coordinate structure:

[She stated the strengths], and **[he mentioned the weaknesses]** of the explanation. - Backward sharing succeeds.

[Larry put a flier on], and **[Sue slipped one under]** the door. - Backward sharing succeeds

Sally **[arrived just before the speaker initiated]**, and **[left right after he finished]** his speech. - Backward sharing succeeds

The underline now marks a constituent that mostly follows the coordinate structure. Unlike with the first three examples, the coordinate structure in these three examples CAN cut into the underlined constituent.

Extraction

In Transformational Grammar, the interaction of coordination and extraction (e.g. *wh*-fronting) has generated a lot of interest. The *Coordinate Structure Constraint* is the property of coordinate structures that prevents extraction of a single conjunct or from a single conjunct. Coordinate structures are said to be strong islands for extraction.^[9] For example:

*Who did you see **[Fred]** and []? - Failed extraction of an entire conjunct

*Who did you see [] and **Susan?** - Failed extraction of an entire conjunct

*Which action did the president understand **[the criticism]** and **[take]?** - Failed extraction out of a single conjunct

These attempts at coordination fail because extraction cannot affect just one conjunct of a coordinate structure. If extraction occurs out of both conjuncts in a like fashion, however, the coordinate structure is acceptable. This trait of coordination is referred to as the *Across-the-Board Constraint*.^[10] For example:

What does **[Sarah like]** and **[Xolani hate]?** - Across-the-board extraction of *What*

There are other apparent exceptions the Coordinate Structure Constraint and the Across-the-Board generalization and their integration to existing syntactic theory has been a long-standing disciplinary desideratum.^[11]

Pseudo-coordination

In pseudo-coordinative constructions, the coordinator, generally *and*, appears to have a subordinating function. It occurs in many languages and is sometimes known as "hendiadys", and it is often, but not always, used to convey a pejorative or idiomatic connotation.^[12] Among the Germanic languages, pseudo-coordination occurs in English, Afrikaans, Norwegian, Danish and Swedish.^[13] Pseudo-coordination appears to be absent in Dutch and German. The pseudo-coordinative construction is limited to a few verbs. In English, these verbs are typically *go*, *try*, and *sit*. In other languages, typical pseudo-coordinative verbs and/or hendiadys predicates are egressive verbs (e.g. *go*) and verbs of body posture (e.g. *sit*, *stand* and *lie down*).

Why don't you go and jump in the lake

I will try and jump in the lake

The pupils sat and read their textbooks

A typical property of pseudo-coordinative constructions is that, unlike ordinary coordination, they appear to violate the Across-the-Board extraction property (see above). In other words, it is possible to extract from one of the conjuncts.^[14]

What did she go and jump in t?

What did she try and jump in

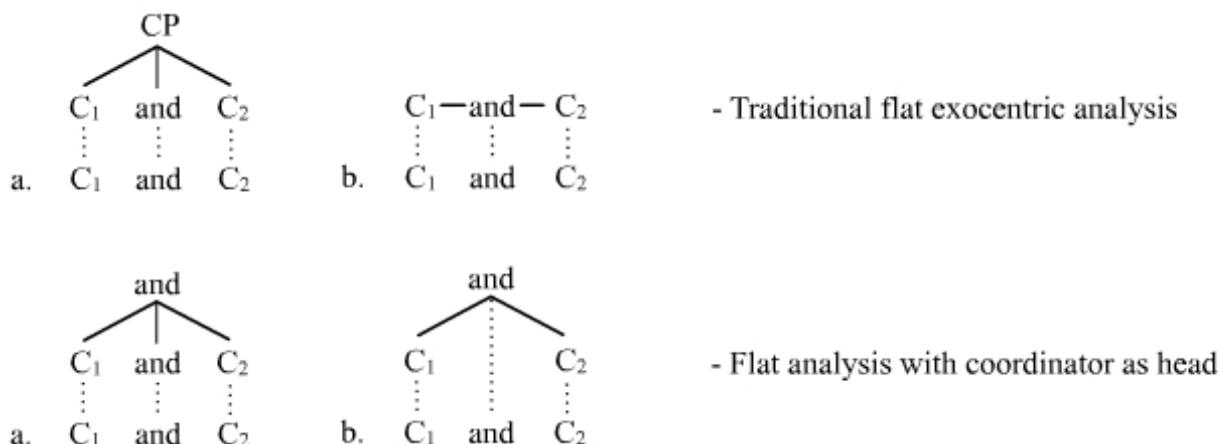
Which textbooks did the pupils sit and read.

It has been argued that pseudo-coordination is not a unitary phenomenon. Even in a single language such as English, the predicate *try* exhibits different pseudo-coordination properties to other predicates and other predicates such as *go* and *sit* can instantiate a number of different pseudo-coordinative construction types.^[15] On the other hand, it has been argued that at least some different types of pseudo-coordination can be analyzed using ordinary coordination as opposed to stipulating that pseudo-coordinative *and* is a subordinator; the differences between the various constructions derive from the level of structure that is coordinated e.g. coordination of heads, coordination of VP, etc.

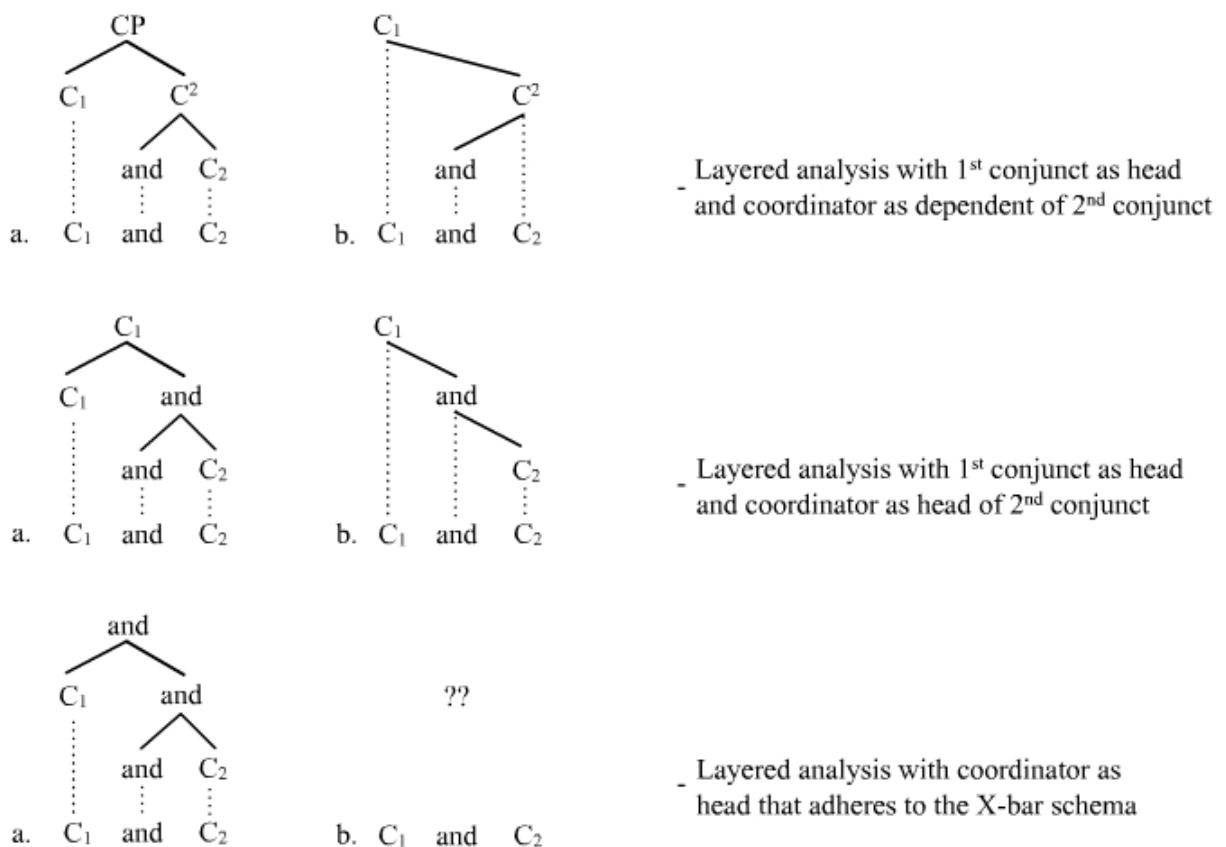
The structure of coordination

Theoretical accounts of coordination vary in major respects. For instance, constituency- and dependency-based approaches to coordination differ significantly, and derivational and representational systems are also likely to disagree on many aspects of how coordination should be explained, derivational accounts, for instance, being more likely to assume transformational mechanisms to "rectify" non-constituent conjuncts (e.g. conjunction reduction and RNR, as mentioned above).

Even concerning the hierarchical structure of coordinated strings, there is much disagreement. Whether or not coordinate structures should be analyzed in terms of the basic tree conventions employed for subordination is an issue that divides experts. Broadly speaking, there are two options: either a flat or a layered analysis. There are two possibilities for the flat option, both of which are shown here. The a-trees represent the analyses in a constituency-based system, and the b-trees in a dependency-based system:



The first two trees present the traditional exocentric analysis. The coordinate structure is deemed exocentric insofar as neither conjunct can be taken to be the sole head, but rather both conjuncts are deemed heads in a sense. The second two trees, where the coordinator is the head, are similar to the first two insofar as the conjuncts are equi-level sisters. These two flat analyses stand in contrast to the following three layered analyses. The constituency-based a-trees appear again on the left, and the dependency-based b-trees on the right:



The primary aspect of these layered analyses is that an attempt is being made to adapt the analysis of coordinate structures to the analysis of subordinate structures. The conjuncts in each case are NOT sister constituents, but rather the first conjunct is in a more prominent (higher) hierarchical position than the second conjunct. The three analyses differ with respect to the presumed head of the entire structure. The third option in terms of the X-bar schema cannot be rendered in terms of dependency because dependency allows a word to project just a single node. There is no way to capture the hierarchical distinction between specifiers and complements in a dependency-based system (but there is always a linear distinction, since specifiers precede complements).

The flat analysis has the benefit that it captures our intuition that coordinate structures are different from subordinate structures at a basic level. The drawback to the flat analysis, however, is that the theory of syntax must be augmented beyond what is necessary for standard subordinate structures. The layered analysis has the advantage that there is no need to augment the syntax with an additional principle of organization, but it has the disadvantage that it does not sufficiently accommodate our intuition that coordination is fundamentally different from subordination. Most if not all of the nine analyses just presented have been proposed in the massive body of literature on coordination.

Notes

- [1] Concerning the distinction between subordination and coordination, see Payne (2006:309).
- [2] See Williams, E. (1978) concerning the matching conjuncts of coordinate structures.
- [3] See for instance Dik (1968), Sag et al. (1985), Zoerner (1995), Bayer (1996), and Progovac (1998).
- [4] See Osborne (2008).
- [5] Concerning conjunction reduction, see for instance Akmajian and Heny (1980:261f.).
- [6] Concerning RNR, see for instance Hudson (1984:2335f.) and McCawley (1988:56).
- [7] Concerning this debate, see Sag et al. (1985) and Osborne (2006).
- [8] The first two examples are taken from Phillips (2003). All six examples in this section appear in Osborne (2008: 1121).
- [9] See Ross, J. (1967).
- [10] See Ross (1967) and Williams (1978).
- [11] See Carden and Pesetsky (1977), Goldsmith (1985), Lakoff (1986), Zoerner (1995), Culicover and Jackendoff (1997), Progovac (1998).
- [12] See Na and Huck (1992).
- [13] See Wiklund (2005) and De Vos (2005).

[14] See De Vos (2005) and Lakoff (1986).

[15] See De Vos (2005).

References

- Akmajian, A. and F. Heny. 1980. An introduction to the principle of transformational syntax. Cambridge, MA: The MIT Press.
- Bayer, S. 1996. The coordination of unlike categories. *Language* 72, 579-616.
- Carden, G. and D. Pesetsky 1977. Double-verb constructions, markedness and a fake coordination. In Papers from the 13th regional meeting, Chicago Linguistic Society, Chicago, 82-92. University of Chicago. Reprinted in: Minoru Yasui (ed.), *Kaigai Eigogaku-ronso*, 1979, Tokyo: Eichosha Company.
- Culicover, P. and R. Jackendoff 1997. Semantic subordination despite syntactic coordination. *Linguistic Inquiry* 28, 2, 195-217.
- Dik, S. 1968. Coordination: Its implications for a theory of general linguistics. Amsterdam: North Holland Publishing Company.
- Goldsmith, J. 1985. A principled exception of the coordinate structure constraint. In W. Eilfort, P. Kroeber and K. Peterson (eds). *CLS 21*, Part 1: Papers from the general session at the twenty-first regional meeting, Chicago, 133-143. Chicago Linguistic Society.
- Hudson, R. 1984. Word Grammar. Oxford: Blackwell.
- Lakoff, G. 1986. Frame semantic control of the coordinate structure constraint. In A. Farley, P. Farley, and K-E. McCullough (eds), *CLS 22*, Part 2: Papers from the parasession on pragmatics and grammatical theory, Chicago, 152-167. Chicago Linguistic Society.
- McCawley, T. 1988. The syntactic phenomena of English, Vol. 1. Chicago: The University of Chicago Press.
- Na, Y. and G. Huck 1992. On extracting from asymmetrical structures. In D. Brentari, G. Larson and L. Macleod (eds), *The joy of grammar: A festschrift in honour of James D. McCawley*, 251-274. Amsterdam: John Benjamins.
- Osborne, T. 2006. Gapping vs. non-gapping coordination. *Linguistische Berichte* 207, 307-338.
- Osborne, T. 2008. Major constituents: And two dependency grammar constraints on sharing in coordination. *Linguistics* 46, 6, 1109-1165.
- Phillips, C. 2003. Linear order and constituency. *Linguistic Inquiry* 34, 1, 37-90.
- Payne, T. 2006. Exploring language structure: A student's guide. Cambridge, UK: Cambridge University Press.
- Progovac, L. 1998. Structure for coordination (Part 1). *GLOT International* 3, 7, 3-6.
- Ross, J. 1967. Constraints on variables in syntax. Ph.D. thesis. Massachusetts Institute of Technology.
- Sag, I., Gazdar, T., Wassow, T. and S. Weisler. 1985. Coordination and how to distinguish categories. *Natural Language and Linguistic Theory* 3, 117-171.
- De Vos, M. 2005. The syntax of pseudo-coordination in English and Afrikaans. Utrecht, the Netherlands: LOT.
- Wiklund, A-L. 2005. The syntax of tenselessness: On copying constructions in Swedish. Ph.D. Thesis. University of Umeaa.
- Williams, E. 1978. Across the board rule application. *Linguistic Inquiry* 9, 31-43.
- Zoerner, E. 1995. Coordination: The syntax of &P. Ph.D. thesis. University of California, Irvine.
- Postal, P. 1998. Three investigations of extraction. Cambridge MA: MIT Press.
- Schmerling, S. 1975. Asymmetric coordination and rules of conversation. In P. Cole and J. Morgan (Eds). *Speech Acts*, Volume 3 of *Syntax and semantics*, pp211–231. New York: Academic Press.

Dangling modifier

A **dangling modifier** (a specific case of which is the **dangling participle**)^[1] is an ambiguous grammatical construct, often considered an error in prescriptivist accounts of English, whereby a grammatical modifier could be misinterpreted as being associated with a word other than the one intended, or with no particular word at all. For example, a writer may have meant to modify the subject, but word order makes the modifier seem to modify an object instead. Such ambiguities can lead to unintentional humor or difficulty in understanding a sentence in formal contexts.

A typical example of a dangling modifier is illustrated in the sentence *Turning the corner, a handsome school building appeared.*^[2] The modifying clause *Turning the corner* is clearly supposed to describe the behaviour of the narrator (or other observer), but grammatically it appears to apply to nothing in particular, or to the school building. Similarly, in the sentence *At the age of eight, my family finally bought a dog,*^[3] the modifier *At the age of eight* "dangles," attaching to no named person or thing (or possibly seems to imply that the *family* was eight years old when it bought the dog, rather than the intended meaning of giving the *narrator's* age at the time).

Dangling participles and participial clauses

Participles or participial clauses may be at the beginning or the end of a sentence, and a participial clause is usually attached to its subject, as in "Walking down the street (clause), the man (subject) saw the beautiful trees (object)." However, when the subject is missing or the participle attaches itself to another object in a sentence, the clause is seemingly "hanging" on nothing or on an entirely inappropriate noun. It thus becomes a dangling participle, as in these sentences:

“Walking down Main Street, the trees were beautiful.”

“Reaching the station, the sun came out.”

In the first sentence, the "walking down" participle modifies "trees," the subject of the sentence. However, the trees are presumably not themselves walking down Main Street. The participle in fact modifies the unmentioned speaker of the sentence, the one doing the walking (and finding the trees beautiful).

In the second sentence, "reaching" is the dangling participle that nonsensically qualifies "sun," the subject of the sentence; thus, the meaning is as if the sun came out when it, "the sun," reached the station. Presumably, there is another, human subject that did reach the station and observed the sun coming out, but since this subject is not mentioned in the text, the intended meaning is obscured, and therefore this kind of sentence is considered incorrect in standard English.

Strunk and White's *The Elements of Style* provides another kind of example, a misplaced modifier (another participle):

“I saw the trailer peeking through the window.”

Presumably, this means the speaker was peeking through the window, but the placement of the clause "peeking through the window" makes it sound as though the trailer were peeking through the window. More correctly, it can be written as, "Peeking through the window, I saw the trailer."

Similarly, in the sentence "She left the room fuming", it is conceivably the room, rather than "she", that was fuming. It may be preferable to write "Fuming, she left the room", to eliminate the ambiguity and make clear that "fuming" modifies the subject of the sentence ("she").

Strunk and White describe as "ludicrous" another of their examples: "Being in a dilapidated condition, I was able to buy the house very cheap."

The author obviously meant the house was dilapidated. But what he wrote was that *he* (the speaker or writer, identified as "I") was in a dilapidated condition.

Bernstein offers another ludicrous example: "Roaring down the track at seventy miles an hour, the stalled car was smashed by the train." [4]

"Roaring," the participle, is meant to modify "train": it is the train that is roaring down the track. But the participial phrase is attached to the grammatical subject of the sentence, car. The writer is saying that the stalled car, which really isn't moving at all, is roaring down the track. Correctly written, the sentence would read: "Roaring down the track at seventy miles an hour, the train smashed the stalled car." Alternatively (but wordier): "The stalled car was smashed by the train, which was roaring down the track at seventy miles an hour."

Follett provides yet another ludicrous example: "Leaping to the saddle, his horse bolted." [5]

Did the horse leap into the saddle? That's what the writer said. But it can't be what he meant. Who did leap into the saddle? Presumably the horseman – certainly not the horse, which was wearing the saddle. In this example, the noun or pronoun intended to be modified isn't even in the sentence. Correct: "Leaping to the saddle, he made his horse bolt forward." Also correct: "As he leaped into the saddle, his horse bolted." In this second revision, the solution is to abandon the participial clause by transforming the participle "leaping" into the verb "leaped" in the dependent clause "As he leaped into the saddle."

These examples illustrate a writing principle that dangling participles violate. Follett states the principle: "A participle at the head of a sentence automatically affixes itself to the subject of the following verb – in effect a requirement that the writer either make his [grammatical] subject consistent with the participle or discard the participle for some other construction." [6] Strunk and White put it this way: "A participial phrase at the beginning of a sentence must refer to the grammatical subject." [7]

Dangling participles should not be confused with clauses in absolute constructions, which are considered grammatical. Because the participial phrase in an absolute construction is not semantically attached to any single element in the sentence, it is easily confused with a dangling participle.^[8] The difference is that the participial phrase of a dangling participle is intended to modify a particular noun or pronoun, but is instead erroneously attached to a different noun, whereas as an absolute clause is not intended to modify any noun at all. An example of an absolute construction is:

“The weather being beautiful, we plan to go to the beach today.”

Non-participial modifiers

Non-participial modifiers that dangle can also be troublesome:

“ After years of being lost under a pile of dust, Walter P. Stanley, III, left, found all the old records of the Bangor Lions Club.”^[9]

The above sentence, from a newspaper article, humorously suggests that it is the subject of the sentence, Walter Stanley, who was buried under a pile of dust, and not the records. It is the prepositional phrase "after years of being lost under a pile of dust" which dangles. This example has been cited in at least one usage manual as an example of the kind of ambiguity that can result from a dangling modifier.

Another famous example of this humorous effect is by Groucho Marx as Captain Jeffrey T. Spaulding in the 1930 film, *Animal Crackers*:

“ One morning I shot an elephant in my pajamas. How he got into my pajamas I'll never know. – Groucho Marx”^[10]

Though under the most plausible interpretation of the first sentence, Captain Spaulding would have been wearing the pajamas, the line plays on the grammatical possibility that the elephant was somehow within his pajamas.

Strunk and White offer this example: "As a mother of five, and with another on the way, my ironing board is always up."^[11] Is the ironing board (grammatical subject) really the mother of five? Correct: "As the mother of five, and with another on the way, I always keep my ironing board up." Also correct: "My ironing board is always up, because I am the mother of five, with another on the way."

Modifiers reflecting the mood or attitude of the speaker

Participial modifiers sometimes can be intended to describe the attitude or mood of the speaker, even when the speaker is not part of the sentence. Some such modifiers are standard and are not considered dangling modifiers: "Speaking of [topic]," and "Trusting that this will put things into perspective," for example, are commonly used to transition from one topic to a related one or for adding a conclusion to a speech.

Usage of "hopefully"

Since about the 1960s, controversy has arisen over the proper usage of the adverb *hopefully*.^[12] Some grammarians object to constructions such as "Hopefully, the sun will be shining tomorrow."^[13] Their complaint is that the term "hopefully" dangles, and can be understood to describe either the speaker's state of mind or the manner in which the sun will shine. It was no longer just an adverb modifying a verb, an adjective or another adverb, but conveniently also one that modified the whole sentence to convey the attitude of the speaker.

Grammatically speaking, "hopefully" used in this way is a disjunct (cf. "admittedly," "mercifully," "oddly"), and is reminiscent of the German "hoffentlich," which similarly means "it is to be hoped that . . ." Disjuncts (also called sentence adverbs) are useful in colloquial speech for the concision they permit. Per Bernstein's *Miss Thistlebottom's Hobgoblins*.^[14]

No other word in English expresses that thought. In a single word we can say it is regrettable that (*regrettably*) or it is fortunate that (*fortunately*) or it is lucky that (*luckily*), and it would be comforting if there were such a word as *hopably* or, as suggested by Follett, *hopingly*, but there isn't. [...] In this instance nothing is to be lost – the word would not be destroyed in its primary meaning – and a useful, nay necessary term is to be gained.

What had been expressed in lengthy adverbial constructions, such as "it is regrettable that ..." or "it is fortunate that , " had of course always been shortened to the adverbs "regrettably" or "fortunately." Bill Bryson says, "those

writers who scrupulously avoid 'hopefully' in such constructions do not hesitate to use at least a dozen other words – 'apparently,' 'presumably,' 'happily,' 'sadly,' 'mercifully,' 'thankfully,' and so on – in precisely the same way."^[15] What has changed, however, in the controversy over "hopefully" being used for "he was hoping that . . .," or "she was full of hope that . . .," is that the original clause was transferred from the speaker, as a kind of shorthand to the subject itself, as though "it" had expressed the hope. ("Hopefully, the sun will be shining.") Although this still expressed the speaker's hope "that the sun will be shining," it may have caused a certain disorientation as to who was expressing what when it first appeared. As time passes, this controversy may fade as the usage becomes increasingly accepted, especially since adverbs such as "mercifully," "gratefully," and "thankfully" are similarly used.

Merriam-Webster gives a usage note on its entry for "hopefully"; the editors point out that the disjunct sense of the word dates to the early 18th century and has been in widespread use since at least the 1930s. Objection to this sense of the word, they state, only became widespread in the 1960s. The editors maintain that this usage is "entirely standard."^[16]

Yet the choice of "regrettably" above as a counterexample points out an additional problem. At the time that objection to "hopefully" became publicized, grammar books relentlessly pointed out the distinction between "regrettably" and "regretfully." The latter is not to be used as a sentence adverb, they state; it must refer to the subject of the sentence.^[17] The misuse of "regretfully" produces worse undesired results than "hopefully," possibly contributing to disdain for the latter. The counterpart *hopably* was never added to the language.

Examples

- *On the face of it, he showed his mettle in the boxing ring.*
- *Turning blue, the chicken was lodged in his mouth.*
- *Kathy went to the seminar with Jenny, but she was talking to her friend who makes a lot of money on the phone.*
- *A worm began to eat one of my tomatoes, but I smashed it green and squishy anyway.*

References

- [1] McArthur, Tom, ed. *The Oxford Companion to the English Language*, pp. 752-753. Oxford University Press, 1992, ISBN 0-19-214183-X
The dangling modifier or participle
- [2] *Merriam Webster's dictionary of English Usage* p. 315 (<http://books.google.co.uk/books?id=2yJusP0vrdgC&pg=PA315>), Merriam-Webster, 1995
- [3] *The Least You Should Know about English* p. 134 (<http://books.google.co.uk/books?id=5bJhOukI2scC&pg=PA134>), Wilson and Glazier, Cengage Learning, 2008
- [4] Theodore M. Bernstein, *The Careful Writer: A Modern Guide to English Usage* (New York: Atheneum, 1985), 128.
- [5] Wilson Follett, *Modern American Usage: A Guide* (New York: Hill and Wang, 1966), 117.
- [6] Ibid.
- [7] Strunk and White, 13.
- [8] *The American Heritage Book of English Usage: A Practical and Authoritative Guide to Contemporary English* (<http://web.archive.org/web/20080728061355/http://www.bartleby.com/64/C001/001.html>). Houghton Mifflin Harcourt. 1996. p. 1. ISBN 0-395-76785-7. .
- [9] *Bangor Daily News* 20 Jan 1978. Reprinted with discussion in *Merriam-Webster's Dictionary of English Usage* p. 315.
- [10] Brainy Quote, 2009, web: BQuote-62 (<http://www.brainyquote.com/quotes/quotes/g/grouchomar128462.html>).
- [11] Strunk and White, 14.
- [12] Kahn, John Ellison and Robert Ilson, Eds. *The Right Word at the Right Time: A Guide to the English Language and How to Use It*, pp. 27–29. London: The Reader's Digest Association Limited, 1985. ISBN 0-276-38439-3.
- [13] http://www.emory.edu/marketing/docs/creative_group/Style%20Manual.pdf
- [14] Bernstein, Theodore M. *Miss Thistlebottom's Hobgoblins*, p. 51. The Noonday Press, New York, 1971. ISBN 0-374-52315-0.
- [15] *Bryson's Dictionary of Troublesome Words*, Bill Bryson, p. 99, Broadway Books, New York, 2002, ISBN 0-7679-1043-5
- [16] "hopefully." Merriam-Webster Online Dictionary. 2007. <http://www.m-w.com/cgi-bin/dictionary?va=hopefully> (15 Aug. 2007).
- [17] <http://www.wsu.edu/~brians/errors/regretfully.html>

External links

- Dangling modifiers (http://owl.english.purdue.edu/handouts/grammar/g_dangmod.html)
- Hopefully fails to modify sentence elements. Originally citing Bryson's Dictionary of Troublesome Words (<http://www.ralphmag.org/DC/hopefully.html>)

Declension

In linguistics, **declension** is the inflection of nouns, pronouns, adjectives, and articles to indicate number (at least singular and plural), case (nominative or subjective, genitive or possessive, etc.), and gender. A declension is also a group of nouns that follow a particular pattern of inflection.

Declension occurs in many of the world's languages, and features very prominently in many European languages. Old English was a highly inflected language, as befits its Indo-European and especially its Germanic linguistic ancestry, but its declensions greatly simplified as it evolved into Modern English.

Basic declension theory

The following hypothetical English grammar demonstrates how declension works in practice. Assume that in English the subject of a sentence has the suffix -tee and the object takes the suffix -woo. Sentences would appear as follows:

- John-tee read an article-woo.
- My friend-tee saw fireworks-woo.
- The article-tee talked about language-woo.
- A business man-tee used his mobile-woo.
- The mobile-tee automatically called the last number-woo.

These examples show how simple declension works in action. Note that, since the subjects and objects are marked with suffixes, the word order can change. As English depends on word order to identify the subject and object, word order cannot change. In the following, the first sentence is the only way to express John reading his book. The second example is grammatically incorrect.

- John read a book.
- A book read John.

However in our theoretical English with declensions, the word order can be changed but the meaning will remain the same as long as the subject and object are marked with the correct suffix.

- John-tee saw the high speed train-woo.
- The high speed train-woo saw John-tee.

Note that the suffixes remain the same even though the word order has changed. In many languages with declension, the word order is not important, however the declension is not optional and nouns must be marked. The following are hypothetical cases and suffixes that would be used in our declined English.

- using something as a tool -ash
- going to/in direction of -ak
- doing something with an object or person -pat
- addressing someone by their name -cake

The following sentences in this theoretical English will demonstrate how foreign English would seem to us if there were declinations.

- John-tee went home-ak with his friend-pat.

- My father-tee wrote a book-woo with his computer-ash.
- Sarah-cake, would you please bring me a whisky-woo with ice-pat.

Note that these sentences could be written in any order and the meaning would stay the same:

- Mark-tee goes to work-ak by car-ash.
- By car-ash Mark-tee goes to work-ak.
- To work-ak Mark-tee goes by car-ash.

This word order is not possible in modern English as there are no cases or declensions as in other languages. This means that in English, word order is essential to constructing coherent sentences.

This theoretical system of declension is relatively simple and is more or less how declension works in languages such as Hungarian. Other languages have a far more complicated set of declensions where the suffixes (or prefixes or enfixes) change depending on the gender of the noun, the quantity of the noun and many other possible factors. There may also be irregular nouns where the declensions are unique for each word. In many languages, articles, demonstratives and adjectives are also declined. The following example demonstrates such declension in our theoretical English.

- The-tee big-tee man-tee saw a-woo big-woo bear-woo.
- Our-tee favourite-tee teacher-tee taugh us-woo how to get to the-ash city-ash centre-ash.

Modern English

In Modern English, nouns have distinct singular and plural forms; that is, they *decline* to reflect their grammatical number. (Consider the difference between *book* and *books*.) In addition, a few English pronouns have distinct nominative and objective forms; that is, they decline to reflect their relationship to a verb or preposition. (Consider the difference between *he* (nominative) and *him* (dative or accusative), as in "He saw it" and "It saw him".) Further, these pronouns and a few others have distinct possessive forms, such as *his*. By contrast, nouns have no distinct nominative and objective forms, the two being merged into a single *plain case*. For example, *chair* does not change form between "the chair is here" (subject) and "I saw the chair" (direct object). Possession is shown by the clitic -'s attached to a possessive noun phrase, rather than by declension of the noun itself.

Gender is at best only weakly grammaticalized in Modern English. While masculine, feminine, and neuter genders are recognized, nouns do not normally decline for gender, though some nouns, especially Latin words and personal names, exist in multiple forms corresponding to different genders: *Alumnus* (male, singular)/*Alumna* (female, singular); *Andrew/Andrea*, *Paul/Paula*, etc. Suffixes such as *-ess*, *-ette*, and *-er* can also derive overtly gendered versions of nouns, with marking for feminine being much more common than marking for masculine. Many nouns can actually function as members of two genders or even all three, and the gender classes of English nouns are usually determined by their agreement with pronouns, rather than marking on the nouns themselves.

Adjectives are rarely declined for any purpose. They can be declined for number when they are used as substitutes for nouns (as in, "I'll take the reds", meaning "I'll take the red ones" or as shorthand for "I'll take the red wines", for example). Some adjectives borrowed from other languages are, or can be, declined for gender, at least in writing: *blond* (male) and *blonde* (female) or a *bonie* lad as compared to a *bonnie* lass. Adjectives are not declined for case in Modern English, though they were in Old English.

The article is never regarded as declined in Modern English, although technically the words *this* and *that*, and their plural forms *these* and *those*, are modern forms of *the* as it was declined in Old English. Certain non-standard regional and economic class-associated dialects do decline the article, either in regular speech or in slang - as in expressions such as "How do you like *them* apples?" and "Oh, *them* are nice!" (instead of "those").

Latin

An example of a Latin noun declension is given below, using the singular forms of the word *homo* (*man*), which belongs to Latin's third declension.

- *homo* (nominative) "[the] man" [as a subject] (e.g., *homo ibi stat* the man is standing there)
- *hominis* (genitive) "of [the] man" [as a possessor] (e.g., *nomen hominis est Claudius* the man's name is Claudius)
- *homini* (dative) "to [the] man" [as an indirect object] (e.g., *homini donum dedi* I gave a present to the man; *homo homini lupus est* Man is a wolf to man.)
- *hominem* (accusative) "[the] man" [as a direct object] (e.g., *ad hominem* toward the man, in the sense of argument directed personally; *hominem vidi* I saw the man)
- *homine* (ablative) "[the] man" [in various uses not covered by the above] (e.g., *sum altior homine* I am taller than the man).

There are two further noun cases in Latin, the vocative and the locative. The vocative case indicates that a person or thing is being addressed (e.g., *O Tite, cur ancillam pugnas?* O Titus, why do you fight the slave girl?). Though widely used, it differs in form from the nominative only in the masculine singular of the second declension (that is, never in the plural, never in the feminine or neuter, and never in any declension other than the second). The locative case is rare in classic Latin, and it is mostly adsorbed in the genitive case.

Sanskrit

Sanskrit has eight cases: nominative, vocative, accusative, genitive, dative, ablative, locative and instrumental.^[1] Some count vocative not as a separate case, despite it having a distinctive ending in the singular, but consider it as a different use of the nominative.^[2]

Sanskrit grammatical case was analyzed extensively. The grammarian Pāṇini identified seven semantic roles or *karaka*, which are related to the eight grammatical cases, but not in a one-to-one way. The seven *karaka* are:^[3]

- agent (*kartr̥*, related to the nominative)
- patient (*karman*, related to the accusative)
- means (*karana*, related to the instrumental)
- recipient (*sampradāna*, related to the dative)
- source (*apādāna*, related to the ablative)
- locus (*adhikaraya*, related to the locative)
- address (*sambodhan*, related to the vocative)

For example, consider the following sentence:

<i>vrkṣ[āt]</i>	<i>parṇ[arṇ]</i>	<i>bhūm[āu]</i>	<i>patati</i>
[from] the tree	a leaf	[to] the ground	falls
"a leaf falls from the tree to the ground"			

Here *leaf* is the agent, *tree* is the source, and *ground* is the locus, the corresponding declensions are reflected in the morphemes *-am* *-at* and *-au* respectively.

References

- [1] James Clackson (2007) *Indo-European linguistics: an introduction* (<http://books.google.com/books?id=DJDjNp6wODoC&pg=PA90>), p.90
- [2] Amba Kulkarni and Peter Scharf (eds), *Sanskrit Computational Linguistics: First and Second International Symposia Rocquencourt, France, October 29-31, 2007 and Providence, RI, USA, May 15-17, 2008, Revised Selected Papers* (<http://books.google.com.au/books?id=t2f1hneiV08C&pg=PA68>), Volume 5402 of Lecture notes in artificial intelligence, Springer, 2009, ISBN 3-642-00154-8, pp. 64–68.
- [3] Pieter Cornelis Verhagen, *Handbook of oriental studies: India. A history of Sanskrit grammatical literature in Tibet, Volume 2* (http://books.google.com.au/books?id=5vmaX_JQzc4C&pg=PA281), BRILL, 2001, ISBN 90-04-11882-9, p. 281.

External links

- The Status of Morphological Case in the Icelandic Lexicon (<http://www.hi.is/~eirikur/cases.pdf>) by Eiríkur Rögnvaldsson. Discussion of whether cases convey any inherent syntactic or semantic meaning.
- Optimal Case: The Distribution of Case in German and Icelandic (<http://web.phil-fak.uni-duesseldorf.de/~wdl/OptCase.pdf>) by Dieter Wunderlich
- Lexicon of Linguistics: Declension (<http://www2.let.uu.nl/UiL-OTS/Lexicon/zoek.pl?lemma=Declension>)
- Lexicon of Linguistics: Base (<http://www2.let.uu.nl/UiL-OTS/Lexicon/zoek.pl?lemma=Base>), Stem (<http://www2.let.uu.nl/UiL-OTS/Lexicon/zoek.pl?lemma=Stem>), Root (<http://www2.let.uu.nl/UiL-OTS/Lexicon/zoek.pl?lemma=Root>)
- Lexicon of Linguistics: Defective Paradigm (<http://www2.let.uu.nl/UiL-OTS/Lexicon/zoek.pl?lemma=Defective+paradigm>)
- Lexicon of Linguistics: Strong Verb (<http://www2.let.uu.nl/UiL-OTS/Lexicon/zoek.pl?lemma=Strong+verb>)
- Lexicon of Linguistics: Inflection Phrase (IP) (<http://www2.let.uu.nl/UiL-OTS/Lexicon/zoek.pl?lemma=IP>), INFL (<http://www2.let.uu.nl/UiL-OTS/Lexicon/zoek.pl?lemma=INFL>), AGR (<http://www2.let.uu.nl/UiL-OTS/Lexicon/zoek.pl?lemma=AGR>), Tense (<http://www2.let.uu.nl/UiL-OTS/Lexicon/zoek.pl?lemma=tense>)
- Lexicon of Linguistics: Lexicalist Hypothesis (<http://www2.let.uu.nl/UiL-OTS/Lexicon/zoek.pl?lemma=Lexicalist+Hypothesis>)
- classical Greek declension (<http://mysite.du.edu/~etuttle/classics/nugreek/app1.htm>)

Dependency grammar

Dependency grammar (DG) 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. 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.

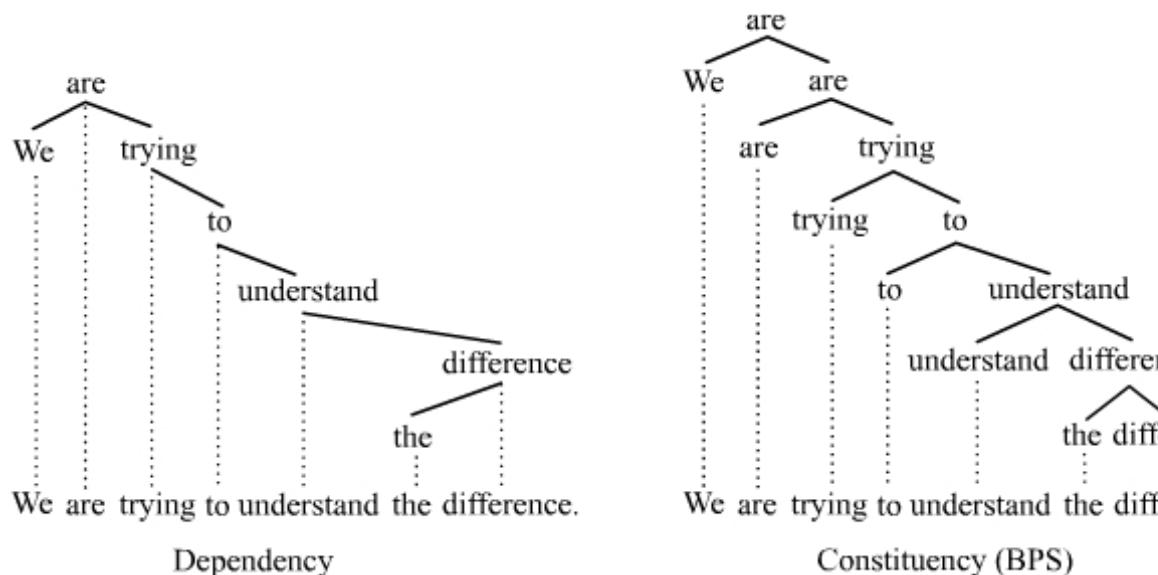
History

The notion of dependencies between grammatical units has existed since the earliest recorded grammars, e.g. Pāṇini, and the dependency concept therefore arguably predates the constituency notion by many centuries.^[1] Ibn Mada, who lived in Cordoba and Sevilla in the 12th century, may have been the first grammarian to use the term *dependency* in the grammatical sense that we use it today. In early modern times, the dependency concept seems to have coexisted side by side with the constituency concept, the latter having entered Latin, French, English and other grammars from the widespread study of term logic of antiquity.^[2]

Modern dependency grammars, however, begin primarily with the work of Lucien Tesnière. Tesnière was a Frenchman, a polyglot, and a professor of linguistics at the universities in Strasbourg and Montpellier. His major work *Éléments de syntaxe structurale* was published posthumously in 1959 – he died in 1954. The basic approach to syntax he developed seems to have been seized upon independently by others in the 1960s^[3] and a number of other dependency-based grammars have gained prominence since those early works.^[4] DG has generated a lot of interest in Germany^[5] in both theoretical syntax and language pedagogy. In recent years, the great development surrounding dependency-based theories has come from computational linguistics. Dependency-based systems are increasingly being used to parse natural language and generate tree banks. Interest in dependency grammar is growing at present, the first international conference on dependency linguistics having taken place recently (Depling 2011^[6]).

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 given a sentence, for every element in that 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^[7] 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.

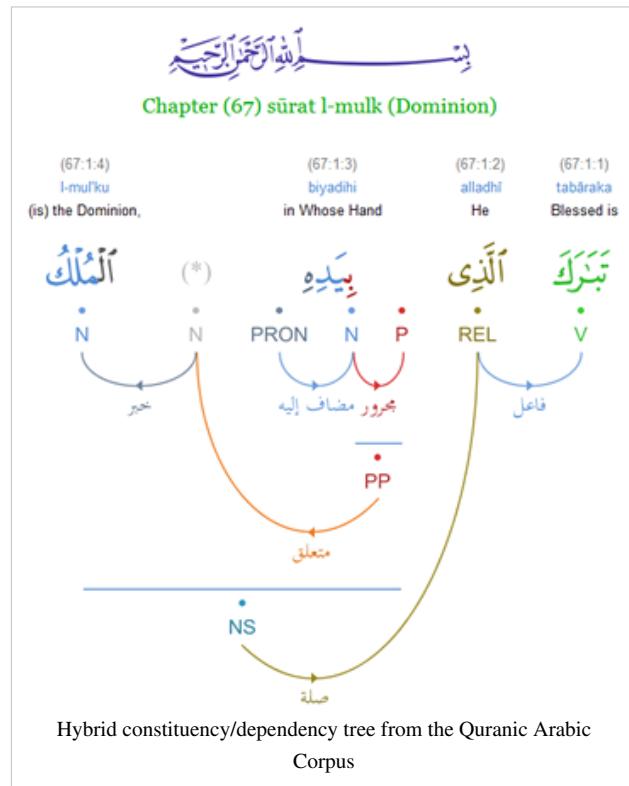
The distinction between dependency- and constituency-based grammars derives in a large part from the initial division of the clause. The constituency relation derives from an initial binary division, whereby the clause is split into a subject noun phrase (NP) and a predicate verb phrase (VP). This division 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.^[8] 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.

Dependency grammars

The following frameworks are dependency-based:

- Algebraic syntax
 - Operator grammar
 - Functional generative description
 - Lexicase grammar
 - Meaning–text theory
 - Word grammar
 - Extensible dependency grammar [9]

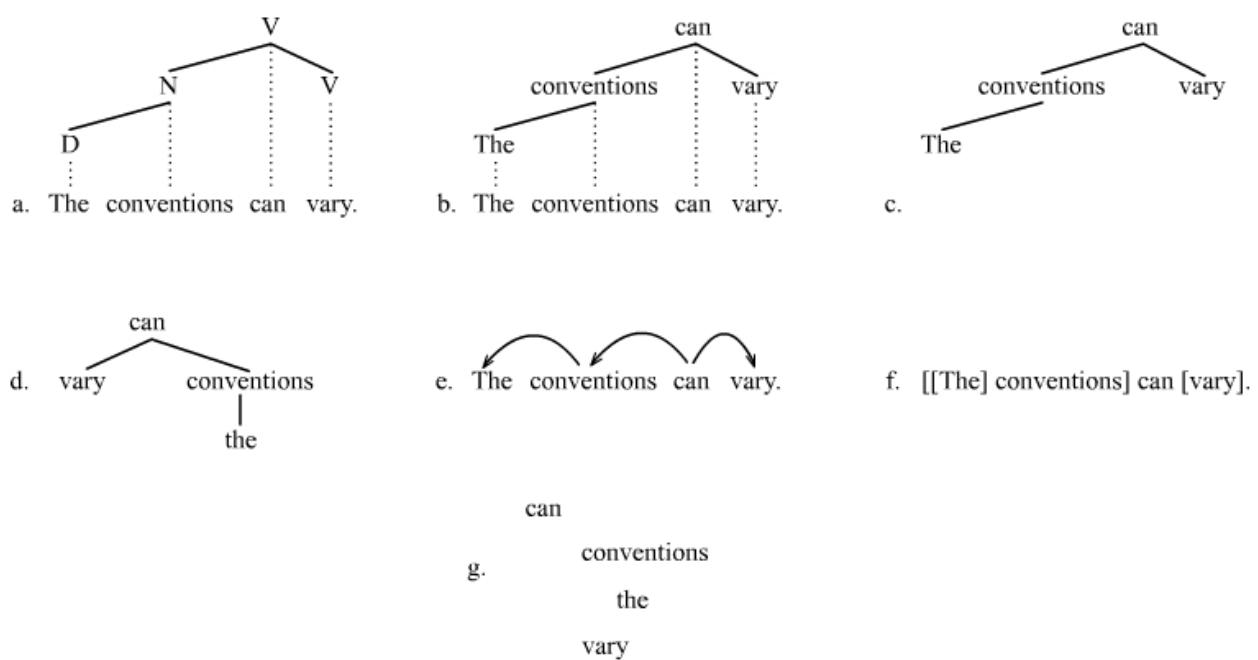
Link grammar is also based on the dependency relation, but link grammar does not include directionality in the dependencies between words, and thus does not describe head-dependent relationships. Hybrid dependency/constituency grammar uses dependencies between words, but also includes dependencies between phrasal nodes – see for example the Quranic Arabic Dependency Treebank. The derivation trees of Tree-adjoining grammar are dependency-based, although the full trees of TAG are constituency-based, so in this regard, it is not clear whether TAG should be viewed more as a dependency or constituency grammar.



There are major differences between the grammars just listed. In this regard, the dependency relation is compatible with other major tenets of theories of grammar. Thus like constituency grammars, dependency grammars can be mono- or multistratal, representational or derivational, construction- or rule-based.

Representing dependencies

There are various conventions that DGs employ to represent dependencies. The following schemata (in addition to the tree above and the trees further below) illustrate some of these conventions:



The representations in (a-d) are trees, whereby the specific conventions employed in each tree vary. Solid lines are *dependency edges* and lightly dotted lines are *projection lines*. The only difference between tree (a) and tree (b) is that tree (a) employs the category class to label the nodes whereas tree (b) employs the words themselves as the node labels.^[10] Tree (c) is a reduced tree insofar as the string of words below and projection lines are deemed unnecessary and are hence omitted. Tree (d) abstracts away from linear order and reflects just hierarchical order.^[11] The arrow arcs in (e) are an alternative convention used to show dependencies and are favored by Word Grammar^[12] The brackets in (f) are seldom used, but are nevertheless quite capable of reflecting the dependency hierarchy; dependents appear enclosed in more brackets than their heads. And finally, the indentations like those in (g) are another convention that is sometimes employed to indicate the hierarchy of words.^[13] Dependents are placed underneath their heads and indented. Like tree (d), the indentations in (g) abstract away from linear order.

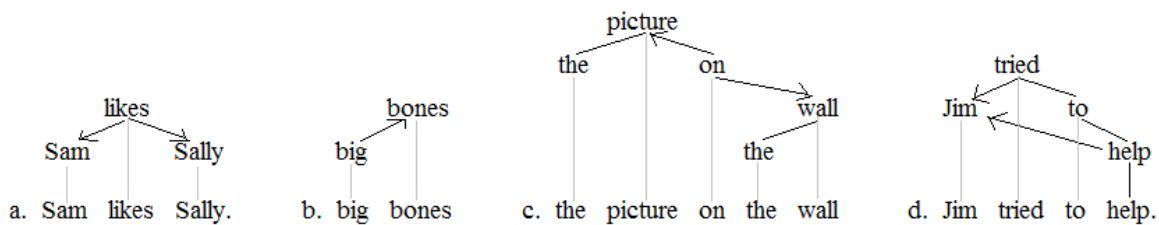
The point to these conventions is that they are just that, namely conventions. They do not influence the basic commitment to dependency as the relation that is grouping syntactic units.

Types of dependencies

The dependency representations above (and further below) show syntactic dependencies. Indeed, most work in dependency grammar focuses on syntactic dependencies. Syntactic dependencies are, however, just one of three or four types of dependencies. Meaning-Text Theory, for instance, emphasizes the role of semantic and morphological dependencies in addition to syntactic dependencies.^[14] A fourth type, prosodic dependencies, can also be acknowledged. Distinguishing between these types of dependencies can be important, in part because if one fails to do so, the likelihood that semantic, morphological, and/or prosodic dependencies will be mistaken for syntactic dependencies is great. The following four subsections briefly sketch each of these dependency types. During the discussion, the existence of syntactic dependencies is taken for granted and used as an orientation point for establishing the nature of the other three dependency types.

Semantic dependencies

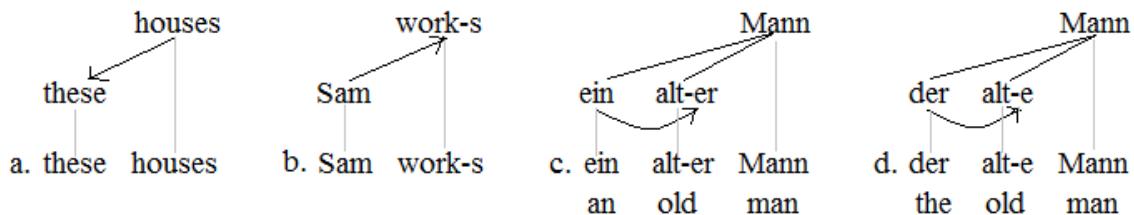
Semantic dependencies are understood in terms of predicates and their arguments.^[15] The arguments of a predicate are semantically dependent on that predicate. Often, semantic dependencies overlap with and point in the same direction as syntactic dependencies. At times, however, semantic dependencies can point in the opposite direction of syntactic dependencies, or they can be entirely independent of syntactic dependencies. The hierarchy of words in the following examples show standard syntactic dependencies, whereas the arrows indicate semantic dependencies:



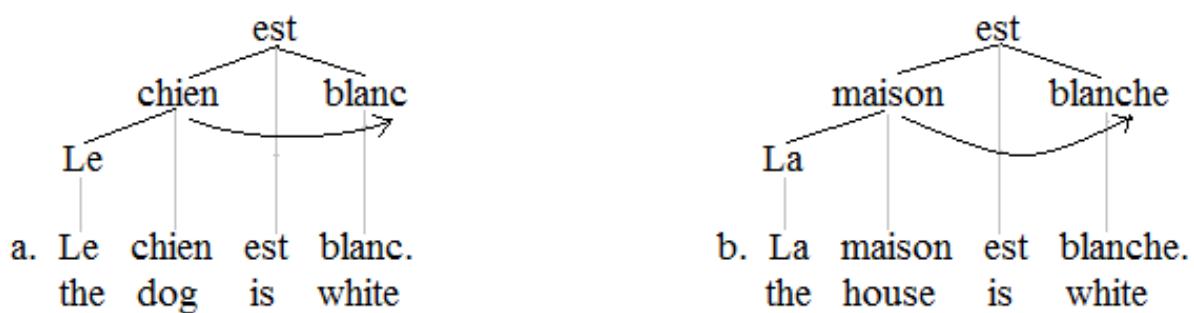
The two arguments *Sam* and *Sally* in tree (a) are dependent on the predicate *likes*, whereby these arguments are also syntactically dependent on *likes*. What this means is that the semantic and syntactic dependencies overlap and point in the same direction (down the tree). Attributive adjectives, however, are predicates that take their head noun as their argument, hence *big* is a predicate in tree (b) that takes *bones* as its one argument; the semantic dependency points up the tree and therefore runs counter to the syntactic dependency. A similar situation obtains in (c), where the preposition predicate *on* takes the two arguments *the picture* and *the wall*; one of these semantic dependencies points up the syntactic hierarchy, whereas the other points down it. Finally, the predicate *to help* in (d) takes the one argument *Jim* but is not directly connected to *Jim* in the syntactic hierarchy, which means that that semantic dependency is entirely independent of the syntactic dependencies.

Morphological dependencies

Morphological dependencies obtain between words or parts of words.^[16] When a given word or part of a word influences the form of another word, then the latter is morphologically dependent on the former. Agreement and concord are therefore manifestations of morphological dependencies. Like semantic dependencies, morphological dependencies can overlap with and point in the same direction as syntactic dependencies, overlap with and point in the opposite direction of syntactic dependencies, or be entirely independent of syntactic dependencies. The arrows are now used to indicate morphological dependencies.



The plural *houses* in (a) demands the plural of the demonstrative determiner, hence *these* appears, not *this*, which means there is a morphological dependency that points down the hierarchy from *houses* to *these*. The situation is reversed in (b), where the singular subject *Sam* demands the appearance of the agreement suffix *-s* on the finite verb *works*, which means there is a morphological dependency pointing up the hierarchy from *Sam* to *works*. The type of determiner in the German examples (c) and (d) influences the inflectional suffix that appears on the adjective *alt*. When the indefinite article *ein* appears, it lacks gender, so the strong masculine ending *-er* appears on the adjective. When the definite article *der* appears, in contrast, it shows masculine gender, which means the weak ending *-e* appears on the adjective. Thus since the choice of determiner impacts the morphological form of the adjective, there is a morphological dependency pointing from the determiner to the adjective, whereby this morphological dependency is entirely independent of the syntactic dependencies. Consider further the following French sentences:



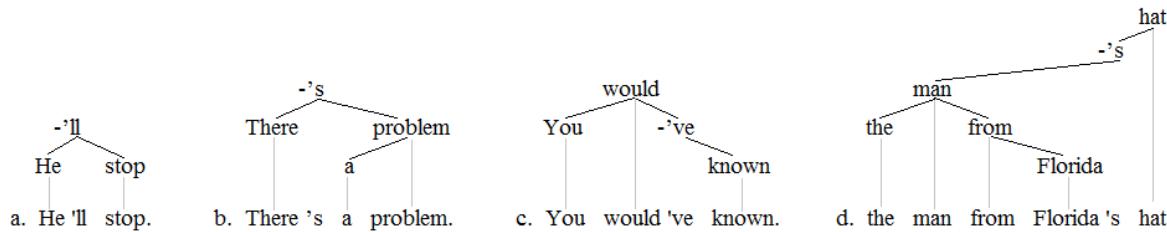
The masculine subject *le chien* in (a) demands the masculine form of the predicative adjective *blanc*, whereas the feminine subject *la maison* demands the feminine form of this adjective. A morphological dependency that is entirely independent of the syntactic dependencies therefore points again across the syntactic hierarchy.

Morphological dependencies play an important role in typological studies. Languages are classified as mostly head-marking (*Sam work-s*) or mostly dependent-marking (*these houses*), whereby most if not all languages contain at least some minor measure of both head and dependent marking.^[17]

Prosodic dependencies

Prosodic dependencies are acknowledged in order to accommodate the behavior of clitics.^[18] A clitic is a syntactically autonomous element that is prosodically dependent on a host. A clitic is therefore integrated into the prosody of its host, meaning that it forms a single word with its host. Prosodic dependencies exist entirely in the linear dimension (horizontal dimension), whereas standard syntactic dependencies exist in the hierarchical dimension (vertical dimension). Classic examples of clitics in English are reduced auxiliaries (e.g. *-ll*, *-s*, *-ve*) and the possessive marker *-s*. The prosodic dependencies in the following examples are indicated with the hyphen and the lack of a

vertical projection line:



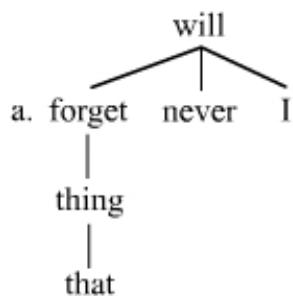
The hyphens and lack of projection lines indicate prosodic dependencies. A hyphen that appears on the left of the clitic indicates that the clitic is prosodically dependent on the word immediately to its left (*He'll*, *There's*), whereas a hyphen that appears on the right side of the clitic (not shown here) indicates that the clitic is prosodically dependent on the word that appears immediately to its right. A given clitic is often prosodically dependent on its syntactic dependent (*He'll*, *There's*) or on its head (*would've*). At other times, it can depend prosodically on a word that is neither its head nor its immediate dependent (*Florida's*).

Syntactic dependencies

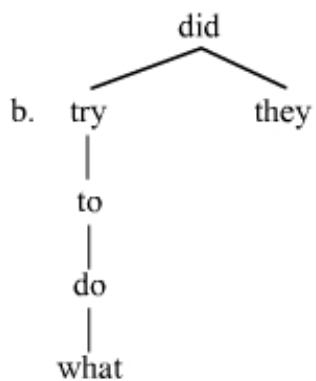
Syntactic dependencies are the focus of most work in dependency grammar, as stated above. How the presence and the direction of syntactic dependencies are determined is of course often open to debate. In this regard, it must be acknowledged that the validity of syntactic dependencies in the trees throughout this article is being taken for granted. However, these hierarchies are such that many dependency grammars can largely support them, although there will certainly be points of disagreement. The basic question about how syntactic dependencies are discerned has proven difficult to answer definitively. One should acknowledge in this area, however, that the basic task of identifying and discerning the presence and direction of the syntactic dependencies of dependency grammars is no easier or harder than determining the constituent groupings of constituency grammars. A variety of heuristics are employed to this end, basic constituency tests being useful tools; the syntactic dependencies assumed in the trees in this article are grouping words together in a manner that most closely matches the results of standard permutation, substitution, and ellipsis constituency tests. Etymological considerations also provide helpful clues about the direction of dependencies. A promising principle upon which to base the existence of syntactic dependencies is distribution.^[19] When one is striving to identify the root of a given phrase, the word that is most responsible for determining the distribution of that phrase as a whole is the root of that phrase.

Linear order and discontinuities

Traditionally, DGs have had a different approach to linear order (word order) than constituency grammars. Dependency-based structures are minimal compared to their constituency-based counterparts, and these minimal structures allow one to focus intently on the two ordering dimensions.^[20] Separating the vertical dimension (hierarchical order) from the horizontal dimension (linear order) is easily accomplished. This aspect of dependency-based structures has allowed DGs, starting with Tesnière (1959), to focus on hierarchical order in a manner that is hardly possible for constituency grammars. For Tesnière, linear order was secondary to hierarchical order insofar as hierarchical order preceded linear order in the mind of a speaker. The stemmas (trees) that Tesnière produced reflected this view; they abstracted away from linear order to focus almost entirely on hierarchical order. Many DGs that followed Tesnière adopted this practice, that is, they produced tree structures that reflect hierarchical order alone, e.g.



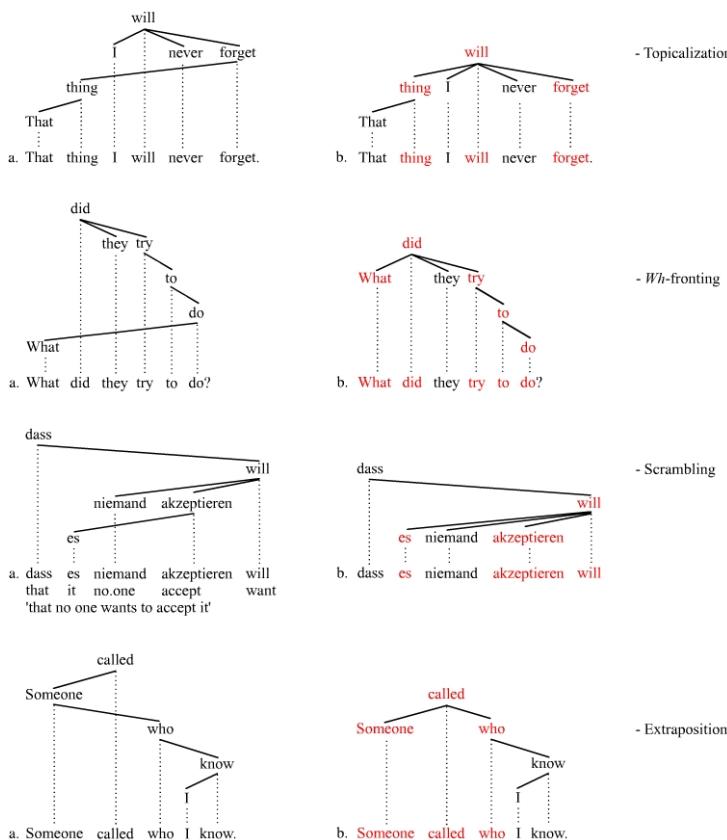
- Unordered tree of the sentence *That thing I will never forget.*



- Unordered tree of the sentence *What did they try to do?.*

The traditional focus on hierarchical order generated the impression that DGs have little to say about linear order, and it has contributed to the view that DGs are particularly well-suited to examine languages with free word order. A negative result of this focus on hierarchical order, however, is that there is a dearth of dependency-based explorations of particular word order phenomena, such as of standard discontinuities. Comprehensive dependency grammar accounts of topicalization, *wh*-fronting, scrambling, and extraposition are mostly absent from many established dependency-based frameworks. This situation can be contrasted with constituency grammars, which have devoted tremendous effort to exploring these phenomena.

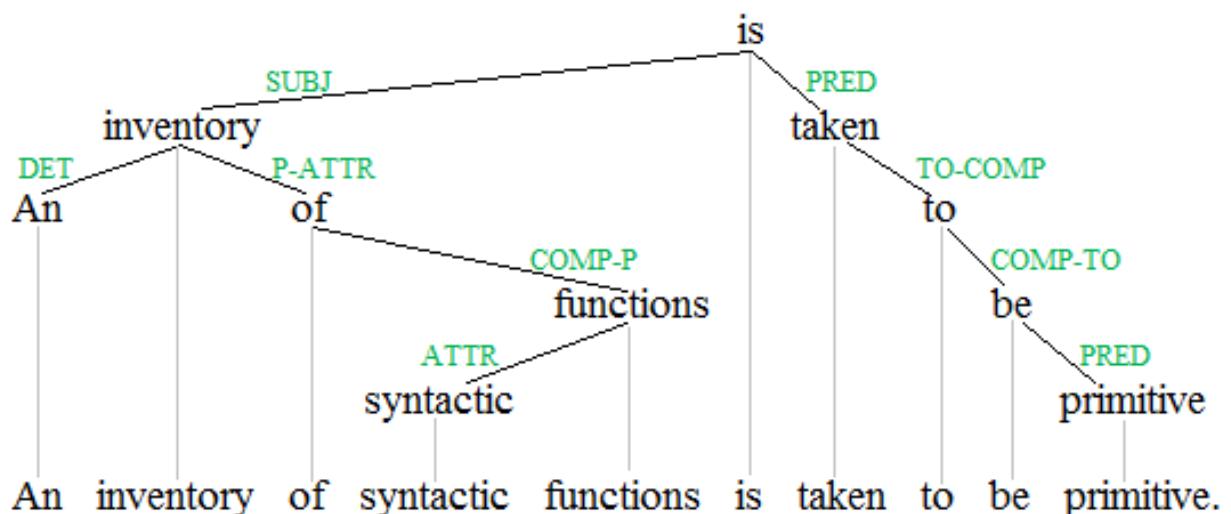
The nature of the dependency relation does not, however, prevent one from focusing on linear order. Dependency-based structures are as capable of exploring word order phenomena as constituency-based structures. The following trees illustrate this point; they represent one way of exploring discontinuities using dependency-based structures. The trees suggest the manner in which common discontinuities can be addressed. An example from German is used to illustrate a scrambling discontinuity:



The a-trees on the left show projectivity violations (= crossing lines), and the b-trees on the right demonstrate one means of addressing these violations. The displaced constituent takes on a word as its head that is not its governor. The words in red mark the catena (=chain) of words that extends from the root of the displaced constituent to the governor of that constituent.^[21] Discontinuities are then explored in terms of these catenae. The limitations on topicalization, wh-fronting, scrambling, and extraposition can be explored and identified by examining the nature of the catenae involved.

Syntactic functions

Traditionally, DGs have treated the syntactic functions (= grammatical functions, grammatical relations) as primitive. They posit an inventory of functions (e.g. subject, object, oblique, determiner, attribute, predicative, etc.). These functions can appear as labels on the dependencies in the tree structures, e.g.^[22]



The syntactic functions in this tree are shown in green: ATTR (attribute), COMP-P (complement of preposition), COMP-TO (complement of to), DET (determiner), P-ATTR (prepositional attribute), PRED (predicative), SUBJ (subject), TO-COMP (to complement). The functions chosen and abbreviations used in the tree here are merely representative of the general stance of DGs toward the syntactic functions. The actual inventory of functions and designations employed vary from DG to DG.

As a primitive of the theory, the status of these functions is much different than in some constituency grammars. Traditionally, constituency grammars derive the syntactic functions from the constellation. For instance, the object is identified as the NP appearing inside finite VP, and the subject as the NP appearing outside of finite VP. Since DGs reject the existence of a finite VP constituent, they were never presented with the option to view the syntactic functions in this manner. The issue is a question of what comes first: traditionally, DGs take the syntactic functions to be primitive and they then derive the constellation from these functions, whereas constituency grammars traditionally take the constellation to be primitive and they then derive the syntactic functions from the constellation.

This question about what comes first (the functions or the constellation) is not an inflexible matter. The stances of both grammar types (dependency and constituency grammars) is not narrowly limited to the traditional views. Dependency and constituency are both fully compatible with both approaches to the syntactic functions. Indeed, monostratal systems, be they dependency- or constituency-based, will likely reject the notion that the functions are derived from the constellation or that the constellation is derived from the functions. They will take both to be primitive, which means neither can be derived from the other.

Notes

- [1] Concerning the history of the dependency concept, see Percival (1990).
- [2] Concerning the influence of term logic on the theory of grammar, see Percival (1976).
- [3] Concerning early dependency grammars that may have developed independently of Tesnière's work, see for instance Hays (1960), Gaifman (1965), and Robinson (1970).
- [4] Some prominent dependency grammars that were well established by the 1980s are from Hudson (1984), Sgall, Hajičová et Paněvová (1986), Mel'čuk (1988), and Starosta (1988).
- [5] Some prominent dependency grammars from the German schools are from Heringer (1996), Engel (1994), Eroms (2000), and Ágel et al. (2003/6) is a massive two volume collection of essays on dependency and valence grammars from more than 100 authors.
- [6] <http://depling.org>
- [7] The minimality of dependency structures is emphasized, for instance, by Osborne et al. (2011).
- [8] Concerning Tesnière's rejection of the subject-predicate division of the clause, see Tesnière (1959:103–105), and for discussion of empirical considerations that support Tesnière's point, see Matthews (2007:17ff.), Miller (2011:54ff.), and Osborne et al. (2011:323f.).
- [9] <http://www.ps.uni-saarland.de/~rade/xdg.html>
- [10] The conventions illustrated with trees (a) and (b) are preferred by Osborne et al. (2011, 2013).
- [11] Unordered trees like (d) are associated above all with Tesnière's stemmas and with the syntactic strata of Mel'čuk's Meaning-Text Theory.
- [12] Three major works on Word Grammar are Hudson (1984, 1990, 2007).
- [13] Lobin (2003) makes heavy use of he indentations.
- [14] For a discussion of semantic, morphological, and syntactic dependencies in Meaning-Text Theory, see Mel'čuk (2003:191ff.).
- [15] Concerning semantic dependencies, see Mel'čuk (2003:192f.).
- [16] Concerning morphological dependencies, see Mel'čuk (2003:193ff.).
- [17] The distinction between head- and dependent-marking was established by Nichols (1986). Nichols was using a dependency-based understanding of these distinctions.
- [18] Concerning prosodic dependencies and the analysis of clitics, see Groß (2011).
- [19] Distribution is primary principle used by Owens (1984:36), Schubert (1988:40), and Mel'čuk (2003:200) for discerning syntactic dependencies.
- [20] Concerning the importance of the two ordering dimensions, see Tesnière (1959:16ff.).
- [21] See Osborne et al. (2013) concerning catenae.
- [22] For discussion and examples of the labels for syntactic functions that are attached to dependency edges and arcs, see for instance Mel'čuk (1988:22, 69) and van Valin (2001:102ff.).

References

- Ágel, Vilmos; Eichinger, Ludwig M.; Eroms, Hans Werner et al., eds. (2003) (in German). *Dependenz und Valenz: Ein internationales Handbuch der zeitgenössischen Forschung [Dependency and Valency: An International Handbook of Contemporary Research]* (<http://www.degruyter.com/view/serial/18595>). Berlin: de Gruyter. ISBN 978-3110141900. Retrieved 24 August 2012.
- Engel, U. 1994. Syntax der deutschen Sprache, 3rd edition. Berlin: Erich Schmidt Verlag.
- Eroms, Hans-Werner (2000). *Syntax der deutschen Sprache* (<http://www.degruyter.com/view/product/5087?format=G>). Berlin [u.a.]: de Gruyter. ISBN 978-3110156669. Retrieved 24 August 2012.
- Groß, T. 2011. Clitics in dependency morphology. Depling 2011 Proceedings, 58-68.
- Helbig, Gerhard; Buscha, Joachim (2007). *Deutsche Grammatik: ein Handbuch für den Ausländerunterricht [German Grammar: A Guide for Foreigners Teaching]* (http://www.langenscheidt.de/produkt/2881_8731/Deutsche_Grammatik-Buch/978-3-468-49493-2) (6. [Dr.]. ed.). Berlin: Langenscheidt. ISBN 978-3-468-49493-2. Retrieved 24 August 2012.
- Heringer, H. 1996. Deutsche Syntax dependentiell. Tübingen: Stauffenburg.
- Hays, D. 1960. Grouping and dependency theories. P-1910, RAND Corporation.
- Hudson, Richard (1984). *Word grammar* (1. publ. ed.). Oxford, OX, England: B. Blackwell. ISBN 978-0631131861.
- Hudson, R. 1990. An English Word Grammar. Oxford: Basil Blackwell.
- Hudson, R. 2007. Language Networks: The New Word Grammar. Oxford University Press.
- Liu, H. 2009. Dependency Grammar: from Theory to Practice. Beijing: Science Press.
- Lobin, H. 2003. Koordinationssyntax als prozedurales Phänomen. Tübingen: Gunter Narr-Verlag.
- Matthews, P. H. (2007). *Syntactic Relations: a critical survey* (<http://www.cambridge.org/us/knowledge/isbn/item1157046>) (1. publ. ed.). Cambridge: Cambridge University Press. ISBN 9780521608299. Retrieved 24 August 2012.
- Mel'čuk, Igor A. (1987). *Dependency syntax : theory and practice* (<http://www.sunypress.edu/p-164-dependency-syntax.aspx>). Albany: State University Press of New York. ISBN 978-0-88706-450-0. Retrieved 24 August 2012.
- Mel'čuk, I. 2003. Levels of dependency in linguistic description: Concepts and problems. In Ágel et al., 170-187.
- Miller, J. 2011. A critical introduction to syntax. London: continuum.
- Nichols, J. 1986. Head-marking and dependent-marking languages. *Language* 62, 56-119.
- Osborne, T., M. Putnam, and T. Groß 2011. Bare phrase structure, label-less trees, and specifier-less syntax: Is Minimalism becoming a dependency grammar? *The Linguistic Review* 28, 315–364.
- Osborne, T., M. Putnam, and T. Groß 2013. Catenae: Introducing a novel unit of syntactic analysis. *Syntax* 16, in press.
- Owens, J. 1984. On getting a head: A problem in dependency grammar. *Lingua* 66, 25-42.
- Percival, K. 1976. On the historical source of immediate-constituent analysis. In: Notes from the linguistic underground, James McCawley (ed.), *Syntax and Semantics* 7, 229–242. New York: Academic Press.
- Percival, K. 1990. Reflections on the history of dependency notions in linguistics. *Historiographia Linguistica*, 17, 29–47.
- Robinson, J. 1970. Dependency structures and transformational rules. *Language* 46, 259–285.
- Schubert, K. 1988. Metataxis: Contrastive dependency syntax for machine translation. Dordrecht: Foris.
- Sgall, P., E. Hajíčová, and J. Panevová 1986. The meaning of the sentence in its semantic and pragmatic aspects. Dordrecht: D. Reidel Publishing Company.
- Starosta, S. 1988. The case for lexicase. London: Pinter Publishers.
- Tesnière, L. 1959. *Éléments de syntaxe structurale*. Paris: Klincksieck.
- Tesnière, L. 1969. *Éléments de syntaxe structurale*, 2nd edition. Paris: Klincksieck.
- van Valin, R. 2001. An introduction to syntax. Cambridge, UK: Cambridge University Press.

Implementations

- DeSR (<http://sites.google.com/site/desrparser/>) A statistical shift/reduce dependency parser
- MaltParser (<http://maltparser.org/>) A system for data-driven dependency parsing
- MST Parser (<http://sourceforge.net/projects/mstparser/>) A non-projective dependency parser that searches for maximum spanning trees over directed graphs
- MST Parser (C#) (<https://github.com/rasoolims/MSTParserCSharp/>) A non-projective dependency parser that searches for maximum spanning trees over directed graphs (C# conversion of the Java code)
- RelEx (<http://wiki.opencog.org/w/RelEx>) A parser that generates a dependency parse for the English language, by applying graph rewriting to the output of the link grammar parser. Open source license
- ClearParser (<http://code.google.com/p/clearparser/>) A statistical, transition-based dependency parser.
- Stanford parser (<http://nlp.stanford.edu/software/lex-parser.shtml>) A statistical phrase-structure parser which provides a tool to convert the output into a form of dependency graph called "Stanford Dependencies"
- TULE (<http://www.parsit.it/tule.php>) A linguistic framework that takes a natural language sentence in input (Italian) and returns a full dependency tree describing its syntactic structure
- XDG Development Kit (<http://www.ps.uni-saarland.de/~rade/mogul/publish/doc/debusmann-xdk/>) An integrated development environment for Extensible Dependency Grammar (XDG)

External links

- Link Grammar online demonstration (<http://www.link.cs.cmu.edu/link/submit-sentence-4.html>)
- Extensible Dependency Grammar articles and grammar development kit (<http://www.ps.uni-sb.de/~rade/xdg.html>)
- Prague Dependency Treebank (<http://ufal.mff.cuni.cz/pdt2.0/>)
- Persian Dependency Treebank (<http://dadegan.ir/en>)
- Quranic Arabic Dependency Treebank (<http://corpus.quran.com>)
- Word Grammar (<http://www.phon.ucl.ac.uk/home/dick/wg.htm>)
- Depling 2011: The first International Conference on Dependency Linguistics (<http://depling.org>)

Determiner

Examples
<ul style="list-style-type: none">• 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.

A **determiner** 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*).

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.

In some languages, the role of certain determiners can be played by affixes (prefixes or suffixes) attached to a noun, or by other types of inflection. For example, definite articles are represented by suffixes in the Scandinavian languages, Romanian, Bulgarian and Macedonian (the Swedish *bok* "book", when definite, becomes *boken* "the book", while the Romanian *caiet* "notebook" similarly becomes *caietul* "the notebook"). Some languages such as Finnish have possessive affixes, which play the role of possessive determiners like *my* and *his*.

X-bar theory contends that every noun has a corresponding determiner (or specifier). In a case where a noun does not have an explicit determiner (as in *physics uses mathematics*), X-bar theory hypothesizes the presence of a zero article, or zero determiner. Some modern grammatical approaches regard determiners (rather than nouns) as the head of their phrase, and thus refer to such phrases as determiner phrases rather than noun phrases. For more detail on theoretical approaches to the status of determiners, see Noun phrase: Noun phrases with and without determiners.

Types of determiners

- Articles
- Demonstratives
- Possessives
- Quantifiers
- Numerals
- Distributives

For details of the use of determiners in English, see English determiners (and specifically for the definite and indefinite articles, English articles).

References

External links

- GrammarBank - Determiners Practice (<http://www.grammarbank.com/determiners-practice.html>)
- SIL Glossary of linguistic terms – What is a determiner? (<http://www.sil.org/linguistics/GlossaryOfLinguisticTerms/WhatIsADeterminer.htm>)

Discontinuity (linguistics)

In linguistics, a **discontinuity** occurs when a given word or phrase is separated from another word or phrase that it modifies in such a manner that a direct connection cannot be established between the two without incurring crossing lines in the tree structure. The terminology that is employed to denote discontinuities varies depending on the theory of syntax at hand. The terms *discontinuous constituent*, *displacement*, *long distance dependency*, *unbounded dependency*, and *projectivity violation* are largely synonymous with the term *discontinuity*. There are various types of discontinuities, the most prominent and widely studied of these being topicalization, wh-fronting, scrambling,^[1] and extraposition.

Discontinuities should be distinguished from *inversion* and *shifting*,^[2] two mechanisms that result in non-canonical word order but that do not necessarily incur discontinuities depending on the theory of sentence structure one assumes (e.g. dependency- or constituency-based). Natural languages vary with respect to the types of discontinuities that they permit. The fixed word order of English allows for relatively few discontinuities compared to, for instance, the Slavic languages, which are much more permissive. Even compared to a closely related language such as German, English is rigid, allowing few discontinuities.

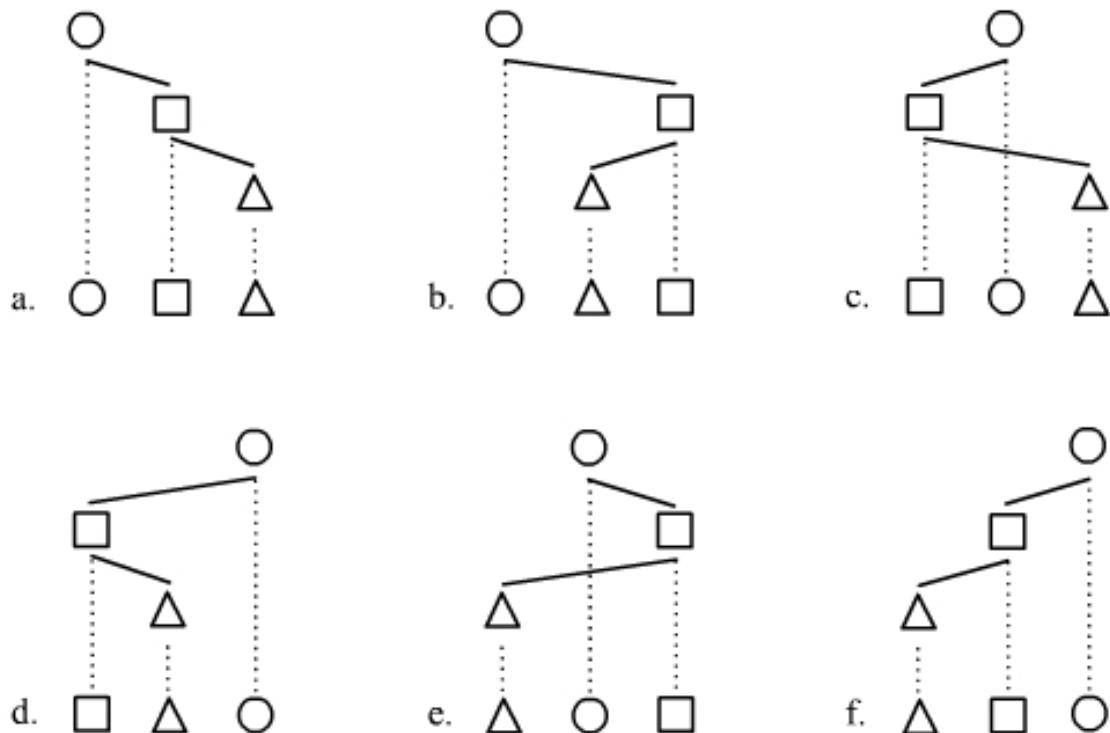
Projectivity

Projectivity is a principle of *tree* structures by which discontinuities are identified and defined. A tree structure is said to be *projective* if there are no crossing dependency edges and/or projection lines.^[3] If there are crossing edges/lines however, then the structure is *non-projective* and contains one or more *projectivity violations*. The concept and terminology of projectivity is associated most with the structures of *dependency grammar*, although the concept is just as applicable to the structures of *phrase structure grammars* (= *constituency grammars*). The discussion here considers projectivity first in terms of dependency-based structures and then in terms of constituency-based structures.

The flatter the tree structures are, the fewer projectivity violations they will contain. As structures become more layered, the number of projectivity violations can increase.

Dependency-based projectivity

The following trees illustrate projective and non-projective structures in a dependency-based analysis of sentence structure:

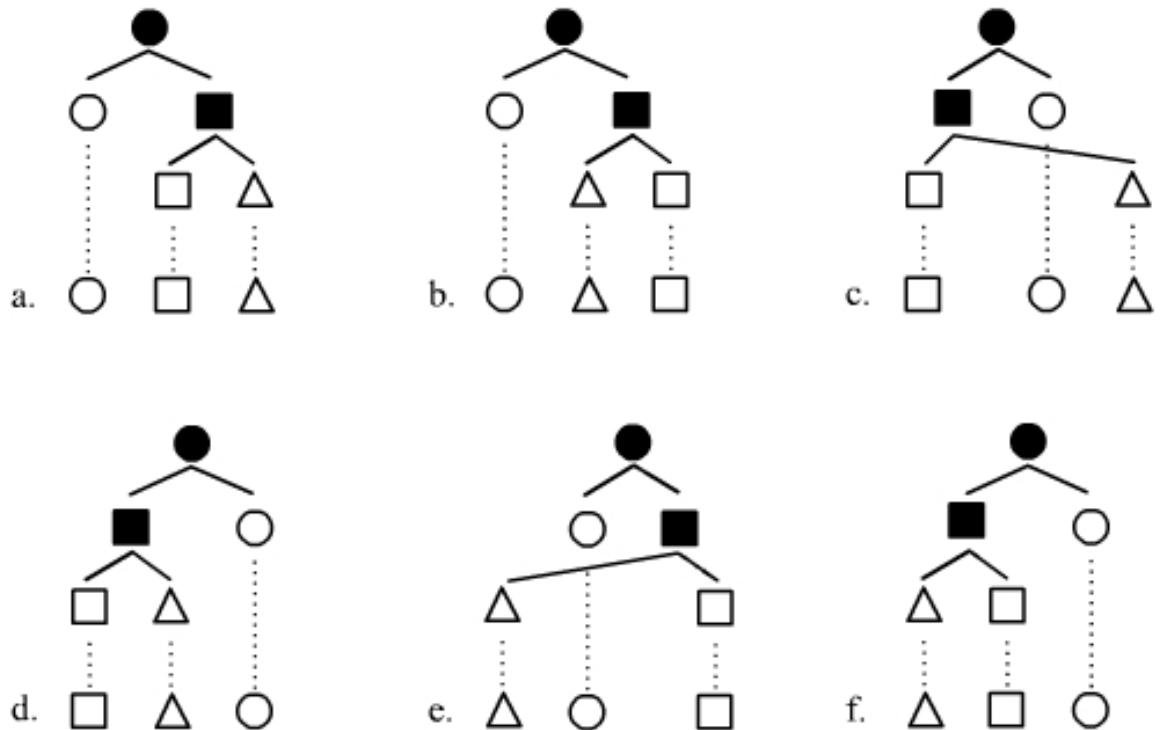


The trees show all six possible three-level structures conceivable for the three element hierarchy circle-square-triangle. Four of these six trees are projective because they contain no crossing lines. Trees (c) and (e), however, are not projective due to the crossing lines; each of (c) and (e) contains a projectivity violation because a solid dependency edge crosses a dotted projection line. In other words, each of (c) and (e) contains a discontinuity. The trees illustrate when discontinuities occur: if a given constituent (= complete subtree) is separated from its head by an element that dominates its head, a discontinuity obtains.

Dependency grammars have explored the projectivity principle in great detail and have formalized it rigorously.^[4] The concept is, however, a simple one. If crossing lines obtain in the tree, projectivity has been violated, meaning a discontinuity is present.

Constituency-based projectivity

The terminology that constituency grammars (= phrase structure grammars) employ to identify and define discontinuities is different. The projectivity principle certainly exists, although it is acknowledged in terms of discontinuous constituents,^[5] long distance dependencies, and/or unbounded dependencies. The constituency-based versions of the six hierarchies from the previous section are rendered as follows. The solid shapes represent phrasal categories, and the empty shapes lexical categories:



The crossing lines again identify projectivity violations. Hence trees (c) and (e) here contain discontinuities, just as they do further above. The solid square constituents in tree (c) and tree (e) are discontinuous in a manner similar to that of the empty square constituents in the dependency-based trees (c) and (e) above.

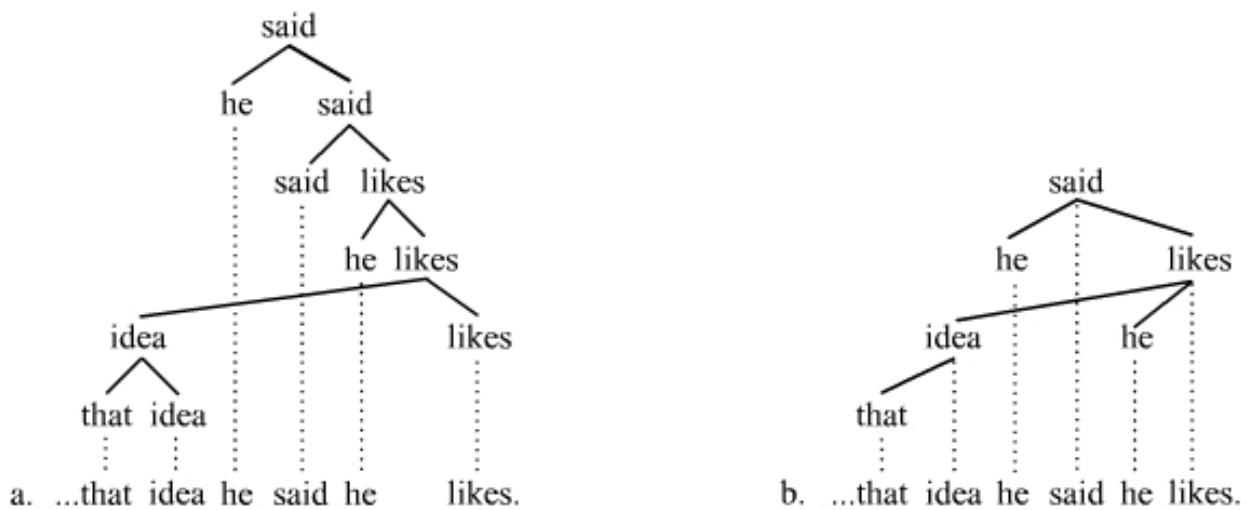
Types of discontinuities

Discontinuities occur in most if not all natural languages. But the types of discontinuities that a given language allows may differ from the discontinuities of another language, even if the languages are closely related. Worth noting is that a large majority of sentences in most languages are projective, i.e. they do not contain discontinuities. Only about 15-25% of actual sentences contain a discontinuity, and the percentage of discontinuous dependencies is even much less, approximately 1-2%.^[6]

The following discussion briefly considers four widely acknowledged types of discontinuities: 1) topicalization, 2) wh-fronting, 3) scrambling, and 4) extraposition. English allows three of the four; it does not allow scrambling. Examples from German are therefore used to illustrate scrambling discontinuities.

Topicalization

Topicalization occurs when a constituent is fronted in order to establish it as the topic. The topicalization of argument NPs is rare in English, but adjunct PPs that establish situational context are frequently topicalized. Topicalization is illustrated here (and further below) using both a constituency- and a dependency-based tree, the constituency-based tree on the left and the dependency-based tree on the right. The convention is employed throughout whereby the words themselves are used to label the nodes in the trees:



The crossing lines are clearly visible in these trees. Further examples of topicalization discontinuities (but without the trees):

Due to the weather, we are sure that they left.

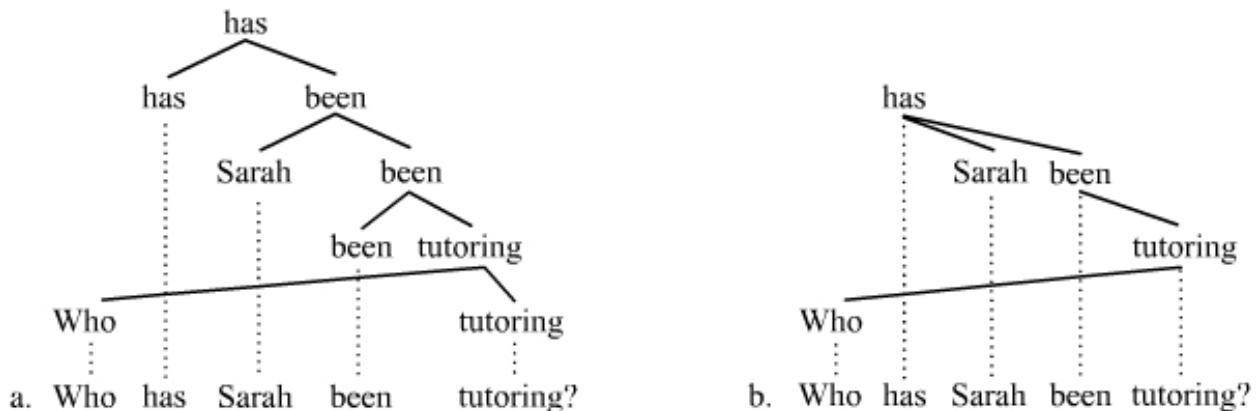
After school, Connor has been practicing piano.

To his wife, Jim gave a fantastic present.

The material in italics has been topicalized, which results in a discontinuity each time.

Wh-fronting

Wh-fronting (= *wh*-movement) occurs when a *wh*-expression appears at the front of the clause in order to focus it. Wh-fronting occurs in direct and indirect questions with interrogative words (e.g. *how*, *what*, *when*, *where*, *which*, *who*, *why*, etc.) and in relative clauses with relative pro-forms (*that*, *what*, *where*, *which*, *when*, *who*, *whose*, etc.). The constituency-based tree appears again on the left, and the dependency-based tree on the right:



These trees are (merely) representative of the type of analyses that one encounters in various grammars. Especially the constituency-based tree here may be disputed. Nevertheless, the crossing lines are again clearly visible. Further examples of *wh*-fronting discontinuities in matrix and embedded clauses:

Which house does Jim plan to buy?

Why has that been annoying you?

Nobody knows *what* they have been saying.

the person *who* we have been seeking

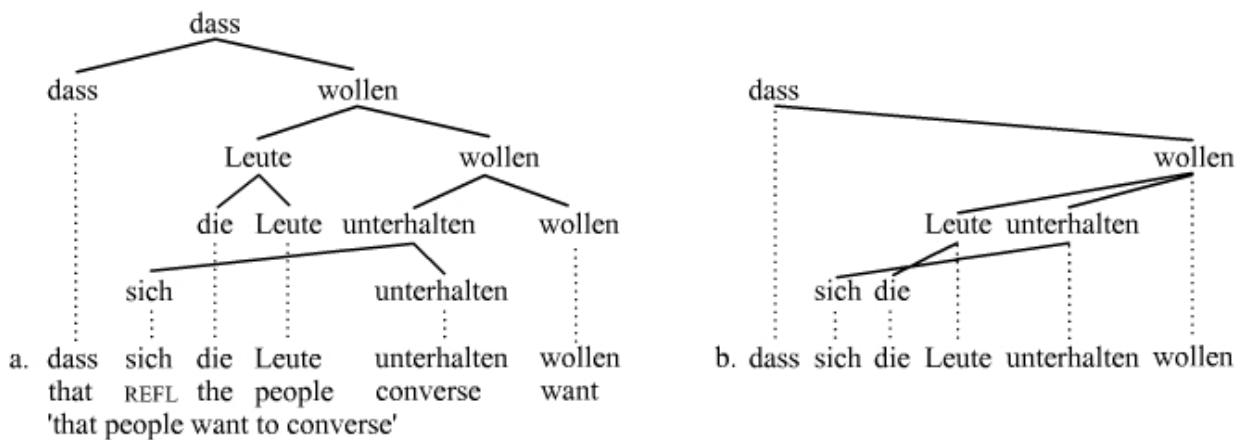
dangers *which* you have been ignoring

a politician *whose flip-flops* nobody is willing to forget

The material in italics has been *wh*-fronted. The first three examples show *wh*-fronting in direct or indirect interrogative clauses, and the second three illustrate *wh*-fronting in relative clauses.

Scrambling

Scrambling can result in a discontinuity (although it need not; sometimes scrambling is accomplished by shifting alone). Scrambling discontinuities often occur in order to accommodate the informational content of constituents, old information preferring to precede new information. Scrambling is frequently visible in the leftward striving of definite pronouns. Interestingly, scrambling discontinuities are absent from English, but they are very common in languages with freer word order such as German. The following trees illustrate a scrambling discontinuity in a subordinate clause of German:



The crossing lines identifying the discontinuity are again completely visible. The reflexive pronoun *sich* strives leftward, which results in the discontinuity. Discontinuities of this sort occur frequently in German. The italicized expressions in the following examples are separated from their heads in such a manner that scrambling discontinuities obtain:

Natürlich kann *uns* nichts überraschen. (naturally can us nothing surprise; 'Naturally nothing can surprise us.')

Sie haben *den* versucht zu lesen. (they have it tried to read; 'They tried to read it.')

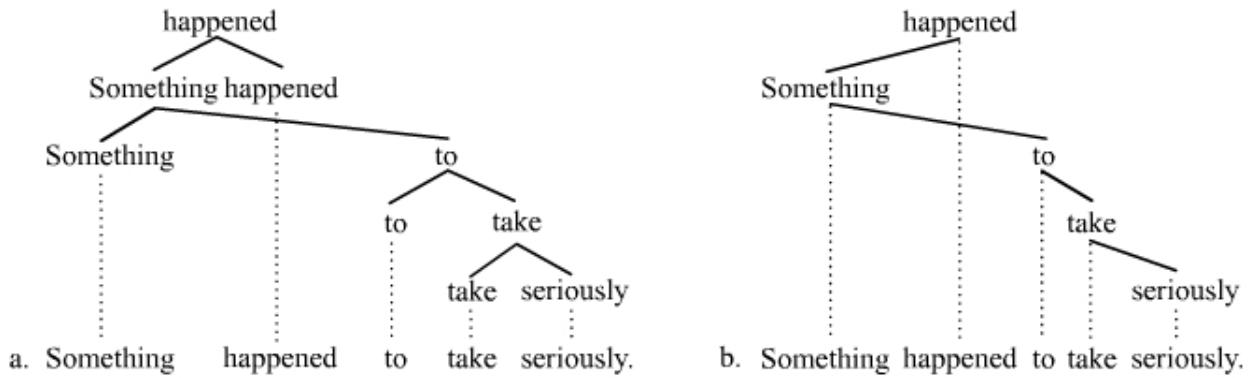
dass *ihn* viele Leute bewundert haben (that him many people admire have; 'That many people have admired him.')

Essen werde ich *das* nicht. (eat will I that not; 'I will not eat that.')

In each of these examples, the italicized constituent is displaced, resulting in a discontinuity. An important aspect of scrambling is that it can operate in both directions. The displaced unit can both precede its head as in the first three examples and follow it as in the fourth example.

Extraposition

Extraposition occurs when an expression appears further to the right of where it would appear under other (but similar) circumstances. It is motivated by the desire to focus or emphasize the extraposed expression, or it serves to reduce center embedding and in so doing, it increases right-branching (linguistics), right-branching structures being easier to process in English than left-branching structures:



The crossing lines identifying the discontinuity are again easily visible. In canonical cases, extraposition is optional, e.g.

- Something *that was unexpected* then occurred.
- Something then occurred *that was unexpected*.
- Did anyone *who you expected to help* actually help?
- Did anyone actually help *who you expected to help*?
- They called someone *to pick up the kids* before school.
- They called someone before school *to pick up the kids*.

One can also distinguish between two types of extraposition. The examples above are canonical cases where extraposition is optional. In cases of *it*-extraposition, the optionality disappears; extraposition is obligatory:

- *It *that it rained* surprised us.
- It surprised us *that it rained*.
- *Did it *that they had to study* disturb them?
- Did it disturb them *that they had to study*?
- *Sarah told it *that there would be no dessert* to the kids.
- Sarah told it to the kids *that there would be no dessert*.

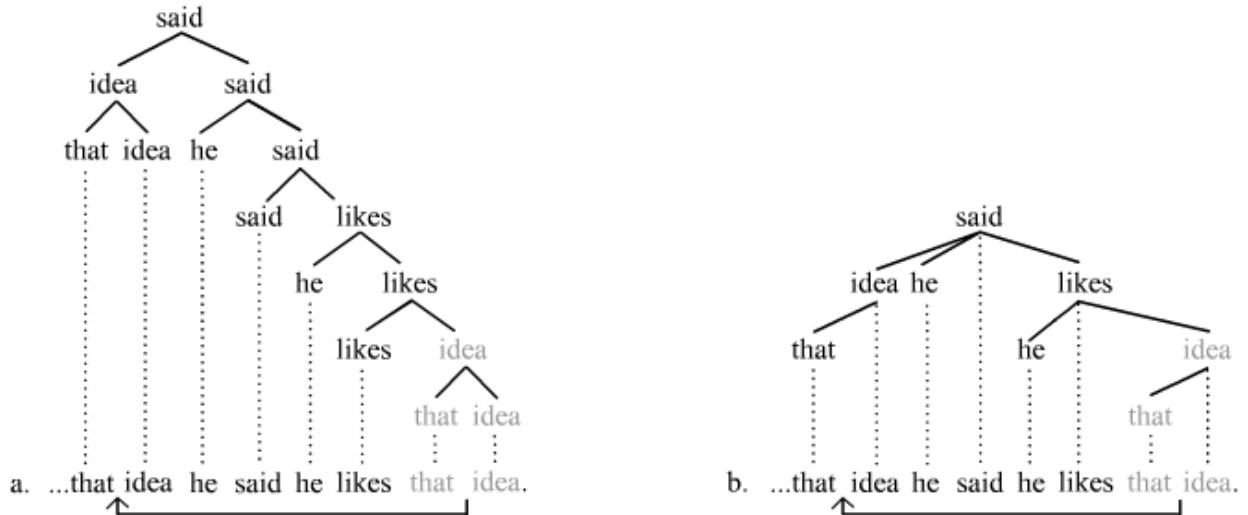
The star * indicates that the sentence is bad. Apparently when *it* appears in subject or object position, it forces the modifying expression to be extraposed.

Theoretical accounts

The challenge posed by discontinuities has fascinated and vexed theories of syntax since the 1950s. Early transformational grammar, which is based on phrase structure, addressed discontinuities in terms of Deep Structure and Surface Structure and transformations that mapped constituents out of one position in Deep Structure into another position in Surface Structure. Modern theories of transformational grammar (e.g. Government and Binding Theory^[7] and the Minimalist Program^[8]) assume a movement or copying procedure that moves or copies constituents out of one position into another in the course of the derivation. Representational phrase structure grammars (e.g. Head-Driven Phrase Structure Grammar^[9] and Lexical Functional Grammar^[10]), in contrast, reject movement and in its stead, they assume some sort of feature passing mechanism that passes information about the displaced constituent up and down the tree.

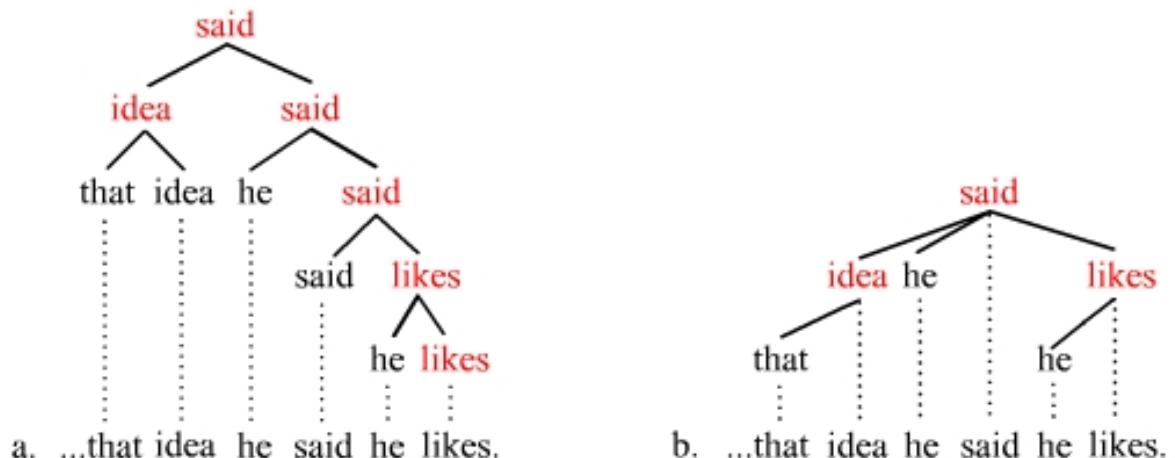
Traditional dependency grammars (e.g. Lucien Tesnière's Structural Syntax^[11] and Igor Mel'čuk's Meaning-Text Theory^[12]) approach discontinuities much differently. They tend to (posit one or more levels of syntactic structure that) abstract away from linear order and acknowledge hierarchical order alone. If linear order is taken to be (in a sense) secondary in this manner, discontinuities present less of a challenge and are therefore of secondary importance to the theory. Other dependency grammars, in contrast, take linear and hierarchical order to be of equal importance. These theories are likely to (also) pursue some sort of feature passing mechanism that passes information about the displaced unit up and down the tree.

The following trees illustrate the movement/copying type of approach to discontinuities:



The constituent *that idea* is seen as being first generated in its canonical position to the right of the verb *likes*. It is then moved out of that position to the front of the sentence, or it is copied at the front of the sentence followed by the deletion of the lower occurrence. Due to the movement (or copying) this sort of approach to discontinuities can be called the *movement approach* (= derivational approach).

The alternative to the movement approach is information passing up and down the tree, e.g.



The displaced unit is taken to appear first in its surface position (it is not moved to that position), and information (= features) about it is seen as being passed down the tree to the position where it would appear under more normal circumstances. The path of information passing is shown in red. Due to the passing of information, this sort of approach can be called the *feature passing approach* (= representational approach). The movement and feature passing approaches have something important in common. They both assume that there are no actual discontinuities in surface syntax (for there are no crossing lines in the trees). What appears to be a discontinuity at first blush is actually rather an indication that movement or feature passing has occurred.

Finally, one point is worth repeating. All theories must have a means of addressing discontinuities, but the nature of this means can vary significantly based upon the amount of structure that the theory at hand posits. Relatively flat structures incur significantly fewer discontinuities than more layered structures. Thus the component that addresses discontinuities plays a larger role in theories that restrict all branching to binary branching. In theories that allow n-ary branching, the role that inversion and shifting play can be greater, which reduces the role of the component of the theory that is needed to address discontinuities.

Notes

- [1] Concerning scrambling, see Grewendorf and Stechow (1990).
- [2] See Groß and Osborne (2009:64-71).
- [3] See Groß (1999: 174-187).
- [4] See for instance Hays (1964), Gaifman (1965), Robinson (1970), Mel'čuk (1988: 35ff.)
- [5] Concerning the term "discontinuous constituent, see Wells (1947) and McCawley (1982).
- [6] Concerning these numbers, see Nivre and Nilsson (2005: 99).
- [7] See Chomsky (1981).
- [8] See Chomsky (1995).
- [9] See Pollard and Sag (1994).
- [10] See Bresnan (2001).
- [11] See Tesnière (1959).
- [12] See Mel'čuk (1988).

References

- Bresnan, J. 2001. Lexical Functional Syntax. Blackwell.
- Chomsky, N. 1981. Lectures on Government and Binding: The Pisa Lectures. Mouton de Gruyter
- Chomsky, N. 1995. The Minimalist Program. MIT Press.
- Gaifman, H. 1965. Dependency systems and phrase-structure systems. *Information and Control* 8, 304–337.
- Grewendorf, S. and W. Sternefeld (eds.) 1990. Scrambling and Barriers. Amsterdam: Benjamins.
- Groß, T. 1999. Theoretical foundations of dependency Syntax. Munich: Iudicium.
- Groß, T. and T. Osborne 2009. Toward a practical dependency grammar theory of discontinuities. *SKY Journal of Linguistics* 22, 43-90.
- Hays, D. 1964. Dependency theory: A formalism and some observations. *Language* 40, 511-525.
- Mel'čuk, I. 1988. Dependency syntax: Theory and practice. Albany: State University of New York Press.
- McCawley, J. 1982. Parentheticals and discontinuous constituent structure. *Linguistic Inquiry* 13, 1, 91–106.
- Nivre, J. and J. Nilsson. 2005. Pseudo-projective dependency parsing. In Proceedings of the 43rd Annual Meeting of the Association for Computational Linguistics(ACL), 99–106, Ann Arbor, MI.
- Pollard, C. and I. Sag. 1994. Head-driven phrase structure grammar. Chicago: University of Chicago Press.
- Robinson, J. 1970. Dependency structures and transformational rules. *Language* 46, 259-285.
- Wells, R. 1947. Immediate constituents. *Language* 23, 2, 81–117.

Do-support

In the grammar of English, the term **do-support** (or **do-insertion**) refers to the use of the auxiliary verb *do*, including its inflected forms *does* and *did*, to produce negated clauses and questions, as well as other constructions in which subject–auxiliary inversion is required.

The verb *do* can be used as an auxiliary even in simple declarative sentences, where it usually serves to add emphasis, as in "I *did* shut the fridge." However in the negated and inverted clauses referred to above, it is used because the rules of English syntax permit these constructions only when an auxiliary is present. It is not allowable (in Modern English) to add the negating word *not* to an ordinary finite lexical verb, as in **I know not* – it can only be added to an auxiliary (or copular) verb, hence if there is no other auxiliary present when negation is required, the auxiliary *do* is used, to produce a form like *I do not (don't) know*. The same applies in clauses requiring inversion, including most questions – inversion must involve the subject and an auxiliary verb, so it is not possible to say **Know you him?*; grammatical rules require *Do you know him?*

Do-support is not used when there is already an auxiliary or copular verb present; nor is it used with non-finite verb forms (infinitives and participles) or with subjunctive forms. Furthermore the use of *do* as an auxiliary should be distinguished from the use of *do* as a normal lexical verb, as in *They do their homework*.

Common uses

Do-support appears to accommodate a number of varying grammatical constructions, e.g. 1) question formation, 2) the appearance of the negation *not*, and 3) negative inversion. These constructions often cannot occur without *do*-support, or the presence of some other auxiliary verb.

In questions

The presence of an auxiliary (or copular) verb allows subject–auxiliary inversion to take place,^{[1][2]} as is required in most interrogative sentences in English. If there is already an auxiliary or copula present, then *do*-support is not required when forming questions:

- *He will laugh.* → **Will he laugh?** (the auxiliary *will* inverts with the subject *he*)
- *She is at home.* → **Is she at home?** (the copula *is* inverts with the subject *she*)

This applies not only in yes–no questions, but also in questions formed using interrogative words (*wh*-questions):

- *When will he laugh?*

However, if there is no auxiliary or copula present, inversion requires the introduction of an auxiliary in the form of *do*-support:

- *I know.* → **Do I know?** (Compare: **Know I?*)
- *He laughs.* → **Does he laugh?** (Compare: **Laughs he?*)
- *She came home.* → **When did she come home?** (Compare: **Came she home?*)

Note that the finite (inflected) verb is now the auxiliary *do*; the following verb is a bare infinitive which does not inflect. Hence *does he laugh?* (not *laughs*); *did she come?* (not *came*).

In negated questions, the negating word *not* may appear either following the subject, or attached to the auxiliary in the contracted form *n't*. This applies both to *do*-support and to other auxiliaries:

- *Why are you not playing? / Why aren't you playing?*
- *Do you not want to try? / Don't you want to try?*

The above principles do not apply to *wh*-questions where the interrogative word is the subject or part of the subject.

In these cases, there is no inversion and hence no need for *do*-support: *Who lives here?, Whose dog bit you?*

For elliptical questions and tag questions, see the elliptical sentences section below.

With the negation *not*

In the same way that the presence of an auxiliary allows question formation, and it also allows the appearance of the negating word *not*.^{[1][2]} In this case too, if no other auxiliary or copular verb is present, *do*-support is required.^{[1][2][3][4]}

- *He will laugh. → He will not laugh.* (*not* attaches to the auxiliary *will*)
- *She laughs. → She does not laugh.* (*not* attaches to the added auxiliary *does*)

In the second sentence, *do*-support is required because modern English does not allow forms like **She laughs not* (although such constructions are frequent in archaic English).

Most combinations of auxiliary/copula plus *not* have a contracted form ending in *-n't*, such as *isn't*, *won't*, etc. The relevant contractions for negations formed using *do*-support are *don't*, *doesn't* and *didn't*. These forms are used very frequently in informal English, e.g.

Do-support is required for negated imperatives, even when the verb is the copula *be*:

- **Do not do that.**
- **Don't be silly.**

However, there is no *do*-support with non-finite and subjunctive verb forms, as these are negated by a preceding *not*:

- *It would be a crime not to help him* (the infinitive *to help* is negated)
- *Not knowing what else to do, I stood my ground* (the present participle *knowing* is negated)
- *Not eating vegetables can harm your health* (the gerund *eating* is negated)
- *I suggest that he not receive any more funding* (the subjunctive *receive* is negated)

The negation in these examples is negating the non-finite predicate. Compare the following competing formulations:

- *I did not try to laugh.* vs. *I tried not to laugh'.*
- *They do not want to go.* vs. *They want to not go.*

There are two predicates in each of the verb chains in these sentences, e.g. *try* and *laugh* in the first example. *Do*-support is needed when the higher of the two is negated; it is not needed to negate the lower nonfinite predicate.

For negated questions, see the questions section above. For negated elliptical sentences, see the elliptical sentences section below.

In cases of negative inversion

The same principles as for question formation apply to other clauses in which subject–auxiliary inversion is required, particularly after negative expressions and expressions involving *only*:

- *Never did he run that fast again.* (Compare: **Never he did run that fast again.* **Never ran he that fast again.*)
- *Only here do I feel at home.* (Compare: *?Only here I feel at home.*)

Further uses of auxiliary *do*

In addition to providing *do*-support in questions and negated clauses as described above, the auxiliary verb *do* can also be used in clauses that strictly speaking do not require *do*-support. In such cases, *do*-support optionally appears for pragmatic reasons. The following subsections describe 1) the use of *do*-support to express emphasis, and 2) the appearance of *do*-support to enable VP-ellipsis.

For emphasis

In this case the auxiliary generally appears for purposes of emphasis, for instance to establish a contrast or to express a correction. For example:

- *Did Bill eat his breakfast? Yes, he **did** eat his breakfast.* (auxiliary *did* emphasizes the positive answer, which may be unexpected)
- *Bill doesn't sing, then. No, he **does** sing.* (auxiliary *does* emphasizes the correction of the previous statement)

As before, the main verb following the auxiliary becomes a bare infinitive, which is not inflected (one cannot say **did ate* or **does sings* in the above examples).

As with typical *do*-support, this usage of *do* does not occur with other auxiliaries or a copular verb. In these cases, emphasis can be obtained by adding stress to the auxiliary or copular:

- *Would you take the risk? Yes, I **would** take the risk.*
- *Bill isn't singing, then. No, he **is** singing.*

(Some auxiliaries, such as *can*, change their pronunciation when stressed; see Weak and strong forms in English.)

In negative sentences, emphasis can be obtained by adding stress either to the negating word (if used in full) or to the contracted form ending in *n't*. This applies whether or not *do*-support is used:

- *I **wouldn't** (or **would not**) take the risk.*
- *They **don't** (or **do not**) appear on the list.*

Emphatic *do* can also be used with imperatives, including with the copula *be*:

- *Do take care! Do be careful!*

In elliptical sentences

The auxiliary *do* is also used in various types of elliptical sentences, where the main verb is omitted (it can be said to be "understood", usually because it would be the same verb as was used in a preceding sentence or clause). This includes the following types:

- Tag questions:
 - *He plays well, **doesn't he?***
 - *You don't like Sara, **do you?***
- Elliptical questions:
 - *I like pasta. **Do you?***
 - *I went to the party. Why **didn't you?***
- Elliptical statements:
 - *They swam, but **I didn't**.*
 - *He looks smart, and so **do you.***
 - *You fell asleep and **I did** too.*

Such uses include cases where *do*-support would have been used in a complete clause (questions, negatives, inversion), but also cases where (as in the last example) the complete clause would normally have been constructed without *do* (in this case, *I fell asleep too*). In such instances *do* may be said to be acting as a pro-verb, since it effectively takes the place of a verb or verb phrase: in this case *did* substitutes for *fell asleep*.

As in the principal cases of *do*-support, this usage of *do* does not normally occur when there is already an auxiliary or copula present; here the auxiliary or copula is retained in the elliptical sentence. For example

- *He **is** playing well, **isn't he?***
- *I **can** cook pasta. **Can** you?*
- *You **should** get some sleep, and **I should** too.*

However it is possible to use *do* as a pro-verb even after auxiliaries:

- *Have you put the shelf up yet? I haven't done (or I haven't), but I will do (or I will).*

(However it is not normally used in this way as a *to*-infinitive: *Have you put the shelf up? I plan to*, rather than **I plan to do*; or as a passive participle: *Was it built? Yes, it was*, not **Yes, it was done.*)

Pro-verbal uses of *do* are also found in the imperative: *Please do. Don't!*

Use of *do* as main verb

Apart from its uses as an auxiliary, the verb *do* (with its inflected forms *does, did, done, doing*) can also be used as an ordinary lexical verb (main verb):

- ***Do* your homework!**
- ***What are you doing?***

In this use, like other non-auxiliary verbs, *do* cannot be directly negated with *not* and cannot participate in inversion.

Hence it may itself require *do*-support, with both auxiliary and lexical instances of *do* appearing together:

- *They didn't do the laundry on Sunday.* (*did* is the auxiliary, *do* is the main verb)
- *Why do you do karate?* (the first *do* is the auxiliary, the second is the main verb)

Meaning contribution

When the auxiliary verb *do* appears as just illustrated, it does not contribute in any obvious way to the meaning of the sentence,^[5] so it is sometimes called a **dummy auxiliary**.^[2] Whether this is the correct way to understand the role of auxiliary *do* in such cases is debatable, however. From a diachronic point of view, the auxiliary *do* may have been an aspect marker, which means it did originally convey functional meaning, i.e. aspectual meaning.

References

- [1] Kaplan, Jeffrey P. (1989). *English Grammar: Principles and Facts*. Englewood Cliffs, New Jersey: Prentice-Hall
- [2] Huddleston, Rodney D.; Geoffrey K. Pullum (2005). *A Student's Introduction To English Grammar*. Cambridge U Press.
- [3] DeCapua, Andrea (2008). *Grammar for Teachers*. Springer.
- [4] Heidinger, Virginia (1984). *Analyzing Syntax and Semantics*. Gallaudet U Press.
- [5] Traugott, Elizabeth Closs; Mary Louise Pratt (1980). *Linguistics for Students of Literature*, San Diego: Harcourt Brace Jovanovich

Dual (grammatical number)

Dual (abbreviated **DU**) is a grammatical number that some languages use in addition to singular and plural. When a noun or pronoun appears in dual form, it is interpreted as referring to precisely two of the entities (objects or persons) identified by the noun or pronoun. Verbs can also have dual agreement forms in these languages.

The dual number existed in Proto-Indo-European, persisted in many of the now extinct ancient Indo-European languages that descended from it—Sanskrit, Ancient Greek and Gothic for example—and can still be found in a few modern Indo-European languages such as Scottish Gaelic, Slovenian, Sorbian, and Frisian. Many more modern Indo-European languages show residual traces of the dual, as in the English distinctions *both* vs. *all*, *either* vs. *any*, *neither* vs. *none*, and so on.

Many Semitic languages also have dual number. For instance, in Arabic all nouns can have singular, plural, or dual forms. For non-broken plurals, masculine plural nouns end with ئ -ūn and feminine plural nouns end with ئ -āt, whilst ئ -ān, is added to the end of a noun to indicate that it is dual (even among nouns that have broken plurals).

Comparative characteristics

Many languages make a distinction between singular and plural: English, for example, distinguishes between *man* and *men*, or *house* and *houses*. In some languages, in addition to such singular and plural forms, there is also a **dual** form, which is used when exactly two people or things are meant. In many languages with dual forms, use of the dual is mandatory, and the plural is used only for groups greater than two. However, use of the dual is optional in some languages such as many modern Arabic dialects including Egyptian Arabic. In other languages such as Hebrew, the dual exists only for words naming time spans (day, week, etc.), a few measure words, and for words that naturally come in pairs and are not used in the plural except in rhetoric: eyes, ears, and so forth. In Slovene the use of the dual is mandatory, except for nouns that are natural pairs, such as trousers, eyes, for which the plural form can be used.

Although relatively few languages have the dual number and most have no number or only singular and plural, using different words for groups of two and groups greater than two is not uncommon. English has words distinguishing dual vs. plural number, including: *both/all*, *either/any*, *neither/none*, *between/among*, *former/first*, and *latter/last*. Japanese, which has no grammatical number, also has words *dochira* (which of the two) and *dore* (which of the three or more), etc.

Use in modern languages

Among living languages, Modern Standard Arabic has a mandatory dual number, marked on nouns, verbs, adjectives and pronouns. (First-person dual forms, however, do not exist; compare this to the lack of third-person dual forms in the old Germanic languages.) Many of the spoken Arabic dialects have a dual marking for nouns (only), but its use is not mandatory. Likewise, Akkadian had a dual number, though its use was confined to standard phrases like "two hands", "two eyes", and "two arms". The dual in Hebrew has also atrophied, generally being used for only time, number, and natural pairs even in its most ancient form.

Inuktitut and the related Central Alaskan Yup'ik language use dual forms; however, the related Greenlandic language does not (though it used to have them).

Austronesian languages, particularly Polynesian languages such as Hawaiian, Niuean and Tongan, possess a dual number for pronouns but not for nouns, as nouns are generally marked for plural syntactically and not morphologically. Other Austronesian languages, particularly those spoken in the Philippines, have a dual first-person pronoun; these languages include Ilokano (*data*), Tausug (*kita*), and Kapampangan (*ikata*). These forms mean *we*, but specifically *you and I*. This form once existed in Tagalog (*kata* or sometimes *kita*) but has disappeared from standard usage (save for certain dialects such as in Batangas) since the middle of the 20th century.

The dual was a standard feature of the Proto-Uralic language, and lives on in Sami languages and Samoyedic languages, while other branches like Finnish, Estonian and Hungarian have lost it. Sami also features dual pronouns, expressing the concept of "we two here" as contrasted to "we". Nenets, two closely related Samoyedic languages, features a complete set of dual possessive suffixes for two systems, the number of possessors and the number of possessed objects (for example, "two houses of us two" expressed in one word).

The dual form is also used in several modern Indo-European languages, such as Scottish Gaelic, Slovenian, Frisian and Sorbian (see below for details). The dual was a common feature of all early Slavic languages at the beginning of the second millennium CE.

Hebrew

Biblical and Mishnaic Hebrew

In Biblical, Mishnaic, and Medieval Hebrew, like Arabic and other Semitic languages, all nouns can have singular, plural or dual forms, and there is still a debate whether there are vestiges of dual verbal forms and pronouns.^[1] However, in practice, most nouns use only singular and plural forms. Usually מִן -im is added to masculine words to make them plural for example ספר / ספרים sēfer / səfārīm "book / books", whilst with feminine nouns the נָה -ā is replaced with נְתָה -ōt. For example פרה / פרות pārā / pārōt "cow / cows". An example of the dual form is יּוֹם / יוֹמִים / יּוֹמִים yōm / yomqayim / yāmīm "day / two days / [two or more] days". Some words occur so often in pairs that the form with the dual suffix -ayim is used in practice for the general plural, such as עֵין / עֵינִים 'ayin / ēnayim "eye / eyes", used even in a sentence like "The spider has eight eyes." Thus words like ēnayim only appear to be dual, but are in fact what is called "pseudo-dual", which is a way of making a plural. Sometimes, words can change meaning depending on whether the dual or plural form is used, for example; 'ayin can mean eye or water spring in the singular, but in the plural eyes will take the dual form of 'enayim whilst springs are 'eynot. Adjectives, verbs, and pronouns have only singular and plural, with the plural forms of these being used with dual nouns.

Modern Hebrew

In Modern Hebrew as used in Israel, there is also a dual number, but its use is very restricted. The dual form is usually used in expressions of time and number. These nouns have plurals as well, which are used for numbers higher than two, for example:

Singular	Double	Triple
פעם אחת pá'am aħat ("once")	פעמיים pa'amayim ("twice")	שלוש פעמים shalosh pə'amim ("thrice")
שבוע אחד shavúa' eħad ("one week")	שבועיים shəvu'āyim ("two weeks")	שלושה שבועות shəloša shavu'ot ("three weeks")
מאה me'a ("one hundred")	מאתיים matāyim ("two hundred")	שלוש מאות shəloš me'ot ("three hundred")

The pseudo-dual is used to form the plural of some body parts, garments, etc., for instance:

- רגל regel ("leg") → רגליים raglāyim ("legs")
- אוזן ózen ("ear") → אוזניים oznáyim ("ears")
- שן shen ("tooth") → שיניים shináyim ("teeth")
- מעי'i ("intestine") → מעיים mə'āyim ("intestines")
- נעיל ná'al ("shoe") → נעליים na'aláyim ("shoes")
- גרב gérev ("sock") → גרבים garbáyim ("socks")

In this case, even if there are more than two, the dual is still used, for instance *lə-kélev yesh arba' raglāyim* ("a dog has four legs").

Another case of the pseudo-dual is *duale tantum* (a kind of plurale tantum) nouns:

- נְקוּדָתִיִּים *nəkudatáyim* ("colon")
 אֲוֹפְנִיִּים *ofanáyim* ("bicycle")
 מַשְׁקָפִיִּים *mishkafáyim* ("eyeglasses")
 צָהָרִיִּים *tsohoráyim* ("midday")
 שָׁמָיִם *shamáyim* ("sky")

The dual in Indo-European languages

The category of dual can doubtless be reconstructed for the Proto-Indo-European, the ancestor of all Indo-European languages, and it has been retained as a fully functioning category in the earliest attested daughter languages. The best evidence for the dual among ancient Indo-European languages can be found in Old Indo-Iranian (Vedic Sanskrit and Avestan), Homeric Greek and Old Church Slavonic, where its use was obligatory for all inflected categories including verbs, nouns, adjectives, pronouns and some numerals. Various traces of dual can also be found in Gothic and Old Irish (see below), and in some fossilized terms in Latin.^[2]

Due to the scarcity of evidence, the reconstruction of dual endings for Proto-Indo-European is difficult, but at least formally according the comparative method it can be ascertained that no more than three dual endings are reconstructible for nominal inflection.^[3] Mallory & Adams (2006) reconstruct the dual endings as:

- Nominative/Accusative/Vocative: *-h₁(e)
- Genitive/Ablative: *-h₁(e) / *-oHs
- Dative: *-me / *-OH
- Locative: *-h₁ow
- Instrumental: *-b^hih₁

Proto-Indo-European category of dual did not only denote two of something: it could also be used as an associative marker, the so-called *elliptical dual*.^[4] For example, the Vedic deity Mitrá, when appearing in dual form *Mitrá* it refers to both Mitra and his companion Varuṇa. Homeric dual Aἴαντε refers to Ajax the Greater and his fighting companion Teucer, and Latin plural *Castorēs* is used to denote both the semi-god Castor and his twin brother Pollux. Beside nominal (nouns, adjectives and pronouns), the dual was also present in verbal inflection where the syncretism was much lower.

Of living Indo-European languages, the dual can be found in dialects of Scottish Gaelic, but fully functioning as a paradigmatic category only in Sorbian, Chakavian and Slovene. Remnants of the dual can be found in many of the remaining daughter languages, where certain forms of the noun are used with the number two (see below for examples).

The dual in Greek

The dual can be found in Ancient Greek Homeric texts such as the *Iliad* and the *Odyssey*, although its use is only sporadic, owing as much to artistic prerogatives as dictional and metrical requirements within the hexametric meter. There were only two distinct forms of the dual in Ancient Greek.

In classical Greek, the dual was all but lost, except in the Attic dialect of Athens, where it persisted until the fifth century BC. Even in this case, its use depended on the author and certain stock expressions.

In Koine Greek and Modern Greek the only remnant of the dual is the numeral for "two", δύο, *dýo*, which has lost its genitive and dative cases (both δυοῖν, *dyoīn*) and retains its nominative/accusative form. Thus it appears to be undeclined in all cases.

The dual in Latin

The dual was lost in Latin and its sister Italic languages. However, certain fossilized forms remained, for example, *diviginti* (twenty), but *triginta* (thirty), the words *ambo* (both, compare Slavic *oba*), *duo / duae* with a dual declension.

The dual in the Celtic languages

Reconstructed Common Celtic nominal and adjectival declensions contain distinct dual forms; pronouns and verbs do not. In Old Irish, nouns and the definite article still have dual forms, but only when accompanied by the numeral *da* "two". Traces of the dual remain in Middle Welsh, in nouns denoting pairs of body parts that incorporate the numeral two: e.g. *deulin* (from *glin* "knee"), *dwyglust* (from *clust* "ear").^[5]

In the modern languages, there are still significant remnants of dual number in Scottish Gaelic in nominal phrases containing the numeral *dà* (including the higher numerals 12, 22, etc.) As the following table shows, *dà* combines with a singular noun, which is lenited. Masculine nouns take no special inflection, but feminine nouns have a slenderized dual form, which is in fact identical to the dative singular.^[6]

Singular	Dual	Plural
<i>cù</i> ("a dog", masculine)	<i>dà chù</i> ("two dogs")	<i>tri coin</i> ("three dogs")
<i>clach</i> ("a stone", feminine)	<i>dà chloich</i> ("two stones")	<i>tri clachan</i> ("three stones")

Languages of the Brythonic branch do not have dual number. As mentioned above for Middle Welsh, some nouns can be said to have dual forms, prefixed with a form of the numeral "two" (Breton *daou-* / *div-*, Welsh *dau-* / *deu-* / *dwy-*, Cornish *dew-* / *diw-*). This process is not fully productive, however, and the prefixed forms are semantically restricted. For example, Breton *daouarn* (<*dorn* "hand") can only refer to one person's pair of hands, not any two hands from two different people. Welsh *deufis* must refer to a period of two consecutive months, whereas *dau fis* can be any two months.^[7]

The dual in the Germanic languages

The dual was present in all the early Germanic languages, as well as in Proto-Germanic. However, the dual had been entirely lost in nouns by that time, and since verbs agreed with nouns in number, so had the third-person dual form of verbs as a result. The dual therefore remained only in the first and second person pronouns and their accompanying verb forms.

Gothic retained this situation more or less unchanged. It had markings for the first and second person for both the verbs and pronouns, for example *wit* "we two" as compared to *weis* "we, more than two". Old English, Old Norse and the other old Germanic languages had dual marking only in the personal pronouns, but not in the verbs.

The dual has disappeared as a productive form in all the living languages, with loss of the dual occurring in North Frisian dialects only quite recently.^[8] The dual survives very marginally in some Limburgish dialects as *weet* (we two) and *jee* (you two), but is archaic and no longer in common use. In Austro-Bavarian, the old dual pronouns have replaced the standard plural pronouns, for example, accusative *enk*, *you plural* (from Proto-Germanic **inkw*, **inkwiz*). A similar development in the pronoun system can be seen in Icelandic and Faroese. Another remnant of the dual can be found in the use of the pronoun *begge* ("both") in the Scandinavian languages of Norwegian and Danish, *bägge* in Swedish and *báðir* / *báðar* / *baði* in Faroese and Icelandic. In these languages, in order to state "all + number", the constructions are *begge to* / *báðir tveir* / *báðar tvær* / *baði tvey* ("all two") but *alle tre* / *allir tríggir* / *allar tríggjar* / *óll trý* ("all three"), while the form **alle to* is unattested. In German, the expression *beide* ("both") is equivalent to, though more commonly used than, *alle zwei* ("all two").

Norwegian Nynorsk also retains the conjunction "korgje" ("one of two") and its inverse "korkje" ("neither of two").

Another example of a lost dual exists in the Faroese ordinals 1st and 2nd, which can be translated two ways: First there is *fyrri* and *seinni*, which mean the 1st and 2nd of two respectively, while *fyrsti* and *annar* mean 1st and 2nd of more than two.

The dual in the Baltic Languages

Among the Baltic languages, the dual form existed but is now nearly obsolete in standard Lithuanian. It can be occasionally found in poetic contexts and some dialects. The dual form *Du litu* was still used on two litas coins issued in 1925, but the plural form (*2 litai*) is used on modern two litas coins.

Singular	Dual	Plural
<i>vyras</i> ("a man")	<i>vyru</i> ("two men")	<i>vyrai</i> ("men")
<i>mergina</i> ("a girl")	<i>mergini</i> ("two girls")	<i>merginos</i> ("girls")
<i>einu</i> ("I go")	<i>einava</i> ("We two go")	<i>einame</i> ("We (more than two) go")

The dual in the Slavic languages

Common Slavic had a complete singular-dual-plural number system, although the nominal dual paradigms showed considerable syncretism, just as they did in Proto-Indo-European. Dual was fully operable at the time of Old Church Slavonic manuscript writings, and it has been subsequently lost in most Slavic dialects in the historical period.

Of the living languages, only Slovene, Chakavian and Sorbian have preserved the dual number as a productive form. In all of the remaining languages, its influence is still found in the declension of nouns of which there are commonly only two: eyes, ears, shoulders, in certain fixed expressions, and the agreement of nouns when used with numbers.^[9]

In all the languages, the words "two" and "both" preserve characteristics of dual declension. The following table shows a selection of forms for the numeral "two":

language	nom.-acc.-voc.	gen.	loc.	dat.	instr.
Common Slavic	*dъva (masc.) *dъvě (fem./nt.)	*dъvoju		*dъvěma	
Belarusian	два <i>dva</i> (masc./nt.) дзе <i>dzve</i> (fem.)	двух <i>dvukh</i> (masc./nt.) дзвюх <i>dzvyukh</i> (fem.)		двум <i>dvum</i> (masc./nt.) дзвюм <i>dzvym</i> (fem.)	двумя <i>dvuma</i> (masc./nt.) дзвюма <i>dzvyma</i> (fem.)
Croatian	dva / dvoje (masc./nt.) dvije (fem.)	dva / dvoje (masc./nt.) dviju (fem.)		dvama (masc./nt.) dvima / dvjema (fem.)	
Czech	dva (masc.) dvě (fem./nt.)	dvou		dvěma	
Polish	dwa (masc./nt.) dwie (fem.) ¹	dwu dwóch		dwu dwóm	dwoma dwiema
Russian	два <i>dva</i> (masc./nt.) две <i>dve</i> (fem.)	двух <i>dvukh</i>		двум <i>dvum</i>	двумя <i>dvumya</i>
Serbian	два / <i>dva</i> (masc./nt.) две / <i>dve</i> (fem.)	двају / <i>dvaju</i> (masc.) два / <i>dva</i> (nt.) двеју / <i>dveju</i> (fem.)		двома / <i>dvoma</i> (masc./nt.) ² двема / <i>dvema</i> (fem.)	
Slovak	dva (masc. inanim.) dvaja / <i>dvoch</i> (masc. anim.) dve (fem., nt.)	dvoch		dvom	dvoma / <i>dvomi</i>

Slovene	dva (masc.) dve (fem./nt.)	dveh		dvema	
Sorbian	dwaj (masc.) dwě (fem./nt.)	dweju	dwěmaj		
Ukrainian	два <i>dva</i> (masc./nt.) дvi <i>dvi</i> (fem.)	двох <i>dvokh</i>		двом <i>dvom</i>	двома <i>dvoma</i>

Notes:

1. In some Slavic languages, there is a further distinction between animate and inanimate masculine nouns. In Polish, for animate masculine nouns the possible nominative forms are *dwaj*, or *dwóch*.
2. Variant form for the masc./neut. locative and instrumental in Serbian: *двојим(a) / dvojim(a)*.

In Common Slavic, the rules were relatively simple for determining the appropriate case and number form of the noun, when it was used with a numeral. The following rules apply:

1. With the numeral "one", both the noun, adjective, and numeral were in the same singular case, with the numeral being declined as an adjective.
2. With the numeral "two", both the noun, adjective, and numeral were in the same dual case. There were separate forms for the masculine and neuter-feminine nouns.
3. With the numerals "three" and "four," the noun, adjective, and numeral were in the same plural case.
4. With any numeral above "four", in the nominative case, the numeral was followed by the noun and adjective in the genitive plural case. For all other cases, both the noun, adjective, and numeral were in the same plural case.

With the loss of the dual in most of the Slavic languages, the above pattern now is only seen in the forms of the numbers for the tens, hundreds, and rarely thousands. This can be seen by examining the following table:

Language	10	20	30	50	100	200	300	500
Common Slavic	*desętъ	*dъva desęti	*triye desęte	*pętъ desętъ	*sъto	*dъvě sъtě	*tri sъta	*pętъ sъtъ
Belarusian	дзесяць <i>dzesyats'</i>	дваццаць <i>dvatstsač'</i>	трыццаць <i>tritstsač'</i>	пяцьдзесят <i>pyats' dzesyat</i>	сто	дзвесце <i>dzvestse</i>	тыста <i>trista</i>	пяцьсот <i>pyats' sot</i>
Bulgarian	десет <i>deset</i>	двадесет <i>dvadeset</i>	тридесет <i>trideset</i>	петдесет <i>petdeset</i>	сто	двеста <i>dvesta</i>	триста <i>trista</i>	петстотин <i>petstotin</i>
Croatian	deset	dvadeset	trideset	pedeset	sto	dvjesto	tristo	petsto
Czech	deset	dvacet	třicet	padesát	sto	dvě stě	tři sta	pět set
Polish	dziesięć	dzwadzieścia	trzydzieści	pięćdziesiąt	sto	dwieście	trzysta	pięćset
Russian	десять <i>desyat</i>	двацать <i>dvadtsat</i>	тридцать <i>tridtsat</i>	пятьдесят <i>pyatdesyat</i>	сто	двести <i>dvesti</i>	триста <i>trista</i>	пятьсот <i>pyatsot</i>
Serbian	десет <i>deset</i>	двадесет <i>dvadeset</i>	тридесет <i>trideset</i>	педесет <i>pedeset</i>	сто	двеста <i>dvesta</i>	триста <i>trista</i>	петсто <i>petsto</i>
Upper Sorbian ^[10]	džesač	dwaceći	třiceći	pjećdžesat	sto	dwě sčě	tři sta	pjeć stow
Slovak	desať	dvadsať	tridsať	päťdesiat	sto	dvesto	tristo	päťsto
Slovene	deset	dvajset	trideset	petdeset	sto	dvesto	tristo	petsto
Ukrainian	десять <i>desyat'</i>	двацять <i>dvadtsyat'</i>	тридцять <i>trydtsyat'</i>	п'ятдесят <i>p'yatdesyat</i>	сто	двесті <i>dvisti</i>	триста <i>trysta</i>	п'ятсот <i>p'yatsot</i>

The Common Slavic rules governing the declension of nouns after numerals, which were described above, have been preserved in Slovene. In those Slavic languages that have lost the dual, the system has been simplified and changed in various ways, but many languages have kept traces of the dual in it. In general, Czech, Slovak, Polish and Ukrainian have extended the pattern of "three/four" to "two"; Russian, Belarusian, Croatian and Serbian have, on the

contrary, extended the pattern of "two" to "three/four"; and Bulgarian and Macedonian have extended the pattern of "two" to all numerals. The resulting systems are as follows:

1. In Czech, Slovak, Polish and Ukrainian, numerals from "two" to "four" are always followed by a noun in the same plural case, but higher numerals (if in the nominative) are followed by a noun in the genitive plural.^[11]
2. In Belarusian, Croatian and Serbian, numerals from "two" to "four" (if in the nominative) are followed by a noun in a form originating from the Common Slavic nominative dual, which has now completely or almost completely merged with the genitive singular.^[12] Higher numerals are followed by a noun in the genitive plural.^[13]
3. In Russian, the form of noun following the numeral is nominative singular if the numeral ends in "one", genitive singular if the numeral ends in "two" to "four", and genitive plural otherwise. As an exception, the form of noun is also genitive plural if the numeral ends in 11 to 14.^[14]
4. In Bulgarian and Macedonian, all numerals are followed by a noun in a form originating from the Common Slavic nominative dual, which has now been re-interpreted as a special so-called "count form" or "quantitative plural".^[15]

These different systems are exemplified in the table below where the word "wolf" is used to form nominative noun phrases with various numerals. The dual and forms originating from it are underlined.

	"wolf"	"wolves"	"two wolves"	"three wolves"	"five wolves"
Noun form	<i>nom. sing.</i>	<i>nom. plur.</i>	varies		
Common Slavic	*вълкъ	вълci	<u>дъва вълка</u> (<i>nom. dual</i>)	tri вълci (<i>nom. pl.</i>)	петъ вълкъ (<i>gen. pl.</i>)
Slovene	volk	volkoví	<u>dva volkova</u> (<i>nom. dual</i>)	trije volkoví (<i>nom. pl.</i>)	pet volkov (<i>gen. pl.</i>)
Czech	vlk	vlci	dva/tři vlci (<i>nom. pl.</i>)		pět vlků (<i>gen. pl.</i>)
Polish	wilk	wilki wilcy (rare)	dwa/trzy wilki (<i>nom. pl.</i>) dwaj/trzej wilcy (<i>nom. pl.</i>)		pięć wilków (<i>gen. pl.</i>)
Slovak	vlk	vlky (concrete) vlci (abstract)	dva/tri vlky (<i>nom. pl.</i>) dvaja/traja vlcí (<i>nom. pl.</i>)		päť vlkov (<i>gen. pl.</i>) piatí vlcí (<i>nom. pl.</i>)
Ukrainian	вовк <i>vovk</i>	вовкі <i>vovký</i>	два/три вовкі <i>dva/try vóvky</i> (<i>nom. pl.</i>)		п'ять вовків <i>p'yat' vovkiv</i> (<i>gen. pl.</i>)
Belarusian	войк <i>vowk</i>	ваўкі <i>vawki</i>	два/тры ваўкі <i>dva/try bawki</i> (<i>nom. pl.</i>)		пяць ваўкоў <i>pyats' bawkow</i> (<i>gen. pl.</i>)
Russian	волк <i>volk</i>	волки <i>volki</i>	<u>два/три волка</u> <i>dva/tri volka</i> (<i>gen. sg.</i>)		пять волков <i>pyat volkov</i> (<i>gen. pl.</i>)
Serbian and Croatian	вук / <i>vuk</i>	вукови / <i>vukovi</i> (concrete) вұци / <i>vuci</i> (abstract)	<u>два/три вука</u> / <i>dva/tri vuka</i> (<i>gen. sg.</i>)		пет вукова / <i>pet vukova</i> (<i>gen. pl.</i>)
Bulgarian	вълк <i>vălk</i>	вълци <i>văltsi</i>	<u>два/три/пет вълка</u> <i>dva/tri/pet vălka</i> (<i>count form</i>)		

The dual has also left traces in the declension of nouns describing body parts that humans customarily had two of, for example: eyes, ears, legs, breasts, and hands. Often the plural declension is used to give a figurative meaning. The table below summarizes the key such points.

Language	Examples
Czech	Certain body parts and their modifying adjectives require in the instrumental and genitive plural cases dual forms: <i>se svýma očima</i> (instrumental dual: "with one's own (two) eyes") or <i>u nohou</i> (genitive dual: "at the (two) feet"). Colloquial Czech will often substitute the dual instrumental for the literary plural instrumental case.
Polish	<i>Oko</i> ("eye") and <i>uchó</i> ("ear") have plural stems deriving from old dual forms, and alternative instrumental and genitive plural forms with archaic dual endings: gen. pl. <i>oczu/ócz/oczów, uszu/uszów</i> ; instr. pl. <i>oczami/oczyma, uszami/uszyma</i> . The declension of <i>ręka</i> ("hand, arm") also contains old dual forms (nom./acc./voc. pl <i>ręce</i> , instr. pl. <i>rekami/rekoma</i> , loc. sg./pl. <i>rękach/ręku</i>). The historically dual forms are usually used to refer a person's two hands (<i>dziecko na ręku</i> "child-in-arms"), while the regularized plural forms are used elsewhere. Other archaic dual forms, including dual verbs, can be encountered in older literature and in dialects: <i>Jak nie chceta, to nie musita</i> "If you don't want to, you don't have to". ^[16]
Slovak	In Slovak, the genitive plural and instrumental plural for the words "eyes" and "ears" has also retained its dual forms: <i>očí/očí</i> and <i>uší/uší</i> .
Ukrainian	The words "eyes" and "shoulders" had dual forms in the instrumental plural case: <i>очима ochyma</i> ("eyes") and <i>плечима plechyma</i> ("shoulders"). Furthermore, the nominative plural word <i>вуся vusa</i> , which is the dual of <i>вус vus</i> ("whisker"), refers to the moustache, while the true nominative plural <i>вуси vusy</i> refers to whiskers.
Bulgarian	Some words such as <i>ръка răka</i> "hand" use the originally dual form as a plural (<i>ръце rătse</i>).
Russian	In Russian the word <i>колено koleno</i> ("knee", "tribe (Israelites)") has different plurals: <i>колена kolena</i> ("Israelites") is pure plural and <i>колени koleni</i> (body part) is a dual form. Some cases are different as well: <i>коленами kolenami</i> vs. <i>коленями kolenyami</i> (instr.pl.).

Slovene

Along with the Sorbian languages, Chakavian dialect, and the extinct Old Church Slavonic, Slovene uses the dual. Although popular sources claim that Slovene has "preserved full grammatical use of the dual,"^[17] Standard Slovene (and, to varying degrees, Slovene dialects) show significant reduction of the dual number system when compared with Common Slavic.^[18] In general, dual forms have a tendency to be replaced by plural forms. This tendency is stronger in oblique cases than in the nominative/accusative: in standard Slovene, genitive and locative forms have merged with the plural, and in many dialects, pluralization has extended to dative/instrumental forms. Dual inflection is better preserved in masculine forms than in feminine forms.^[19] Natural pairs are usually expressed with the plural in Slovene, not with the dual: e.g. *roke* "hands", *ušesa* ears. The dual forms of such nouns can be used, in conjunction with the quantifiers *dva* "two" or *oba* "both", to emphasize the number: e.g. *Imam samo dve roki* "I only have two hands". The words for "parents" and "twins" show variation in colloquial Slovene between plural (*starši, dvojčki*) and dual (*starša, dvojčka*).^[20] Standard Slovene has replaced the nominative dual pronouns of Common Slavic (*vě* "the two of us", *va* "the two of you", *ja/ji/ji* "the two of them" [m./f./n.]) with new synthetic dual forms: *midva* (literally, "we-two"), *vidva, onadva/onidve/onidve*.^[21]

Nominative case of noun *volk* "wolf", with and without numerals:

without numerals

	nom. sg. (wolf)	nom. dual (2 wolves)	nom. pl. (wolves)
Slovene	volk	volkova	volkovi

with numerals

	wolf	2 wolves	3 (or 4) wolves	5(+) wolves (gen. pl.)
Slovene	en volk	dva volkova	trije volkovi	pet volkov

The dual is recognised by many Slovene speakers as one of the most distinctive features of the language and a mark of recognition, and is often mentioned in tourist brochures.

For verbs, the endings in the present tense are given as *-va*, *-ta*, *-ta*. The table below shows a comparison of the conjugation of the verb *oddati*, which means "to give away" and belongs to Class I in the singular, dual, and plural.

	Singular	Dual	Plural
First person	oddam	oddava	oddamo
Second person	oddaš	oddava	oddate
Third person	odda	oddava	oddajo

In the imperative the endings are given as *-iva* for the first person dual and *-ita* for the second person dual. The table below shows the imperative forms for the verb *hoditi* ("to walk") in the first and second persons of the imperative (the imperative does not exist for 1st person singular).

	Singular	Dual	Plural
First person		hodiva	hodimo
Second person	hodi	hodita	hodite

Sorbian language

As in Slovenian, the Sorbian language (both dialects Upper and Lower Sorbian) have preserved the dual. For nouns, the following endings are used:

	Masculine	Feminine / Neuter
Nominative, Accusative, Vocative	-aj/-ej	-e ² /-y/-i
Genitive¹	-ow	-ow
Dative, Instrumental, Locative	-omaj	-omaj

1. The genitive form is based on the plural form of the noun.
2. The -e ending causes various softening changes to occur to the preceding constant, for further information see the article on Sorbian.

For example, the declension of sin (masculine) and crow (feminine) in the dual in Upper Sorbian would be given as

	hrěch ("sin")	wróna ("crow")
Nominative, Accusative, Vocative	hrěchaj	wróńje
Genitive	hrěchow	wrónow
Dative, Instrumental, Locative	hrěchomaj	wrónomaj

For verbs, the endings in the present tense are given as *-moj*, *-tej/-taj*, *-tej/-taj*. The table below shows a comparison of the conjugation of the verb *pisać*, which means "to write" and belongs to Class I in the singular, dual, and plural.

	Singular	Dual	Plural
First person	pisam	pisamoj	pisaamy
Second person	pisaš	pisatej	pisaće
Third person	pisa	pisaatej	pisaja

Languages with dual number

- Austronesian languages
 - Tagalog language
 - Cabuano language
 - Ilocano language
 - Māori (only the personal pronouns)
 - Samoan (only the personal pronouns)
 - Tahitian (only the personal pronouns)
 - Hawaiian (only the personal pronouns)
 - Chamorro (reflected in the verb)
- Indo-European languages
 - Avestan
 - Ancient Greek
 - Germanic languages (only first and second person pronouns and verb forms)
 - Frisian (only pronouns in some North Frisian dialects)
 - Gothic
 - Limburgish (obsolete, only the personal pronouns)
 - Old English (only the personal pronouns)
 - Insular Celtic languages:
 - Old Irish
 - Scottish Gaelic (only nouns, only following the numeral for 'two')
 - Old Church Slavonic
 - Old East Slavic
 - Sanskrit
 - Slovene
 - Chakavian
 - Sorbian languages:
 - Lower Sorbian
 - Upper Sorbian
- Uralic languages
 - Khanty

- Mansi
- Nenets
- Sami languages
- Afroasiatic languages
 - Akkadian (Assyrian and Babylonian)
 - Arabic
 - Biblical Hebrew
 - Egyptian (including Coptic)
 - Maltese
- Other languages
 - Hmong
 - Lakota (only the personal pronouns, always means "you and I")
 - Mi'kmaq
 - Inuktitut
 - Dogrib (only in the first person)
 - American Sign Language
 - Quenya (elvish language created by J.R.R Tolkien)
 - Khamti [22]

Notes

- [1] Gary Rendsburg (July 1982). "Dual Personal Pronouns and Dual Verbs in Hebrew". *The Jewish Quarterly Review, New Series* 73 (1): 38–58. doi:10.2307/1454459.
- [2] For example: *ambō* "both", and *duo* "two", the latter with iambic shortening.
- [3] Ringe (2006, pp. 42)
- [4] Clackson (2007, p. 101)
- [5] Lewis, Henry; Holger Pedersen (1989). *A Concise Comparative Celtic Grammar* (3rd ed.). Göttingen: Vandenhoeck & Ruprecht. pp. §§246, 468. ISBN 3-525-26102-0. Thurneysen, Rudolf (1993) [1946]. *A Grammar of Old Irish*. Trans. by D. A. Binchy and Osborn Bergin. Dublin Institute for Advanced Studies. ISBN 1-85500-161-6. Evans, D. Simon (1989) [1964]. *A Grammar of Middle Welsh*. Dublin Institute for Advanced Studies. pp. §§30, 33. ISBN 1-85500-000-8.
- [6] Ó Maolalaigh, Roibeard; Iain MacAonghus (1997). *Scottish Gaelic in Three Months*. Hugo's Language Books. ISBN 978-0-85285-234-7.
- [7] Heinecke, Johannes (2002). "Is there a Category of Dual in Breton or Welsh?". *Journal of Celtic Linguistics* 7: 85–101.
- [8] Howe, Stephen. *The Personal Pronouns in the Germanic Languages. A study of personal pronoun morphology and change in the Germanic languages from the first records to the present day*. [Studia Linguistica Germanica, 43]. Berlin: de Gruyter, 1996. (xxii + 390 pp.) pp. 193–195.
- [9] Mayer, Gerald L. (1973) "Common Tendencies in the Syntactic Development of 'Two', 'Three,' and 'Four' in Slavic." *The Slavic and East European Journal* 17.3:308–314.
- [10] These forms are taken from De Bray, R. G. A. *Guide to the Slavonic Languages*. London, 1951.
- [11] However, Ukrainian is special in that the form used with "two", "three" and "form" has the stress pattern of the genitive singular and thus of the old dual.
- [12] Browne, Wayles and Theresa Alt (2004) A Handbook of Bosnian, Serbian and Croatian. (http://www.seelrc.org:8080/grammar/pdf/stand_alone_bcs.pdf) P.21
- [13] Kordić, Snježana (2006) [1st pub. 1997]. *Serbo-Croatian*. Languages of the World/Materials ; 148. Munich & Newcastle: Lincom Europa. p. 32. ISBN 3-89586-161-8. OCLC 37959860. OL{{1}}. Contents (<http://www.webcitation.org/6AE3FeWzm>). Summary (<http://linguistlist.org/pubs/books/get-book.cfm?BookID=23011>). [Grammar book].
- [14] Paul V. Cubberley (2002) Russian: a linguistic introduction. p.141
- [15] Friedman, Victor (2001) Macedonian. (http://www.seelrc.org:8080/grammar/pdf/compgrammar_macedonian.pdf) P.19
- [16] Swan, Oscar E. (2002). *A Grammar of Contemporary Polish*. Bloomington, IN: Slavica. pp. 57, 199, 216. ISBN 0-89357-296-9.
- [17] "International Mother Language Day" (http://www.stat.si/eng/novica_prikazi.aspx?id=2177). Statistical Office of the Republic of Slovenia. 19 February 2009. . Retrieved 3 February 2011.
- [18] Jakop, Tjaša (2008). *The Dual in Slovene Dialects* (<http://books.google.com/books?id=gQZ1Y9O7OLAC>). Bochum: Brockmeyer. ISBN 978-3-8196-0705-9. .
- [19] Jakop (2008, pp. 104–105 (<http://books.google.com/books?id=gQZ1Y9O7OLAC&pg=PA104>))
- [20] Jakop (2008, pp. 6ff (<http://books.google.com/books?id=gQZ1Y9O7OLAC&pg=PA6>))

- [21] Derganc, Aleksandra. 2006. Some Characteristics of the Dual in Slovenian. *Slavistična revija* 54 (special issue): 416–434; especially pp. 428–429.
- [22] "Khamti." Indian Institute of Technology Guwahati. N.p., n.d. Web. 14 Oct. 2012. <www.iitg.ernet.in/rcilts/phasel/languages/khamti.htm>

References

- Wilhelm von Humboldt (1828). *Über den Dualis*. Berlin
- Ringe, Donald (2006). *From Proto-Indo-European to Proto-Germanic*. New York: Oxford University Press
- Mallory, James Patrick; Adams, Douglas Q. (2006). *The Oxford Introduction to Proto-Indo-European and the Proto-Indo-European World*. New York: Oxford University Press
- Clackson, James (2007). *Indo-European Linguistics, An Introduction*. New York: Cambridge University Press

Ellipsis

Ellipsis (plural **ellipses**; from the Ancient Greek: ἔλλειψις, *elleipsis*, "omission" or "falling short") is a series of dots that usually indicate an intentional omission of a word, sentence or whole section from the original text being quoted. An ellipsis can also be used to indicate an unfinished thought or, at the end of a sentence, a trailing off into silence (aposiopesis), example: "But I thought he was . . ." When placed at the beginning or end of a sentence, the ellipsis can also inspire a feeling of melancholy or longing. The ellipsis calls for a slight pause in speech or any form of text, and can be used to suggest a tense or awkward momentary silence.

The most common form of an ellipsis is a row of three periods or full stops (...) or a pre-composed triple-dot glyph (...). The usage of the em dash (—) can overlap the usage of the ellipsis. *The Chicago Manual of Style* recommends that an ellipsis be formed by typing three periods, each with a space on both sides.

The triple-dot punctuation mark is also called a **suspension point**, **points of ellipsis**, **periods of ellipsis**, or colloquially, **dot-dot-dot**.

In writing

It is used to build tension or show that the sentence has been left unfinished or unstarted.

In the 19th and early 20th centuries, an ellipsis was often used when a writer intentionally omitted a specific proper noun, such as a location: "Jan was born on . . . Street in Warsaw."

As commonly used, this juxtaposition of characters is referred to as "dots of ellipsis" in the English language.

Occasionally, it would be used in pulp fiction and other works of early 20th C. fiction to denote expletives that would otherwise have been censored.^[1]

An ellipsis may also imply an unstated alternative indicated by context. For example, when Count Dracula says "I never drink . . . wine", the implication is that he does drink something else.

In reported speech, the ellipsis is sometimes used to represent an intentional silence, perhaps indicating irritation, dismay, shock or disgust.

In poetry, this is used to highlight sarcasm or make the reader think about the last points in the poem.

In news reporting, it is used to indicate that a quotation has been condensed for space, brevity or relevance.

Herb Caen, Pulitzer-prize-winning columnist for the San Francisco Chronicle, became famous for his "Three-dot journalism".

In different languages

In English

The Chicago Manual of Style suggests the use of an ellipsis for any omitted word, phrase, line, or paragraph from within but not at the end of a quoted passage. There are two commonly used methods of using ellipses: one uses three dots for any omission, while the second one makes a distinction between omissions within a sentence (using three dots: ...) and omissions between sentences (using a period and a space followed by three dots:). An ellipsis at the end of a sentence with a sentence following should be preceded by a period (for a total of four dots).

The Modern Language Association (MLA), however, used to indicate that an ellipsis must include spaces before and after each dot in all uses. If an ellipsis is meant to represent an omission, square brackets must surround the ellipsis to make it clear that there was no pause in the original quote: [. . .]. Currently, the MLA has removed the requirement of brackets in its style handbooks. However, some maintain that the use of brackets is still correct because it clears confusion.^[2]

The MLA now indicates that a three-dot, spaced ellipsis (. . .) should be used for removing material from within one sentence within a quote. When crossing sentences (when the omitted text contains a period, so omitting the end of a sentence counts), a four-dot, spaced (except for before the first dot) ellipsis (. . . .) should be used. When ellipsis points are used in the original text, ellipsis points that are not in the original text should be distinguished by enclosing them in square brackets (e.g. "text [...] text").^[3]

According to the Associated Press, the ellipsis should be used to condense quotations. It is less commonly used to indicate a pause in speech or an unfinished thought or to separate items in material such as show business gossip. The stylebook indicates that if the shortened sentence before the mark can stand as a sentence, it should do so, with an ellipsis placed after the period or other ending punctuation. When material is omitted at the end of a paragraph and also immediately following it, an ellipsis goes both at the end of that paragraph and in front of the beginning of the next, according to this style.^[4]

According to Robert Bringhurst's *Elements of Typographic Style*, the details of typesetting ellipsis depend on the character and size of the font being set and the typographer's preference. Bringhurst writes that a full space between each dot is "another Victorian eccentricity. In most contexts, the Chicago ellipsis is much too wide"—he recommends using flush dots, or *thin*-spaced dots (up to one-fifth of an em), or the prefabricated ellipsis character (Unicode U+2026, Latin entity …). Bringhurst suggests that normally an ellipsis should be spaced fore-and-aft to separate it from the text, but when it combines with other punctuation, the leading space disappears and the other punctuation follows. This is the usual practice in typesetting. He provides the following examples:

i ... j k.... l...l 1 1, ... 1 m...? n...!

In legal writing in the United States, Rule 5.3 in the *Bluebook* citation guide governs the use of ellipsis and requires a space before the first dot and between the two subsequent dots. If an ellipsis ends the sentence, then there are three dots, each separated by a space, followed by the final punctuation. In some legal writing, an ellipsis is written as three asterisks (*** or * * *) to make it obvious that text has been omitted.

In Polish

When applied in Polish language syntax, the ellipsis is called *wielokropek*, which means "multidot". The word *wielokropek* distinguishes the ellipsis of Polish syntax from that of mathematical notation, in which it is known as an *elipsa*.

When an ellipsis replaces a fragment omitted from a quotation, the ellipsis is enclosed in parentheses or square brackets. An unbracketed ellipsis indicates an interruption or pause in speech.

The syntactical rules for ellipses are standardized by the 1983 Polska Norma document PN-83/P-55366, *Zasady składania tekstów w języku polskim* ("Rules for setting texts in the Polish Language").

In Japanese

The most common character corresponding to an ellipsis is called 3-ten rīdā ("3-dot leaders", ...). 2-ten rīdā exists as a character, but it is used less commonly. In writing, the ellipsis consists usually of six dots (two 3-ten rīdā characters,). Three dots (one 3-ten rīdā character) may be used where space is limited, such as in a header. However, variations in the number of dots exist. In horizontally written text the dots are commonly vertically centered within the text height (between the baseline and the ascent line), as in the standard Japanese Windows fonts; in vertically written text the dots are always centered horizontally. As the Japanese word for dot is pronounced "ten", the dots are colloquially called "ten-ten-ten" (てんてんてん, akin to the English "dot dot dot").

In Japanese manga, the ellipsis by itself represents speechlessness, or a "pregnant pause". Given the context, this could be anything from an admission of guilt to an expression of being dumbfounded at another person's words or actions. As a device, the *ten-ten-ten* is intended to focus the reader on a character while allowing the character to not speak any dialogue. This conveys to the reader a focus of the narrative "camera" on the silent subject, implying an expectation of some motion or action. It is not unheard of to see inanimate objects "speaking" the ellipsis.

In Chinese

In Chinese, the ellipsis is six dots (in two groups of three dots, occupying the same horizontal space as two characters) (i.e.). The dots are always centered within the baseline and the ascender when horizontal (on the baseline has become acceptable) and centered horizontally when vertical.

In mathematical notation

An ellipsis is also often used in mathematics to mean "and so forth". In a list, between commas, or following a comma, a normal ellipsis is used, as in:

$$1, 2, 3, \dots, 100.$$

To indicate the omission of values in a repeated operation, an ellipsis raised to the center of the line is used between two operation symbols or following the last operation symbol, as in:

$$1 + 2 + 3 + \cdots + 100$$

(though sometimes, for example, in Russian mathematical texts, normal, non-raised, ellipses are used even in repeated summations^[5]).

The latter formula means the sum of all natural numbers from 1 to 100. However, it is not a formally defined mathematical symbol. Repeated summations or products may similarly be denoted using capital sigma and capital pi notation, respectively:

$$\begin{aligned} 1 + 2 + 3 + \cdots + 100 &= \sum_{n=1}^{100} n \\ 1 \times 2 \times 3 \times \cdots \times 100 &= \prod_{n=1}^{100} n = 100! (\text{see factorial}) \end{aligned}$$

Normally dots should be used only where the pattern to be followed is clear, the exception being to show the indefinite continuation of an irrational number such as:

$$\pi = 3.14159265\dots$$

Sometimes, it is useful to display a formula compactly, for example:

$$1 + 4 + 9 + \dots + n^2 + \dots + 400.$$

Another example is the set of zeros of the cosine function.

$$\left\{ \pm \frac{\pi}{2}, \pm \frac{3\pi}{2}, \pm \frac{5\pi}{2}, \dots \right\}.$$

There are many related uses of the ellipsis in set notation.

The diagonal and vertical forms of the ellipsis are particularly useful for showing missing terms in matrices, such as the size- n identity matrix

$$I_n = \begin{bmatrix} 1 & 0 & \dots & 0 \\ 0 & 1 & \dots & 0 \\ \vdots & \vdots & \ddots & \vdots \\ 0 & 0 & \dots & 1 \end{bmatrix}.$$

The use of ellipses in mathematical proofs is often discouraged because of the potential for ambiguity. For this reason, and because the ellipsis supports no systematic rules for symbolic calculation, in recent years some authors have recommended avoiding its use in mathematics altogether.^[6]

Computer interfaces and programming

Ellipses are often used in an operating system's taskbars or web browser tabs to indicate longer titles than will fit. Hovering the cursor over the tab often displays a tooltip of the full title. When many programs are open, or during a "tab explosion" in web browsing, the tabs may be reduced in size so much that no characters from the actual titles show, and ellipses take up all the space besides the program icon or favicon.

In many user interface guidelines, a "..." after the name of a command implies that the user will need to provide further information, for example in a subsequent dialog box, before the action can be completed. A typical example is the *Save As...* command, which after being clicked will usually require the user to enter a filename, as opposed to *Save* where the file will usually be saved under its existing name.

An ellipsis character after a status message signifies that an operation may take some time, as in "Downloading updates...".

The ellipsis is used as an operator in some programming languages. The precise meaning varies by language, but it generally involves something dealing with multiple items. See *Ellipsis (programming operator)*.

On the Internet and in text messaging

The ellipsis is a non-verbal cue that is often used in computer-mediated interactions, in particular in synchronous genres, such as chat. The reason behind its popularity is the fact that it allows people to indicate in writing several functions:

- the sign of ellipsis can function as a floor holding device, and signal that more is to come, for instance when people break up longer turns in chat^[7]
- dot-dot-dot can be used systematically to enact linguistic politeness, for instance indicating topic change or hesitation^[8]
- suspension dots can be turn-constructional units to signal silence, for example when indicating disagreement, disapproval or confusion^[9]

Although an ellipsis is technically complete with three periods (...), its rise in popularity as a "trailing-off" or "silence" indicator, particularly in mid-20th century comic strip and comic book prose writing, has led to expanded uses online. Today, extended ellipsis anywhere from two to dozens of periods have become common constructions in Internet chat rooms and text messages.^[10] The extent of repetition in itself might serve as an additional contextualization or paralinguistic cue, to "extend the lexical meaning of the words, add character to the sentences, and allow fine-tuning and personalisation of the message".^[11]

Computer representations

In computing, several ellipsis characters have been codified, depending on the system used.

In the Unicode standard, there are the following characters:

Name	Character	Unicode	HTML Entity Name	Use
Horizontal ellipsis	...	U+2026	…	General
Laotian ellipsis	⠇	U+0EAF		General
Mongolian ellipsis	⠇	U+1801		General
Thai ellipsis	߱	U+0E2F		General
Vertical ellipsis	⠇	U+22EE	⋮	Mathematics
Midline horizontal ellipsis	⠇	U+22EF		Mathematics
Up-right diagonal ellipsis	⠇	U+22F0		Mathematics
Down-right diagonal ellipsis	⠇	U+22F1		Mathematics

In Windows, it can be inserted with `Alt+0133`.

In MacOS, it can be inserted with `Opt+;` (on an English language keyboard).

In Linux, it can be inserted with `AltGr+`.

In Chinese and sometimes in Japanese, ellipsis characters are done by entering two consecutive *horizontal ellipsis* (U+2026). In vertical texts, the application should rotate the symbol accordingly.

Unicode recognizes a series of three period characters (U+002E) as compatibility equivalent (though not canonical) to the horizontal ellipsis character.^[12]

In HTML, the horizontal ellipsis character may be represented by the entity reference `…` (since HTML 4.0), and the vertical ellipsis character by the entity reference `⋮` (since HTML 5.0).^[13] Alternatively, in HTML, XML, and SGML, a numeric character reference such as `…` or `…` can be used.

In the TeX typesetting system, the following types of ellipsis are available:

Character name	Character	TeX markup
Lower ellipsis	...	<code>\ldots</code>
Centred ellipsis	· · ·	<code>\cdots</code>
Diagonal ellipsis	· · .	<code>\ddots</code>
Vertical ellipsis	⋮	<code>\vdots</code>
Up-right diagonal ellipsis	⋮ ⋮	<code>\reflectbox{\ddots}</code>

The horizontal ellipsis character also appears in the following older character maps:

- in Windows-1250—Windows-1258 and in IBM/MS-DOS Code page 874, at code 85 (hexadecimal)
- in Mac-Roman, Mac-CentEuro and several other Macintosh encodings, at code C9 (hexadecimal)
- in Ventura International encoding at code C1 (hexadecimal)

Note that ISO/IEC 8859 encoding series provides no code point for ellipsis.

As with all characters, especially those outside of the ASCII range, the author, sender and receiver of an encoded ellipsis must be in agreement upon what bytes are being used to represent the character. Naive text processing software may improperly assume that a particular encoding is being used, resulting in mojibake.

The Chicago Style Q&A recommends to avoid the use of ... (U+2026) character in manuscripts and to place three periods plus two nonbreaking spaces (. . .) instead, so that an editor, publisher, or designer can replace them later.^[14]

In Abstract Syntax Notation One (ASN.1), the ellipsis is used as an extension marker to indicate the possibility of type extensions in future revisions of a protocol specification. In a type constraint expression like A ::= INTEGER (0..127, ..., 256..511) an ellipsis is used to separate the extension root from extension additions. The definition of type A in version 1 system of the form A ::= INTEGER (0..127, ...) and the definition of type A in version 2 system of the form A ::= INTEGER (0..127, ..., 256..511) constitute an extension series of the same type A in different versions of the same specification. The ellipsis can also be used in compound type definitions to separate the set of fields belonging to the extension root from the set of fields constituting extension additions. Here is an example: B ::= SEQUENCE { a INTEGER, b INTEGER, ..., c INTEGER }

Unicode

In Unicode, apart from the basic ellipsis, other ellipses are encoded: In other languages and scripts:

References

- [1] Raymond Chandler, Frank MacShane. *Raymond Chandler: Stories and Early Novels*. First Edition. New York: Library of America. 1995. *Note on the Texts*.
- [2] Fowler, H. Ramsey, Jane E. Aaron, Murray McArthur. *The Little, Brown Handbook*. Fourth Canadian Edition. Toronto: Pearson Longman. 2005. p. 440.
- [3] <http://www.naropa.edu/nwc/documents/citationcomparisonsp11.pdf>
- [4] Godlstein, Norm, editor. "Associated Press Stylebook and Briefing on Media Law". 2005. pp.328–329.
- [5] Мильчин А. Э. Издательский словарь-справочник (<http://slovary.yandex.ru/~книги/Издательский словарь/Многоточие в математических формулах/>).— Изд. 3-е, испр. и доп., Электронное — М.: ОЛМА-Пресс, 2006. (in Russian)
- [6] Roland Backhouse, *Program Construction: Calculating Implementations from Specifications*. Wiley (2003), page 138
- [7] Simpson, J (2005). "Meaning-making online: Discourse and CMC in a Language learning community". *Recent Research Developments in Learning Technologies*. CiteSeerX: 10.1.1.108.463 (<http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.108.463>).
- [8] Erika, Darics (2010). "Relational work in synchronous text-based CMC of virtual teams" (<http://eprints.port.ac.uk/3682/>). *Handbook of research on discourse behavior and digital communication: language structures and social interaction* .
- [9] Ong, Kenneth Keng Wee (2011). "Disagreement, Confusion, Disapproval, Turn Elicitation and Floor Holding: Actions accomplished by Ellipsis Marks-Only Turns and Blank Turns in Quasisynchronous Chat". *Discourse Studies* 13 (2).
- [10] Maness, Jack M. (2007). "The Power of Dots: Using Nonverbal Compensators in Chat Reference" ([http://ucblibraries.colorado.edu/facultyprofiles/files/publications/ADmanessj/Maness--The Power of Dots\(personal\).pdf](http://ucblibraries.colorado.edu/facultyprofiles/files/publications/ADmanessj/Maness--The Power of Dots(personal).pdf)) (PDF). *Proceedings of the 2007 Annual Meeting of ASIS&T*. Annual Meeting of ASIS&T (<http://www.asis.org/Conferences/AM07/>). University Libraries – University of Colorado at Boulder. . Retrieved 24 October 2011.
- [11] Kalman, Yoram M et al.. "CMC cues enrich lean online communication: the case of letter and punctuation mark repetitions" (<http://www.kalmans.com/MCIS2010Cues.pdf>). . Retrieved 9 July 2012.
- [12] UnicodeData.txt (<http://www.unicode.org/Public/UNIDATA/UnicodeData.txt>): 2026; HORIZONTAL ELLIPSIS; Po; 0; ON; <compat> 002E 002E 002E;;;;;N;;;;;
- [13] "W3C Working Draft: HTML5: 8.5 Named character references" (<http://www.w3.org/TR/2011/WD-html5-20110113/named-character-references.html#entity-vellip>). 2011. . Retrieved 2012-11-08.
- [14] "Chicago Style Q&A: How do I insert an ellipsis in my manuscript?" (http://www.chicagomanualofstyle.org/CMS_FAQ/SpecialCharacters/SpecialCharacters09.html). *The Chicago Manual of Style, edition 16*. University of Chicago Press. 2010. . Retrieved 2011-02-10.

Further reading

- Bringhurst, Robert (2002). *The Elements of Typographic Style* (Version 2.5 ed.). Point Roberts, Washington: Hartley & Marks. pp. 82–83. ISBN 978-0-88179-132-7. OCLC 50848361.
- Halliday, M.A.K., and Ruqayia, H. (1976), *Cohesion in English*, London: Longman.
- Morris, William (1980). *The Houghton Mifflin Canadian Dictionary of the English Language*. Markham, ON: Houghton Mifflin Canada. pp. 424 (spacing of dots: . . .). ISBN 978-0-395-29654-7. OCLC 8063090.

Endocentric and exocentric

In theoretical linguistics, a distinction is made between **endocentric** and **exocentric** constructions. A grammatical construction (e.g. a phrase or compound word) is said to be *endocentric* if it fulfills the same linguistic function as one of its parts, and *exocentric* if it does not.^[1] The distinction reaches back at least to Bloomfield's work of the 1930s.^[2] Such a distinction is possible only in phrase structure grammars (constituency grammars), since in dependency grammars all constructions are necessarily endocentric.^[3]

Endocentric construction

An endocentric construction consists of an obligatory head and one or more dependents, whose presence serves to narrow the meaning of the head. For example:

big house - Noun phrase (NP)

sing songs - Verb phrase (VP)

very long - Adjective phrase (AP)

These phrases are indisputably endocentric. They are endocentric because the one word in each case carries the bulk of the semantic content and determines the grammatical category to which the whole constituent will be assigned. The phrase *big house* is a noun phrase in line with its part *house*, which is a noun. Similarly, *sing songs* is a verb phrase in line with its part *sing*, which is a verb. The same is true of *very long*; it is a an adjective phrase in line with its part *long*, which is an adjective. In more formal terms, the distribution of an endocentric construction is functionally equivalent, or approaching equivalence, to one of its parts, which serves as the center, or head, of the whole. An endocentric construction is also known as a *headed* construction, where the head is contained "inside" the construction.

Exocentric construction

An exocentric construction consists of two or more parts, whereby the one or the other of the parts cannot be viewed as providing the bulk of the semantic content of the whole. Further, the syntactic distribution of the whole cannot be viewed as being determined by the one or the other of the parts. The classic instance of an exocentric construction is the sentence (in a phrase structure grammar).^[4] The traditional binary division^[5] of the sentence (S) into a subject noun phrase (NP) and a predicate verb phrase (VP) was exocentric:

Hannibal destroyed Rome. - Sentence (S)

Since the whole is unlike either of its parts, it is exocentric. In other words, since the whole is neither a noun (N) like *Hannibal* nor a verb phrase (VP) like *destroyed Rome* but rather a sentence (S), it is exocentric. With the advent of X-bar Theory in Transformational Grammar in the 1970s, this traditional exocentric division was largely abandoned and replaced by an endocentric analysis, whereby the sentence is viewed as an inflection phrase (IP), which is essentially a projection of the verb (a fact that makes the sentence a big VP in a sense). Thus with the advent of X-bar Theory, the endocentric vs. exocentric distinction started to become less important in the theory of syntax, for without the concept of exocentricity, the notion of endocentricity was becoming vacuous. In theories of morphology

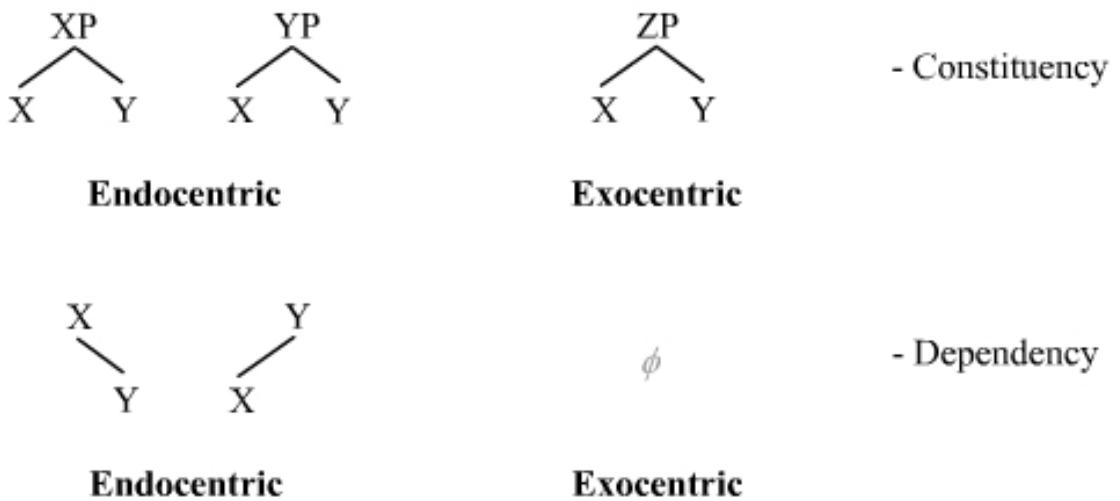
however, the distinction remains, since certain compounds seem to require an exocentric analysis, e.g. *have-not* in *Bill is a have-not*. For a class of compounds described as exocentric, see bahuvrihi.

The distinction in dependency grammars

The endo- vs. exocentric distinction is possible in phrase structure grammars (= constituency grammars), since they are constituency-based. The distinction is hardly present in dependency grammars, since they are dependency-based. In other words, dependency-based structures are necessarily endocentric, i.e. they are necessarily headed structures. Dependency grammars by definition were much less capable of acknowledging the types of divisions that constituency enables. Acknowledging exocentric structure necessitates that one posit more nodes in the syntactic (or morphological) structure than one has actual words or morphs in the phrase or sentence at hand. What this means is that a significant tradition in the study of syntax and grammar has been incapable from the start of acknowledging the endo- vs. exocentric distinction, a fact that has generated confusion about what should count as an endo- or exocentric structure.

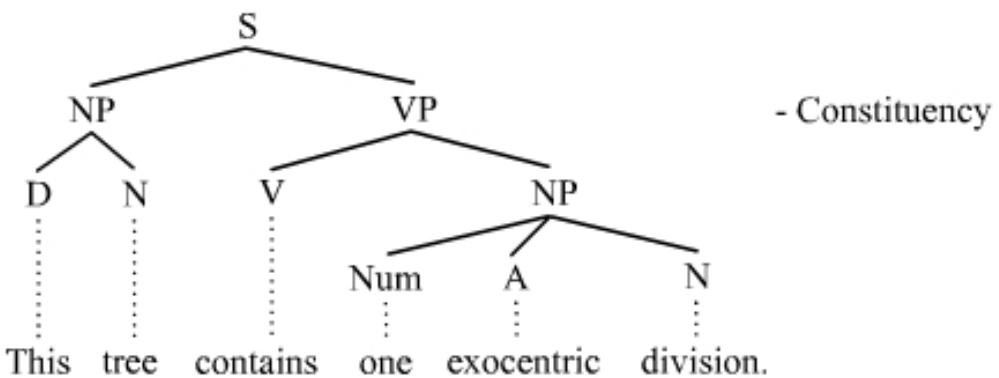
Representing endo- and exocentric structures

Theories of syntax (and morphology) represent endocentric and exocentric structures using tree diagrams and specific labeling conventions. The distinction is illustrated here using the following trees. The first three trees show the distinction in a constituency-based grammar, and the second two trees show the same structures in a dependency-based grammar:

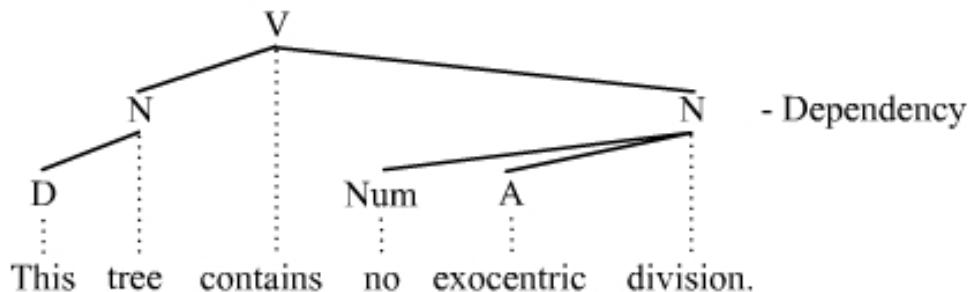


The upper two trees on the left are endocentric since each time, one of the parts, i.e. the head, projects its category status up to the mother node. The upper tree on the right, in contrast, is exocentric, because neither of the parts projects its category status up to the mother node; Z is a category distinct from X or Y. The two dependency trees show the manner in which dependency-based structures are inherently endocentric. Since the number of nodes in the tree structure is necessarily equal to the number of elements (e.g. words) in the string, there is no way to assign the whole (i.e. XY) a category status that is distinct from both X and Y.

Traditional phrase structure trees are mostly endocentric, although the initial binary division of the clause is exocentric ($S \rightarrow NP VP$), as mentioned above, e.g.



This tree structure contains four divisions, whereby only one of these division is exocentric (the highest one). The other three divisions are endocentric because the mother node has the same basic category status of one of its daughters. The one exocentric division disappears in the corresponding dependency tree:



Dependency positions the finite verb is the root of the entire tree, which means the initial exocentric division is impossible. This tree is entirely endocentric.

A note about coordinate structures

While exocentric structures have largely disappeared from most theoretical analyses of standard sentence structure, many theories of syntax still assume (something like) exocentric divisions for coordinate structures, e.g.

[Sam] and [Larry] arrived.

She [laughed] and [cried].

[Should I] or [should I not] go to that conference?

The brackets each time mark the conjuncts of a coordinate structure, whereby this coordinate structure includes the material appearing between the left-most bracket and the right-most bracket; the coordinator is positioned between the conjuncts. Coordinate structures like these do not lend themselves to an endocentric analysis in any clear way, nor to an exocentric analysis. One might argue that the coordinator is the head of the coordinate structure, which would make it endocentric. This argument would have to ignore the numerous occurrences of coordinate structures that lack a coordinator (asyndeton), however. One might therefore argue instead that coordinate structures like these are multi-headed, each conjunct being or containing a head. The difficulty with this argument, however, is that the traditional endocentric vs. exocentric distinction did not foresee the existence of multi-headed structures, which means that it did not provide a guideline for deciding whether a multi-headed structure should be viewed as endo- or exocentric. Coordinate structures thus remain a problem area for the endo- vs. exocentric distinction in general.

Notes

- [1] Matthews (1981:147) provides an insightful discussion of the endo- vs. exocentric distinction. See Falk (2001:43ff., 49ff.) as well.
- [2] See Bloomfield (1933).
- [3] Concerning the lack of exocentric structures in dependency grammar, see Osborne et al. (2011:325).
- [4] Concerning the status of S as an exocentric construction, see Emonds (1976:15).
- [5] See for example Chomsky (1957).

References

- Barri, Nimrod. Note terminologique: endocentrique-exocentrique. *Linguistics* 163, November 1975, pp. 5–18.
- Bloomfield, Leonard. 1933. *Language*. New York: Henry Holt.
- Chomsky, Noam 1957. *Syntactic Structures*. The Hague/Paris: Mouton.
- Emonds, J. 1976. A transformational approach to English syntax: Root, structure-preserving, and local transformations. New York: Academic Press.
- Falk, Y. 2001. *Lexical-Functional Grammar: An introduction to parallel constraint-based syntax*. Stanford, CA: CSLI Publications.
- Matthews, P. 1981. *Syntax*. Cambridge, UK: Cambridge University Press.
- Osborne, T., M. Putnam, and T. Groß. 2011. Bare phrase structure, label-less structures, and specifier-less syntax: Is Minimalism becoming a dependency grammar? *The Linguistic Review* 28: 315–364.

Syntactic expletive

Syntactic expletives are words that perform a syntactic role but contribute nothing to meaning.^[1] Expletive subjects in the form of dummy pronouns are part of the grammar of many non-pro-drop languages such as English, whose clauses normally require overt provision of subject even when the subject can be pragmatically inferred (for an alternative theory considering expletives like *there* as a dummy predicate rather than a dummy subject based on the analysis of the copula see Moro 1997 in the list of references cited here). Consider this example:

"*It* is important that you work hard for the exam."

Following the eighteenth-century conception of pronoun, Bishop Robert Lowth objected that since *it* is a pronoun, it should have an antecedent. Since it cannot function like that in Latin, Lowth said that the usage was incorrect in English. By this approach, the correct phrasing (with the omission of the syntactic expletive "it") would be:

"That you work hard for the exam is important."

Contrast *it is necessary that you ...* with its Latin equivalent *oportet tibi*, meaning more or less 'necessitates for you'. Since subject pronouns are not used in Latin except for emphasis, neither are expletive pronouns and the problem does not arise.

Whether or not *it* is a pronoun here (and linguists today would say that it is one), English is not Latin; and the sentence was and is fully acceptable to native speakers of English and thus was and is grammatical. *It* has no meaning here; it merely serves as a dummy subject. (It is sometimes called *preparatory it* or *prep it*, or a *dummy pronoun*.)

Bishop Lowth did not condemn sentences that use *there* as an expletive, even though it is one in many sentences, for example:

"*There* are ten desks here."

The nomenclature used for the constituents of sentences such as this is still a matter of some dispute, but *there* might be called subject, *are* copula, and *ten desks* predicate nominal. Meanwhile the word *here* in the example above shows the semantic emptiness of *there*.

There is some disagreement over whether the *it* in such sentences as

"It is raining now."

is an expletive. Whereas it makes no sense to ask what the *it* means in "It is important that you work hard for the exam", some people might say that the dummy *it* in "It is raining now" means the weather (even if the word *weather* has not previously been mentioned, and even though "The weather is raining now" is unidiomatic). Thus the *it* in such sentences is sometimes called expletive, sometimes a *weather "it"*. Compare with weather verb.

Further reading

- Everaert, M.; van Riemsdijk, H; Goedemans, R. (eds) 2006 *The Blackwell Companion to Syntax*, 5 volumes, Blackwell, London: see "existential sentences and expletive there" in Volume 2.
- Moro, A. 1997 *The Raising of Predicates. Predicative Noun Phrases and the Theory of Clause Structure*, Cambridge Studies in Linguistics, 80, Cambridge University Press, Cambridge.

References

[1] <http://dictionary.reference.com/browse/expletive>

Exceptional case-marking

In linguistics, the term **exceptional case-marking** (ECM) denotes a phenomenon where the subject of an embedded infinitival verb seems to appear in the superordinate clause and, if it is a pronoun, is unexpectedly marked with object case morphology (*him* not *he*, *her* not *she*, etc.). The unexpected object case morphology is deemed "exceptional". The term *ECM* itself was coined in the Government and Binding grammar framework,^[1] although the phenomenon is closely related to the accusativus cum infinitivo constructions of Latin. ECM-constructions are also studied within the context of raising. The verbs that license ECM are known as *raising-to-object* verbs. Many languages lack ECM-predicates, and even in English, the number of ECM-verbs is small. The structural analysis of ECM-constructions varies in part according to whether one pursues a relatively flat structure or a more layered one.

Examples

The ECM-construction is licensed by a relatively small number of verbs in English (e.g. *believe, judge, prove, want*, etc.):

Tim believes **him to be innocent**. - Exceptional case-marking of the object/subject *him*.

We judge **them to be ridiculous**. - Exceptional case-marking of the object/subject *them*.

The prosecutor proved **her to be guilty**. - Exceptional case-marking of the object/subject *her*.

They want **us to be respectful**. - Exceptional case-marking of the object/subject *us*.

The strings in bold are the ECM-constructions. The pronouns are marked with object case morphology, but they function semantically as the subjects of the infinitival verbs to their right. Many ECM-verbs allow the same meaning to be expressed with a full object clause, e.g.:

Tom believes **that he is innocent**. - ECM-construction alternates with full clause.

The prosecutor proved **that she is guilty**. - ECM-construction alternates with full clause.

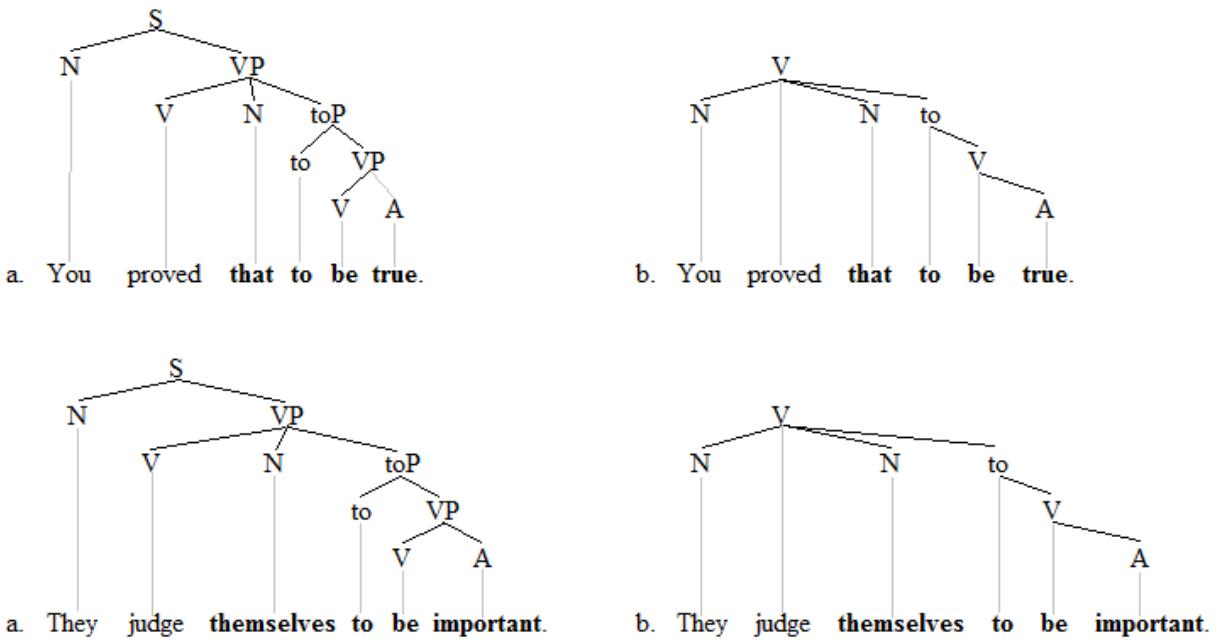
They want **for us to be respectful**. - ECM-construction alternates with full clause.

Since the meaning across these clauses remains consistent, one tendency has been to view the ECM-material (i.e. the material in bold in the first four examples) as a type of small clause that is analogous to the full clausal counterpart. On this approach, the object forms a constituent with the infinitive to its right. The primary trait of the ECM-object/subject is that it is NOT a semantic argument of the matrix predicate, which means that it is not

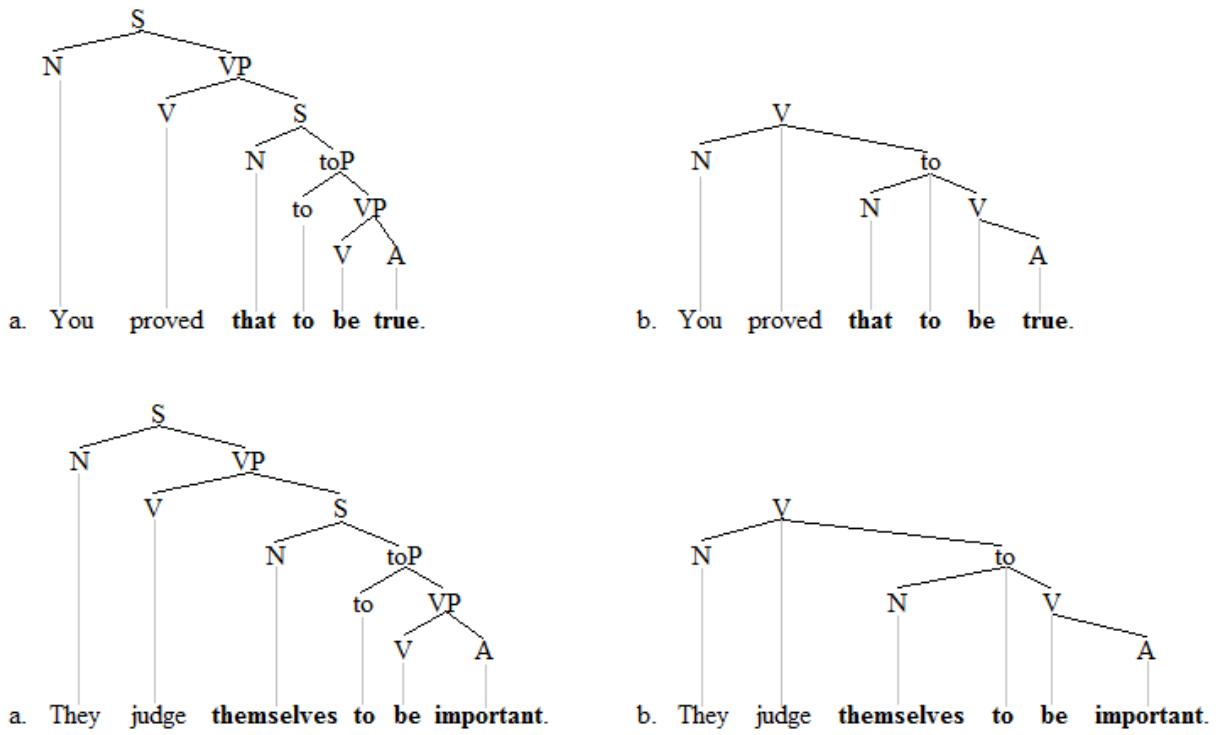
semantically selected by the matrix verb.^[2] In this area, ECM-constructions should not be confused with control constructions, since control predicates semantically select their object (e.g. *They told us to start*).

Structural analyses

An interesting aspect of ECM-constructions concerns the underlying structure. There are two basic possibilities in this area: a flat structure or a more layered one.^[3] The following trees illustrate the "flat" analysis. For each example, both a constituency-based analysis of a phrase structure grammar and a dependency-based analysis of a dependency grammar are shown:



The phrase structure grammar trees are the a-trees on the left, and the dependency grammar trees are the b-trees on the right. Both types of analysis show a relatively flat structure insofar as the material in bold consists of two separate sister constituents. The object/subject pronouns are shown as dependents of the matrix verb each time. The two do NOT form a single constituent with the predicates to their right. The alternative, more layered analysis of these sentences might be as follows.^[4]



The constituency-based trees are again on the left, and the dependency-based trees on the right. The material in bold now forms a single constituent. This is accomplished in the constituency trees by adding the clause node S, and in the dependency trees, it is accomplished by subordinating the ECM object/subject to the particle *to*. One can now debate which of the two analyses is better. The more layered analysis has the advantage that it accommodates the insight that the subject/object constituent is a semantic argument of the infinitival verb. The flat analysis has the advantage that it is more consistent with data delivered by operational considerations: the object morphology on the pronoun (e.g. *him, her, them*, etc.), the ability of the object/subject to become the subject in the passive counterpart (e.g. *That was proved to be true*), the obligatory appearance of the reflexive pronoun when coindexation occurs with the subject (e.g. *They₁ judge themselves₁ /*them₁ to be important*), and the inability of constituency tests to clearly identify a clausal constituent (e.g. Topicalization: ??*That to be true, you proved*).^[5]

The more layered analysis was favored in the GB framework and a variation of it certainly obtains in current Minimalism as well. The flat analysis is certainly the one preferred by dependency grammars.

Notes

[1] See for instance Chomsky (1986:85-87), Cowper (1992:100f.), Napoli (1993:210-213), Lasnik (1999:8ff.).

[2] Concerning the lack of a thematic relationship between the ECM-verb and its object, see for instance Ouhalla (1994:172) and Lasnik (1999:8).

[3] Falk (2001:132f.) provides a good illustration of the two competing analyses (flat vs. layered).

[4] The layered analysis is preferred by those working in the GB framework, e.g. Chomsky (1986:85), Cowper (1992:101), Napoli (1993:211).

[5] For more arguments along these lines in favor of the flat structure and thus against the more layered one, see Bresnan (1982:381f.) and Falk (2001:133f.).

Literature

- Chomsky, N. 1986. Barriers. Cambridge, MA: The MIT Press.
- Bresnan, J. (ed.). 1982. The mental representation of grammatical relations. Cambridge, MA: The MIT Press.
- Cowper, E. 1992. A concise introduction to syntactic theory: The government-binding approach. Chicago: The University of Chicago Press.

- Falk, Y. 2001. Lexical-Functional Grammar: An introduction to parallel constraint-based syntax. Stanford, CA: CSLI Publications.
- Lasnik, H. 1999. Minimalist analysis. Malden, MA: Blackwell Publishers.
- Napoli, D. 1993. Syntax: Theory and problems. New York: Oxford University Press.
- Ouhalla, J. 1994. Transformational grammar: From rules to principles and parameters. London: Edward Arnold.

Extraposition

Extraposition is a mechanism of syntax that alters word order in such a manner that a relatively "heavy" constituent appears to the right of its canonical position.^[1] Extraposing a constituent results in a discontinuity and in this regard, it is unlike shifting, which does not generate a discontinuity. The extraposed constituent is separated from its governor by one or more words that dominate its governor. Two types of extraposition are acknowledged in theoretical syntax: standard cases where extraposition is optional and *it*-extraposition where extraposition is obligatory. Extraposition is motivated in part by a desire to reduce center embedding by increasing right-branching and thus easing processing, center-embedded structures being more difficult to process. Extraposition occurs frequently in English and related languages.

Examples

Standard cases of extrapostion are optional, although at times the extraposed version of the sentence is strongly preferred. The following pairs of sentences illustrate "normal" word order first followed by the same sentence with extraposition:

- a. Someone **who we don't know** left a message.
- b. Someone left a message **who we don't know**. - Extraposition of relative clause out of subject

- a. Susan said something **that nobody expected** more than once.
- b. Susan said something more than once **that nobody expected**. - Extraposition of relative clause out of object

- a. Some guy **with red hair** was there.
- b. Some guy was there **with red hair**. - Extraposition of prepositional phrase out of subject

- a. How frustrated **with their kids** are they?
- b. How frustrated are they **with their kids**? - Extraposition of prepositional phrase from predicative adjective phrase

- a. ?What **that was so entertaining** actually happened?
- b. What actually happened **that was so entertaining**? - Extraposition of content clause from subject *wh*-element

- a. ?What **that upset everyone** do you think they did?
- a. What do you think they did **that upset everyone**? - Extraposition of content clause from object *wh*-element

These examples illustrate a couple of basic facts about extraposition. One of these facts is that relatively "heavy" constituents are being extraposed (e.g.usually clauses and sometimes prepositional phrases). Another fact is that extraposition can occur out of subjects. This aspect of extraposition is unlike topicalization and *wh*-fronting, two other mechanisms that often generate discontinuities. Attempts to front expressions out of subjects fail in English. Another fact about extraposition is that sometimes it cannot occur beyond informationally heavy material.

- a. Some guy **with red hair** was talking excessively.
- b. *Some guy was talking excessively **with red hair**. - Failed attempt to extrapose prepositional phrase

This aspect of extraposition supports the insight that extraposed constituents should be informationally heavy. Extraposition likely fails in this case because *with red hair* cannot be construed as important information.

Clause bound

A further widely acknowledged fact about extraposition is that it is clause-bound. This aspect of extraposition is known as the *Right Roof Constraint*.^[2] There is a "right roof" above which extraposition cannot occur. In other words, extraposition cannot occur out of an embedded clause:

- a. That we think **that the idea is good** is no secret.
- b. *That we think is no secret **that the idea is good**. - Failed attempt to extrapose out of a subject clause
- a. Someone who thinks **that Romney will win** was talking non-stop.
- b. *Someone who thinks was talking non-stop **that Romney will win**. - Failed attempt to extrapose out of a relative clause
- a. Before it was certain **that it would rain**, we were planning a picnic.
- b. *Before it was certain, we were planning a picnic **that it would rain**. - Failed attempt to extrapose out of an adjunct clause

This aspect of extraposition is unlike fronting discontinuities (topicalization and *wh*-fronting), which can easily front a constituent out of an (argument) clause, e.g.

- a. They mentioned that they like **the coffee**.
- b. **What** did they mention that they like. - Successful *wh*-fronting out of an object clause

but it is like scrambling discontinuities; scrambling cannot displace a constituent from one clause into another.

It-extraposition

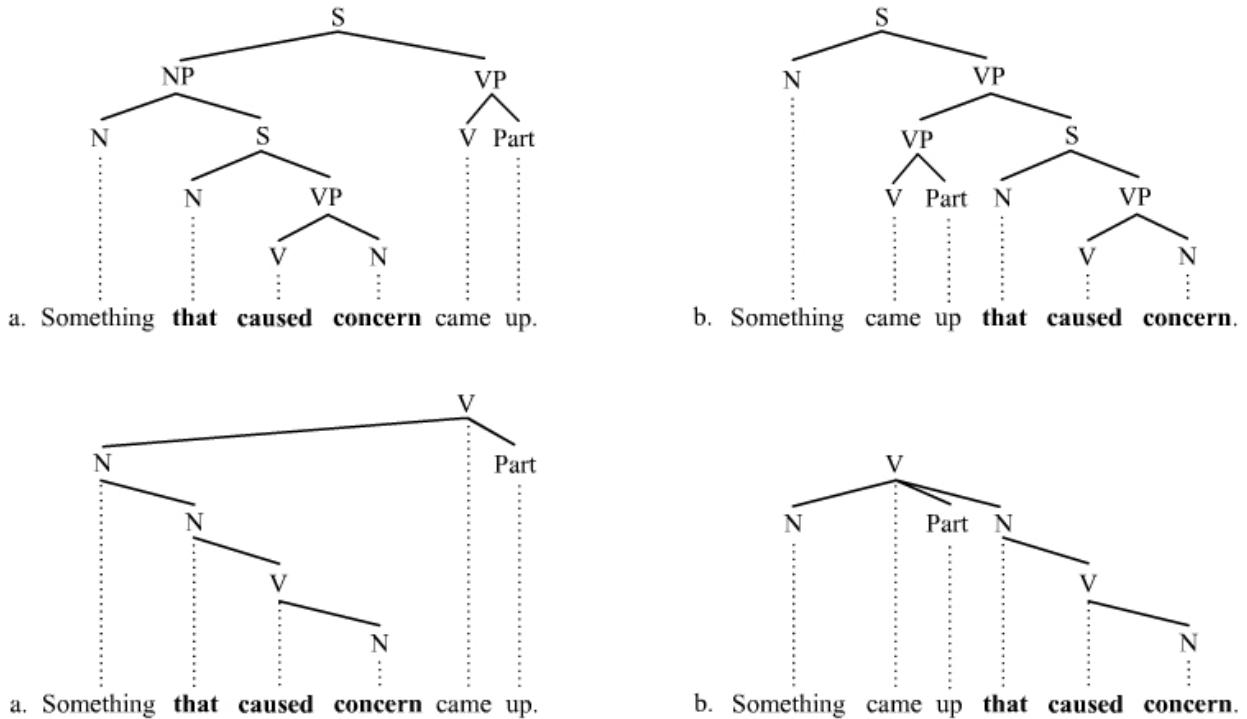
The term "extraposition" is also used to denote similar structures in which *it* appears.^[3] While certainly related to canonical cases, *it*-extraposition is different in at least one important respect. In cases of *it*-extraposition, extraposition is not optional, but rather it is obligatory, e.g.

- a. ***It that I burned the potatoes** was frustrating. - Failed sentence because extraposition is obligatory when *it* appears
- b. It was frustrating **that I burned the potatoes**.
- a. *Did **it that that happened** surprise you? - Failed sentence because extraposition is obligatory when *it* appears
- b. Did it surprise you **that that happened**?
- a. *We suggested **it that we leave later than planned** to them. - Failed sentence because extraposition is obligatory when *it* appears
- b. We suggested **it to them that we leave later than planned**.
- a. *Nobody believes **it that Newt will get the nomination** for a second. - Failed sentence because extraposition is obligatory when *it* appears
- a. Nobody believes **it for a second that Newt will get the nomination**.

Another aspect of *it*-extraposition that distinguishes it from canonical cases is that the extraposed constituent is usually a clause; *it*-extraposition cannot extrapose a prepositional phrase. This fact can be explained by appealing to the status of *it* as a *cataphor*. In other words, *it* is pro-form of a sort; its appearance pushes the clause that it stands for to the end of the sentence. Since prepositional phrases cannot appear in the position of a clause, it should not be surprising that prepositional phrases cannot be *it*-extraposed.

Motivation

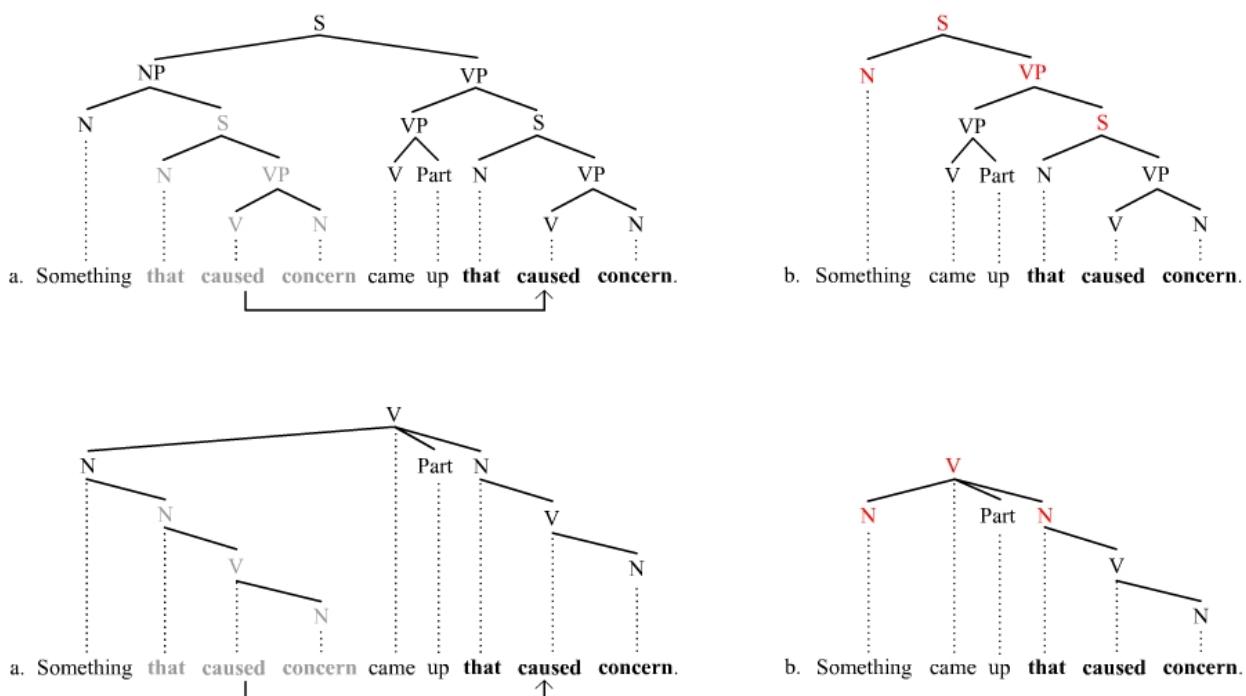
Extraposition is motivated at least in part by the desire to reduce processing load.^[4] When extraposition occurs, it inevitably reduces center embedding and thus increases right-branching. Right-branching structures in English are known to be easier to process. The extent to which extraposition increases right-branching is now illustrated using both a constituency-based analysis of a phrase structure grammar and a dependency-based analysis of a dependency grammar. The constituency-based trees appear first above the dependency-based trees:



The a-trees, which lack extraposition, extend down, whereas the b-trees, where extraposition is present, grow down and to the right. English, like many other languages, prefers to avoid trees that grow just down. Extraposition is one mechanism that increases rightward growth (shifting is another).

Theoretical analyses

Theories of syntax vary in their analyses of extraposition. Derivational theories are likely to produce an analysis in terms of movement (or copying), and representational theories are likely to assume feature passing (instead of movement). The following trees illustrate these analyses. The movement-type analysis appears on the left in the a-trees, and the feature passing analysis on the right in the b-trees. The constituency-based trees appear again above the dependency-based trees.



On the movement analysis in the a-trees, the embedded clause is first generated in its canonical position.^[5] To increase right-brancing it then moves rightward to its surface position. On the feature passing analysis in the b-trees, no movement is involved. Instead, information about the extraposed constituent is passed along the path marked in red. This path extends from the extraposed constituent to what can be viewed as the governor of the extraposed constituent.^[6] The words in red in the dependency tree qualify as a concrete unit of syntax; they form a catena.

Notes

- [1] For accounts of extraposition, see for instance Guéron (1990), Baltin (1981, 1983), Guéron and May (1984), Stucky (1987), Wittenberg (1987), Culicover and Rochemont (1990), Huck and Na (1990).
- [2] The Right Roof Constraint is attributed to Ross (1967). See also Gross and Osborne (2009:83-85). Toward a practical dependency grammar theory of discontinuities. SKY Journal of Linguistics 22, 43-90.
- [3] Rosenbaum (1967) may have been the first to look at *it*-extraposition.
- [4] See Francis (2010).
- [5] See Ross (1967) and Baltin (1981) for such rightward movement analyses.
- [6] For a dependency grammar analysis in terms of feature passing, see Osborne (2012).

References

- Baltin, M. 1981. Strict bounding. In C. L. Baker and J. McCarthy (eds.), *The logical problem of language acquisition*, 257-295. Cambridge, Mass.: MIT Press.
- Baltin, M. 1983. Extrapolation: Bounding vs. Government-Binding. *Linguistic Inquiry* 14, 1, 155-162.
- Culicover, P. and M. Rochemont 1990. Extrapolation and the complement principle. *Linguistic Inquiry* 21, 1, 23-47.
- Francis, E. 2010. Grammatical weight and relative clause extrapolation in English. *Cognitive Linguistics* 21, 1, 35-74.
- Groß, T. and T. Osborne 2009. Toward a practical dependency grammar theory of discontinuities. *SKY Journal of Linguistics* 22, 43-90.
- Guéron, J. 1980. On the syntax and semantics of extrapolation. *Linguistic Inquiry* 11, 637-678.
- Guéron, J. and R. May 1984. Extrapolation and Logical Form. *Linguistic Inquiry* 15, 1-31.
- Huck, G. and Y. Na 1990. Extrapolation and focus. *Language* 66, 51-77.

- Osborne, T. 2012. Edge features, catenae, and dependency-based Minimalism. *Linguistic Analysis* 34, 3-4, 321-366.
- Rosenbaum, P. 1967. *The grammar of English predicate complement constructions*. Cambridge, Mass, M.I.T. Press.
- Ross, J. 1967. Constraints on variables in syntax. Ph.D. thesis. Massachusetts Institute of Technology.
- Stucky, S. 1987. Configurational variation in English: A study of extraposition and related matters. In J. Huck and A. Ojeda (eds.), *Syntax and Semantics* 20, Discontinuous constituency. San Diego, Harcourt Brace Jovanovich, Publishers.
- Wittenberg, K. 1987. Extraposition from NP as anaphora. In J. Huck and A. Ojeda (eds.), *Syntax and Semantics*, Volume 20: Discontinuous Constituency. San Diego, Harcourt Brace Jovanovich, Publishers.

Finite verb

A **finite verb** is a form of a verb that has a subject (expressed or implied) and can function as the root of an independent clause;^[1] an independent clause can, in turn, stand alone as a complete sentence. In many languages, finite verbs are the locus of grammatical information of gender, person, number, tense, aspect, mood, and/or voice.^[2] Finite verbs are distinguished from non-finite verbs, such as infinitives, participles, etc., which generally mark these grammatical categories to a lesser degree or not at all, and which appear below the finite verb in the hierarchy of syntactic structure.

Examples

The **finite** verbs are in bold in the following sentences, and the non-finite verbs are underlined:

Verbs **appear** in almost all sentences.

This sentence **is** illustrating finite and non-finite verbs.

The dog **will have been trained** well.

Tom **promises** to try to do the work.

In many languages (including English), there can be just one finite verb at the root of each clause (unless the finite verbs are coordinated), whereas the number of non-finite verbs can reach up to five or six, or even more, e.g.

He **was** believed to have been told to have himself examined.

Finite verbs can appear in dependent clauses as well as independent ones:

John **said** that he **enjoyed** reading.

Something you **make yourself seems** better than something you **buy**.

Most types of verbs can appear in finite or non-finite form (and sometimes these forms may be identical): for example, the English verb *go* has the finite forms *go*, *goes*, and *went*, and the non-finite forms *go*, *going* and *gone*. The English modal verbs (*can*, *could*, *will*, etc.) are defective and lack non-finite forms.

It might seem that every grammatically complete sentence or clause must contain a finite verb. However, sentences lacking a finite verb were quite common in the old Indo-European languages, and still occur in many present-day languages. The most important type of these are nominal sentences.^[3] Another type are sentence fragments described as phrases or minor sentences. In Latin and some Romance languages, there are a few words that can be used to form sentences without verbs, such as Latin *ecce*, Portuguese *eis*, French *voici* and *voilà*, and Italian *ecco*, all of these translatable as *here ... is* or *here ... are*. Some interjections can play the same role. Even in English, utterances that lack a finite verb are common, e.g. *Yes.*, *No.*, *Bill!*, *Thanks.*, etc.

A finite verb is generally expected to have a subject, as it does in all the examples above, although null-subject languages allow the subject to be omitted. For example, in the Latin sentence *cogito ergo sum* ("I think therefore I am") the finite verbs *cogito* and *sum* appear without an explicit subject – the subject is understood to be the first-person personal pronoun, and this information is marked by the way the verbs are inflected. In English, finite verbs lacking subjects are normal in imperative sentences, and also occur in some fragmentary utterances.

Come over here!

Don't look at him!

Doesn't matter.

Grammatical categories of the finite verb

Due to the relatively poor system of inflectional morphology in English, the central role that finite verbs play is often not so evident. In other languages however, finite verbs are the locus of much grammatical information. Depending on the language, finite verbs can inflect for the following grammatical categories:

- Gender, e.g. masculine, feminine or neuter
- Person, e.g. 1st, 2nd, or 3rd (I/we, you, he/she/it/they)
- Number, e.g. singular or plural (or dual)
- Tense, e.g. present, past or future
- Aspect, e.g. perfect, perfective, progressive, etc.
- Mood, e.g. indicative, subjunctive, imperative, optative, etc.
- Voice, e.g. active or passive

The first three categories represent agreement information that the finite verb gets from its subject (by way of subject–verb agreement). The second four categories serve to situate the clause content according to time in relation to the speaker (tense), extent to which the action, occurrence, or state is complete (aspect), assessment of reality or desired reality (mood), and relation of the subject to the action or state (voice).

English is a synthetic language, which means it has limited ability to express these categories by verb inflection, and often conveys such information peripherastically, using auxiliary verbs. In a sentence such as

Sam **laughs** a lot.

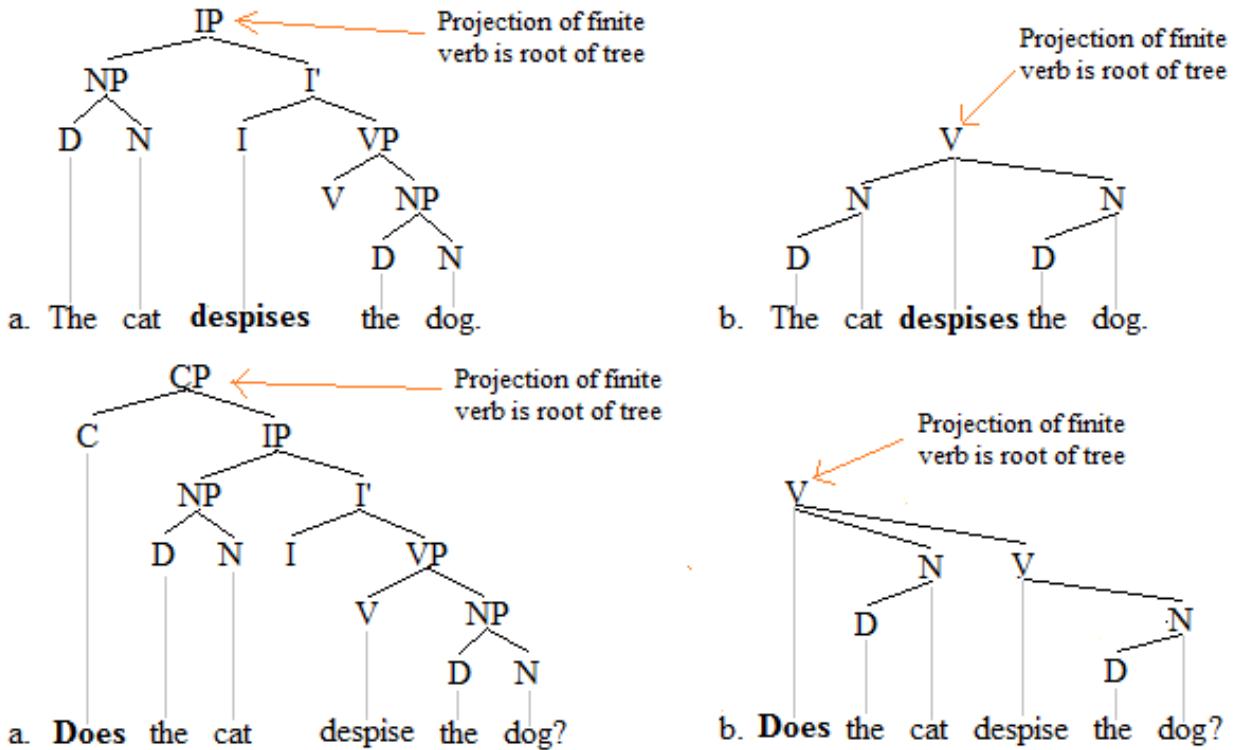
the verb form agrees in person (3rd) and number (singular) with the subject, by means of the *-s* ending, and this form also indicates tense (present), aspect ("simple"), mood (indicative) and voice (active). However most combinations of these categories need to be expressed using auxiliaries:

Sam **will have been examined** by this afternoon.

Here the auxiliaries *will*, *have* and *been* express respectively future time, perfect aspect and passive voice. (See English verb forms.) Highly inflected languages like Latin and Russian, however, frequently express most or even all of these categories in one finite verb.

Finite verbs in theories of syntax

Finite verbs play a particularly important role in syntactic analyses of sentence structure. In many phrase structure grammars – for instance those that build on the X-bar schema – the finite verb is the head of the finite verb phrase, and as such it is the head of the entire sentence. Similarly, in dependency grammars, the finite verb is the root of the entire clause and is thus the most prominent structural unit in the clause. This is illustrated by the following trees:



The phrase structure grammar trees are the a-trees on the left; they are similar to the trees produced in the Government and Binding framework.^[4] The b-trees on the right are the dependency grammar trees.^[5] Many of the details of these trees are not important for the point at hand, but they show clearly that the finite verb (in bold each time) is the structural center of the clause. In the phrase structure trees, the highest projection of the finite verb – IP (inflection phrase) or CP (complementizer phrase) – is the root of the entire tree. And in the dependency trees, the projection of the finite verb (V) is the root of the entire structure.

Notes

- [1] Concerning the appearance of a subject as an important criterion for identifying finite verbs, see Radford (1997:507f.).
- [2] For similar definitions of the finite verb that point to the finite verb as the locus of tense, mood, etc., see for instance Quirk et al. (1979:43f.), Greenbaum and Quirk (1990:25ff.), Downing and Locke (1992:6, 180), Klammer and Schulz (1996:276f.), Radford (1997:508), Finch (2000:92f.).
- [3] Concerning nominal sentences in old Indo-European languages, see Fortson (2004:143).
- [4] Concerning such GB trees, see for instance Cowper (1992) and Haegeman (1994).
- [5] Concerning such dependency trees, see for instance Ermons (2000).

References

- Greenbaum, S. and R. Quirk. 1990. A student's grammar of the English language. Harlow, Essex, England: Longman.
- Cowper, E. 1992. A concise introduction to syntactic theory: The government-binding approach. Chicago: The University of Chicago Press.
- Downing, A. and P. Locke. 1992. English grammar: A university course, second edition. London: Routledge.
- Eroms, H.-W. 2000. Syntax der deutschen Sprache. Berlin: de Gruyter.
- Finch, G. 2000. Linguistic terms and concepts. New York: St. Martin's Press.
- Fortson, B. 2004. Indo-European Language and Culture. Blackwell Publishing.
- Haegeman, L. 1994. Introduction to government and binding theory, 2nd edition. Oxford, UK: Blackwell.
- Klammer, T. and M. Schulz. 1996. Analyzing English grammar. Boston: Allyn and Bacon.
- Oxford English Dictionary 1795. "**finite** [...] *Of a verb*: limited by number and person.
- Quirk, R. S. Greenbaum, G. Leech, and J. Svartvik. 1979. A grammar of contemporary English. London: Longman.
- Radford, A. 1997. Syntactic theory and the structure of English: A minimalist approach. Cambridge, UK: Cambridge University Press.

Function word

Function words (or **grammatical words** or **synsemantic words** or **structure-class words**) are words that have little lexical meaning or have ambiguous meaning, but instead serve to express grammatical relationships with other words within a sentence, or specify the attitude or mood of the speaker. They signal the structural relationships that words have to one another and are the glue that holds sentences together. Thus, they serve as important elements to the structures of sentences.^[1] Consider the following two sentences:

1. The *winfy prunkilmonger* from the *glidgement mominkled* and *brangified* all his *levensers vederously*.
2. *Glop angry investigator larm blonk* government harassed *gerfritz* infuriated *sutbor pumrog* listeners thoroughly.

In sentence (1) above, the content words have been changed into nonsense syllables but it is not difficult for one to posit that *winfy* is an adjective, *prunkilmonger*, *glidgement*, *levensers* as nouns, *mominkled*, *brangified* as verbs and *vederously* as an adverb based on clues like the derivational and inflectional morphemes. (The clue is in the suffixes: -y indicates adjectives such as "wintery"; -er, -ment and -ers indicates nouns such as "baker", "battlement" and "messengers"; -led and -fied suggests verbs such as "mingled" and "clarified"; and -ly is that of adverbs such as "vigorously"). Hence, even without lexical meaning, the sentence can be said to be rather "meaningful". However, when the reverse is done and the function words are being changed to nonsense syllables as in sentence (2), the result is a totally incomprehensible sentence as the grammatical meaning which is signaled by the structure words is not present. Hence, function words provide the grammatical relationships between the open class words and helps create meaning in sentences.

Words that are not function words are called **content words** (or **open class words** or **lexical words** or **autosemantic words**): these include nouns, verbs, adjectives, and most adverbs, although some adverbs are function words (e.g., *then* and *why*). Dictionaries define the specific meanings of content words, but can only describe the general usages of function words. By contrast, grammars describe the use of function words in detail, but treat lexical words in general terms only.

Function words might be prepositions, pronouns, auxiliary verbs, conjunctions, grammatical articles or particles, all of which belong to the group of closed-class words. Interjections are sometimes considered function words but they belong to the group of open-class words. Function words might or might not be inflected or might have affixes.

Function words belong to the closed class of words in grammar in that it is very uncommon to have new function words created in the course of speech, whereas in the open class of words (that is, nouns, verbs, adjectives, or adverbs) new words may be added readily (such as slang words, technical terms, and adoptions and adaptations of foreign words). See neologism.

Each function word either gives some grammatical information on other words in a sentence or clause, and cannot be isolated from other words, or it may indicate the speaker's mental model as to what is being said.

Grammatical words, as a class, can have distinct phonological properties from content words. Grammatical words sometimes do not make full use of all the sounds in a language. For example, in some of the Khoisan languages, most content words begin with clicks, but very few function words do.^[2] In English, only function words begin with voiced *th-* [ð] (see Pronunciation of English *th*).

The following is a list of the kind of words considered to be function words:

- articles — *the* and *a*. In some inflected languages, the articles may take on the case of the declension of the following noun.
- pronouns — inflected in English, as *he* — *him*, *she* — *her*, etc.
- adpositions — uninflected in English
- conjunctions — uninflected in English
- auxiliary verbs — forming part of the conjugation (pattern of the tenses of main verbs), always inflected
- interjections — sometimes called "filled pauses", uninflected
- particles — convey the attitude of the speaker and are uninflected, as *if*, *then*, *well*, *however*, *thus*, etc.
- expletives — take the place of sentences, among other functions.
- pro-sentences — *yes*, *okay*, etc.

References

- [1] Klammer , Thomas, Muriel R. Schulz and Angela Della Volpe. (2009). *Analyzing English Grammar* (6th ed).Longman.
[2] Westphal, E.O.J. (1971), "The click languages of Southern and Eastern Africa", in Sebeok, T.A., *Current trends in Linguistics, Vol. 7: Linguistics in Sub-Saharan Africa*, Berlin: Mouton

External links

- List of function words (<http://www.sequencepublishing.com/academic.html>)

Gapping

In linguistics, **gapping** is a type of ellipsis that occurs in the non-initial conjuncts of coordinate structures.^[1] Gapping usually elides minimally a finite verb and further any non-finite verbs that are present. This material is gapped from the non-initial conjuncts of a coordinate structure. Gapping exists in many languages, but by no means in all of them, and gapping has been studied extensively and is therefore one of the more understood ellipsis mechanisms.^[2] Stripping is viewed as a particular manifestation of the gapping mechanism where just one remnant (instead of two or more) appears in the gapped/stripped conjunct.

Basic examples

Canonical examples of gapping have a true "gap", which means the elided material appears medially in the non-initial conjuncts, with a **remnant** to its left and a remnant to its right. The elided material of gapping in all the examples below is indicated with subscripts and a smaller font:

Some ate bread, and others _{ate} rice.

Fred likes to pet the cat, and Sally _{likes to pet} the dog.

Jim has been being observed by me, and Tom _{has been being observed} by you.

In the first sentence, the second conjunct has the subject *others*, the object *rice*, but the verb has been 'gapped', that is, omitted. Gapping can span several verbs and nonfinite clause boundaries, as in the second and third sentence illustrate, but it cannot apply across a finite clause boundary, as seen in the next sentence:

*Sam said that they spoke German, and Charlene _{said that they spoke} Spanish.

The star * indicates that the sentence is bad. Gapping is also incapable of operating backwards, which means that the antecedent to the gap must precede the gap. Attempts at gapping where the gap precedes its antecedent are quite bad, e.g.

*He _{orders} beer, and she orders wine.

Further examples

While the canonical cases of gapping have medial gaps, the gap can also be discontinuous, e.g.

Should I call you, or _{should} you call me?

Will Jimmy greet Jill first, or _{will} Jill _{greet} Jimmy first?

He believes her to know the answer, and she _{believes} him to know the answer.

I expect you to help, and you _{expect} me to help.

Many syntacticians take stripping (= bare argument ellipsis) to be a particular manifestation of gapping where only one remnant appears instead of two or more. If this assumption is correct, then the same ellipsis mechanism is at work in the following cases:

Sam has done the work, and Bill _{has done the work}, too.

Sophie barks at racoons in the morning, and _{Sophie barks} at squirrels _{in the morning}, too.

Did Frank get married first, or _{did} Larry _{get married first}?

In its manifestation as stripping, the gapping mechanism occurs frequently. Gapping is widely assumed to obligatorily elide a finite verb. However, gapping can also occur when no finite verb is involved,^[3] e.g.

With her keen on him, and him _{keen} on her, the party should be fun.

It is impossible for Connor to be nice to Jilian, or Jilian _{to be nice} to Connor.

The gap of gapping cannot, however, cut into a *major constituent*, e.g.

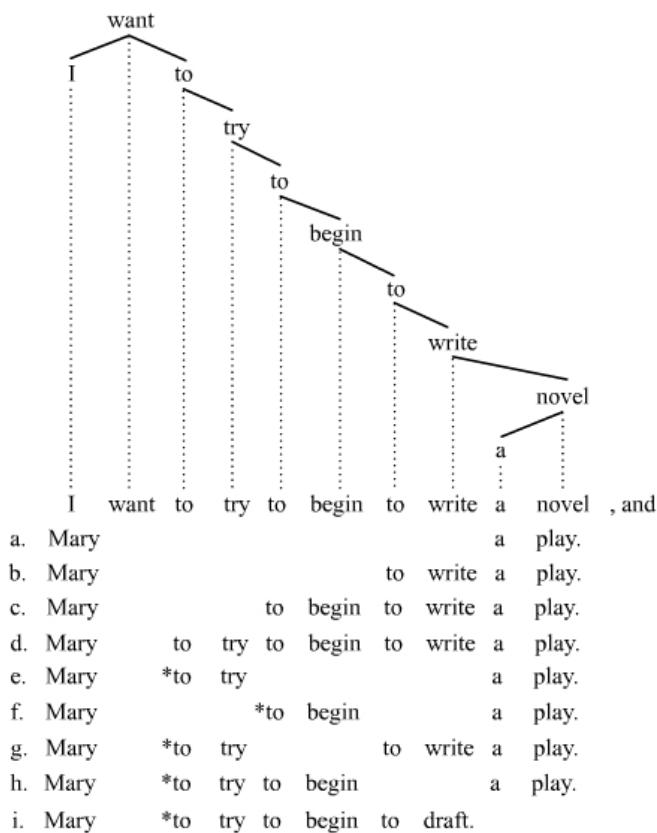
*I read the story about elves, and you _{read the story} about dwarves.

*Pictures of friends should make you smile, and _{pictures} of enemies _{should make you} frown.

Theoretical analyses

Gapping challenges phrase structure theories of syntax because it is not evident how one might produce a satisfactory analysis of the material that can be gapped. The problem concerns the fact that the elided material often does not qualify as a constituent, as many of the examples above illustrate.^[4] Faced with this challenge, one prominent approach is to assume some sort of movement. The remnants are moved out of an encompassing parent constituent so that the parent constituent can then be deleted. In other words, there is an ordering of transformations. First the remnants are moved out of their parent constituent and then that parent constituent is elided. The difficulty with such movement analyses concerns the nature of the movement mechanisms, since the movement mechanism needed to vacate the parent constituent would be unlike the recognized movement mechanisms (fronting, scrambling, extraposition).

An alternative analysis of gapping assumes that the catena is the basic unit of syntactic analysis.^[5] The catena is associated with dependency grammars and is defined as *any word or any combination of words that is continuous with respect to dominance*. The elided material of gapping always qualifies as a catena. This situation is illustrated with the following tree, which shows the dependency structure of a well-known example from Ross 1970:



The a-clause is from Ross, whereas the clauses b-i have been added to illustrate the role that the catena plays. The (at least somewhat) acceptable clauses a-d have the elided material corresponding to a catena each time, whereas the clauses e-i are unacceptable each time because the elided material does not correspond to a catena. The star * indicates that the clauses are bad. For instance, the elided material *wants...to begin*, to the exclusion of *to try*, is not a catena in (g). The other main forms of ellipsis (e.g. answer fragments, sluicing, VP-ellipsis, etc.) can also all be investigated in terms of the catena. The elided material of most if not all ellipsis mechanisms corresponds to catenae.

Notes

- [1] Gapping is limited to coordinate structures; it does not occur independent of coordination, as noted by McCawley (1988:48f.) and Kroeger (2004:35).
- [2] For prominent studies of gapping, see for instance Ross (1970), Jackendoff (1971), Kuno (1976), Hankamer (1979), Hartmann (2000), Osborne (2006), Johnson (2009).
- [3] The first example here is taken from Hudson (???).
- [4] That the gap often does not qualify as a constituent is a widely acknowledged fact of gapping. See for instance Kroeger (2004:1935) and Carnie (2013:459).
- [5] See Osborne et al. (2012) argue that the catena is the relevant unit of syntactic analysis for all types of ellipsis, not just for gapping.

References

- Carnie, A. 2013. Syntax: A generative introduction. 3rd edition. Malden, MA: Wiley-Blackwell.
- Hankamer, J. 1973. Unacceptable ambiguity. *Linguistic Inquiry*, 4, 17–68.
- Hankamer, J. 1979. Deletion in coordinate structures. New York: Garland Publishing, Inc.
- Hartmann, K. 2000. Right Node Raising and gapping: Interface conditions on prosodic deletion. *Amsterdam: John Benjamins*.
- Jackendoff, R. 1971. Gapping and related rules. *Linguistic Inquiry* 2, 21-35.
- Johnson, K. 2009. Gapping is not (VP) ellipsis. *Linguistic Inquiry*.
- Kuno, S. 1976. Gapping: A functional analysis. *Linguistic Inquiry* 7, 300–318.
- Kroeger, P. 2004: Analyzing syntax: A lexical-functional approach. Cambridge, UK: Cambridge University Press.
- McCawley, J. 1988. The syntactic phenomena of English. Chicago: The University of Chicago Press.
- Osborne, T. 2006. Gapping vs. non-gapping coordination. *Linguistische Berichte* 207, 307-338.
- Osborne, T., M. Putnam, and T. Groß 2013. Catenae: Introducing a novel unit of syntactic analysis. *Syntax* 16, in press.
- Sag, I. 1976 Deletion and logical form. Doctoral Dissertation, MIT, Cambridge, Massachusetts.
- Ross, J. 1970. Gapping and the order of constituents. In M. Bierwisch & K Heidolph (eds.), *Progress in linguistics: A collection of papers*, pp. 249–259, The Hague: Mouton.

Government (linguistics)

In grammar and theoretical linguistics, **government** or **rection** refers to the relationship between a word and its dependents. One can discern between at least three concepts of government: the traditional notion of case government, the highly specialized definition of government in some generative models of syntax, and a much broader notion in dependency grammars.

Traditional case government

In traditional Latin and Greek (and other) grammars, government refers to the selection of grammatical features by verbs and prepositions. Most commonly, a verb or preposition is said to "govern" a specific grammatical case if its complement must take that case in a grammatically correct structure (see: case government).^[1] For example, in Latin, most transitive verbs require their direct object to appear in the accusative case, while the dative case is reserved for indirect objects. The verb *favere* (to help), however, is an exception to this default government pattern: its direct object must be in the dative. Thus, the phrase *I see you* would be rendered as *Te video* in Latin, using the accusative form *te* for the second person pronoun, while *I help you* would be rendered as *Tibi faveo*, using the dative form *tibi*. Prepositions (and postpositions and circumpositions, i.e. adpositions) are like verbs in their ability to govern the case of their complement, and like many verbs, many adpositions can govern more than one case, with distinct interpretations.

Government in Government and Binding Theory

The abstract syntactic relation of government in government and binding theory, a phrase structure grammar, is an extension of the traditional notion of case government. Verbs govern their objects, and more generally, heads govern their dependents. A governs B if and only if:^[2]

- A is a governor,
- A m-commands B, and
- no barrier intervenes between A and B.

Lexical heads are assumed to be governors. Maximal projections are assumed to be barriers to government.^[3]

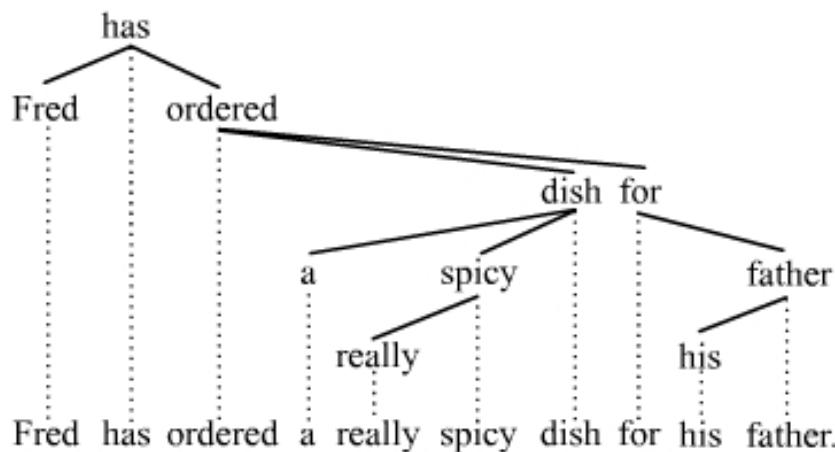
Government broadly construed

One sometimes encounters definitions of government that are much broader than the one just produced. Government is understood as obtaining between a word and the constituents that that word requires or allows to appear.^[4] This broader understanding of government is what one finds in many dependency grammars. A given word governs all those words that it requires or allows to appear. The notion is that many individual words in a given sentence can appear only by virtue of the fact that some other word appears in that sentence. Government is defined as follows:

Government

Government obtains when a dominant element (head) A opens a slot for a dependent element B.^[5]

According to this definition, government obtains between any two words connected by a dependency, the dominant word opening slots for subordinate words. The dominant word is the *governor*, and the subordinates are its *governees*. The following dependency tree illustrates governors and governees:



The word *has* governs *Fred* and *ordered*; in other words, *has* is governor over its governees *Fred* and *ordered*. Similarly, *ordered* governs *dish* and *for*, that is, *ordered* is governor over its governees *dish* and *for*; Etc. This understanding of government is widespread among dependency grammars.^[6]

Governors vs. heads

The distinction between the terms *governor* and *head* is a source of confusion, given the definitions of government produced above. Indeed, *governor* and *head* are overlapping concepts. The governor and the head of a given word will often be one and the same other word. The understanding of these concepts becomes difficult, however, when discontinuities are involved. The following example of a *w*-fronting discontinuity from German illustrates the difficulty:

Wem	denkst	du	haben	sie	geholfen?
who-DAT	think	you	have	they	helped

'Who do you think they helped?'

Two of the criteria mentioned above for identifying governors (and governees) are applicable to the interrogative pronoun *wem* 'whom'. This pronoun receives dative case from the verb *geholfen* 'helped' (= case government) and it can appear by virtue of the fact that *geholfen* appears (= licensing). Given these observations, one can make a strong argument that *geholfen* is the governor of *wem*, even though the two words are separated from each other by the rest of the sentence. In such constellations, one sometimes distinguishes between *head* and *governor*.^[7] The governor of *wem* is indeed *geholfen*, but one takes the finite verb *denkst* 'think' to be its head. In other words, when a discontinuity obtains, one assumes that the governor and the head (of the relevant word) are distinct, otherwise they are the same word. Exactly how the terms *head* and *governor* are used can depend on the particular theory of syntax that is employed.

Notes

- [1] See for instance Allerton (1979:150f) and Lockwood (2002:75ff.).
- [2] For definitions of government along the lines given here, see for instance van Riemsdijk and Williams (1987:231, 291) and Ouhalla (1994:169).
- [3] Reinhart (1976), Aoun and Sportiche (1983), and Chomsky (1986) are three prominent sources that established important concepts in generative grammar such as c-command, m-command, and government.
- [4] For examples of government construed in this broad sense, see for instance Burton-Roberts (1986:41) and Wardbaugh (2003:84).
- [5] The definition is taken from Jung (1995: 88) and translated from German.
- [6] See for instance Tesnière (1959), Starosta (1988:21), Engel (1994), Groß and Osborne (2009), among many others.
- [7] Concerning the distinction between heads and governors, see Groß and Osborne (2009: 51-56).

References

- Allerton, D. 1979. Essentials of grammatical theory. London: Routledge & Kegan Paul.
- Aoun, J. and D. Sportiche 1983. On the formal theory of government. *Linguistic Review* 2, 211–236.
- Burton-Roberts, N. 1986. Analysing sentences: An introduction to English syntax. London: Longman.
- Chomsky, N. 1986. Barriers. Cambridge, MA: MIT Press.
- Engel, U. 1994. Syntax der deutschen Gegenwartssprache, 3rd revised edition. Berlin: Erich Schmidt.
- Groß, T. and T. Osborne 2009. Toward a practical dependency grammar theory of discontinuities. *SKY Journal of Linguistics* 22, 43-90.
- Harris, C. L. and Bates, E. A. 2002. Clausal backgrounding and pronominal reference: A functionalist approach to c-command. *Language and Cognitive Processes* 17, 3, 237-269.
- Jung, W.-Y. 1995. Syntaktische Relationen im Rahmen der Dependenzgrammatik. Hamburg: Buske.
- Lockwood, D. 2002. Syntactic analysis and description: A constructional approach. London: continuum.
- Ouhalla, J. 1994. Transformational grammar: From rules to principles and parameters. London: Edward Arnold.
- Reinhart, T. 1976. The syntactic domain of anaphora. Doctoral dissertation, MIT. (Available online at <http://dspace.mit.edu/handle/1721.1/16400>).
- Starosta, S. 1988. The case for Lexicase: An outline of Lexicase grammatical theory. New York: Pinter Publishers.
- Tesnière, L. 1959. *Élément de syntaxe structural*. Paris: Klincksieck.
- van Riemsdijk, H. and E. Williams. 1986. Introduction to the theory of grammar. Cambridge, MA: The MIT Press.
- Wardbaugh, R. 2003. Understanding English grammar, second edition. Malden, MA: Blackwell Publishing.

Grammatical gender

In linguistics, **grammatical gender** is a system of noun classification present in approximately one fourth of the world's languages. In languages with grammatical gender, every noun must pertain to one category called **gender**. The different genders form a closed set of usually 2 or 3 divisions, in which all the nouns are included. Very few items can belong to several classes at once. Common gender divisions include: masculine, feminine, neuter, animate, or inanimate.

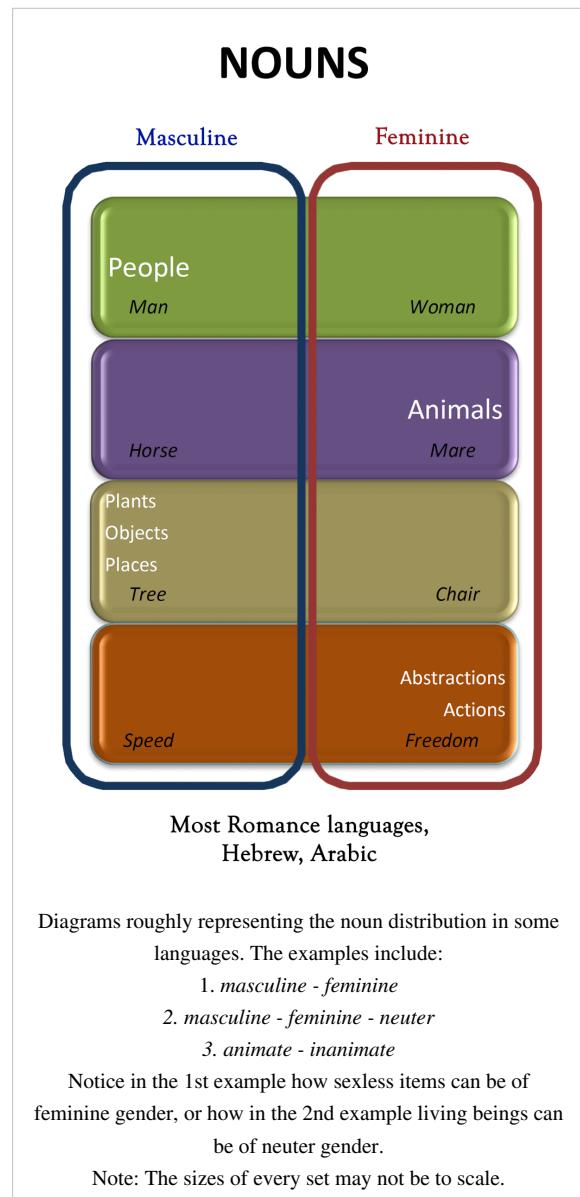
In a few languages, the gender assignation of nouns is solely determined by their meaning or attributes (e.g. biological sex, humanness, animacy). However, in most languages, this semantic division is only partially valid, and many nouns may belong to a gender category that contrasts with their meaning (e.g. the word "manliness" could be of feminine gender). In this case, the gender assignation can also be influenced by the morphology or phonology of the noun, or in some cases, can be completely arbitrary.

Grammatical gender manifests itself when words related to a noun (e.g. determiners, pronouns, adjectives) change their form (**inflection**) according to the gender of noun they refer to (**agreement**). The parts of speech affected by gender agreement, the circumstances in which it occurs, and the way words are marked for gender vary cross-linguistically. Gender inflection may interact with other grammatical categories (e.g. number, case).

Grammatical gender is typical of the Afro-Asiatic, Dravidian, Indo-European, and Northeast Caucasian language families; as well as several Australian aboriginal languages (e.g. Dyirbal, Kalaw Lagaw Ya). Also, most Niger-Congo languages have extensive systems of noun classes, which can be grouped into several grammatical genders.^[1]

Grammatical gender is usually absent from the Altaic, Austronesian, Sino-Tibetan, Uralic and most Native American language families.^[1]

Modern English is not considered to have grammatical gender, although historically it did.



Definition

"Genders are classes of nouns reflected in the behaviour of associated words."

Charles Hockett^{[2][3]}

In languages with grammatical gender, each noun assigned to a class called "gender". The different classes form a closed set. Most languages usually have from 2 to 4 different genders, but some are attested with up to 20.^{[2][5][6]} Common divisions include:

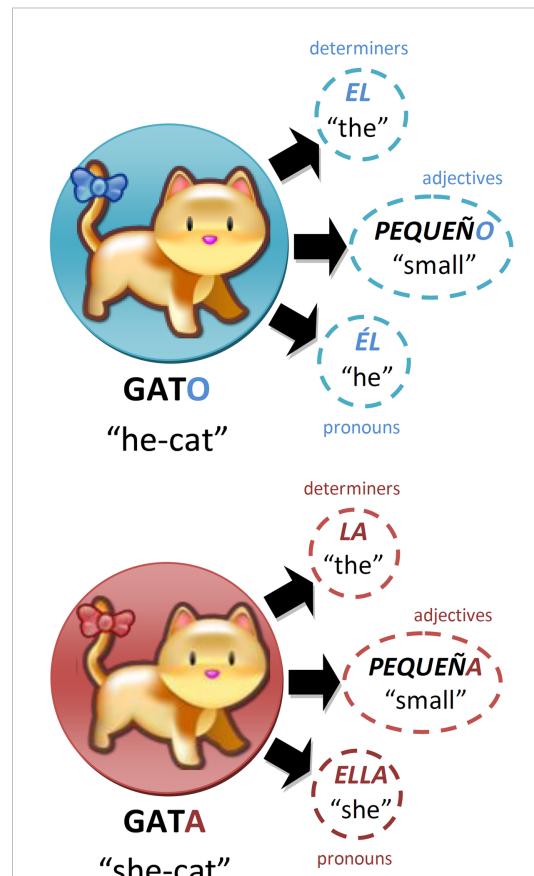
- masculine / feminine
- masculine / feminine / neuter
- animate / inanimate
- human / non-human
- human / animal / inanimate
- male / other

Few or no nouns can occur in more than one class.^{[2][5][6]}

Depending on the language and the word, this assignation might bear some relationship with the meaning of the noun (e.g. "woman" is usually feminine), or may be arbitrary.^{[7][8]}

Gender is considered an inherent quality of nouns, and it affects the forms of other related words, a process called agreement. Nouns may be considered the "triggers" of the process, while other words will be the "target" of these changes.^[7]

These related words can be, depending on the language: determiners, pronouns, numerals, quantifiers, possessives, adjectives, past and passive participles, verbs, adverbs, complementizers, and adpositions. Gender class may be marked on the noun itself, but will also always be marked on other constituents in a noun phrase or sentence. If the noun is explicitly marked, both trigger and target may feature similar alternations.^{[5][7][8]}



The grammatical gender of a noun affects the form of other words related to it. For example, in Spanish, determiners, adjectives, and pronouns change their form depending on the noun they refer to.^[4] Spanish has two genders: Masculine and feminine.

Example: Spanish

Spanish is a language with two genders: masculine and feminine.^[9] Among other lexical items, the definite article changes its form according to the gender of the noun. In the singular, the article is: *el* (masculine),^[10] and *la* (feminine).^[11] Thus, nouns referring to male beings carry the masculine article, and female beings the feminine article (agreement).^[12]

Example^[9]

Gender	Phrase	Gloss
Masculine	<i>el abuelo</i>	"the grandfather"
Feminine	<i>la abuela</i>	"the grandmother"

However, every noun must belong to one of the two categories: nouns referring to sexless entities must also be masculine or feminine. In this language, the choice is completely arbitrary.

Example^[13]

Gender	Phrase	Gloss
Masculine	<i>el plato</i>	"the dish"
Feminine	<i>la canción</i>	"the song"

Related linguistic concepts

Noun classes

A noun may belong to a given class because of characteristic features of its referent, such as sex, animacy, shape, but counting a given noun among nouns of such or another class is often clearly conventional. Some authors use the term "grammatical gender" as a synonym of "noun class", but others use different definitions for each.

Noun classifiers

A classifier or measure word, is a word or morpheme used in some languages to classify the referent of a countable noun according to its meaning. In languages that have classifiers, they are often used when the noun is being counted or specified (i.e., when it appears with a numeral or a demonstrative). Classifiers are not used in English (for instance, "people" is a countable noun, and to say "three people" no extra word needs to be added), but are common in East Asian languages (where the equivalent of "three people" is often "three *classifier* people") and in sign languages.

Gender inflection

In many languages, gender is marked quite explicitly, and in different ways.

"I love you" in Arabic:

said to a male – *uhibbuka* (أَحِبْكَ)

said to a female – *uhibbuki* (أَحِبْكِ)

"[I am] very grateful" in Portuguese:

said by a male – *muito obrigado*

said by a female – *muito obrigada*

The switch from one gender to the other is typically achieved by inflecting appropriate words, the object suffix of the verb *uhibbu-ka/ki* in the Arabic example (gender is not marked in the first person, in Arabic), and the suffix in the past participle (or adjective) *obrigado* - *obrigada* in the Portuguese example (literally this means "much obliged").

In Spanish, most masculine nouns and their modifiers end with the suffix *-o* or with a consonant, while the suffix *-a* is characteristic of feminine nouns and their modifiers (though there are many exceptions). Thus, *níño* means "boy", and *níña* means "girl". This paradigm can be exploited for making new words: from the masculine nouns *abogado*

"lawyer", *diputado* "member of parliament" and *doctor* "doctor", it was straightforward to make the feminine equivalents *abogada*, *diputada*, and *doctora*.

Sometimes, gender is expressed in more subtle ways. In Welsh, gender marking is mostly lost, however, it has the peculiar feature of initial mutation, where the first consonant of a word changes into another in certain conditions. Gender is one of the factors that can cause mutation (soft mutation). For instance, the word *merch* "girl" changes into *ferch* after the definite article. This only occurs with feminine singular nouns: *mab* "son" remains unchanged. Adjectives are affected by gender in a similar way.

	Default		After definite article		With adjective	
Masculine singular	<i>mab</i>	"son"	<i>y mab</i>	"the son"	<i>y mab mawr</i>	"the big son"
Feminine singular	<i>merch</i>	"girl"	<i>yferch</i>	"the girl"	<i>yferch fawr</i>	"the big girl"

Personal names

Personal names are frequently constructed with language-specific affixes that identify the gender of the bearer. Common feminine suffixes used in English names are *-a*, of Latin or Romance origin (cf. *Robert* and *Roberta*) and *-e*, of French origin (cf. *Justin* and *Justine*). Although gender inflection may be used to construct cognate nouns for the people of opposite genders in languages that have grammatical gender, this alone does not constitute grammatical gender. Distinct names for men and women are also common in languages where gender is not grammatical.

Personal pronouns

Personal pronouns often have different forms based on gender. Even though it has lost gender-related inflections, English still distinguishes between "he" (generally applied to a male person), "she" (female person), and "it" (object, abstraction, or animal). But this also does not guarantee the existence of grammatical gender. There is a spoken form, "they", which although not part of the standard literary language, is cosmopolitan in the English-speaking world and is used when the gender of a person being referred to is not known (e.g. "This person doesn't know where *they* are going").

Gendered pronouns and their corresponding inflections vary considerably across languages. In languages that never had grammatical gender, there is normally just one word for "he" and "she", like *dia* in Indonesian, *hän* in Finnish, *ő* in Hungarian and *o* in Turkish. These languages only have different pronouns and inflections in the third person to differentiate between people and inanimate objects, and in spoken Finnish this distinction is commonly waived.

Dummy pronouns

A dummy pronoun is a type of pronoun used in non-pro-drop languages, such as English. It is used when a particular verb argument is nonexistent, but when a reference to the argument (a pronoun) is nevertheless syntactically required.

In languages with a neuter gender, the neuter gender is usually used: in German: *Es regnet*, means literally "It rains." (In fact, the English word 'it' comes from the Old English neuter gender). In languages with only a masculine and a feminine gender, the dummy pronoun, is usually the masculine third person singular. For example, in French *Il pleut*, literally means "He rains." But there are exceptions: the corresponding sentence in Welsh is *Mae hi'n bwrw glaw*, "She's raining."

Gender agreement

In the Spanish sentences *Él es un buen actor* "He is a good actor" and *Ella es una buena actriz* "She is a good actress", almost every word changes to match the gender of the subject. The noun *actor* inflects by replacing the masculine suffix *-or* with the feminine suffix *-riz*, the personal pronoun *él* "he" changes to *ella* "she", and the feminine suffix *-a* is added to the article (*un* → *una*) and to the adjective (*buen* → *buena*). Only the verb remains unchanged.

The following "highly contrived" Old English sentence serves as an example of gender agreement.

Old English	Seo brade lind wæs tilu and ic hire lufode.
Modern English gloss	That broad shield was good and I her loved.
Modern English translation	That broad shield was good and I loved it.

The word *hire* "her" refers to *lind* "shield". Since this noun was grammatically feminine, the adjectives *brade* "broad" and *tilu* "good", as well as the pronouns *seo* "the/that" and *hire* "her", which referred to *lind*, must also appear in their feminine forms. Old English had three genders, masculine, feminine and neuter, but gender inflections were greatly simplified by sound changes, and then completely lost (as well as number inflections, to a lesser extent).

In modern English, by contrast, the noun "shield" takes the neuter pronoun "it", since it designates a genderless object. In a sense, the neuter gender has grown to encompass most nouns, including many that were masculine or feminine in Old English. If one were to replace the phrase "broad shield" with "brave man" or "brave woman", the only change to the rest of the sentence would be in the pronoun at the end, which would become "him" or "her", respectively.

Grammatical vs. natural gender

The grammatical gender of a word does not always coincide with real gender of its referent. An example of this is the grammatically feminine Spanish word *masculinidad* "masculinity"; this is because it is composed of *masculin-* "male" and the suffix *-idad* similar to English "-ity", which places nouns in the "feminine" noun class. Another example of this is grammatically neuter German word *Mädchen* "girl"; this is because it is composed of *Magd* "maidservant", and the diminutive suffix *-chen*, which places nouns in the "neuter" noun class.

A few more examples:

- Old English *wif* (n.) and *wifmann* (m.) "woman"
- German *Frau* (f.) and *Weib* (n.) "woman"
- Irish *cailín* (m.) "girl", *stail* (f.) "stallion".
- Scottish Gaelic *boireannach* (m.) "woman".
- Slovenian *dekle* (n.) "girl".
- Spanish *gente* (f.) "people", even if the collective term refers to a group of men.

Normally, such exceptions are a small minority. However, in some local dialects of German, nouns and proper names for female persons have shifted to the neuter gender (presumably further influenced by the standard word *Weib*), but the feminine gender remains for words denoting objects.

There is a certain tendency to keep the grammatical gender when a close back-reference is made, but to switch to natural gender when the reference is further away. For example in German, the sentence "The girl has come home from school. She is now doing her homework" can be translated in two ways:

- *Das Mädchen* (n.) ist aus der Schule gekommen. *Es* (n.) macht jetzt *seine* (n.) Hausaufgaben.
- *Das Mädchen* (n.) ist aus der Schule gekommen. *Sie* (f.) macht jetzt *ihre* (f.) Hausaufgaben.

Though the second sentence may appear grammatically incorrect, it is commonly heard in speech. With one or more intervening sentences, the second form becomes more likely. However, no number of adjectives put between the article and the noun (e.g. *das schöne, fleißige, langhaarige, blonde, [...] Mädchen*) can license a switch from the neutral to the feminine article, so it is always considered wrong to say a sentence like *die schöne [...] Mädchen*.

Indeterminate gender

In languages with a masculine and feminine gender (and possibly a neuter), the masculine is usually employed by default to refer to persons of unknown gender. This is still done sometimes in English.

In the plural, the masculine is often used to refer to a mixed group of people. Thus, in French the feminine pronoun *elles* always designates an all-female group of people, but the masculine pronoun *ils* may refer to a group of males, to a mixed group, or to a group of people of unknown genders. In English, this issue does not arise with pronouns, since there is only one plural third person pronoun, "they". However, a group of actors and actresses would still be described as a group of "actors".

In all these cases, one says that the feminine gender is semantically marked, while the masculine gender is unmarked.

In Swedish, on the other hand, it is the masculine form of an adjective that is marked (in the weak inflection, with an *-e*,) e.g. *min lillebror* "my little brother". This form is reserved for naturally masculine nouns or male human beings in modern Swedish. Even so, the third person singular masculine pronoun *han* would normally be the default for a person of unknown gender in Swedish, although in practice the indefinite pronoun *man* and the reflexive *sig* and/or its possessive forms *sin/sitt/sina* usually make this unnecessary.

Animals

Often, the masculine/feminine classification is only followed carefully for human beings. For animals, the relation between real and grammatical gender tends to be more arbitrary. In Spanish, for instance, a cheetah is always *un guepardo* (*m.*) and a zebra is always *una cebra* (*f.*), regardless of their biological sex. If it becomes necessary to specify the sex of the animal, an adjective is added, as in *un guepardo hembra* (a female cheetah), or *una cebra macho* (a male zebra). Different names for the male and the female of a species are more frequent for common pets or farm animals, e.g. English *cow* and *bull*, Spanish *vaca* "cow" and *toro* "bull".

In English, it is common to refer to animals, especially house pets, for which the natural gender is known as "he" and "she", accordingly, and to animals of unknown gender as "it".

In Polish, a few general words such as *zwierzę* "animal" or *bydło* "animal, one cattle" are neuter, but species names are almost exclusively masculine or feminine. Thus when the sex of an animal is known, it will normally be referred to in gender consistent with its sex, and when it is unknown, in the gender of its species' name, which may or may not agree with its actual sex. If the species name happens to be neuter, the gender of a more generic class word might be substituted, for example *kiwi* (*n.*) → *ptak* (*m.*) "bird", so masculine forms will be used.

Objects and abstractions

Since all nouns must belong to some noun class, many end up with genders which are purely conventional. For instance, the Romance languages have inherited *sol* (*m.*) "sun" and *luna* (*f.*) "moon" from Latin but in German and other Germanic languages the words are *Sonne* (*f.*) "sun" and *Mond* (*m.*) "moon". Two nouns denoting the same concept can also differ in gender in closely related languages, or within a single language. For instance, there are two different words for "car" in German: *Wagen* (*m.*) is masculine and *Auto* (*n.*). Meanwhile Spanish has *auto* (*m.*), French has *auto* (*f.*), and Czech has *auto* (*n.*). In all cases, the meaning is the same.

Examples:

Language	Word	Meaning	Gender
Polish	księżyca	moon	masculine
Portuguese	lua	moon	feminine
Russian	луна	moon	feminine
Russian	месяц	moon	masculine
Spanish	luna	moon	feminine
Russian	картофель	potato	masculine
Russian	картошка	potato	feminine
Spanish	patata	potato	feminine
Polish	tramwaj	tram	masculine
Czech	tramvaj	tram	feminine
Romanian	tramvai	tram	neuter
Polish	tysiąc	thousand	masculine
Russian	тысяча	thousand	feminine

There is nothing inherent about the moon which makes it objectively "male" or "female". In these cases, gender is quite independent of meaning, and a property of the nouns themselves, rather than of their referents.

Sometimes the gender of a word switches with time. For example the Russian modern loanword *виски* (*viski*) "whisky" was originally feminine,^[14] then masculine,^[15] and today it has become neuter.

Other types of gender classifications

Some languages have gender-like noun classifications unrelated to gender identity. Particularly common are languages with animate and inanimate categories. The term "grammatical genders" is also used by extension in this case, although many authors prefer "noun classes" when none of the inflections in a language relate to sex. Note however that the word "gender" derives from Latin *genus* (also the root of *genre*) originally meant "kind", so it does not necessarily have a sexual meaning. For further information, see Animacy.

Some Slavic languages, including Russian, Czech, and Slovak, make grammatical distinctions between animate and inanimate nouns (in Czech only in the masculine gender; in Russian only in masculine singular, but in the plural in all genders). Another example is Polish, which can be said to distinguish five genders: personal masculine (referring to male humans), animate non-personal masculine, inanimate masculine, feminine, and neuter.

The genders in Polish

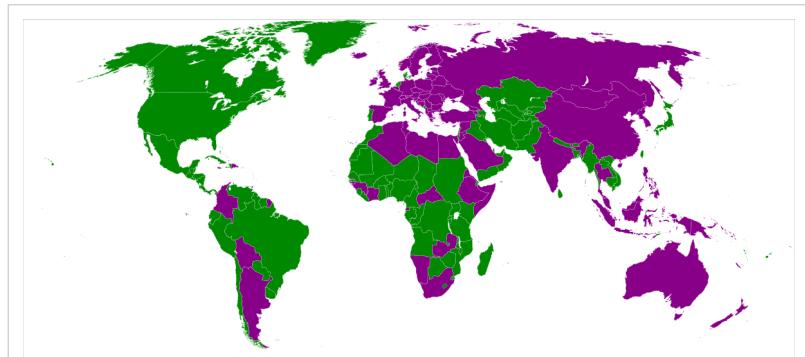
	masculine			translation	
	animate		inanimate		
	personal	impersonal			
Nominative singular	To jest dobry nauczyciel	To jest dobry pies	To jest dobry ser	<i>It's a good teacher / a good dog / good cheese</i>	
Accusative singular	Widzę dobrego nauczyciela	Widzę dobrego psa	Widzę dobry ser	<i>I see a good teacher / a good dog / good cheese</i>	
Accusative plural	Widzę dobrych nauczycieli	Widzę dobre psy	Widzę dobre sery	<i>I see good teachers / good dogs / good cheeses</i>	

Furthermore, related Polish nouns can have the same singular nominative form, but decline differently based on animation. For example *To jest nasz najlepszy klient* → *To są nasi najlepsi klienci* ("He is our best customer" → "They are our best customers"), but *To jest najlepszy klient FTP* → *To są najlepsze klienty FTP* ("This is the best FTP client" → "Those are the best FTP clients").

In some languages such as the Ojibwe language the system of grammatical gender has no correspondence with a masculine/feminine distinction, but rather distinguishes between entities considered animate and inanimate.^[16] In Dravidian languages such as Tamil the distinction is often described as being between rational and non-rational nouns, but it is generally the case that masculine nouns fall into one class and feminine into the other, for which reason the Tamil noun class system can be described as a system of "natural gender".^[17]

Gender assignment

There are three main ways by which natural languages categorize nouns into genders: according to logical or symbolic similarities in their meaning (semantic), by grouping them with other nouns that have similar form (morphological), or through an arbitrary convention (lexical, possibly rooted in the language's history). Usually, a combination of the three types of criteria is used, though one is more prevalent.



In the French language, countries can have masculine names (green) or feminine (purple). Except the isles and *Mexique*, *Mozambique*, *Cambodge*, and *Zimbabwe*, the difference is based on the -e ending.

Languages with strict semantic criteria

In some languages, the gender of a noun is directly determined by its physical attributes (sex, animacy, etc.), and there are few or no exceptions to this rule. This system is found in the Dravidian languages, but is otherwise uncommon around the world.^[18]

Defaka

For example, the Defaka language has three genders: One for all male humans, one for all female humans, and a third for all the remaining nouns. Gender is only marked in personal pronouns.^[19]

Standard English is very similar in this respect: Male humans are denoted by *he*, female humans by *she*, and everything else by *it*. However, domestic animals may also be classified according to their sex. Also, there are some conventions for objects, like *she* for ships.^[19]

Dizi

Another example is the Dizi language, with two asymmetrical genders. The feminine stands for all living beings of female sex (e.g. woman, girl, cow...), and diminutives; the masculine encompasses the rest of nouns (e.g. man, boy, pot, broom...). In this language, feminine nouns are always marked with *-e* or *-in*.^[20]

Languages with mostly semantic criteria

In other languages, the gender of nouns can also mostly be determined by its physical attributes, but their role is more restricted. These languages feature what Colbertt calls "semantic residue": nouns whose gender is not assigned through semantical criterion.^[21] The world view (e.g. mythology) of the speakers may influence the division of categories.^[22]

Zande

For example, the Zande language has four genders: Male human, female human, animal, and inanimate.^[23]

The genders in Zande

Gender	Example	Gloss
human (male)	<i>kumba</i>	"man"
human (female)	<i>dia</i>	"wife"
animate	<i>nya</i>	"beast"
inanimate	<i>bambu</i>	"house"

However, there are about 80 inanimate entities which are animate in gender: Heavenly objects (moon, rainbow), metal objects (hammer, ring), edible plants (sweet potato, pea), and non-metallic objects (whistle, ball). Many have a round shape or can be explained by the role they play in mythology.^[23]

Kot

The Kot language has three genders: Masculine, feminine, and neuter. The system is basically based on semantics, but there are many inanimate nouns outside the neuter class. Gender appears among others, in the agreement between verb and verbal predicate.^[24]

The genders in Ket

Masculine	Feminine	Neuter
male animates most fishes trees the moon large wooden objects most living beings some religious items	female animates 3 fishes some plants the sun and other heavenly objects some body parts and skin diseases the soul some religious items	part (of a whole) the rest of nouns (the majority)

The gender assignation of non-sex-differentiable animals in masculine and feminine is complex; in general, those of no importance to the Kets are feminine. Objects of importance (e.g. fish, wood) are masculine. Mythology is, again also an important factor.^[24]

Alamblak

The Alamblak language has two genders, masculine and feminine. However, the masculine also includes things which are tall or long and slender, or narrow (e.g. fish, snakes, arrows, slender trees...), while the feminine gender has things which are short, squat or wide (e.g. turtles, houses, shields, squat trees...).^[22]

Languages with mostly formal criteria

In Portuguese/Spanish, grammatical gender is most obviously noticeable by noun morphology. Since nouns that refer to male persons usually end in *-o* or a consonant and nouns that refer to female persons usually end in *-a*, most other nouns that end in *-o* or a consonant are also treated as masculine, and most nouns that end in *-a* are treated as feminine, whatever their meaning. (Nouns that end in some other vowel are assigned a gender either according to etymology, by analogy, or by some other convention.) Morphology may in fact override meaning, in some cases. The noun *membro/miembro* "member" is always masculine, even when it refers to a woman, but *pessoal/persona* "person" is always feminine, even when it refers to a man. It would however be far more useful to consider that the grammatical gender of almost all nouns in the Romance languages is determined by etymology, that is to say that on the whole, the gender of a word in Portuguese, Spanish, Italian or French is the same as the gender of its cognate word in Latin with very few exceptions.

In German also, diminutives with the endings *-chen* and *-lein* (cognates of English *-kin* and *-ling*, meaning "little, young") are always neuter, which is why *Mädchen* "girl" and *Fräulein* "young woman" are neuter. Another ending, the nominalizing suffix *-ling*, can be used to make countable nouns from uncountable nouns (*Teig* "dough" → *Teigling* "piece of dough"), or personal nouns from abstract nouns (*Lehre* "teaching", *Strafe* "punishment" → *Lehrling* "apprentice", *Sträfling* "convict") or adjectives (*feige* "cowardly" → *Feigling* "coward"), always producing masculine nouns.

In Irish, nouns ending in *-óir/-eoir* and *-ín* are always masculine, while those ending *-óg/-eog* or *-lann* are always feminine.

In Arabic, gender can often be guessed from morphological clues. Nouns whose singular form ends in a *tā' marbūṭa* (traditionally [t] that becomes [h] in pause) is a marker of feminine gender, with the only significant exceptions being the word *khalīfah* (Caliph) and certain masculine personal names (e.g. أُسَامَة 'Usāmah). However, many masculine nouns such as أَسْتَاذ "ustaath" (male professor) take a *tā' marbūṭa* in their plural, producing the form "usaatatha" (male professors), which might easily be confused for a feminine singular noun. Furthermore, gender may be understood on the basis of the stem of the word in question: for instance, the verbal nouns of Stem II (فعل fa 'ala, yufa 'il, al-taf'il) are always masculine.

On the other hand, the correlation between grammatical gender and morphology is usually not perfect: *problema* "problem" is masculine in Spanish (this is for etymological reasons, as it was derived from a Greek noun of the neuter gender), and *radio* "radio station" is feminine (because it is a shortening of *estación de radio*, a phrase whose head is the feminine noun *estación*).

Lexicon

In some languages, gender markers have been so eroded by time that they are no longer recognizable, even to native speakers (this is generally known as deflexion). Most German nouns give no morphological or semantic clue as to their gender. It must simply be memorized. The conventional aspect of grammatical gender is also clear when one considers that there is nothing objective about a table which makes it feminine, as French *table*, masculine as German *Tisch*, or neuter, as Norwegian *bord*. The learner of such languages should regard gender as an integral part of each noun. A frequent recommendation is to memorize a modifier along with the noun as a unit, usually a definite article, e.g. memorizing *la table* – where *la* is the French feminine singular definite article – *der Tisch* – where *der* is the German masculine singular nominative definite article – and *bordet* – where the suffix *-et* indicates the definite neuter singular in Norwegian. In French the noun's ending often indicates gender. As a very broad trend, nouns

ending in *-e* tend to be feminine, while the rest tend to be masculine, but there are many exceptions; certain suffixes are quite reliable indicators though, such as the suffix *-age*, which when added to a verb (e.g. *gérer* ("to park") -> *garage*; *nettoyer* ("to clean") -> *nettoyage* ("cleaning")), indicates a masculine noun; however, when *-age* is part of the root of the word, it can be feminine, as in *plage* ("beach") or *image*. On the other hand, nouns ending in "-tion" "-sion" and *-aison* are all feminine.

Sometimes, a noun's gender can change between plural and singular, such as in the French words *amour* (love), *délice* ("delight") and *orgue* ("organ" as musical instrument), all three of which are masculine in singular but feminine in plural. These anomalies can come from the language's history (*amour* used to be feminine in the singular too) or from slightly different notions (*orgue* in the singular tends to refer to barrel organs, while the plural *orgues* tends to refer to the collection of columns in a church organ).

Whether a distant ancestor of French, German, Norwegian, and English had a semantic value for genders is of course a different matter. Some authors have speculated that archaic Proto-Indo-European had two noun classes with the semantic values of animate and inanimate.

Useful roles of grammatical gender

Ibrihim identified three possible useful roles of grammatical gender:^[25]

1. In a language with explicit inflections for gender, it is easy to express the natural gender of animate beings.
2. Grammatical gender "can be a valuable tool of disambiguation", rendering clarity about antecedents.
3. In literature, gender can be used to "animate and personify inanimate nouns".

Gender in English

While grammatical gender was a fully productive inflectional category in Old English, Modern English has a much less pervasive gender system, primarily based on natural gender.

There are a few traces of gender marking in Modern English:

- Some loanwords inflect according to gender, such as *actor/actress*, or *blond/blonde*.
- The third person singular pronouns (and their possessive forms) are gender specific: "he/his" (masculine gender, overall used for males), "she/her(s)" (feminine gender, for females), "it/its" (neuter gender, mainly for objects and abstractions), "one/one's" (common gender, for anyone or anything).

But these are insignificant features compared to a typical language with grammatical gender:

- English has no live productive gender markers. An example is the suffix *-ette* (of French provenance), but it is seldom used, and mostly with disparaging or humorous intent.
- The English nouns that inflect for gender are a very small minority, typically loanwords from non-Germanic languages (the suffix *-ress* in the word "actress", for instance, derives from Latin *-rix* via French *-rice*). Feminine forms of Latin-derived words may also use *-rix*, as in *aviatrix*.
- The third-person singular forms of the personal pronouns are the only modifiers that inflect according to gender.

It is also noteworthy that, with few exceptions, the gender of an English pronoun coincides with the real gender of its referent, rather than with the grammatical gender of its antecedent, frequently different from the former in languages with true grammatical gender. The choice between "he", "she" and "it" invariably comes down to whether they designate a male or female human or animal of a known sex, or something else.

Exceptions

- Some animals such as cattle and chickens have different words for male and female animals (*bull* and *cow*, *rooster* and *hen*, for example). *He* and *she* may therefore be used correspondingly, though *it* remains acceptable. The gender of other animals such as rabbits, insects, etc. is not usually obvious and so these animals are usually referred to as *it* except in some veterinarian or literary contexts. Alternatively, the use of *it* may imply the speaker lacks or disdains emotional connection with the animal.
- The pronoun "she" is sometimes used to refer to things which can contain people, such as countries, ships, or vehicles, or when referring to certain other machines. This, however, is considered an optional figure of speech. This usage is furthermore in decline and advised against by most journalistic style guides.^[26]

Occurrence

Grammatical gender is quite common phenomenon in the world's languages.^[27] A typological survey of 174 languages revealed that over one fourth of them had grammatical gender.^[28] Gender systems rarely overlap with numerical classifier systems. Gender and noun class systems are usually found in fusional or agglutinating languages, while classifiers are more typical of isolating languages.^[29] Thus, the main characteristics of gendered languages are:^[29]

- Location in an area with languages featuring noun classes.
- Preference for head-marking morphology.
- Moderate to high morphological complexity.
- Non-accusative alignment.

Indo-European

Many Indo-European languages, though not English, provide archetypical examples of grammatical gender.

Research indicates that the earliest stages of Proto-Indo-European had two genders (animate and inanimate), as did Hittite. However, the animate gender, which, in contrast to the inanimate gender, had an independent accusative form, later split into masculine and feminine; thus originating the three-way classification into masculine, feminine, and neuter.^{[30][31]}

Many Indo-European languages kept these three genders, like most Slavic languages, Latin, Sanskrit, Greek, and German. In these languages, there is a high but not absolute correlation between grammatical gender and declensional class. Many linguists believe this to be true of the middle and late stages of Proto-Indo-European.

However, many languages reduced the number of genders to two. Some lost the neuter, leaving masculine and feminine; like most Romance languages, Hindi-Urdu, and the Celtic languages. Others merged feminine and the masculine into a common gender. Finally, a few languages, such as English and Afrikaans, have nearly completely lost grammatical gender; while Bengali, Persian, Armenian, Assamese, Oriya, Khowar, and Kalasha have completely lost it.

On the other hand, a few Slavic languages have arguably added new genders to the classical three. For example, Polish has 5 genders, since it has split the masculine into: animate personal (people), animate non-personal (mostly animals), and inanimate (things).

However, even in those languages where the original three genders have been mostly lost or reduced, there is sometimes a trace of them in a few words.

English, personal pronouns: *he*, *she*, *it*

Italian, nouns with masculine singular and feminine plural: *il uovo*, *le uova* ("the egg(s)")

Spanish, definite articles: *el*, *la*, *lo*

Basque

In Basque there are two classes, animate and inanimate; however, the only difference is in the declension of locative cases (inessive, locative genitive, adlative, terminal adlative, ablative and directional ablative). There are a few words with both masculine and feminine forms, generally words for relatives (cousin: lehengusu (m)/lehengusina (f)) or words borrowed from Latin ("king": *errege*, from the Latin word *regem*; "queen": *erregina*, from *reginam*). In names for familiar relatives, where both genders are taken into account, either the words for each gender are put together ("son": *seme*; "daughter": *alaba*; "children"(meaning son(s) and daughter(s)): *seme-alaba(k)*) or there is a noun that includes both: "father": *aita*; "mother": *ama*; "father" (both genders): *guraso*.

Gender in words borrowed from one language by another

Ibrahim identifies several processes by which a language assigns a gender to a newly borrowed word; these processes follow patterns by which even children, through their subconscious recognition of patterns, can often correctly predict a noun's gender.^[32]

1. If the noun is animate, natural gender tends to dictate grammatical gender.
2. The borrowed word tends to take the gender of the native word it replaces.
3. If the borrowed word happens to have a suffix that the borrowing language uses as a gender marker, the suffix tends to dictate gender.
4. If the borrowed word rhymes with one or more native words, the latter tend to dictate gender.
5. The default assignment is the borrowing language's unmarked gender.
6. Rarely, the word retains the gender it had in the donor language.

Influence on culture

According to research by Lera Boroditsky, grammatical genders are among the aspects of languages that shape how people think (a hypothesis called "linguistic relativity"). In one study by Boroditsky, in which native speakers of German and Spanish were asked to describe everyday objects in English, she found that they were more likely to use attributes conventionally associated with the genders of the objects in their native languages.

For instance, German-speakers more often described *German: Brücke, (f.)* "bridge" with words like 'beautiful', 'elegant', 'fragile', 'peaceful', 'pretty', and 'slender', whereas Spanish-speakers, which use *puente (m.)* used terms like 'big', 'dangerous', 'long', 'strong', 'sturdy', and 'towering'.

Also according to Boroditsky, the gender in which concepts are anthropomorphized in art is dependent, in 85% of all cases, on the grammatical gender of the concept in the artist's language. Therefore, in German art *Tod (m.)* "death" is generally portrayed as male, but in Russian *Смерть (f.)* "death" is generally portrayed as a female.^[33]

Auxiliary and constructed languages

Many constructed languages have natural gender systems similar to that of English. Animate nouns can have distinct forms reflecting natural gender, and personal pronouns are selected according to natural gender. There is no gender agreement on modifiers. The first three languages below fall into this category.

- Esperanto features the female infix *-in-*. While it differentiates a small number of male and female nouns such as *patro* (father) and *patrino* (mother), most nouns are gender-neutral and the use of it is not necessary. For instance, *hundo* means either a male or female dog, *virhundo* means a male dog, and *hundino* means a female dog. The personal pronouns *li* (he) and *si* (she) and their possessive forms *lia* (his) and *siia* (her) are used for male and female antecedents, while *ĝi* (it) and its possessive form *ĝia* (its) are used to refer to a non-personal antecedent, or as an epicene pronoun.
- Ido has the masculine infix *-ul* and the feminine infix *-in* for animate beings. Both are optional and are used only if it is necessary to avoid ambiguity. Thus: *kato* "a cat", *katulo* "a male cat", *katino* "a female cat". There are third

person singular and plural pronouns for all three genders: *masculine*, *feminine*, and *neuter*, but also *gender-free* pronouns.

- Interlingua has no grammatical gender. It indicates only natural gender, as in *matre* "mother" and *patre* "father". Interlingua speakers may use feminine endings. For example, *-a* may be used in place of *-o* in *catto*, producing *catta* "female cat". *Professora* may be used to denote a professor who is female, and *actrice* may be used to mean "actress". As in Ido, inflections marking gender are optional, although some gender-specific nouns such as *femina*, "woman", happen to end in *-a* or *-o*. Interlingua has feminine pronouns, and its general pronoun forms are also used as masculine pronouns.
- The fictional Klingon language has three classes: capable of speaking, body part and other.
- The Dothraki language divides nouns into two broad classes referred to as animate and inanimate.

See also Gender-neutrality in languages with grammatical gender: International auxiliary languages, and Gender-specific pronoun: Constructed languages.

Notes

- [1] Corbett 1991, p. 2
- [2] Hockett, Charles (1958). *A course in modern linguistics*. Macmillan. p. 231.
- [3] Corbett 1991, p. 4
- [4] Bradley 2004, p. 27, 52
- [5] Dixon, Robert (1968). *Noun Classes*. Lingua. pp. 105–111.
- [6] SIL: Glossary of Linguistic Terms: What is grammatical gender? (<http://www.sil.org/linguistics/GlossaryOfLinguisticTerms/WhatIsGrammaticalGender.htm>)
- [7] Franceschina 2005, p. 72
- [8] Franceschina 2005, p. 78
- [9] Bradley 2004, p. 18
- [10] Exception: Feminine nouns beginning with stressed *a*-, like *águila* "eagle", also take the article *el* despite their feminine gender (*el águila* "the eagle"). This does not happen if the noun is preceded by an adjective (*la bella águila* "the beautiful eagle"), or in the plural (*las aguilas* "the eagles").
- [11] Bradley 2004, p. 27
- [12] These examples are based on an example in French from *Merriam-Webster's Dictionary of English Usage*. Merriam-Webster Inc. 1994. p. 474. ISBN 0-87779-132-5.
- [13] López-Arias, Julio (1996). "10". *Test Yourself: Spanish Grammar* (1 ed.). McGraw-Hill. p. 85. ISBN 0844223743 , 978-0844223742.
- [14] In a translation of Jack London stories, 1915
- [15] In a song of Alexander Vertinsky, 1920s or 1930s
- [16] Corbett 1991, pp. 20-21
- [17] Corbett 1991, pp. 8-11
- [18] Corbett 1991, p. 8
- [19] Corbett 1991, p. 12
- [20] Corbett 1991, p. 11
- [21] Corbett 1991, p. 13
- [22] Corbett 1991, p. 32
- [23] Corbett 1991, p. 14
- [24] Corbett 1991, p. 19
- [25] Iibrihim 1973, p. 27-28
- [26] *The Chicago Manual of Style*, 15th edition, p. 356. 2003. ISBN 0-226-10403-6.
- [27] Foley & Van Valin 1984, p. 326
- [28] Nichols 1992
- [29] Franceschina 2005, p. 77
- [30] How did genders and cases develop in Indo-European? (<http://www.zompist.com/lang21.html#28>)
- [31] The Original Nominal System of Proto-Indoeuropean – Case and Gender (<http://members.pgv.at/homer/INDOEURO/gender.htm>)
- [32] Iibrihim 1973, p. 61
- [33] Boroditsky, Lera (6.12.2009). "How does our language shape the way we think?" (http://www.edge.org/3rd_culture/boroditsky09_boroditsky09_index.html). *Edge* . Retrieved 29 October 2010.

Bibliography

- Craig, Colette G. (1986). *Noun classes and categorization: Proceedings of a symposium on categorization and noun classification, Eugene, Oregon, October 1983*. Amsterdam: J. Benjamins.
- Corbett, Greville G. (1991). *Gender*. Cambridge University Press.
- Corbett, Greville (1994) "Gender and gender systems". In R. Asher (ed.) *The Encyclopedia of Language and Linguistics*, Oxford: Pergamon Press, pp. 1347–1353.
- Greenberg, J. H. (1978) "How does a language acquire gender markers?" In J. H. Greenberg et al. (eds.) *Universals of Human Language*, Vol. 4, pp. 47 – 82.
- Hockett, Charles F. (1958) *A Course in Modern Linguistics*, Macmillan.
- Iturrioz, J. L. (1986) "Structure, meaning and function: a functional analysis of gender and other classificatory techniques". *Función* 1. 1–3.
- Pinker, Steven (1994) *The Language Instinct*, William Morrow and Company.
- Roscoe, W. (ed.) (1988) *Living the Spirit: A Gay American Indian Anthology*. New York: St. Martin's Griffin.
- Franceschina, Florencia (2005). *Fossilized Second Language Grammars: The Acquisition of Grammatical Gender*. John Benjamins Publishing Company. pp. 299. ISBN 90 272 5298 X.
- Bradley, Peter (2004). *Spanish: An Essential Grammar* (1 ed.). ISBN 0415286433, 978-0415286435.
- Ibrihim, Muhammad Hasan (1973). *Grammatical gender: Its Origin and Development*. Mouton.

External links

- An overview of the grammar of Old English (<http://www.ucalgary.ca/UofC/eduweb/engl401/grammar/index.htm>)
- Susanne Wagner (2004-07-22) (PDF). *Gender in English pronouns: Myth and reality* (http://www.freidok.uni-freiburg.de/volltexte/1412/pdf/Diss_Freidok.pdf). Albert Ludwigs University of Freiburg.
- "The morphology of gender in Hebrew and Arabic numerals", by Uri Horesh (<http://web.archive.org/web/20080414093055/http://ling.upenn.edu/~urih/numerals.pdf>) (PDF)

Gerund

Gerund is a term used to denote certain types of non-finite verb forms in various languages.

The English word *gerund* comes from the Latin *gerundium* (which itself derives from the gerundive of the Latin verb *gero*, namely *gerundus*, meaning "to be carried out"). The Latin gerund (*gerundium*) is a verb form which behaves similarly to a noun, although it can only appear in certain oblique cases. (It should not be confused with the Latin gerundive, which is similar in form, but has a passive adjectival use.)

In English grammar, the gerund is a verb form in *-ing* when used to make a verb phrase that can serve in place of a noun phrase (thus being similar in function to the Latin gerund). The same *-ing* form also serves as the English present participle (which has an adjectival or adverbial function), and as a verbal noun.

In relation to certain other languages, the term *gerund* may be applied to a form which has noun-like uses like the Latin and English gerunds, or in some cases to various other non-finite verb forms, such as verbal adverbs (also called adverbial participles).

Gerunds in various languages

Meanings of the term *gerund* as used in relation to various languages are listed below.

- As applied to English, it refers to the use of a verb (in its *-ing* form) as a noun (for example, the verb "learning" in the sentence "Learning is an easy process for some").^[1]
- As applied to French, it refers either to the adverbial participle—also called the *gerundive*—or to the present adjectival participle.
- As applied to Latin, its form is based on the participle ending, similarly to English. The *-ns* ending is replaced with *-ndus*, and the preceding *ā* or *ē* is shortened. However, the gerund is only ever seen in the accusative form ("ndum"), genitive form ("ndi"), dative form ("ndo") or ablative form ("ndo") (see Latin conjugation.) If the gerund is needed in the nominative form, the present infinitive is used instead.
- As applied to Macedonian, it refers to the verb noun formed by adding the suffix *-ње* (-nje) to the verb form, like in *јаде* (*jade*, *he eats*) — *јадење* (*jadenje*, *eating*).
- As applied to Japanese, it designates verb and verbals adjective forms in dictionary form paired with the referral particle *no*, which turns the verbal into a concept or property noun, or also can refer to the *-te* form of a verb.
- As applied to Portuguese, it refers to an adverbial participle (a verbal adverb), called *gerúndio*.
- As applied to Romanian, it refers to an adverbial participle (a verbal adverb), called the *gerunziu*, formed by appending *-ând* or *-ind*, to the verb stem, like in *cântând/fugind*".
- As applied to Spanish, it refers to an adverbial participle (a verbal adverb), called in Spanish the *gerundio*.
- As applied to Turkish, it refers to the Turkish verbal nouns formed by appending *-ma* or *-me*, depending on vowel harmony, to the verb stem, like in "*Sana sormamın bir mahsuru var mı?*" ("Do you mind my asking you?" - not to confuse with the negational *-ma* postfix.) The Turkish gerund is rather similar in meaning and use to the English gerund.
- As applied to Arabic, it refers to the verb's action noun, known as the masdar form (Arabic: المُصْدَر). This form ends in a tanwin and is generally the equivalent of the *-ing* ending in English.
- As applied to Hebrew, it refers either to the verb's action noun, or to the part of the infinitive following the infinitival prefix (also called the *infinitival construct*).
- As applied to West Frisian, it refers to one of two verb forms frequently referred to as infinitives, this one ending in *-n*. It shows up in nominalizations and is selected by perception verbs.

In other languages, it may refer to almost any non-finite verb form; however, it most often refers to an action noun, by analogy with its use as applied to English or Latin.

Gerunds in English

In English, the gerund is identical in form to the present participle (ending in *-ing*) and can behave as a verb within a clause (so that it may be modified by an adverb or have an object), but the clause as a whole (sometimes consisting of only one word, the gerund itself) acts as a noun within the larger sentence. For example: *Eating this cake is easy*.

In "Eating this cake is easy," "eating this cake," although traditionally known as a phrase, is referred to as a non-finite clause in modern linguistics. "Eating" is the verb in the clause, while "this cake" is the object of the verb. "Eating this cake" acts as a noun phrase within the sentence as a whole, though; the subject of the sentence is the non-finite clause, specifically *eating*.

Other examples of the gerund:

- *I like swimming.* (direct object)
- *Swimming is fun.* (subject)
- *I never gave swimming all that much effort.* (indirect object)

Gerund clauses:

- *She is considering having a holiday.*
- *Do you feel like going out?*
- *I can't help falling in love with you.*
- *I can't stand not seeing you.*

Not all nouns that are identical in form to the present participle are gerunds.^[2] The formal distinction is that a gerund is a *verbal* noun – a noun derived from a verb that retains verb characteristics, that functions *simultaneously* as a noun and a verb, while other nouns in the form of the present participle (ending in *-ing*) are *deverbal* nouns, which function as common nouns, not as verbs at all. Compare:

- *I like fencing.* (gerund, an activity, could be replaced with "to fence")
- *The white fencing adds to the character of the neighborhood.* (deverbal, could be replaced with an object such as "bench")

Double nature of the gerund

As the result of its origin and development, the gerund has nominal and verbal properties. The *nominal* characteristics of the gerund are as follows:

1. The gerund can perform the function of subject, object and predicative:
 - *Smoking endangers your health.* (subject)
 - *I like making people happy.* (object)
2. The gerund can be preceded by a preposition:
 - *I'm tired of arguing.*
3. Like a noun the gerund can be modified by a noun in the possessive case, a possessive adjective, or an adjective:
 - *I wonder at John's keeping calm.*
 - *Is there any objection to my seeing her?*
 - *Brisk walking relieves stress.*

The *verbal* characteristics of the gerund include the following:

1. The gerund of transitive verbs can take a direct object:
 - *I've made good progress in speaking Basque.*
2. The gerund can be modified by an adverb:
 - *Breathing deeply helps you to calm down.*
3. The gerund has the distinctions of aspect and voice.

- *Having read the book once before makes me more prepared.*
- *Being deceived can make someone feel angry.*

Verb patterns with the gerund

Verbs that are often followed by a gerund include *admit, adore, anticipate, appreciate, avoid, carry on, consider, contemplate, delay, deny, describe, detest, dislike, enjoy, escape, fancy, feel, finish, give, hear, imagine, include, justify, listen to, mention, mind, miss, notice, observe, perceive, postpone, practice, quit, recall, report, resent, resume, risk, see, sense, sleep, stop, suggest, tolerate and watch*. Additionally, prepositions are often followed by a gerund.

For example:

- *I will never quit smoking.*
- *We postponed making any decision.*
- *After two years of analyzing, we finally made a decision.*
- *We heard whispering.*
- *They denied having avoided me.*
- *He talked me into coming to the party.*
- *They frightened her out of voicing her opinion.*

Verbs followed by a gerund or a to-infinitive

With little change in meaning

advise, recommend and forbid:

These are followed by a *to-infinitive* when there is an object as well, but by a gerund otherwise.

- *The police advised us not to enter the building, for a murder had occurred. (Us is the object of advised.)*
- *The police advised against our entering the building. (Our is used for the gerund entering.)*

consider, contemplate and recommend:

These verbs are followed by a *to-infinitive* only in the passive or with an object pronoun.

- *People consider her to be the best. – She is considered to be the best.*
- *I am considering sleeping over, if you do not mind.*

begin, continue, start; hate, like, love, prefer

With *would*, the verbs *hate, like, love*, and *prefer* are usually followed by the *to-infinitive*.

- *I would like to work there. (more usual than working)*

When talking about sports, there is usually a difference in meaning between the infinitive and gerund (see the next section).

With a change in meaning

like, love, prefer

In some contexts, following these verbs with a *to-infinitive* when the subject of the first verb is the subject of the second verb provides more clarity than a gerund.

- *I like to box. (I enjoy doing it myself.)*
- *I like boxing. (Either I enjoy watching it, I enjoy doing it myself, or the idea of boxing is otherwise appealing.)*
- *I do not like gambling, but I do like to gamble."*

dread, hate and cannot bear:

These verbs are followed by a *to*-infinitive when talking subjunctively (often when using *to think*), but by a gerund when talking about general dislikes.

- *I dread / hate to think what she will do.*
- *I dread / hate seeing him.*
- *I cannot bear to see you suffer like this.* (You are suffering now.)
- *I cannot bear being pushed around in crowds.* (I never like that.)

forget and remember:

When these have meanings that are used to talk about the future from the given time, the *to*-infinitive is used, but when looking back in time, the gerund.

- *She forgot to tell me her plans.* (She did not tell me, although she should have.)
- *She forgot telling me her plans.* (She told me, but then forgot having done so.)
- *I remembered to go to work.* (I remembered that I needed to go to work.)
- *I remembered going to work.* (I remembered that I went to work.)

go on:

- *After winning the semi-finals, he went on to play in the finals.* (He completed the semi-finals and later played in the finals.)
- *He went on giggling, not having noticed the teacher enter.* (He continued doing so.)

mean:

- *I did not mean to scare you off.* (I did not intend to scare you off.)
- *Taking a new job in the city meant leaving behind her familiar surroundings.* (If she took the job, she would have to leave behind her familiar surroundings.)

regret:

- *We regret to inform you that you have failed your exam.* (polite or formal form of apology)
- *I very much regret saying what I said.* (I wish that I had not said that.)

try:

When a *to*-infinitive is used, the subject is shown to make an effort at something, attempt or endeavor to do something. If a gerund is used, the subject is shown to attempt to do something in testing to see what might happen.

- *Please try to remember to post my letter.*
- *I have tried being stern, but to no avail.*

stop, quit:

When the infinitive is used after 'stop' or 'quit', it means that the subject stops one activity and starts the activity indicated by the infinitive. If the gerund is used, it means that the subject stops the activity indicated by the gerund.

- *She stopped to smell the flowers.*
- *She stopped smelling the flowers.*

Or more concisely:

- *She stopped walking to smell the flowers.*
- *He quit working there to travel abroad.*

Gerunds preceded by a genitive

Because of its noun properties, the genitive (possessive) case is preferred for a noun or pronoun preceding a gerund, which is functioning as the subject of the gerund's verbal element.

- *We enjoyed their [genitive] singing.*

This use is preferred in formal writing or speaking. In casual speech, the objective case is sometimes used in place of the possessive:

- *I do not see it making any difference.* (*I do not see its making any difference* is correct.)

Using the possessive case with the gerund is applicable in all situations, for instance:

- *He affected my going there.*
- *He affected your going there.*
- *He affected his/her/its going there.*
- *He affected our going there.*
- *He affected their going there.*
- *He affected Mary's going there.*

The verbal action of the gerund belongs, in effect, to the subject practising it; thus, the possessive is required to clearly demonstrate that relationship.

In some situations, either the possessive or the nominative case may be logical, but with slightly different meanings; but when the nominative case is used the verbal element is a participle, not a gerund:

- *The teacher's shouting startled the student.* (*Shouting* is a gerund, and *teacher's* is a possessive noun indicating whose shouting is being talked about; but *shouting* is the subject of the sentence.)
- *The teacher shouting startled the student.* (*Shouting* is a participle describing the teacher. This sentence means *The teacher who was shouting startled the student.* In this sentence, the subject is the teacher herself. A clearer way to write this sentence might be *The teacher, shouting, startled the student.*)

Either of these sentences means that the student was startled because the teacher was shouting, but the first places greater emphasis on the shouting by making it the subject of the sentence, while the second places greater emphasis on the teacher and is not using a gerund.

Despite such examples of a similar construction that uses a participle instead of a gerund, using a noun or pronoun in anything except the possessive case as the subject of a gerund (*He affected me going there*) is incorrect in formal writing.

Gerunds and present participles

Insofar as there is a distinction between gerunds and present participles, it is generally fairly clear which is which. The subject or object of a preposition is a gerund. If, on the other hand, the word modifies a noun attributively or absolutely, it is a participle. The main source of confusion is when the word follows a verb, in which case it may be a predicate adjective and hence a participle, or a direct object or predicate nominative and hence a gerund. In this case, a few transformations can help distinguish the cases. In the table that follows, ungrammatical sentences are marked with asterisks, per common linguistic practice; it should be noted that the transformations all produce grammatical sentences with similar meanings when applied to sentences with gerunds but either ungrammatical sentences, or sentences with completely different meanings, when applied to sentences with participles.

Transformation	Gerund use	Participle use
(none)	John suggested asking Bill.	John kept asking Bill.
Passivization	Asking Bill was suggested.	*Asking Bill was kept.
Pronominal substitution	John suggested it.	*John kept it.
Use as a noun	John suggested the asking of Bill.	*John kept the asking of Bill.
Replacement with a finite clause	John suggested that Bill be asked.	*John kept that Bill be asked.
Use with an objective or possessive subject	John suggested our asking Bill.	*John kept his asking Bill.
Clefting	Asking Bill is what John suggested.	*Asking Bill is what John kept.
Left dislocation	Asking Bill John suggested.	*Asking Bill John kept.

None of these transformations is a perfect test, however.

English gerund-like words in other languages

English words ending in *-ing* are often transformed into pseudo-anglicisms in other languages, where their use is somewhat different from in English itself. In many of these cases, the loanword has functionally become a noun rather than a gerund. For instance, *camping* is a campsite in Bulgarian, Dutch, French, Greek, Italian, Portuguese, Romanian, Russian, and Spanish; in Bulgarian, Dutch, French, Polish, and Russian *parking* is a car park; *lifting* is a facelift in Bulgarian, French, German, Italian, Polish, Romanian, Hebrew, and Spanish. The French word for shampoo is (*le*) *shampooing*.

In popular culture

In the Molesworth books by Geoffrey Willans and Ronald Searle, Searle included a series of cartoons on the "private life of the gerund",^[3] intended to parody the linguistic snobbery of Latin teachers' striving after strict grammatical correctness and the difficulty experienced by students in comprehending the construction.

Owen Johnson's "Lawrenceville Stories" feature a Latin teacher who constantly demands that his students determine whether a given word is a gerund or a gerundive.

In an episode of Dan Vs., "The Ninja", after Dan's milk carton exploded from the ninja's shuriken, a teenager said to Dan "Drinking problem much?" and Dan complained that the sentence had no verb, just a gerund.

References

- [1] "Definition: gerund" (<http://www.websters-online-dictionary.org/definitions/gerund?cx=partner-pub-0939450753529744:v0qd01-tdlq&cof=FORID:9&ie=UTF-8&q=gerund&sa=Search#922>). <http://www.websters-online-dictionary.org/credits/wordnet.html#>: WordNet 1.7.1. . Retrieved 2010-03-09. "A noun formed from a verb (such as the '-ing' form of an English verb when used as a noun)."
- [2] Re: Post Hey man, I gots ta know (Gerund versus gerundive) (<http://www.wordwizard.com/phpbb3/viewtopic.php?f=16&t=&p=47234#p47234>), Phil White, Mon August 7, 2006 1:35 pm
- [3] "The Private Life of the Gerund" (<http://web.archive.org/web/20100420034708/http://www.stcustards.free-online.co.uk/topp/latin/latin2.htm>). *Molesworth*. .; ([http://lh4.ggpht.com/_BsePKX0h59Q/SV9L_FUgOxI/AAAAAAAACE4/G18F_D10xuU/s1600-h/searle_topp_gerunds\[3\].jpg](http://lh4.ggpht.com/_BsePKX0h59Q/SV9L_FUgOxI/AAAAAAAACE4/G18F_D10xuU/s1600-h/searle_topp_gerunds[3].jpg))

Head (linguistics)

In linguistics, 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*.^[1] 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.

Basic examples

Examine the following expressions:

big red dog

birdsong

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*.^[2] 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 *bird*. 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.

Representing heads

Trees

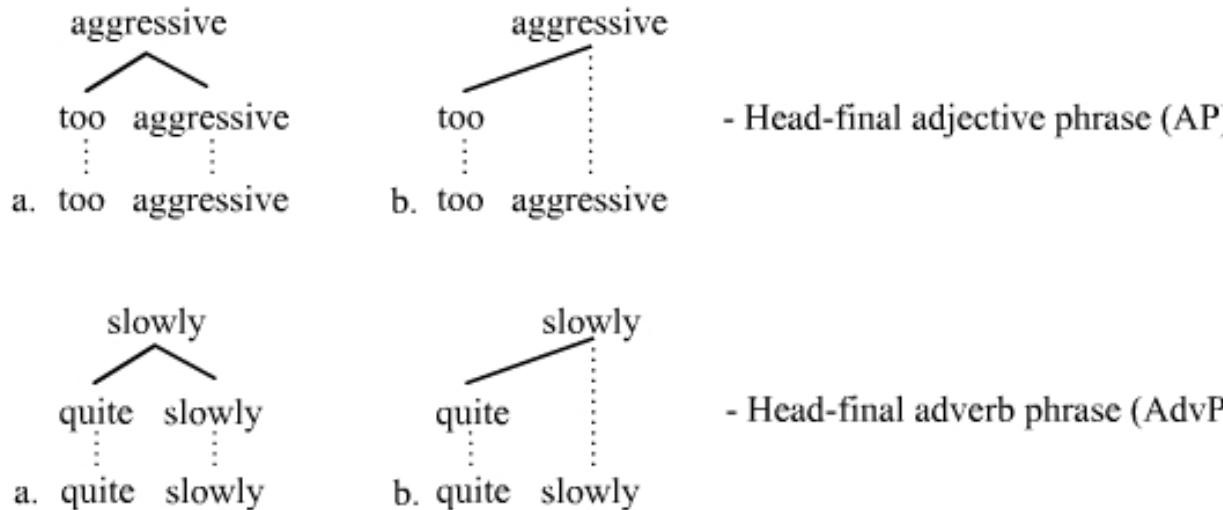
Many theories of syntax represent heads by means of tree structures. These trees tend to be organized in terms of one of two relations: either in terms of the *constituency* relation of phrase structure grammars or the *dependency* relation of dependency grammars. Both relations are illustrated with the following trees:^[3]



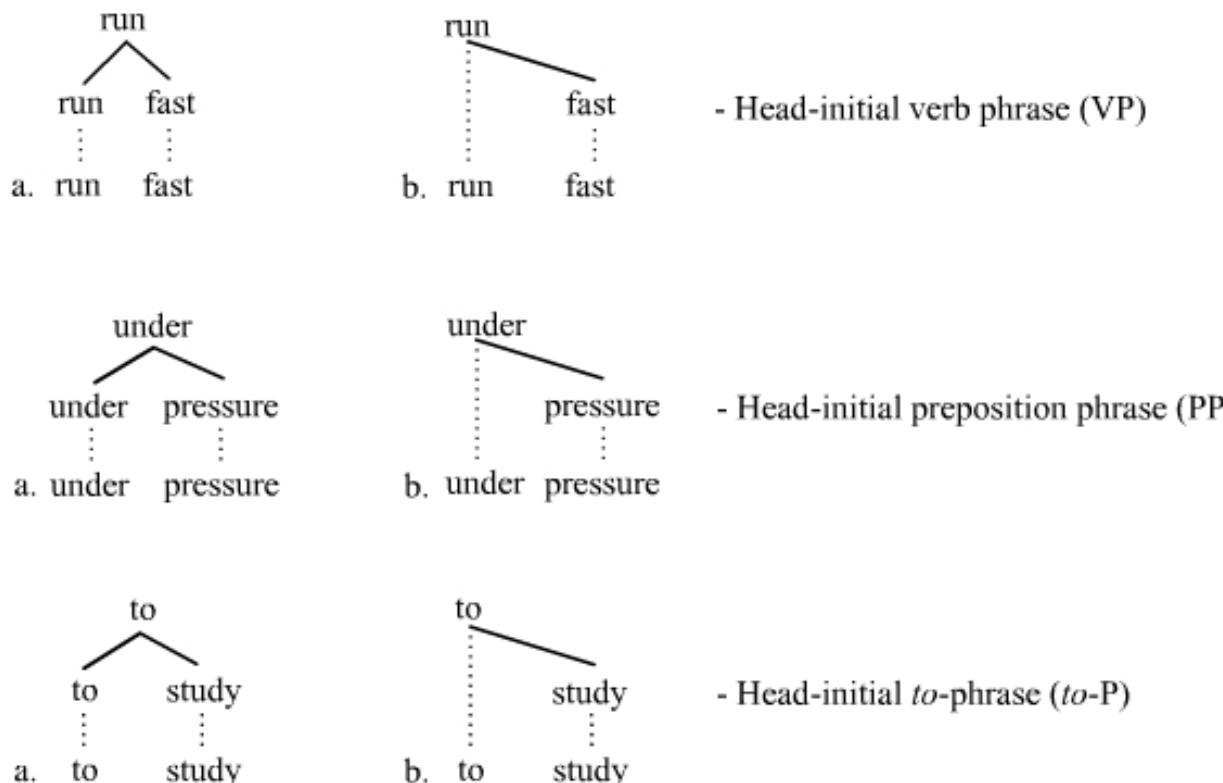
The constituency relation is shown on the left and the dependency relation on the right. The a-trees identify heads by way of category labels, whereas the b-trees use the words themselves as the labels.^[4] The noun *stories* (N) is the head over the adjective *funny* (A). In the constituency trees on 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 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.

More trees

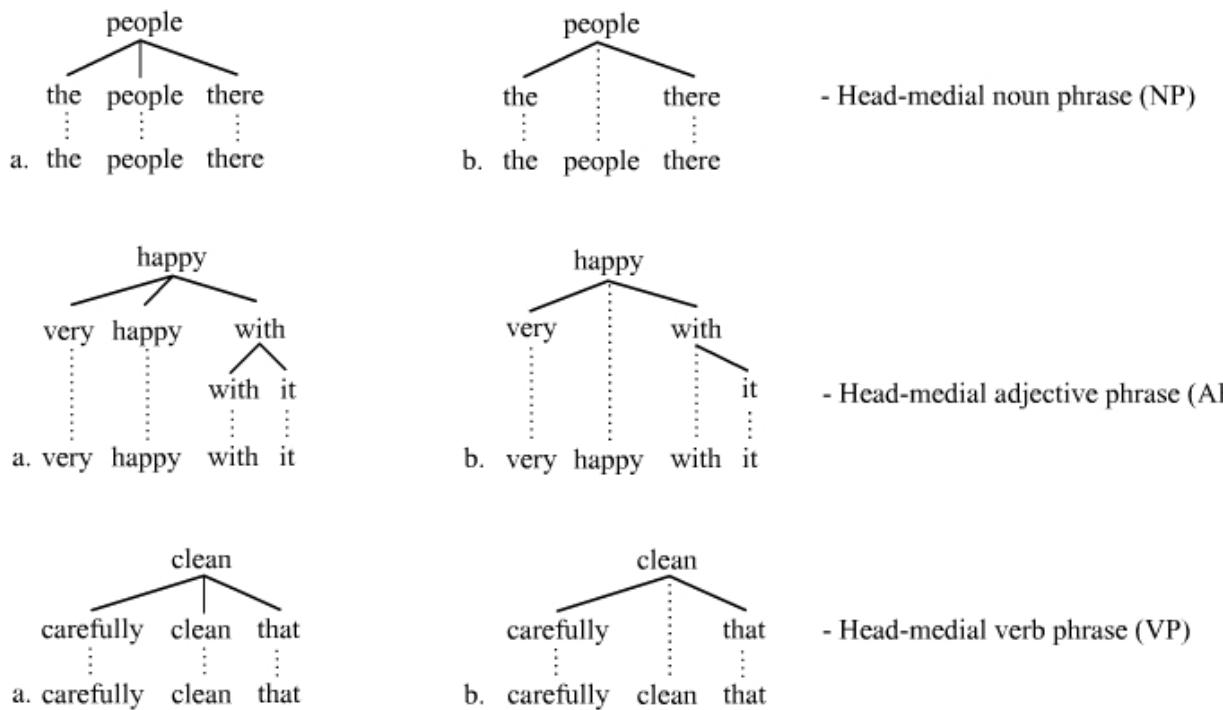
The four trees above show a head-final structure. The following trees illustrate head-final structures further as well as head-initial and head-medial structures. The constituency trees (= a-trees) appear on the left, and dependency trees (= b-trees) on the right. Henceforth the convention is employed where the words appear as the labels on the nodes. The next four trees are additional examples of head-final phrases:



The following six trees illustrate head-initial phrases:



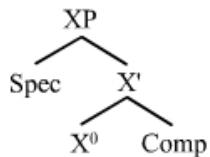
And the following six trees are examples of head-medial phrases:



The head-medial constituency trees here assume a more traditional n-ary branching analysis. Since some prominent phrase structure grammars (e.g. most work in Government and binding theory and the Minimalist Program) take all branching to be binary, these head-medial a-trees may be controversial.

X-bar trees

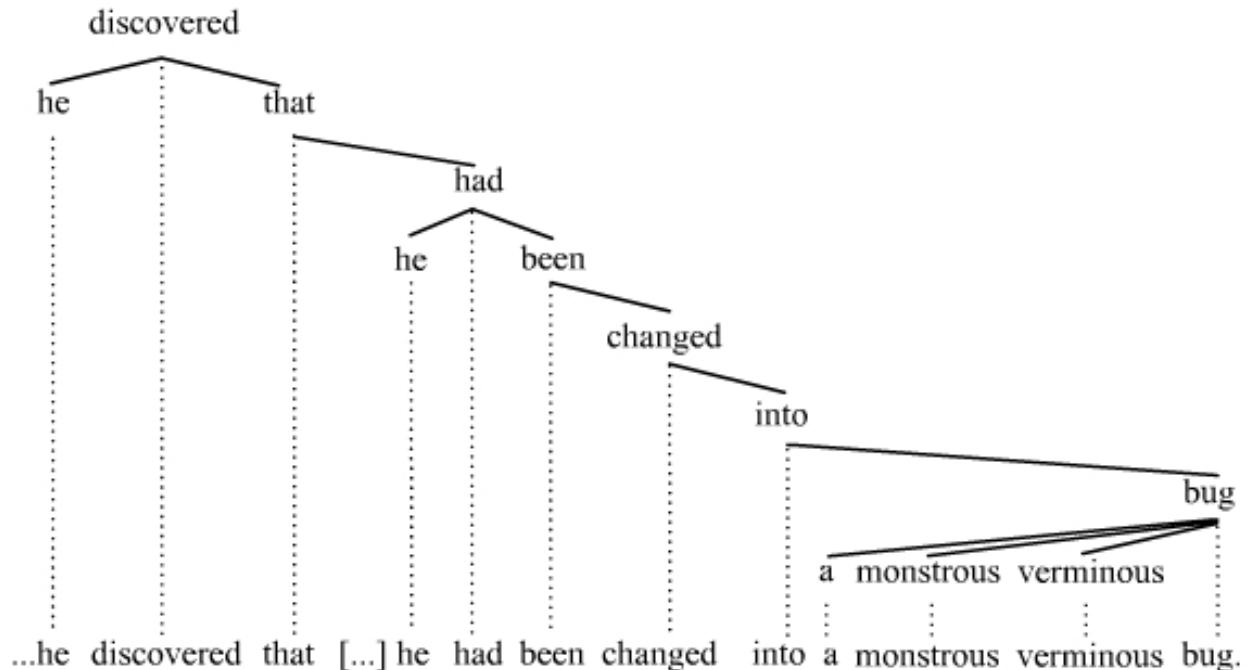
Trees that are based on the X-bar schema are also acknowledging head-initial, head-final, and head-medial phrases, although the depiction of heads is less direct. The standard X-bar schema for English is as follows:



This structure is both head-initial and head-final, which makes it head-medial in a sense. It is head-initial insofar as the head X^0 precedes its complement, but it is head-final insofar as the projection X' of the head follows its specifier.

Head-initial vs. head-final languages

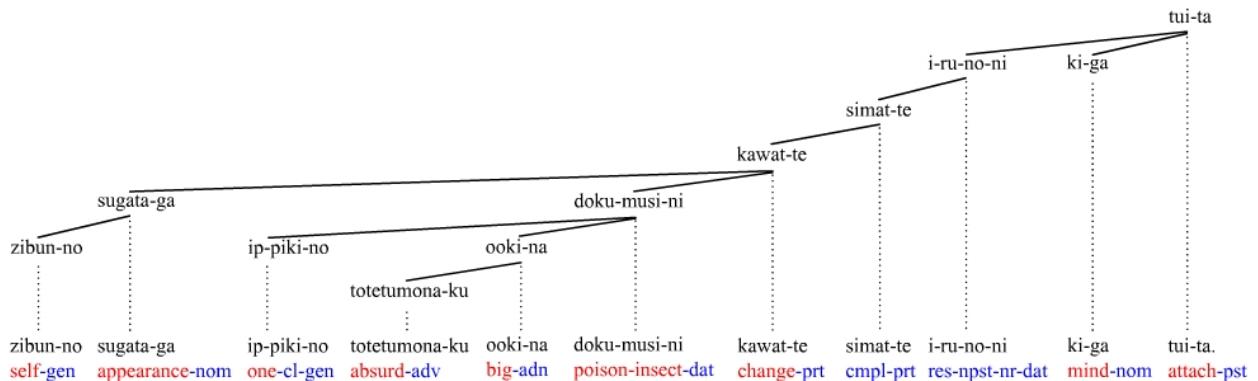
Some language typologists classify language syntax according to a head directionality parameter in word order, that is, whether a phrase is *head-initial* (= right-branching) or *head-final* (= left-branching), assuming that it has a fixed word order at all. English is more head-initial than head-final, as illustrated with the following dependency tree of the first sentence of Franz Kafka's *The Metamorphosis*:



(Ian Johnston <http://records.viu.ca/~johnstoi/stories/kafka-E.htm>)

The tree shows the extent to which English is primarily a head-initial language. Structure is descending as speech and processing move from left to right. Most dependencies have the head preceding its dependent(s), although there are also head-final dependencies in the tree. For instance, the determiner-noun and adjective-noun dependencies are head-final as well as the subject-verb dependencies. Most other dependencies in English are, however, head-initial as the tree shows. The mixed nature of head-initial and head-final structures is common across languages. In fact purely head-initial or purely head-final languages probably do not exist, although there are some languages that approach purity in this respect, for instance Japanese.

The following tree is of the same sentence from Kafka's story. The glossing conventions are those established by Lehmann^[5]. One can easily see the extent to which Japanese is head-final:



A large majority of head-dependent orderings in Japanese are head-final. This fact is obvious in this tree, since structure is strongly ascending as speech and processing move from left to right. Thus the word order of Japanese is

in a sense the opposite of English. One can imagine the difficulties that this state of affairs presents to English speakers learning Japanese and to Japanese speakers learning English.

Head-marking vs. dependent-marking

It is also common to classify language morphology according to whether a phrase is head-marking or dependent-marking. A given dependency is head-marking, if something about the dependent influences the form of the head, and a given dependency is dependent-marking, if something about the head influences the form of the dependent.

For instance, in the English possessive case, possessive marking ('s) appears on the dependent (the possessor), whereas in Hungarian possessive marking appears on the head noun:^[6]

English: *the man's house*

Hungarian: *az ember ház-a* (the man house-POSSESSIVE)

Prosodic head

In a prosodic unit, the head is that part which extends from the first stressed syllable up to (but not including) the tonic syllable. A high head is the stressed syllable which begins the head and is high in pitch, usually higher than the beginning pitch of the tone on the tonic syllable. For example:

The ↑ bus was late.

A low head is the syllable which begins the head and is low in pitch, usually lower than the beginning pitch of the tone on the tonic syllable.

The ↓ bus was late.

Notes

[1] For a good general discussion of heads, see Miller (2011:41ff.).

[2] Discerning head from dependent is not always easy. The exact criteria that one employs to identify the head of a phrase vary, and definitions of "head" have been debated in detail. See the exchange between Zwicky (1985, 1993) and Hudson (1987) in this regard.

[3] Dependency grammar trees similar to the ones produced in this article can be found, for instance, in Ágel et al. (2003/6).

[4] Using the words themselves as the labels on the nodes in trees is a convention that is consistent with *bare phrase structure* (BPS). See Chomsky (1995).

[5] <http://www.folialinguistica.com/documents/Interlinearmorphemicglossing.pdf>

[6] See Nichols (1986).

References

- Chomsky, N. 1995. The Minimalist Program. Cambridge, Mass.: The MIT Press.
- Corbett, G., N. Fraser, and S. McGlashan (eds). 1993. Heads in Grammatical Theory. Cambridge University Press.
- Hudson, R. A. 1987. Zwicky on heads. *Journal of Linguistics* 23, 109–132.
- Miller, J. 2011. A critical introduction to syntax. London: continuum.
- Nichols, J. 1986. Head-marking and dependent-marking languages. *Language* 62, 56-119.
- Zwicky, A. 1985. Heads. *Journal of Linguistics* 21, pp. 1–29.
- Zwicky, A. 1993. Heads, bases and functors. In G. Corbett, et al. (eds) 1993, 292–315.

Infinitive

Infinitive is a grammatical term used to refer to certain verb forms that exist in many languages. As with many linguistic concepts, there is not a single definition applicable to all languages. In traditional descriptions of English, the infinitive is the basic dictionary form of a verb when used non-finitely, with or without the particle *to*. Thus *to go* is an infinitive, as is *go* in a sentence like *I must go there* (but not in *I go there*). The latter is called the **bare infinitive**, the former the **full infinitive** or **to-infinitive**. In many other languages the infinitive is a single word, often with a characteristic inflective ending, such as *manger* ("(to) eat") in French, *portare* ("(to) carry") in Latin, *lieben* ("(to) love") in German, etc.

Some languages do not have any forms identifiable as infinitives. Many Native American languages and some languages in Africa and Australia do not have direct equivalents to infinitives or verbal nouns. In their place they use finite verb forms in ordinary clauses or various special constructions.

Forms identified as infinitives are generally non-finite verbs in most uses. They may function as other lexical categories, such as nouns, within the clauses that contain them, for example by serving as the subject, object or complement of another verb or preposition. As non-finite verbs, they are generally used without a stated subject, and as a rule they are not inflected to agree with any subject; nor do they normally inflect for other categories such as tense, aspect, mood or voice (although such inflection sometimes occurs to a certain degree, for example Latin has distinct active and passive infinitives).

Other non-finite verb forms which often share many of the above properties (but are not classed as infinitives) include participles, gerunds and gerundives.

English

English language has three non-finite verbal forms, but by long-standing convention, the term "infinitive" is applied to only one of these. (The other two are the past- and present-participle forms, where the present-participle form is also the gerund form.) In English, a verb's infinitive is its unmarked form, such as *be*, *do*, *have*, or *sit*, often introduced by the particle *to*. When this particle is absent, the infinitive is said to be a *bare infinitive*; when it is present, it is generally considered to be a part of the infinitive, then known as the *full infinitive* (or *to-infinitive*), and there is a controversy about whether it should be separated from the main word of the infinitive (see Split infinitive). Nonetheless, modern theories typically do not consider the to-infinitive to be a distinct constituent, instead taking the particle *to* for operating on an entire verb phrase; so, *to buy a car* is parsed as *to [buy [a car]]*, not as *[to buy] [a car]*.

The bare infinitive and the full infinitive are mostly in complementary distribution. They are not generally interchangeable, but the distinction does not generally affect the meaning of a sentence; rather, certain contexts call almost exclusively for the bare infinitive, and all other contexts call for the full infinitive.

Huddleston and Pullum's *Cambridge Grammar of the English Language* (CGEL), published in 2002, does not use the notion of the *infinitive*, arguing that English uses the same form of the verb, the *plain form*, in infinitival clauses that it uses in imperative and present-subjunctive clauses.

Bare

The bare infinitive is not used in as many contexts as the full infinitive, but some of these are quite common:

- The bare infinitive is used as the main verb after the dummy auxiliary verb *do*, or most modal auxiliary verbs (such as *will*, *can*, or *should*). So, "I will/do/can/etc. **see** it."
- Several common verbs of perception, including *see*, *watch*, *hear*, *feel*, and *sense* take a direct object and a bare infinitive, where the bare infinitive indicates an action taken by the main verb's direct object. So, "I saw/watched/heard/etc. it **happen**." (A similar meaning can be effected by using the present participle instead: "I saw/watched/heard/etc. it **happening**." The difference is that the former implies that the entirety of the event was perceived, while the latter implies that part of the progress of the event was perceived.)
- Similarly with several common verbs of permission or causation, including *make*, *bid*, *let*, and *have*. So, "I made/bade/let/had him **do** it." (However, *make* takes a to-infinitive in the passive voice: "I was made **to do** it.")
- After the *had better* expression. So, "You had better **leave** now."
- With the verb *help*. So, "He helped them **find** it." (The use of the to-infinitive with the verb *help* is also common.)

Some examples are : To be happy about winning the championship. To sleep after a long day at work. I just need to know if you're going to help out. I'm glad to know all my friends. I was born to play at a high level.

- With the word *why*. So, "Why **reveal** it?" (Use of the to-infinitive following *why* is also common.)
- The bare infinitive is the dictionary form of a verb, and is generally the form of a verb that receives a definition; however, the definition itself generally uses a to-infinitive. So, "The word '**amble**' means 'to walk slowly.'"
- The bare infinitive form coincides with the present subjunctive form as well as the imperative form, but most grammarians do not consider uses of the present subjunctive or imperative to be uses of the bare infinitive.

Full

The full infinitive (or to-infinitive) is used in a great many different contexts:

- Outside of dictionary headwords, it is the most commonly used citation form of the English verb: "How do we conjugate the verb *to go*?"
- It can be used like a noun phrase, expressing its action or state in an abstract, general way. So, "**To err** is human"; "**To know me** is **to love me**". (However, a gerund is often preferred for this — "**Being** is **doing**" would be more natural than the abstract and philosophical sounding "**To be** is **to do**."^[1])
- It can be used like an adjective or adverb, expressing purpose or intent. So, "The letter says I'm **to wait outside**", or "He is the man **to talk to**", or "[In order] **to meditate**, one must free one's mind."
- In either of the above uses, it can often be given a subject using the preposition *for*: "**For him to fail now** would be a great disappointment"; "[In order] **for you to get there on time**, you'll need to leave now." (The former sentence could also be written, "His failing now would be a great disappointment.")
- It can be used after many intransitive verbs; in this case, it generally has the subject of the main verb as its implicit subject. So, "I agreed **to leave**", or "He failed **to make** his case." (This may be considered a special case of the noun-like use above.) With some verbs the infinitive may carry a significantly different meaning from a gerund: compare *I stopped to talk to her* with *I stopped talking to her*, or *I forgot to buy the bread* with *I forgot buying the bread*.
- It can be used after the direct objects of many transitive verbs; in this case, it generally has the direct object of the main verb as its implicit subject. So, "I convinced him **to leave** with me", or "He asked her **to make** his case on his behalf." However, in some cases, the subject of the main clause is also subject of the infinitival clause, as in "John promises Mary to cook", where the person who will cook is John (the subject of the main sentence), and not Mary (the object).
- As a special case of the above, it can often be used after an intransitive verb, together with a subject using the preposition *for*: "I arranged **for him to accompany** me", or "I waited **for summer to arrive**."

When the verb is implied, some dialects will reduce the to-infinitive to simply *to*: "Do I have **to**?"

Auxiliary verbs

The auxiliary verb *do* does not have an infinitive — even though *do* is also a main verb and in that sense is often used in the infinitive. One does not say **I asked to do not have to*, but rather, either *I asked not to have to* or *I asked to not have to* (but see split infinitive). Similarly, one cannot emphasize an infinitive using *do*; one cannot say, "I hear him do say it all the time."

Nonetheless, the auxiliary verbs *have* (used to form the perfect) and *be* (also used to form the passive voice and continuous aspect) both commonly appear in the infinitive: "It's thought **to have** been a ceremonial site", or "I want **to be** doing it already." "I was supposed **to have** (already) gone" vs "I should have (already) gone."

Defective verbs

The modal auxiliary verbs, *can*, *may*, *shall*, *will* and *must* are defective in that they do not have infinitives; so, one cannot say, **I want him to can do it*, but rather must say, *I want him to be able to do it*. The periphrases *to be able to*, *to have to* and *to be going to* are generally used in these cases.

Impersonal constructions

There is a specific situation in which the infinitive is used like an "impersonal future tense", replacing "will". This is done through the construction:

to be + "to" + bare infinitive

Grammatically, this is identical to the instructional "I am to wait outside" construction (above), but *does not* signify somebody having been issued an instruction; rather, it expresses an intended action, in the same way as "will". This "tense" is used extensively in news reports, e.g. —

- *The Prime Minister is to visit the West Bank* (active)
- *Aid is to be sent to war-torn Darfur* (passive)^[2]

This "future infinitive" construction is interesting in that it only has a future aspect to it in situations where the speaker is significantly distanced from the event.^[3] In cases where the subject of the sentence is not quite as distanced from the speaker, then the same construction takes on a sense of **instruction** or **necessity** (as in "he is to wait outside", or "he is to go to hospital").

The same construction can be used in conditional clauses — *If you are to go on holiday, then you need to work hard* (or, conversely, *if you want to...then you are to...*).

The impersonality aspect comes from the fact that the emotionless verb *to be* is used in the place of the more usual modal verbs which would normally connect the speaker to the statement. In this way, statements are given weight (as if some external force, rather than the speaker, is governing events).

Conversely, however, the construction also provides an uncertainty aspect, since it frees the speaker from responsibility on their statement — in the phrase "John will go", for example, the speaker is almost advocating their certainty that John will, in fact, go; meanwhile, "the Prime Minister is to go" simply states the **knowledge** that the PM's going is in some way foreseen. (If John ends up not going, for example, the "will go" construction is negated, while the PM's "to go" construction would still hold true, since all it expresses is an *expectation*). In both cases, the knowledge is simply being reported (or pretends to be) from an independent source. In this sense, this impersonal *to + verb* construction can almost be seen as a fledgeling renarrative mood.

Other Germanic languages

The original Proto-Germanic ending of the infinitive was *-an*, with verbs derived from other words ending in *-jan* or *-janan*.

In German it is *-en* ("sagen"), with *-eln* or *-ern* endings on a few words based on *-l* or *-r* roots ("segeln", "ändern"). The use of *zu* with infinitives is similar to English *to*, but is less frequent than in English. German infinitives can function as nouns, often expressing abstractions of the action, in which case they are of neuter gender: *das Essen* means *the eating*, but also *the food*.

In Dutch infinitives also end in *-en* (*zeggen* — *to say*), sometimes used with *te* similar to English *to*, e.g. "Het is niet moeilijk te begrijpen" → "It is not difficult to understand." The few verbs with stems ending in *-a* have infinitives in *-n* (*gaan* — *to go*, *slaan* — *to hit*). Afrikaans has lost the distinction between the infinitive and present forms of verbs, with the exception of the verbs "wees" (to be), which admits the present form "is", and the verb "hê" (to have), whose present form is "het".

In North Germanic languages the final *-n* was lost from the infinitive as early as 500–540 AD, reducing the suffix to *-a*. Later it has been further reduced to *-e* in Danish and some Norwegian dialects (including the written majority language bokmål). In the majority of Eastern Norwegian dialects and a few bordering Western Swedish dialects the reduction to *-e* was only partial, leaving some infinitives in *-a* and others in *-e* (å laga vs. å kaste). In northern parts of Norway the infinitive suffix is completely lost (å lag' vs. å kast') or only the *-a* is kept (å laga vs. å kast'). The infinitives of these languages are inflected for passive voice through the addition of *-s* or *-st* to the active form. This suffix appeared in Old Norse as a contraction of *mik* ("me", forming *-mk*) or *sik* (reflexive pronoun, forming *-sk*) and was originally expressing reflexive actions: (hann) *kallar* ("he calls") + *-sik* ("himself") > (hann) *kallask* ("he calls himself"). The suffixes *-mk* and *-sk* later merged to *-s*, which evolved to *-st* in the western dialects. The loss or reduction of *-a* in active voice in Norwegian did not occur in the passive forms (*-ast*, *-as*), except for some dialects that have *-es*. The other North Germanic languages have the same vowel in both forms.

Latin and Romance languages

The formation of the infinitive in the Romance languages reflects that in their ancestor, Latin, almost all verbs had an infinitive ending with *-re* (preceded by one of various thematic vowels). For example, in Italian infinitives end in *-are*, *-ere*, *-rre* (rare), or *-ire*, and in *-arsi*, *-ersi*, *-rsi*, *-irsi* for the reflexive forms. In Spanish and Portuguese, infinitives end in *-ar*, *-er*, or *-ir*, while similarly in French they typically end in *-re*, *-er*, *oir*, and *-ir*. In Romanian the so-called "long infinitives" end in *-are*, *-ere*, *-ire* and they are converted into verbal nouns by articulation (verbs that cannot be converted into the nominal long infinitive are very rare^[4]). The "short infinitives" used in verbal contexts (e.g. after an auxiliary verb) have the endings *-a*, *-ea*, *-e*, and *-i* (basically removing the ending in "*-re*"). In Romanian, the infinitive is usually replaced by a clause containing the preposition *să* plus the subjunctive mood. The only verb that is modal in common modern Romanian is the verb *a putea*, to be able to. But in popular speech, the infinitive after *a putea* is also increasingly replaced by the subjunctive.

In all Romance languages, infinitives can also be used as nouns.

Latin infinitives challenged several of the generalizations about infinitives. They did inflect for voice (*amare*, "to love", *amari*, to be loved) and for aspect (*amare*, "to love", *amavisse*, "to have loved"), and allowed for an overt expression of the subject (*video Socratem currere*, "I see Socrates running").

Romance languages inherited from Latin the possibility of an overt expression of the subject (as in Italian *vedo Socrate correre*). Moreover, the "**inflected infinitive**" (or "personal infinitive") found in Portuguese, Galician, and (some varieties of) Sardinian inflects for person and number. These are the only Indo-European languages that allow infinitives to take person and number endings. This helps to make infinitive clauses very common in these languages; for example, the English finite clause *in order that you/she/we have...* would be translated to Portuguese as *para teres/ela ter/termos...* (Portuguese is a null-subject language). The Portuguese personal infinitive has no

proper tenses, only aspects (imperfect and perfect), but tenses can be expressed using periphrastic structures. For instance, *even though you sing/have sung/are going to sing* could be translated to *apesar de cantares/teres cantado/ires cantar*.

Other Romance languages (including Spanish, Romanian, Catalan, and some Italian dialects) allow uninflected infinitives to combine with overt nominative subjects. For example, Spanish *al abrir yo los ojos* ("when I opened my eyes") or *sin yo saberlo* ("without my knowing about it").^[5]

Hellenic languages

Ancient Greek

In Ancient Greek the infinitive has four tenses (present, future, aorist, perfect) and three voices (active, middle, passive). Unique forms for the middle are found only in the future and aorist; in the present and perfect, middle and passive are the same.

Modern Greek

Only the Ancient Greek aorist infinitives active and passive survive in Modern Greek, but their descendants have a totally different function. The Ancient Greek *γράψω* "to write" became *γράψειν* in analogy to the present infinitive *γράφειν* and then *γράψει* in Modern Greek and is used only in combination with the auxiliary verb *έχω* "I have" in the formation of the Present Perfect: *έχω γράψει* "I have written, lit. I have write(inf.)". When combined with *είχα* "I had", it yields the Past Perfect *είχα γράψει* "I had written". Similarly, the Ancient Greek *γραφῆναι* "to be written" survives as *γραφεί* (*γραφῆ* in Katharevousa); thus, *έχει γραφεί* (*έχει γραφῆ* in Kath.) means "It has been written".

In Pontic Greek, infinitives have a similar function; they only serve for the creation of the Present Perfect Optative: *ας είχα γράψ'ναι* "I wish I have written". Infinitives are formed this way: active: root of the Future + -ναι; passive: root of the Aorist + -θήν. Examples: *εποθανείναι*, *μαθείναι*, *κόψ'ναι*, *ράψ'ναι*, *χαρίσ'ναι*, *αγαπέθην*, *κοιμεθήν*.

In Modern Greek, "I want to write" translates *θέλω να γράψω* (literally, "I want that I write"), opposed to Ancient Greek *έθέλω γράψειν* (literally, "I want to write"). In Modern Greek, the infinitive has changed form and is used mainly in the formation of tenses and not with an article or alone. Instead of the Ancient Greek infinitive "*γράφειν*", Modern Greek uses the infinitive "*γράψει*", which does not inflect. The Modern Greek infinitive has only two forms according to voice, "*γράψει*" for the active voice and "*γραφ(τ)εί*" for the passive voice.

Balto-Slavic languages

The infinitive in Russian usually ends in *-t'* (ть) preceded by a thematic vowel, or *-ti* (ти), if not preceded by one; some verbs have a stem ending in a consonant and change the *t* to *č'*, such as **mogt' → moc'* (*могть → мочь) "can". Some other Balto-Slavic languages have the infinitive typically ending in, for example, *-ć* (sometimes *-c*) in Polish, *-t'* in Slovak, *-t* (formerly *-ti*) in Czech and Latvian (with a handful ending in *-s* on the latter), *-ty* (-ти) in Ukrainian, *-ць* (-тс') in Belarusian. Lithuanian infinitives end in *-ti*, Slovenian end on *-ti* or *-či*, and Croatian on *-ti* or *-ći*.

Serbian officially retains infinitives *-ti* or *-ći*, but is more flexible than the other Slavs in breaking the infinitive through a clause. The infinitive nevertheless remains the dictionary form. Bulgarian and Macedonian have lost the infinitive altogether (it usually ended in *-ти*). For that reason, the present first-person singular conjugation is used as the dictionary form in Bulgarian, where as Macedonian uses the third person singular form of the verb in present tense.

Biblical Hebrew

Hebrew has *two* infinitives, the infinitive absolute and the infinitive construct. The infinitive construct is used after prepositions and is inflected with pronominal endings to indicate its subject or object: *bikhtōbh hassōphēr* "when the scribe wrote", *ahare lekhtō* "after his going". When the infinitive construct is preceded by ה (lə-, li-, lā-) "to", it has a similar meaning as the English *to*-infinitive, and this is its most frequent use in Modern Hebrew. The infinitive absolute is used for verb focus, as in *mōth yāmūth* (literally "die he will die"; figuratively, "he shall indeed die").^[6] This usage is commonplace in the Bible, but in Modern Hebrew it is restricted to high-flown literary works. Note, however, that the *to*-infinitive of Hebrew is not the dictionary form; that is the third person singular perfect form.

Finnish

To form the first infinitive, the strong form of the root (without consonant gradation or epenthetic 'e') is used, and these changes occur:

1. the root is suffixed with *-ta/-tä* according to vowel harmony
2. consonant elision takes place if applicable, e.g. *juoks+ta* → *juosta*
3. assimilation of clusters violating sonority hierarchy if applicable, e.g. *nuol+ta* → *nuolla*, *sur+ta* → *surra*
4. 't' weakens to 'd' after diphthongs, e.g. *juo+ta* → *juoda*
5. 't' elides if intervocalic, e.g. *kirjoitta+ta* → *kirjoittaa*

As such, it is inconvenient for dictionary use, because the imperative would be closer to the root word. Nevertheless, dictionaries use the first infinitive.

There are also four other infinitives, plus a "long" form of the first:

- The long first infinitive is *-kse-* and must have a personal suffix appended to it. It has the general meaning of "in order to [do something]", e.g. *kirjoittakseni* "in order for me to write [something]".
- The second infinitive is formed by replacing the final *-a/-ä* of the first infinitive with *e*. It can take the inessive and instructive cases to create forms like *kirjoittaessa* "while writing".
- The third infinitive is formed by adding *-ma* to the first infinitive, which alone creates an "agent" form: *kirjoita-* becomes *kirjoittama*. The third infinitive is technically a noun (denoting the act of performing some verb), so case suffixes identical to those attached to ordinary Finnish nouns allow for other expressions using the third infinitive, e.g. *kirjoittamalla* "by writing".
 - A personal suffix can then be added to this form to indicate the "agent participle", such that *kirjoittamani kirja* = "the book which I wrote".
- The fourth infinitive adds *-minen* to the first, forming a noun which has the connotation of "the process of [doing something]", e.g. *kirjoittaminen* "[the process of] writing". It, too, can be inflected like other Finnish nouns which end in *-nen*.
- The fifth infinitive adds *-maisilla-* to the first, and like the long first infinitive, must take a possessive suffix. It has to do with being "about to [do something]" and may also imply that the act was cut off or interrupted, e.g. *kirjoittamaisillasi* "you were about to write [but something interrupted you]". This form is more commonly replaced by the third infinitive in adessive case, usually also with a possessive suffix (thus *kirjoittamallasi*).

Note that all of these must change to reflect vowel harmony, so the fifth infinitive (with a third-person suffix) of *hypätä* "jump" is *hyppäämäisillään* "he was about to jump", not **hyppäämäisillaan*.

Seri

The Seri language of northwestern Mexico has infinitival forms which are used in two constructions (with the verb meaning 'want' and with the verb meaning 'be able'). The infinitive is formed by adding a prefix to the stem: either *iha-* [i?a-] (plus a vowel change of certain vowel-initial stems) if the complement clause is transitive, or *ica-* [ika-] (and no vowel change) if the complement clause is intransitive. The infinitive shows agreement in number with the controlling subject. Examples are: *icatax ihmimzo* 'I want to go', where *icatax* is the singular infinitive of the verb 'go' (singular root is *-atax*), and *icalx hamiumcajc* 'we want to go', where *icalx* is the plural infinitive. Examples of the transitive infinitive: *ihaho* 'to see it/him/her/them' (root *-aho*), and *ihacta* 'to look at it/him/her/them' (root *-oocata*).

Translation to languages without an infinitive

In languages without an infinitive, the infinitive is translated either as a *that*-clause or as a verbal noun. For example, in Literary Arabic the sentence "I want to write a book" is translated as either *urīdu an aktuba kitāban* (lit. "I want that I write a book", with a verb in the subjunctive mood) or *urīdu kitābata kitābin* (lit. "I want the writing of a book", with the *masdar* or verbal noun), and in Levantine Colloquial Arabic *biddi aktub kitāb* (subordinate clause with verb in subjunctive).

Even in languages that have infinitives, similar constructions are sometimes necessary where English would allow the infinitive. For example, in French the sentence "I want you to come" translates to *Je veux que vous veniez* (lit. "I want that you come", with *come* being in the subjunctive mood). However, "I want to come" is simply *Je veux venir*, using the infinitive, just as in English. In Russian, sentences such as "I want you to leave" do not use an infinitive. Rather, they use the conjunction *чтобы* "in order to/so that" with the past tense form (most probably remnant of subjunctive) of the verb: *Я хочу, чтобы вы ушли* (literally, "I want so that you left").

Notes

- [1] English Page - Gerunds and Infinitives Part 1 (http://englishpage.com/gerunds/part_1.htm) [*sic*]
- [2] In headlines, the verb *to be* is entirely omitted - e.g. *Prime Minister to visit...*; *Aid to be sent...*, etc.
- [3] Grammar books on English simply do not deal with this tense due to its extreme rarity, hence why it has no official name .
- [4] Pană Dindelegan, Gabriela. "Aspecte ale substantivizării în româna actuală. Forme de manifestare a substantivizării adjecțivului" (<http://ebooks.unibuc.ro/filologie/dindelegan/2.pdf>) (in Romanian). p. 2. .
- [5] Kim Schulte (1994), *Pragmatic Causation in the Rise of the Romance Prepositional Infinitive: A statistically-based study with special reference to Spanish, Portuguese and Romanian*. (<http://www.sml.ex.ac.uk/spanish/staff/schulte.htm>) PhD Dissertation, University of Cambridge.
- [6] Scott N. Callaham, *Modality and the Biblical Hebrew Infinitive Absolute*, Abhandlungen für die Kunde des Morgenlandes 71 (Wiesbaden: Harrassowitz, 2010).

Inversion (linguistics)

In linguistics, **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*.^[1] 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.
- b. **What has Larry** done? - Subject–auxiliary inversion with constituent question
- a. **Fred has** helped at no point.
- b. At no point **has Fred** helped. - Subject–auxiliary inversion with fronted expression containing negation (negative inversion)
 - a. If **we were** to surrender, ...
 - b. **Were we** to surrender, ... - Subject–auxiliary inversion in condition clause – see English subjunctive: Inversion in condition clauses

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

(The star * is the symbol used in linguistics to indicate that the example is grammatically unacceptable.)

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

There are a number of types of subject–verb inversion in English: *locative inversion*, *directive inversion*, *copular inversion*, and *quotative inversion*. See the article on subject–verb inversion.

Inversion in other languages

Certain other languages, in particular other Germanic languages and Romance languages, use inversion in broadly similar ways to English, such as in question formation. The restriction of inversion to auxiliary verbs does not generally apply in these languages; subjects can be inverted with any type of verb, although particular languages have their own rules and restrictions.

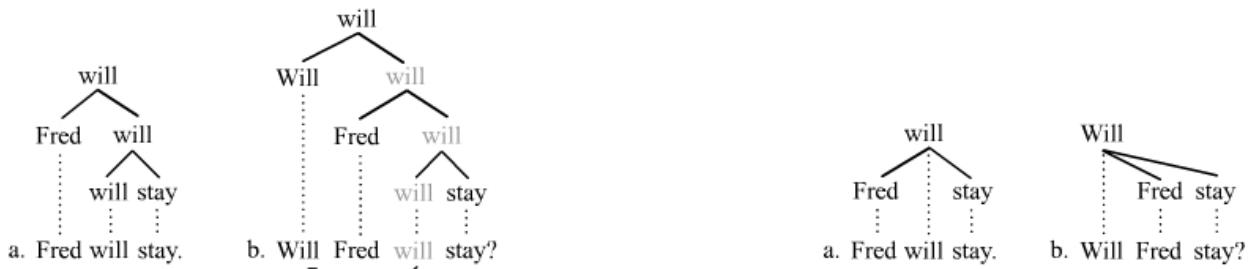
For example, in French, *tu aimes le chocolat* is a declarative sentence meaning "you like chocolate". When the order of the subject *tu* ("you") and the verb *aimes* ("like") is switched, a question is produced: *aimes-tu le chocolat?* ("do you like chocolate?"). In German, similarly, *du magst* means "you like", whereas *magst du* can mean "do you like?".

In languages with V2 word order, such as German, inversion can occur as a consequence of the requirement that the verb appear as the second constituent in a declarative sentence. Thus if another element (such as an adverbial phrase or clause) introduces the sentence, the verb must come next, followed by the subject. An example is: *Ein Jahr nach dem Autounfall sieht er wirklich gut aus*, literally "A year after the car accident, looks he really good". The same occurs in some other West Germanic languages, like Dutch, where the previous sentence would be *Een jaar na het auto-ongeval ziet hij er werkelijk goed uit*. (In such languages, inversion can function as a test for syntactic constituency, since precisely one constituent may surface preverbally.)

In languages with free word order, inversion of subject and verb or of other elements of a clause can occur more freely, often for pragmatic reasons rather than as part of a specific grammatical construction.

Theoretical analyses

Syntactic inversion has played an important role in the history of linguistic theory because of the way it interacts with question formation and topic and focus constructions. The particular analysis of inversion can vary greatly depending on the theory of syntax that one pursues. One prominent type of analysis is in terms of *movement* in transformational phrase structure grammars.^[2] Since these grammars tend to assume layered structures that acknowledge a finite verb phrase (VP) constituent, they need movement to overcome what would otherwise be a discontinuity. In dependency grammars in contrast, sentence structure is less layered (in part because a finite VP constituent is absent), which means that simple cases of inversion do not involve a discontinuity;^[3] the dependent simply appears on the other side of its head. These two competing analyses are illustrated with the following trees:



The two trees on the left illustrate the movement analysis of subject-auxiliary inversion in a *constituency-based* theory; a BPS-style (bare phrase structure) representational format is employed, where the words themselves are used as labels for the nodes in the tree. The finite verb *will* is seen moving out of its base position into a derived position at the front of the clause. The trees on the right show the contrasting *dependency-based* analysis. The flatter structure, which lacks a finite VP constituent, does not necessitate an analysis in terms of movement, but rather the dependent *Fred* simply appears on the other side of its head *Will*.

Notes

- [1] The use of terminology here, i.e. *subject-auxiliary inversion* and *subject–verb inversion*, follows Greenbaum and Quirk (1990:410).
- [2] The movement analysis of subject-auxiliary inversion is pursued, for instance, by Ouhalla (1994:62ff.), Culicover (1997:337f.), Radford (1988: 411ff., 2004: 123ff.).
- [3] Concerning the dependency grammar analysis of inversion, see Groß and Osborne (2009: 64-66).

References

- Culicover, P. 1997. Principles and parameters: An introduction to syntactic theory. Oxford, UK: Oxford University Press.
- Greenbaum, S. and R. Quirk. 1990. A student's grammar of the English language. Harlow, Essex, England: Longman.
- Groß, T. and T. Osborne 2009. Toward a practical dependency grammar theory of discontinuities. SKY Journal of Linguistics 22, 43-90.
- Ouhalla, J. 1994. Transformational grammar: From rules to principles and parameters. London: Edward Arnold.
- Quirk, R. S. Greenbaum, G. Leech, and J. Svartvik. 1979. A grammar of contemporary English. London: Longman.
- Radford, A. 1988. Transformational Grammar: A first course. Cambridge, UK: Cambridge University Press.
- Radford, A. 2005. English syntax: An introduction. Cambridge University Press.

Inverse copular constructions

In linguistics, **inverse copular constructions**, named after Moro (1997), are a type of inversion in English where canonical SCP word order (subject-copula-predicative expression), e.g. *Only some people are happy*, is reversed in a sense, so that one appears to have the order PCS instead (predicative expression-copula-subject), e.g. *Happy are only some people*. The verb in these constructions is always the copula *be* (*am, are, is, was, were*). The predicative expression involved may be an adjective (phrase), a prepositional (phrase), etc., but the most intriguing inverse copular constructions are the ones that involve noun phrases, because such cases render the distinction between subject and predicative expression difficult to maintain. This confusion has led to focused study of these constructions,^[1] and their impact on the theory of grammar may be great since they appear to challenge the initial binary division of the sentence (S) into a subject noun phrase (NP) and a predicate verb phrase (VP) (S → NP VP), this division being at the core of all phrase structure grammars (as opposed to dependency grammars, which do not acknowledge this binary division).

Examples

Inverse copular constructions can involve adjectives, prepositions, and nouns, but they do not allow the post-copula nominal to be a definite pronoun:

- a. **The cause of the riot is** a picture on the wall.
- b. A picture on the wall **is the cause of the riot**. - Inverse copular construction
- c. *A picture on the wall **is it**. - Post-verb subject cannot be a definite pronoun
- a. **Fred is** the plumber.
- b. The plumber **is Fred**. - Inverse copular construction
- c. *The plumber **is he**. - Post-verb subject cannot be a definite pronoun

The defining trait of the inverse copular constructions is that two counts of inversion have occurred: the normal subject has inverted to a post-verb position, and the predicative expression has inverted to the pre-verb position. The verb is always a finite form of the copula 'be' (*am, are, is, was, were*). This type of inversion is generally NOT possible with other verbs, e.g. *Sam belched twice* vs. **Twice belched Sam*.

Subject-verb agreement

Inverse copular constructions where the inverted predicative expression is a noun phrase are particularly noteworthy, in part because subject-verb agreement can (at least in English) be established with the pre-verb predicative NP as opposed to with the post-verb subject NP, e.g.

- a. **The pictures are** a problem. - Canonical word order, standard subject-verb agreement
- b. A problem **is/?? are the pictures**. - Inverse copular construction, subject-verb agreement reversed in a sense
 - a. **Those kids are** an annoyance. - Canonical word order, standard subject-verb agreement
 - b. An annoyance **is/?? are those kids**. - Inverse copular construction, subject-verb agreement reversed in a sense

In the inverse copular constructions, the copula agrees with the singular predicative expression to its left as opposed to with the plural subject to its right. Interestingly, this phenomenon seems to be limited to English (and possibly French); it does not occur in related languages such as German, e.g.

- a. **Die Bilder sind** ein Problem. - Canonical subject-verb agreement
'The pictures are a problem.'
- b. Ein Problem **sind/*ist die Bilder**. - Plural agreement with inverted subject maintained

'A problem are/is the pictures.'

Nor does it occur in some Romance languages, e.g. Italian:

- a. **Queste foto del muro sono** la causa della rivolta. - Canonical subject-verb agreement

'These photos on the wall are the cause of the revolt.'

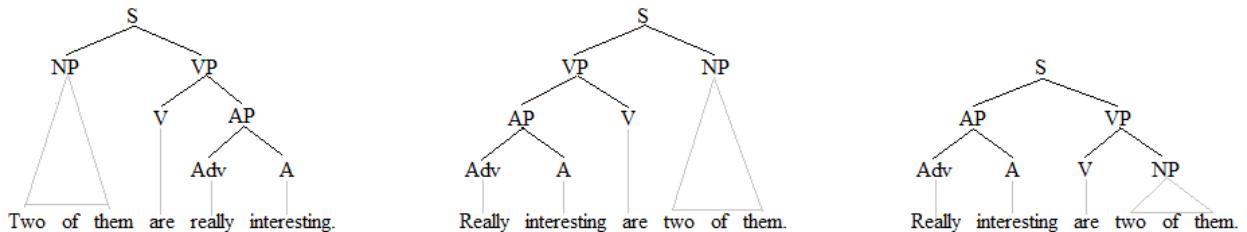
- b. La causa della rivolta **sono/*è queste foto del muro.** - Plural agreement with inverted subject maintained

'The cause of the revolt are/is the photos on the wall.'

The fact that English (unlike German and Italian) demands subject-verb agreement to occur with the pre-verb NP generates confusion about what should qualify as the subject NP. From a morphological point of view, the pre-verb NP in inverse copular constructions should count as the subject, but from the perspective of information structure (e.g. definiteness, old information, specificity), the post-verb NP should be the subject.

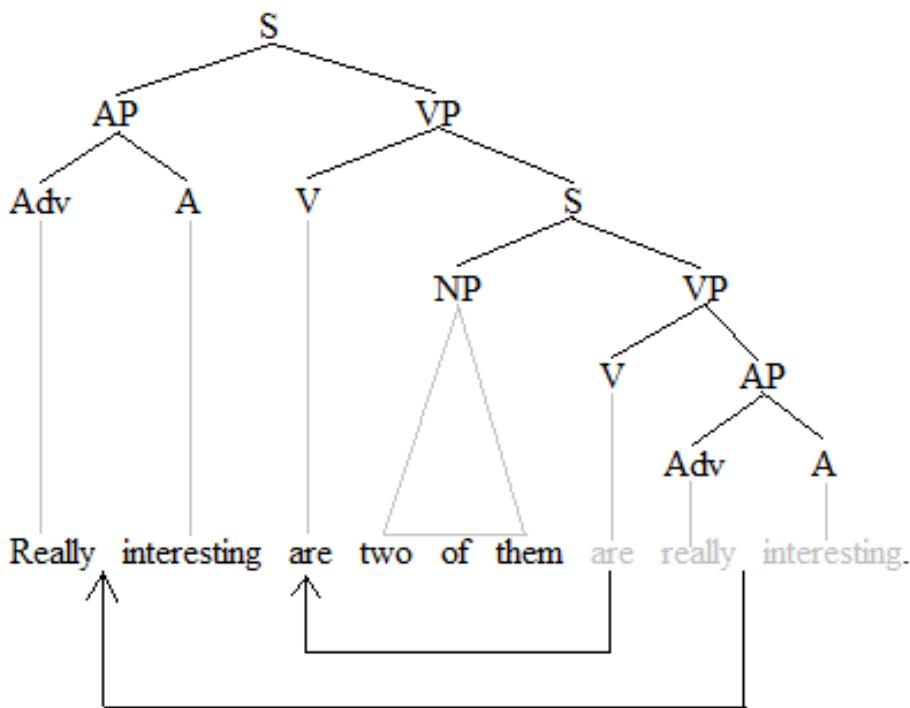
Importance for the theory of grammar

Inverse copular constructions challenge one of the major dogmas of the theory of clause or sentence structure, i.e. that the two basic constituents of a sentence - the noun phrase (NP) and the verb phrase (VP) - are associated with the logical/grammatical functions of subject and predicate (cf. phrase structure rules and sentence). In fact, copular sentences that maintain the canonical groupings are not adequate on empirical grounds, since a very unorthodox left-branching structure is necessary, or if one rejects the canonical groupings and positions the subject inside a VP-like constituent, then one has to assume that the subject NP and copula verb can form a type of VP to the exclusion of the predicative expression. These analyses are illustrated with the following trees:



The tree on the left shows the traditional division of the clause into a subject NP and a predicate VP. Most declarative sentences in English are consistent with this analysis because most sentences allow one to acknowledge the pre-verb NP as the subject. Inverse copular constructions, however, do not readily allow this division precisely because one really cannot group the postposed subject together with the copula so that the two continue to form a VP constituent. If one nevertheless does group them together as shown in the second tree, the resulting structure is very unorthodox because it is left-branching. Or if one nevertheless does position the subject inside a VP-type constituent as shown on the right, this VP-type constituent is problematic, because phrase structure grammars do not generally group the subject together with the copula to the exclusion of the predicative expression.

To remedy a phrase structure analysis of copular sentences, the theory has to augment the analysis with additional assumptions. The standard explanation is to assume movement, whereby the traditional NP-VP division is maintained in a sense, but it exists at an underlying level of structure. One assumes that both the copula and the predicative expression move out of their canonical positions to positions higher in the tree structure, e.g.^[2]

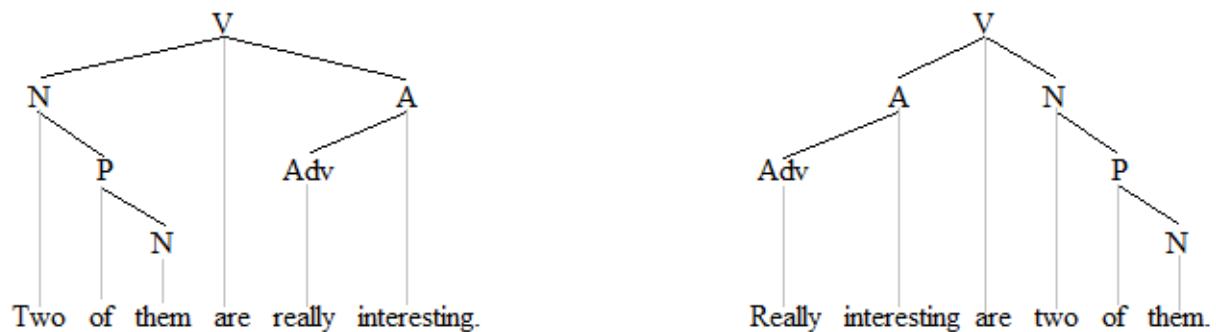


This analysis maintains the binary division of the clause into NP and VP, but at the cost of major stipulation. One has to assume that at least two instances of movement occur; both the subject *two of the problems* and the copula *are* move out of their base position up the structure to the left.

The dependency grammar analysis

The discussion in the preceding section has demonstrated that in order for phrase structure grammars to address inverse copular constructions, they must augment their theoretical apparatus in significant ways. This necessity is due to their almost unanimous assumption that basic clause structure contains a finite VP constituent in English (and many other languages).

In contrast to phrase structure grammars, dependency grammars are NOT challenged by inverse copular constructions in the same way because they do not acknowledge the existence of a predicate VP constituent. Instead, they position the (finite) verb as the root of all clause structure, whereby subject NP and predicative expression are equi-level dependents of this root. What this means for the analysis of inverse copular constructions is that there is no motivation to force these constructions to somehow fit the structure of canonical SCP copular clauses (subject-copula-predicative expression), for there is no predicate VP present to begin with. The following dependency trees illustrate the point:^[3]



Since there is no VP constituent present in the sentences with canonical order on the left, there is no reason to add additional theoretic apparatus to accommodate the inverse copular construction on the right. What happens is that the subject and predicative expression switch positions, whereby due to the relatively flat structure, this switch does not result in a discontinuity. The integrity of the basic hierarchical structure remains consistent across the two variants.

Notes

- [1] Inverse copular constructions have been explored in great depth. See Moro (1997) for the original proposal, Heycock and Kroch (1998), Pereltsvaig (2001), Mikkelsen (2005).
- [2] For examples of movement analyses along the lines shown here, see for instance Moro (1997) and Mikkelsen (2005).
- [3] Dependency grammar trees like the ones here can be found en masse in, for instance, Groß and Osborne (2009).

References

- Groß, T. and T. Osborne 2009. Toward a practical dependency grammar theory of discontinuities. SKY Journal of Linguistics 22, 43-90.
- Heycock, C. and A. Kroch 1998. Inversion and equation in copular sentences. In A. Alexiadou et al. (eds) ZAS Papers in Linguistics 10. 71 - 87. Zentrum für Allgemeine Sprachwissenschaft, Berlin.
- Mikkelsen, L. 2005. Copular clauses: Specification, predication, and equation. Linguistics Today 85. Amsterdam: John Benjamins.
- Moro, A. 1997. The raising of predicates. Predicative noun phrases and the theory of clause structure, Cambridge Studies in Linguistics, Cambridge University Press, Cambridge, England.
- Pereltsvaig, A. 2001. Copular sentences and the architecture of grammar, Ph.D. Thesis, McGill University, Canada.

Lexical item

A **lexical item** (or **lexical unit**, **lexical entry**) is a single word, a part of a word, or a chain of words (=catena) that forms the basic elements of a language's lexicon (≈vocabulary). Examples are *cat*, *traffic light*, *take care of*, *by the way*, and *it's raining cats and dogs*. Lexical items can be generally understood to convey a single meaning, much as a lexeme, but are not limited to single words. Lexical items are like semes in that they are "natural units" translating between languages, or in learning a new language. In this last sense, it is sometimes said that language consists of grammaticalized lexis, and not lexicalized grammar. The entire store of lexical items in a language is called its lexis. Lexical items composed of more than one word are also sometimes called *lexical chunks*, *gambits*, *lexical phrases*, *lexical units*, *lexicalized stems*, or *speech formulae*. The term *polyword listemes* is also sometimes used.

Types of lexical items

Common types of lexical items/chunks include^[1]

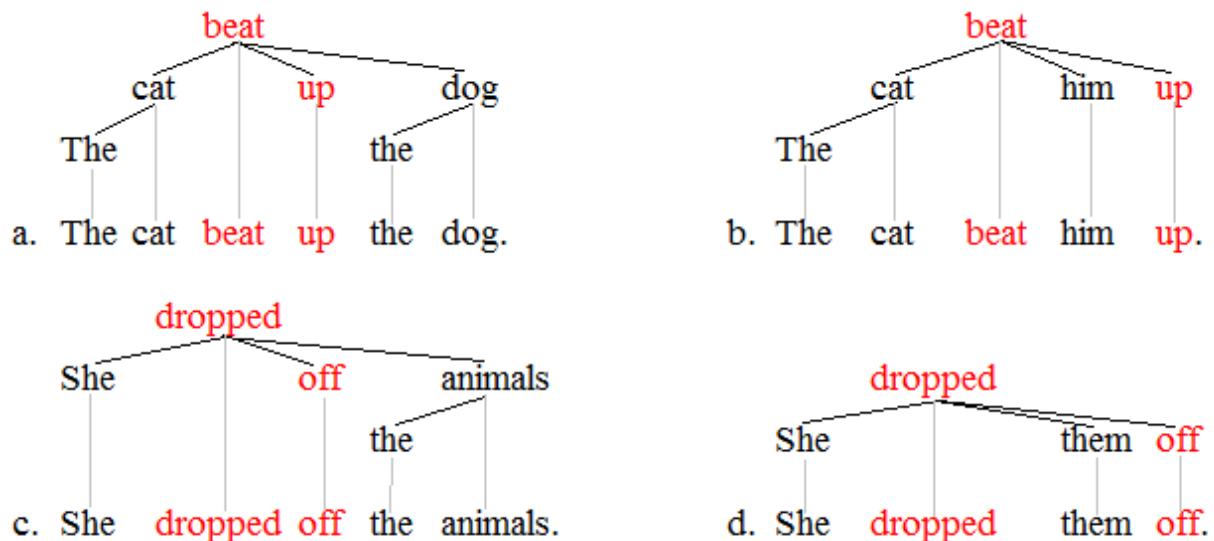
1. Words, e.g. *cat*, *tree*
2. Parts of words, e.g. *-s* in *trees*, *-er* in *worker*, *non-* in *nondescript*, *-est* in *loudest*
3. Phrasal verbs, e.g. *put off* or *get out*
4. Polywords, e.g. *by the way*, *inside out*
5. Collocations, e.g. *motor vehicle*, *absolutely convinced*.
6. Institutionalized utterances, e.g. *I'll get it*, *We'll see*, *That'll do*, *If I were you*, *Would you like a cup of coffee?*
7. Idioms, e.g. *break a leg*, *was one whale of a*, *a bitter pill to swallow*
8. Sayings, e.g. *The early bird gets the worm*, *The devil is in the details*

9. Sentence frames and heads, e.g. *That is not as...as you think*, *The problem was*
10. Text frames, e.g., *In this paper we explore...*; *Firstly...*; *Secondly...*; *Finally ...*

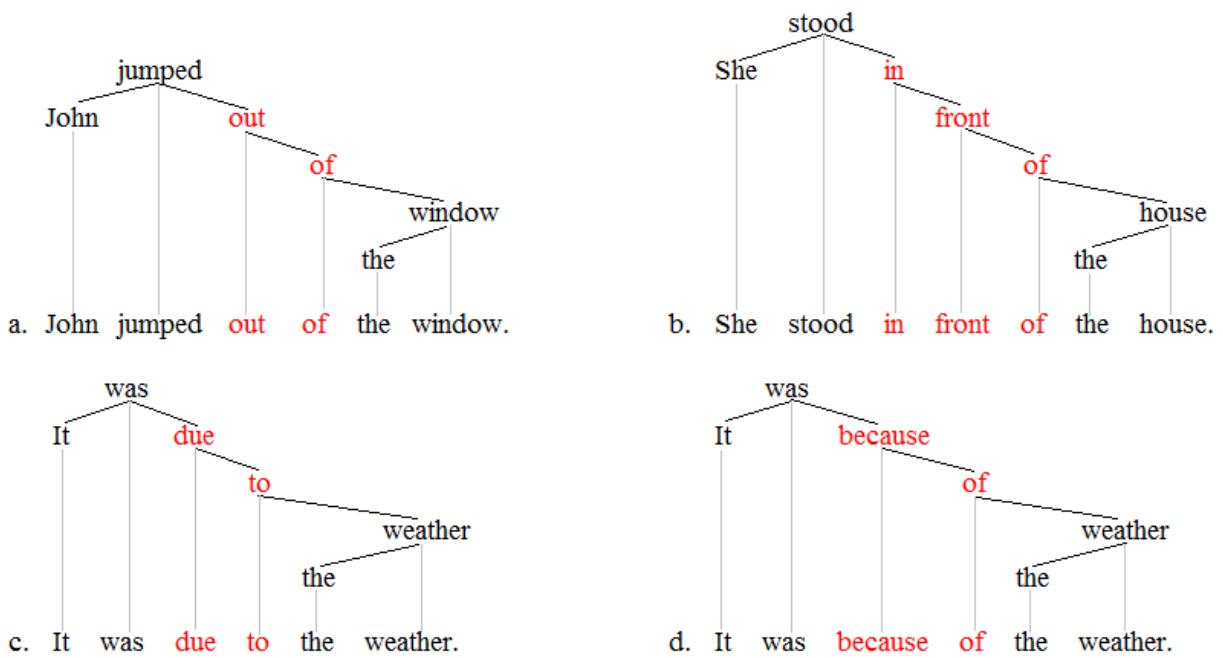
An associated concept is that of noun-modifier semantic relations, wherein certain word pairings have a standard interpretation. For example, the phrase *cold virus* is generally understood to refer to the virus that causes a cold, rather than to a virus that is cold.

Form-meaning correspondence

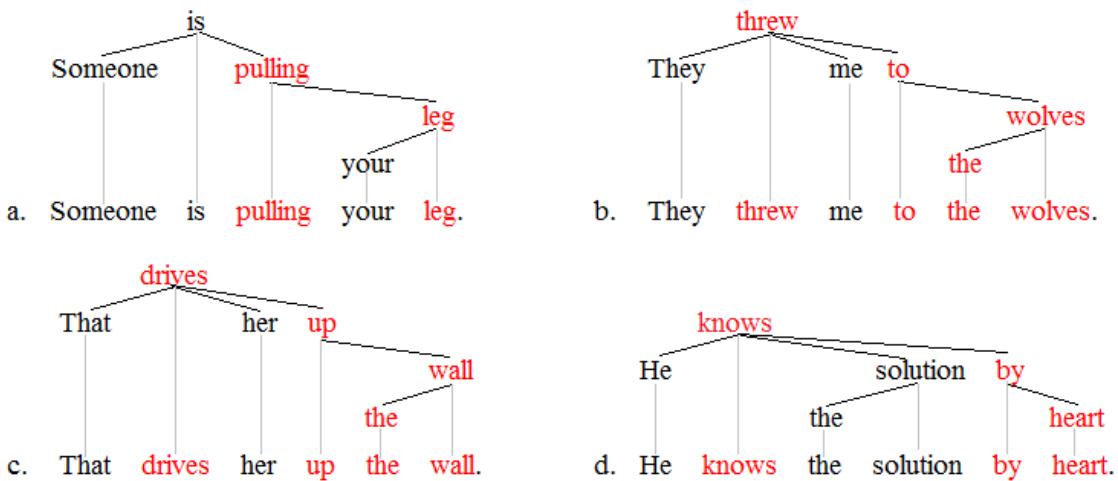
Many lexical items are either a whole word or part of a word, whereas many other lexical items consist of parts of one or more words or of multiple words in their entirety. A basic question in this area concerns the form-meaning correspondence. Many multi-word lexical items cannot be construed as constituents in syntax in any sense. But if they are not constituents, then what are they? A relatively recent development in the field of syntax is that lexical items are stored in the lexicon as catenae, whereby a given catena may or not be a constituent.^[2] In syntax, a catena is any element or combination of elements (words or parts of words) that are continuous in the vertical dimension, that is, in the hierarchy of words. The elements form a catena insofar as they are linked together by dependencies. Some dependency grammar trees containing multiple word lexical items that are catenae but not constituents are now produced. The following trees illustrate phrasal verbs:



The verb and particle (in red) in each case constitute a particle verb construction, which is a single lexical item. The two words remain a catena even as shifting changes their order of appearance. The following trees illustrate polywords:



The component words of the polywords (in red) are continuous in the vertical dimension and are therefore catenae. They cannot, however, be construed as constituents since they do not form complete subtrees. The following trees illustrate idioms:



The fixed words constituting the idiom (in red) build a catena each time. Note that *your* is not part of the idiom in the first tree (tree a) because the possessor is variable, e.g. *He is pulling my/her/his/someone's/etc. leg*. An important caveat concerning idiom catenae is that they can be broken up in the syntax, e.g. *Your leg is being pulled*. The claim, however, is that these lexical items are stored as catenae in the lexicon; they do not always appear as catenae in the actual syntax.

Notes

- [1] Concerning types of lexical chunks, see M. Lewis (1997).
- [2] The catena unit was introduced to linguistics by William O'Grady (1998). The concept has been developed further by others. See for instance Osborne and Groß (2012).

References

- Lewis, M. 1997. Implementing the Lexical Approach. Language Teaching Publications. Hove, England.
- O'Grady, W. 1998. The syntax of idioms. *Natural Language and Linguistic Theory* 16, 79-312.
- Osborne, T. and T. Groß 2012. Constructions are catenae: Construction Grammar meets Dependency Grammar. *Cognitive Linguistics* 23, 1, 163-214.

m-command

In theoretical linguistics, **m-command** is a syntactic relation between two elements in a tree structure. It is a broader version of c-command, and like c-command, it is defined over the constituency-based trees associated with the phrase structure grammars (= constituency grammars) of the Chomskyan tradition (Government and Binding, Minimalist Program); it is therefore not applicable to the structures that other theories of syntax assume. For instance, is not (or hardly) applicable to the dependency-based structures of dependency grammars. Aoun and Sportiche's (1983) definition of c-command in fact corresponds to what is now known as "m-command". Chomsky (1986) established the standard definition of m-command. If X and Y are two nodes in a syntactic tree, X m-commands Y if and only if:

- X does not dominate Y ,
- Y does not dominate X , and
- the maximal projection of X dominates Y .

The notion of maximal projection is adopted from X-bar theory. The difference between c-command and m-command is that X m-commands everything that it c-commands, and in addition, it m-commands the element in the specifier position of the phrase that it heads. M-command is used in the formulation of the syntactic relation government.

References

- Aoun, Joseph; Dominique Sportiche (1983). "On the Formal Theory of Government". *Linguistic Review* 2: 211–236.
- Chomsky, Noam (1986). *Barriers*. Cambridge, MA: MIT Press.

Measure word

In linguistics, **measure words** are words (or morphemes) that are used in combination with a numeral to indicate an amount of some noun. They denote a unit or measurement and are used with nouns that are not countable. For instance, in English, mud is a mass noun and thus one cannot say *"three muds", but one can say "three drops of mud", "three pails of mud", etc. In these examples, *drops* and *pails* function as measure words.

Informally, the term *measure word* is also sometimes used to refer to **numeral classifiers**, which are used with nouns that are countable in some languages. For instance, in English no extra word is needed when saying "three people", but in many East Asian languages a numeral classifier is added, just as a measure word is added for uncountable nouns in English. While many linguists maintain a distinction between measure words and numeral classifiers, the terms are sometimes used interchangeably.^{[1][2]} (For instance, materials for teaching Chinese as a second language generally refer to Chinese classifiers as "measure words".)

Most measure words in English correspond to units of measurement or containers, and are themselves count nouns rather than grammatical particles:

- one *litre* of water
- three *cups* of coffee
- four *kernels* of corn, three *ears* of corn, two *bushels* of corn

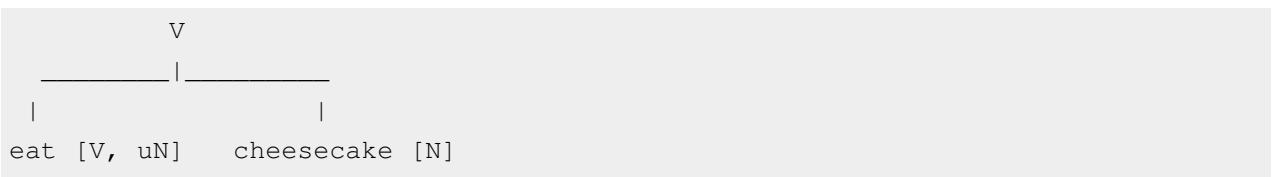
References

- [1] Tai, James H.-Y. (1994). "Chinese classifier systems and human categorization". In Willian S.-Y. Wang, M. Y. Chen, and Ovid J.L. Tzeng. *In honor of William S.-Y. Wang: Interdisciplinary studies on language and language change*. Taipei: Pyramid Press. 2.
ISBN 978-957-9268-55-4.
- [2] Cheng, Lisa L.-S.; Sybesma, Rint (1998). "yi-wan tang and yi-ge Tang: Classifiers and mass-classifiers". *Tsing Hua Journal of Chinese Studies* 28 (3).

Merge (linguistics)

Merge (usually capitalized) is one of the basic operations in the Minimalist Program, a leading approach to generative syntax, when two syntactic objects are combined to form a new syntactic unit (a set). Merge also has the property of recursion in that it may apply to its own output: the objects combined by Merge are either lexical items or sets that were themselves formed by Merge. This recursive property of Merge has been claimed to be a fundamental characteristic that distinguishes language from other cognitive faculties. As Noam Chomsky (1999) puts it, Merge is "an indispensable operation of a recursive system ... which takes two syntactic objects A and B and forms the new object G={A,B}" (p. 2).^[1]

In some variants of the Minimalist Program Merge is triggered by feature checking, e.g. the verb *eat* selects the noun *cheesecake* because the verb has an uninterpretable N-feature [uN] ("u" stands for "uninterpretable"), which must be checked (or deleted) due to full interpretation.^[2] By saying that this verb has a nominal uninterpretable feature, we rule out such ungrammatical constructions as **eat* *beautiful* (the verb selects an adjective). Schematically it can be illustrated as:



Chomsky (2001) distinguishes between external and internal Merge: if A and B are separate objects then we deal with external Merge; if either of them is part of the other it is internal Merge.^[3]

In other approaches to generative syntax, such as Head-driven phrase structure grammar and Lexical functional grammar, there is no precise analogue to Merge. However, in these theories, feature structures are used to account for many of the same facts. Though Merge is usually assumed to be unique to language, the linguists Jonah Katz and David Pesetsky have argued that the harmonic structure of tonal music is also a result of the operation Merge.^[4]

This notion of 'merge' may in fact be related to Fauconnier's 'blending' notion in cognitive linguistics.

Three controversial aspects of Merge

Standard Merge (i.e. as it is commonly understood) encourages one to adopt three key assumptions about the nature of syntactic structure and the faculty of language: 1) sentence structure is generated bottom up in the mind of speakers (as opposed to top down or left to right), 2) all syntactic structure is binary branching (as opposed to n-ary branching) and 3) syntactic structure is constituency-based (as opposed to dependency-based). While these three assumptions are taken for granted for the most part by those working within the broad scope of the Minimalist Program, other theories of syntax reject one or more of them.

Merge is commonly seen as merging smaller constituents to greater constituents until the greatest constituent, the sentence, is reached. This bottom-up view of structure generation is rejected by representational (=non-derivational) theories (e.g. Generalized Phrase Structure Grammar, Head-Driven Phrase Structure Grammar, Lexical Functional Grammar, most dependency grammars, etc.), and it is contrary to early work in Transformational Grammar. The phrase structure rules of context free grammar, for instance, were generating sentence structure top down.

Merge is usually assumed to merge just two constituents at a time, a limitation that results in tree structures in which all branching is binary. While the strictly binary branching structures have been argued for in detail,^[5] one can also point to a number of empirical considerations that cast doubt on these strictly binary branching structures, e.g. the results of standard constituency tests.^[6] For this reason, most grammar theories outside of Government and Binding Theory and the Minimalist Program allow for n-ary branching.

Merge merges two constituents in such a manner that these constituents become sister constituents and are daughters of the newly created mother constituent. This understanding of how structure is generated is constituency-based (as opposed to dependency-based). Dependency grammars (e.g. Meaning-Text Theory, Functional Generative Description, Word grammar) disagree with this aspect of Merge, since they take syntactic structure to be dependency-based.^[7]

Notes

- [1] Chomsky (1999).
- [2] See Adger (2003).
- [3] See Chomsky (2001).
- [4] See Katz and Pesetsky (2009).
- [5] See Kayne (1981, 1994).
- [6] Concerning what constituency tests tell us about the nature of branching and syntactic structure, see Osborne (2008: 1126-32).
- [7] Concerning dependency grammars, see Ágel et al. (2003/6).

References

- Adger, D. 2003. Core syntax: A Minimalist approach. Oxford: Oxford University Press. ISBN 0-19-924370-0.
- Ágel, V., Ludwig Eichinger, Hans-Werner Eroms, Peter Hellwig, Hans Heringer, and Hennig Lobin (eds.) 2003/6. Dependency and valency: An international handbook of contemporary research. Berlin: Walter de Gruyter.
- Chomsky, N. 1999. Derivation by phase. Cambridge, MA: MIT.
- Chomsky, N. 2001. Beyond explanatory adequacy. Cambridge, MA: MIT.
- Katz, J., D. Pesetsky 2009. The identity thesis for language and music. <http://ling.auf.net/lingBuzz/000959>
- Kayne, R. 1981. Unambiguous paths. In R. May and J. Koster (eds.), Levels of syntactic representation, 143-183. Dordrecht: Kluwer.
- Kayne, R. 1994. The antisymmetry of syntax. Linguistic Inquiry Monograph Twenty-Five. MIT Press.
- Osborne, T. 2008. Major constituents: And two dependency grammar constraints on sharing in coordination. *Linguistics* 46, 6, 1109-1165.

Modal particle

In linguistics, **modal particles** are always uninflected words, and are a type of grammatical particle. Their function is that of reflecting the mood or attitude of the speaker or narrator, in that they are not reflexive but change the mood of the verb. They are often used to indicate how the speaker thinks that the content of the sentence relates to the participants' common knowledge.^[1] Languages that use a lot of modal particles in their spoken form include Dutch, German, Indonesian and Japanese.^[2] The translation is often not straightforward and depends on the context.

Mandarin Chinese depends highly on the use of modal particles. Because it is a tonal language, expressing emotion by changing the pitch of the sentence or phrase would make the meaning of the sentence different; therefore, many particles have arisen that can be added to the end of the sentence to express emotion.^[3]

References

- [1] Fabian Bross (2012): German modal particles and the common ground (http://helikon-online.de/2012/Bross_Particles.pdf). In: Helikon. A Multidisciplinary Online Journal, 2. 182-209.
- [2] Dutch Grammar: politeness - Beleefdheid Modal particle - Modale partikels (http://dutchcentre.group.shef.ac.uk/advanced.dutch.grammar/mod_par.php?PHPSESSID=c40f574d03dc5ff37b8e924fde3caaAdvanced) retrieved 2009-01-01
- [3] The Chinese Language, By Daniel Kane (http://books.google.com/books?id=8OT_Sbk0yekC&pg=PA129&lpg=PA129&dq=history+of+ma+chinese+particle&source=web&ots=n9TpP8fyO&sig=uh0bZXtsh1BsthGp4osMQj2G6aE&hl=en&sa=X&oi=book_result&resnum=3&ct=result) retrieved 2009-01-29

Modal verb

A **modal verb** (also **modal**, **modal auxiliary verb**, **modal auxiliary**) is a type of auxiliary verb that is used to indicate modality – that is, likelihood, ability, permission, and obligation.^[1] Examples include the English verbs *can*, *must* and *should*.

In English and other Germanic languages, modal verbs are often distinguished as a class based on certain grammatical properties.

For more detail about modals in English, see English modal verbs.

Function

A modal auxiliary verb gives more information about the function of the main verb that it governs. Modals have a wide variety of communicative functions, but these functions can generally be related to a scale ranging from possibility ("may") to necessity ("must"), in terms of one of the following types of modality:

- epistemic modality, concerned with the theoretical *possibility of propositions being true or not true* (including likelihood and certainty)
- deontic modality, concerned with *possibility and necessity in terms of freedom to act* (including permission and duty)
- dynamic modality,^[2] which may be distinguished from deontic modality, in that with dynamic modality, the conditioning factors are *internal* – the subject's own ability or willingness to act^[3]

The following sentences illustrate epistemic and deontic uses of the English modal verb *must*:

- epistemic: *You must be starving.* ("It is necessarily the case that you are starving.")
- deontic: *You must leave now.* ("You are required to leave now.")

An ambiguous case is *You must speak Spanish*. This may be intended epistemically ("It is surely the case that you speak Spanish", e.g. after having lived in Spain for a long time), or deontically ("It is a requirement that you speak Spanish", e.g. if you want to get a job in Spain).

Epistemic modals can be analyzed as raising verbs, while deontic modals can be analyzed as control verbs.

Epistemic usages of modals tend to develop from deontic usages.^[4] For example, the inferred certainty sense of English *must* developed after the strong obligation sense; the probabilistic sense of *should* developed after the weak obligation sense; and the possibility senses of *may* and *can* developed later than the permission or ability sense. Two typical sequences of evolution of modal meanings are:

- internal mental ability → internal ability → root possibility (internal or external ability) → permission and epistemic possibility
- obligation → probability

Modal verbs in Germanic languages

English

The following table lists the modal auxiliary verbs of standard English. Most of them appear more than once based upon the distinction between deontic and epistemic modality:

Modal auxiliary	meaning contribution	Example
can ₁	deontic/dynamic modality	She can really sing.
can ₂	epistemic modality	That can indeed help.
could ₁	deontic modality	He could swim when he was young.
could ₂	epistemic modality	That could happen soon.
may ₁	deontic modality	May I stay?
may ₂	epistemic modality	That may be a problem.
might	epistemic modality	The weather might improve.
must ₁	deontic modality	Sam must go to school.
must ₂	epistemic modality	It must be hot outside.
shall	deontic modality	You shall not pass.
should ₁	deontic modality	You should stop that.
should ₂	epistemic modality	That should be surprising.
will	epistemic modality	She will try to lie.
would	epistemic modality	Nothing would accomplish that.

The verbs in this list all have the following characteristics:

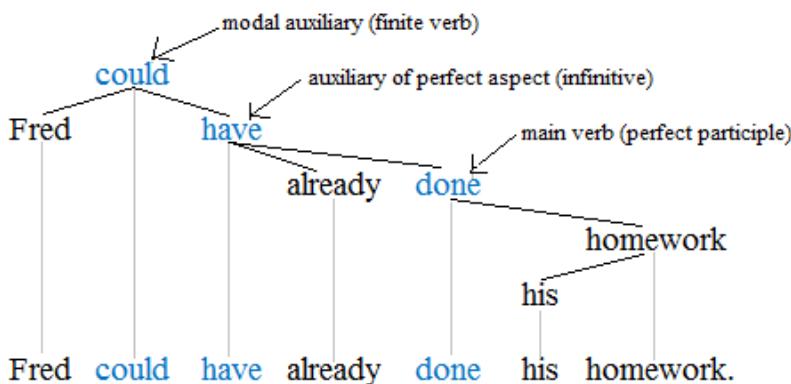
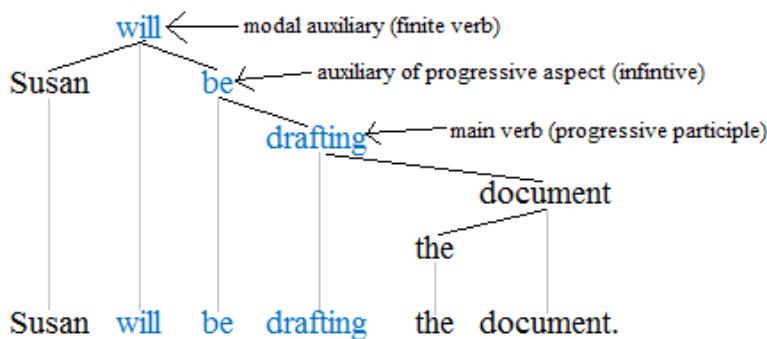
- They are auxiliary verbs, which means they allow subject-auxiliary inversion and can take the negation *not*,
- They convey functional meaning,
- They are defective insofar as they cannot be inflected, nor do they appear in non-finite form (i.e. not as infinitives, gerunds, or participles),
- They are nevertheless always finite and thus appear as the root verb in their clause, and
- They subcategorize for an infinitive, i.e. they take an infinitive as their complement

The verbs/expressions *dare*, *ought to*, *had better*, and *need not* behave like modal auxiliaries to a large extent, although they are not productive in the role to the same extent as those listed here. Furthermore, there are numerous other verbs that can be viewed as modal verbs insofar as they clearly express modality in the same way that the verbs in this list do, e.g. *appear*, *have to*, *seem*, etc. In the strict sense, though, these other verbs do not qualify as modal verbs in English because they do not allow subject-auxiliary inversion, nor do they allow negation with *not*. If, however, one defines *modal verb* entirely in terms of meaning contribution, then these other verbs would also be

modals and so the list here would have to be greatly expanded.

Defectiveness

Modals in English form a very distinctive class of verbs. They are auxiliary verbs like *be*, *do*, and *have*, but they are defective insofar as they cannot be inflected like these other auxiliary verbs, e.g. *have* → *has* vs. *should* → **shoulds*, *do* → *did* vs. *may* → **mayed*, etc. In clauses that contain two or more verbs, any modal that is present appears as the left-most verb in the verb catena (= chain of verbs). What this means is that the modal verb is always finite (although it is, as stated, never inflected). In the syntactic structure of the clause, the modal verb is the clause root. The following dependency grammar trees illustrate the point:



The verb catenae are in blue. The modal auxiliary in both trees is the root of the entire sentence. The verb that is immediately subordinate to the modal is always an infinitive. The fact that modal auxiliaries in English are necessarily finite means that within the minimal finite clause that contains them, they can never be subordinate to another verb, e.g.

- a. Sam **may** have done his homework. - The modal auxiliary *may* is the root of the clause.
- b. *Sam has **may** done his homework. - The sentence fails because the modal auxiliary *may* is not the root of the clause.
- a. Jim **will** be helped. - The modal auxiliary *will* is the root of the clause.
- b. *Jim is **will** be helped. - The sentence fails because the modal auxiliary *will* is not the root of the clause.

This trait of modal auxiliaries has motivated the designation *defective*, that is, modal auxiliaries are defective in English because they are so limited in their form and distribution. One can note further in this area that English modal auxiliaries are quite unlike modal verbs in closely related languages. In German, for instance, modals can occur as non-finite verbs, which means they can be subordinate to other verbs in verb catenae; they need not appear as the clause root.

Other Germanic languages

The table below lists some modal verbs with common roots in English, German and Dutch. English modal auxiliary verb provides an exhaustive list of modal verbs in English, and German verb#Modal verbs provides a list for German, with translations. Dutch verbs#Irregular verbs gives conjugations for some Dutch modals.

Words in the same row of the table below share the same etymological root. Because of semantic drift, however, words in the same row may no longer be proper translations of each other. In addition, the English and German verbs *will* are completely different in meaning, and the German one has nothing to do with constructing the future tense. These words are false friends.

In English, the plural and singular forms are identical. For German and Dutch, both the plural and singular form of the verb are shown.

English	German	Dutch
can	<i>können, kann</i>	<i>kunnen, kan</i>
shall	<i>sollen, soll</i>	<i>zullen, zal</i>
will	<i>wollen, will</i>	<i>willen, wil</i>
must	<i>müssen, muss</i>	<i>moeten, moet</i>
may	<i>mögen, mag</i>	<i>mogen, mag</i>
tharf ^[5]	<i>dürfen, darf</i>	<i>durven, durf</i>

The English *could* is the preterite form of *can*; *should* is the preterite of *shall*; and *might* is the preterite of *may*. (This is ignoring the use of "may" as a vestige of the subjunctive mood in English.) These verbs have acquired an independent, present tense meaning. The German verb *möchten* is sometimes taught as a vocabulary word and included in the list of modal verbs, but it is actually the past subjunctive form of *mögen*. The English verbs *dare* and *need* have both a modal use (*he dare not do it*), and a non-modal use (*he doesn't dare to do it*). The Dutch verb *durven* is not considered a modal (but it is there, nevertheless) because its modal use has disappeared, but it has a non-modal use analogous with the English *dare*. Some English modals consist of more than one word, such as "had better" and "would rather".^[6]

Some other English verbs express modality although they are not modal verbs because they are not auxiliaries, including *want*, *wish*, *hope*, and *like*. All of these differ from the modals in English (with the disputed exception of *ought* (to)) in that the associated main verb takes its long infinitive form with the particle *to* rather than its short form without *to*, and in that they are fully conjugated.

Morphology and syntax

Germanic modal verbs are preterite-present verbs, which means that their present tense has the form of a vocalic preterite. This is the source of the vowel alternation between singular and plural in German and Dutch. Because of their preterite origins, modal verbs also lack the suffix (-s in modern English, -t in German and Dutch) that would normally mark the third person singular form:

	normal verb	modal verb
<i>English</i>	he works	he can
<i>German</i>	er arbeitet	er kann
<i>Dutch</i>	hij werkt	hij kan

The main verb that is modified by the modal verb is in the infinitive form and is *not* preceded by the word *to* (German: *zu*, Dutch: *te*). There are verbs that may seem somewhat similar in meaning to modal verbs (e.g. *like*, *want*), but the construction with such verbs would be different:

	normal verb	modal verb
<i>English</i>	he tries to work	he can work
<i>German</i>	er versucht zu arbeiten	er kann arbeiten
<i>Dutch</i>	hij probeert te werken	hij kan werken

In English, main verbs but not modal verbs always require the auxiliary verb *do* to form negations and questions, and *do* can be used with main verbs to form emphatic affirmative statements. Neither negations nor questions in early modern English used to require *do*.

	normal verb	modal verb
<i>affirmative</i>	he works	he can work
<i>negation</i>	he does not work	he cannot work
<i>emphatic</i>	he does work hard	he can work hard
<i>question</i>	does he work here?	can he work at all?
<i>negation + question</i>	does he not work here?	can he not work at all?

(German never uses "do" as an auxiliary verb for any function; Dutch uses "do" as an auxiliary, but only in colloquial speech)

In English, modal verbs are called defective verbs because of their incomplete conjugation: they have a narrower range of functions than ordinary verbs. For example, most have no infinitive or gerund.

Modal verbs in other languages

Hawaiian Creole English

Hawaiian Creole English is a creole language most of whose vocabulary, but not grammar, is drawn from English. As is generally the case with creole languages, it is an isolating language and modality is typically indicated by the use of invariant pre-verbal auxiliaries.^[7] The invariance of the modal auxiliaries to person, number, and tense makes them analogous to modal auxiliaries in English. However, as in most creoles the main verbs are also invariant; the auxiliaries are distinguished by their use in combination with (followed by) a main verb.

There are various preverbal modal auxiliaries: *kaen* "can", *laik* "want to", *gata* "have got to", *haeftu* "have to", *baeta* "had better", *sapostu* "am/is/are supposed to". Unlike in Germanic languages, tense markers are used, albeit infrequently, before modals: *gon kaen kam* "is going to be able to come". *Waz* "was" can indicate past tense before the future/volitional marker *gon* and the modal *sapostu*: *Ai waz gon lift weits* "I was gonna lift weights"; *Ai waz sapostu go* "I was supposed to go".

Hawaiian

Hawaiian, like the Polynesian languages generally, is an isolating language, so its verbal grammar exclusively relies on unconjugated verbs. Thus, as with creoles, there is no real distinction between modal auxiliaries and lexically modal main verbs that are followed by another main verb. Hawaiian has an imperative indicated by *e* + verb (or in the negative by *mai* + verb). Some examples of the treatment of modality are as follows:^{[8]:pp. 38–39} *Pono* conveys obligation/necessity as in *He pono i na kamali'i a pau e maka'ala*, "It's right for children all to beware", "All children should/must beware"; ability is conveyed by *hiki* as in *Ua hiki i keia kamali'i ke heluhelu* "Has enabled to this child to read", "This child can read".

French

French, like other Romance languages, does not have a grammatically distinct class of modal auxiliary verbs; instead, it expresses modality using conjugated verbs followed by infinitives: for example, *pouvoir* "to be able" (*Je peux aller*, "I can go"), *devoir* "to have an obligation" (*Je dois aller*, "I must go"), and *vouloir* "to want" (*Je veux aller* "I want to go").

Mandarin Chinese

Mandarin Chinese is an isolating language without inflections. As in English, modality can be indicated either lexically, with main verbs such as *yào* "want" followed by another main verb, or with auxiliary verbs. In Mandarin the auxiliary verbs have six properties that distinguish them from main verbs:^{[9]:pp.173-174}

- They must co-occur with a verb (or an understood verb).
- They cannot be accompanied by aspect markers.
- They cannot be modified by intensifiers such as "very".
- They cannot be nominalized (used in phrases meaning, for example, "one who can")
- They cannot occur before the subject.
- They cannot take a direct object.

The complete list of modal auxiliary verbs^{[9]:pp.182-183} consists of

- three meaning "should",
- four meaning "be able to",
- two meaning "have permission to",
- one meaning "dare",
- one meaning "be willing to",
- four meaning "must" or "ought to", and
- one meaning "will" or "know how to".

Spanish

Spanish, like French, uses fully conjugated verbs followed by infinitives. For example, *poder* "to be able" (*Puedo andar*, "I can go"), *deber* "to have an obligation" (*Debo andar*, "I should go"), and *querer* "to want" (*Quiero andar* "I want to go").

The correct use of *andar* in these examples would be reflexive. "*Puedo andar*" means "I can walk", "*Puedo irme*" means "I can go" or "I can take myself off/away". The same applies to the other examples.

Bibliography

- The Syntactic Evolution of Modal Verbs in the History of English [10]
- Walter W. Skeat, The Concise Dictionary of English Etymology (1993), Wordsworth Editions Ltd.

References

- [1] Palmer, F.R., *Mood and Modality*, Cambridge University Press, 2001, p. 33
- [2] A Short Overview of English Syntax (Rodney Huddleston) (<http://www.lel.ed.ac.uk/grammar/overview.html>), section 6.5d
- [3] Palmer, *op. cit.*, p. 70. The subsequent text shows that the intended definitions were transposed.
- [4] Bybee, Joan; Perkins, Revere; and Pagliuca, William. *The Evolution of Grammar*, Univ. of Chicago Press, 1994, pp.192-199
- [5] Obsolete or dialectal, confused with and replaced by *dare* (*OED*, s.v. †*tharf*, *thar*, *v.* and *dare*, *v.*¹).
- [6] Ian Jacobs. English Modal Verbs. August 1995 (<http://www.w3.org/People/Jacobs/modals.ps>)
- [7] Sakoda, Kent, and Jeff Siegel, *Pidgin Grammar*, Bess Press, 2003.
- [8] Alexander, W. D., *Introduction to Hawaiian Grammar*, Dover Publ., 2004
- [9] Li, Charles N., and Sandra A. Thomson, *Mandarin Chinese: A Functional Reference Grammar*, 1989.
- [10] http://www.celineromero.com/eng-thesis_html/thesis.html

External links

- German Modal Verbs (<http://www.deutsched.com/Grammar/Lessons/0108modalverbs.php>) A grammar lesson covering the German modal verbs
- (Portuguese) Modal Verbs (<http://www.infoescola.com/ingles/verbos-modais-modal-verbs/>)
- Modal Verb Tutorial (<http://www.englishpage.com/modals/modalintro.html>)

Movement paradox

A **movement paradox** is a grammatical phenomenon which, particularly according to proponents of lexical functional grammar, presents some problems for a transformational approach to syntax. Take the following example sentences:

We talked about the fact that he was sick for days.

The fact that he was sick, we talked about for days.

These two sentences are related by movement in a transformational analysis: in the second sentence, the phrase "the fact that he was sick" has been moved to the front of the sentence for emphasis. However, there are pairs of sentences like this in which the sentence without movement is ungrammatical while the sentence with movement is not:

**We talked about that he was sick for days.*

That he was sick, we talked about for days.

This may be difficult to explain in an analysis based on movement, since it is not obvious how the second sentence can be grammatical if it is derived from a movement operation applying to an ungrammatical structure, i.e. a structure like that of the first sentence. Lexical functional grammar avoids these difficulties to some extent because it does not have a movement operation.

References

- Bresnan, Joan. 2001. *Lexical-Functional Syntax*. Oxford: Blackwell.

Grammatical modifier

In grammar, a **modifier** is an optional element in phrase structure or clause structure.^[1] 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.

Premodifiers and postmodifiers

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 that you met*

In this noun phrase, *man* is the head, *nice* and *tall* are premodifiers, and *from Canada* and *that 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.

Types of modifiers

The two principal types of modifiers are adjectives (and adjectival phrases and adjectival clauses), which modify nouns; and adverbs (and adverbial phrases and adverbial clauses), which modify other parts of speech, particularly verbs, adjectives and other adverbs, as well as whole phrases or clauses. (Not all adjectives and adverbs are necessarily modifiers, however; an adjective will normally be considered a modifier when used attributively, but not when used predicatively – compare the examples with the adjective *red* at the start of this article.)

Another type of modifier in some languages, including English, is the noun adjunct, which is a noun modifying another noun (or occasionally another part of speech). An example is *land* in the phrase *land mines* given above.

Examples of the above types of modifiers, in English, are given below.

- *It was [a nice house].* (adjective modifying a noun, in a noun phrase)
- *[The swiftly flowing waters] carried it away.* (adjectival phrase, in this case a participial phrase, modifying a noun in a noun phrase)
- *She's [the woman with the hat].* (adjectival phrase, in this case a prepositional phrase, modifying a noun in a noun phrase)
- *I saw [the man whom we met yesterday].* (adjectival clause, in this case a relative clause, modifying a noun in a noun phrase)
- *His desk was in [the faculty office].* (noun adjunct modifying a noun in a noun phrase)
- *[Put it gently in the drawer].* (adverb in verb phrase)
- *He was [very gentle].* (adverb in adjective phrase)
- *She set it down [very gently].* (adverb in adverb phrase)
- *[Even more] people were there.* (adverb modifying a determiner)
- *It ran [right up the tree].* (adverb modifying a prepositional phrase)
- *[Only the dog] was saved.* (adverb modifying a noun phrase)

In some cases, noun phrases or quantifiers can act as modifiers:

- *[A few more] workers are needed.* (quantifier modifying a determiner)
- *She's [two inches taller than I].* (noun phrase modifying an adjective)

Ambiguous and dangling modifiers

Sometimes it is not clear which element of the sentence a modifier is intended to modify. In many cases this is not important, but in some cases it can lead to genuine ambiguity. For example:

- *He painted her sitting on the step.*

Here the participial phrase *sitting on the step* may be intended to modify *her* (meaning that the painting's subject was sitting on the step), or it may be intended to modify the verb phrase *painted her* or the whole clause *he painted her* (or just *he*), meaning in effect that it was the painter who was sitting on the step.

Sometimes the element which the modifier is intended to modify does not in fact appear in the sentence, or is not in an appropriate position to be associated with that modifier. This is often considered a grammatical or stylistic error. For example:

- *Walking along the road, a vulture loomed overhead.*

Here whoever was "walking along the road" is not mentioned in the sentence, so the modifier (*walking along the road*) has nothing to modify, except *a vulture*, which is clearly not the intention. Such a case is called a "dangling modifier", or more specifically, in the common case where (as here) the modifier is a participial phrase, a "dangling participle".

References

[1] Cambridge Grammar of the English Language

Grammatical mood

In linguistics, **grammatical mood** is a grammatical (and specifically, morphological) feature of verbs, used to signal modality.^{[1][2]:p.181; [3]} That is, it is the use of verbal inflections that allow speakers to express their attitude toward what they are saying (for example, whether it is intended as a statement of fact, of desire, of command, etc.). Less commonly, the term is used more broadly to allow for the syntactic expression of modality — that is, the use of non-inflectional phrases.

Mood is distinct from grammatical tense or grammatical aspect, although the same word patterns are used to express more than one of these meanings at the same time in many languages, including English and most other modern Indo-European languages. (See [tense–aspect–mood](#) for a discussion of this.)

Some examples of moods are conditional, imperative, indicative, injunctive, optative, potential, and subjunctive. Infinitive is a category apart from all these finite forms, and so are gerunds and participles. Some Uralic Samoyedic languages have more than ten moods; Nenets has as many as sixteen. The original Indo-European inventory of moods was indicative, subjunctive, optative, and imperative. Not every Indo-European language has each of these moods, but the most conservative ones such as Avestan, Ancient Greek, and Sanskrit have them all. English has the indicative, imperative, and subjunctive moods; others, such as the conditional, do not appear as morphologically distinct forms.

Not all of the moods listed below are clearly conceptually distinct. Individual terminology varies from language to language, and the coverage of (e.g.) the "conditional" mood in one language may largely overlap with that of the "hypothetical" or "potential" mood in another. Even when two different moods exist in the same language, their respective usages may blur, or may be defined by syntactic rather than semantic criteria. For example, the subjunctive and optative moods in Ancient Greek alternate syntactically in many subordinate clauses, depending on the tense of the main verb. The usage of the indicative, subjunctive and jussive moods in Classical Arabic is almost completely controlled by syntactic context; the only possible alternation in the same context is between indicative and jussive following the negative particle *lā*.

Realis moods

Realis moods are a category of grammatical moods that indicate that something is actually the case or actually not the case. The most common realis mood is the indicative mood. Some languages have a distinct generic mood for expressing general truths. For other realis moods, see the main article.

Indicative

The indicative mood, or evidential mood, is used for factual statements and positive beliefs. All intentions that a particular language does not categorize as another mood are classified as indicative. In English, questions are considered indicative. It is the most commonly used mood and is found in all languages. Example: "Paul is eating an apple" or "John eats apples".

Irrealis moods

Irrealis moods are the set of grammatical moods that indicate that something is not actually the case. Simply put, they are any verb or sentence mood that are not realis moods. They may be part of expressions of necessity, possibility, requirement, wish or desire, fear, or as part of counterfactual reasonings, etc.

Irrealis verb forms are used when speaking of an event which has not happened, is not likely to happen, or is otherwise far removed from the real course of events. For example, in the sentence "If you had done your homework, you wouldn't have failed the class", *had done* is an irrealis verb form.

Some languages have distinct grammatical forms that indicate that the event described by a specific verb is an irrealis verb. Many of the Indo-European languages preserve a subjunctive mood that functions as an irrealis; some also preserve an optative mood that describes events that are wished for or hoped for but not factual.

Common irrealis moods are the imperative, the conditional, the subjunctive, the optative, the jussive, and the potential. For other examples, see the main article.

Subjunctive

The subjunctive mood, sometimes called conjunctive mood, has several uses in dependent clauses. Examples include discussing imaginary or hypothetical events and situations, expressing opinions or emotions, or making polite requests (the exact scope is language-specific). A subjunctive mood exists in English, though it is used in English much less than in many other Indo-European languages; in English, this mood has, for some uses, become something of a linguistic fossil. An example of the subjunctive mood is "I suggest that Paul *eat* an apple". In this instance, Paul is not in fact eating an apple; the sentence merely presents the hypothetical (but unfulfilled) actions of Paul according to the speaker's suggestion. Contrast this with the indicative verb of the sentence "Paul eats an apple", in which the verb "to eat" is in the present tense and employs a mood that states an unambiguous fact. Another way of expressing the request is "I suggest that Paul should eat an apple", derived from "Paul should eat an apple."

Other uses of the subjunctive in English, as in "And if he be not able to bring a lamb, then he shall bring for his trespass..." (KJV Leviticus 5:7) are archaisms. Statements such as "I will ensure that he leave immediately" often sound archaic or overly formal, and have been almost completely supplanted by constructions with the indicative, like "I will ensure that he leaves immediately".

The subjunctive part of the conditional version of "John eats if he is hungry" is:

English: *John would eat if he were hungry.*

German: *Johannes äße, wenn er Hunger hätte.*

Spanish: *Juan comería si tuviera hambre.*

Italian: *Giovanni mangerebbe se avesse fame.*

The subjunctive mood figures prominently in the grammar of the Romance languages, which require this mood for certain types of dependent clauses. This point commonly causes difficulty for English speakers learning these languages.

In certain other languages, the dubitative or the conditional moods may be employed instead of the subjunctive in referring to doubtful or unlikely events (see the main article).

Conditional

The conditional mood is used to speak of an event whose realization is dependent upon another condition, particularly, but not exclusively, in conditional sentences. In Modern English, this type of modality is expressed via a periphrastic construction, with the form *would* + infinitive, (e.g. *I would buy*), and thus is a mood only in the broad sense and not in the more common narrow sense of the term "mood". In other languages, such as Spanish or French, verbs have a specific conditional inflection. This applies also to some verbs in German, in which the conditional

mood is conventionally called *Konjunktiv II*, differing from *Konjunktiv I*. Thus, the conditional version of "John eats if he is hungry" is:

English: *John would eat if he were hungry.*

German: *Johannes äße, wenn er hungrig wäre.*

French: *Jean mangerait s'il avait faim.*

Spanish: *Juan comería si tuviera hambre.*

Portuguese: *João comeria se estivesse com fome.*

Polish: *Jan zjadłby, gdyby był głodny.*

Italian: *Giovanni mangerebbe se avesse fame.*

Johannes würde essen, wenn er hungrig wäre is also acceptable in German.

In the Romance languages, the conditional form is used primarily in the apodosis (main clause) of conditional clauses, and in a few set phrases where it expresses courtesy or doubt. The main verb in the protasis (dependent clause) is usually in the subjunctive or in the indicative mood. However, this is not a universal trait: among others in German (as above), Finnish and Romanian (even though the latter is a Romance language), the conditional mood is used in both the apodosis and the protasis. A further example is the sentence "I would buy a house if I earned a lot of money", where in Finnish both clauses have the conditional marker *-isi-*: *Ostaisin talon, jos ansaitsisin paljon rahaa.* In Polish (as well as in east slavic languages) the conditional marker *-by* also appears twice: *Kupiłbym dom, gdybym zarabiał dużo pieniędzy.*

Because English is used as a lingua franca, a similar kind of doubling of the word *would* is a fairly common way to misuse an English language construction: **I would buy if I would earn....* As in this wrong case, in English, the *would + infinitive* construct can be employed in main clauses, with a subjunctive sense: "If you **would** only **tell me** what is troubling you, I might be able to help".

Optative

The optative mood expresses hopes, wishes or commands and has other uses that may overlap with the subjunctive mood. Few languages have an optative as a distinct mood; some that do are Albanian, Ancient Greek, Sanskrit, Japanese, Finnish, Nepali and all forms of the Persian language (Avestan, Old Persian, Middle Persian, New Persian).

Jussive

The jussive mood expresses pleading, insistence, imploring, self-encouragement, wishing, desiring, intention, commanding, purpose or consequence. It is found in Arabic, where it is called the مجزون, *mağzūm*. The rules governing the jussive in Arabic are somewhat complex.

Potential

The potential mood is a mood of probability indicating that, in the opinion of the speaker, the action or occurrence is considered likely. It is used in Persian, Finnish, Japanese, in Sanskrit and in the Sami languages. (In Japanese it is often called something like **tentative**, since **potential** is used to refer to a voice indicating capability to perform the action.)

In Finnish, it is mostly a literary device, as it has virtually disappeared from daily spoken language in most dialects. Its affix is *-ne-*, as in **men + ne + e → mennee* "(s/he/it) will probably go". In English, it is formed by means of the auxiliaries *may, can, ought* and *must*: "She *may* go."

Other moods

Imperative

The imperative mood expresses direct commands, prohibitions, and requests. In many circumstances, using the imperative mood may sound blunt or even rude, so it is often used with care. Example: "Paul, do your homework now". An imperative is used to tell someone to do something without argument.

Many languages, including English, use the bare verb stem to form the imperative (such as "go", "run", "do"). Other languages, such as Seri and Latin, however, use special imperative forms.

In English, second person is implied by the imperative except when first-person plural is specified, as in "Let's go" ("Let us go").

The prohibitive mood, the negative imperative may be grammatically or morphologically different from the imperative mood in some languages. It indicates that the action of the verb is not permitted, e.g. "Don't you go!"

In English, the imperative is sometimes used to form a conditional sentence: e.g. "go eastwards a mile, and you'll see it" means "if you go eastwards a mile, you will see it".

Interrogative

The interrogative mood is used for asking questions. Most languages do not have a special mood for asking questions, but Welsh and Nenets do.

References

- [1] Palmer, F. R., *Mood and Modality*, Cambridge Univ. Press, 1986 (second edition 2001).
- [2] Bybee, Joan; Perkins, Revere; and Pagliuca, William. *The Evolution of Grammar*, Univ. of Chicago Press, 1994.
- [3] Loos, Eugene E.; Anderson, Susan; Day, Dwight H., Jr. et al., eds. (2004), *What is mood and modality?* (<http://www.sil.org/linguistics/GlossaryOfLinguisticTerms/WhatIsMoodAndModality.htm>), SIL International, , retrieved 2008-05-16

External links

- Mood and Modality: Out of theory and into the fray (<http://ilit.umbc.edu/MargePub/MoodandModal.pdf>)
- Mood in Biblical Greek (<http://www.bcbser.com/greek/gmood.html>)

From SIL International:

- Deontic modality (<http://www.sil.org/linguistics/GlossaryOfLinguisticTerms/WhatIsDeonticModality.htm>)
 - Volitive modality (<http://www.sil.org/linguistics/GlossaryOfLinguisticTerms/WhatIsVolitiveModality.htm>): imprecatory mood (<http://www.sil.org/linguistics/GlossaryOfLinguisticTerms/WhatIsImprecativeMood.htm>), optative mood (<http://www.sil.org/linguistics/GlossaryOfLinguisticTerms/WhatIsOptativeMood.htm>)
 - Directive modality (<http://www.sil.org/linguistics/GlossaryOfLinguisticTerms/WhatIsDirectiveModality.htm>): deliberative mood (<http://www.sil.org/linguistics/GlossaryOfLinguisticTerms/WhatIsDeliberativeMood.htm>), imperative mood (<http://www.sil.org/linguistics/GlossaryOfLinguisticTerms/WhatIsImperativeMood.htm>), immediate imperative mood (<http://www.sil.org/linguistics/GlossaryOfLinguisticTerms/WhatIsImmediateImperativeMood.htm>), jussive mood (<http://www.sil.org/linguistics/GlossaryOfLinguisticTerms/WhatIsJussiveMood.htm>), obligative mood (<http://www.sil.org/linguistics/GlossaryOfLinguisticTerms/WhatIsObligativeMood.htm>), permissive mood (<http://www.sil.org/linguistics/GlossaryOfLinguisticTerms/WhatIsPermissiveMood.htm>), precatory mood (<http://www.sil.org/linguistics/GlossaryOfLinguisticTerms/WhatIsPecreativeMood.htm>), prohibitive mood (<http://www.sil.org/linguistics/GlossaryOfLinguisticTerms/WhatIsProhibitiveMood.htm>)

- Epistemic modality (<http://www.sil.org/linguistics/GlossaryOfLinguisticTerms/WhatIsEpistemicModality.htm>)
- judgment modality (<http://www.sil.org/linguistics/GlossaryOfLinguisticTerms/WhatIsJudgmentModality.htm>): assumptive mood (<http://www.sil.org/linguistics/GlossaryOfLinguisticTerms/WhatIsAssumptiveMood.htm>), declarative mood (<http://www.sil.org/linguistics/GlossaryOfLinguisticTerms/WhatIsDeclarativeMood.htm>), deductive mood (<http://www.sil.org/linguistics/GlossaryOfLinguisticTerms/WhatIsDeductiveMood.htm>), dubitative mood (<http://www.sil.org/linguistics/GlossaryOfLinguisticTerms/WhatIsDubitativeMood.htm>), hypothetical mood (<http://www.sil.org/linguistics/GlossaryOfLinguisticTerms/WhatIsHypotheticalMood.htm>), interrogative mood (<http://www.sil.org/linguistics/GlossaryOfLinguisticTerms/WhatIsInterrogativeMood.htm>), speculative mood (<http://www.sil.org/linguistics/GlossaryOfLinguisticTerms/WhatIsSpeculativeMood.htm>)
- Irrealis modality (<http://www.sil.org/linguistics/GlossaryOfLinguisticTerms/WhatIsIrrealisModality.htm>): subjunctive mood (<http://www.sil.org/linguistics/GlossaryOfLinguisticTerms/WhatIsSubjunctiveMood.htm>)

Nanosyntax

Nanosyntax is an approach to syntax in which syntactic parse trees are built from a large number of syntactic constituents. Each morpheme may correspond to several such elements, which do not have to form a "subtree".

Some recent work in theoretical linguistics suggests that the "atoms" of syntax are much smaller than words or morphemes. From that it immediately follows that the responsibility of syntax is not limited to ordering "preconstructed" words. Instead, within the framework of nanosyntax,^[1] the words are derived entities built in syntax, rather than primitive elements supplied by a lexicon.

The beginnings of nanosyntax can be traced to a 1993 article by Kenneth Hale and S. Jay Keyser titled 'On Argument Structure and the Lexical Representation of Syntactic Relations'^[2], which first introduced the concept of I-syntax.

References

- [1] Starke, Michal. 2011. Towards an elegant solution to language variation: Variation reduces to the size of lexically stored trees. MS. Barcelona, Spain
- [2] Hale, Kenneth and S. Jay Keyser. 1993. On Argument Structure and the Lexical Representation of Syntactic Relations. In *The View from Building 20*, edited by Kenneth Hale and S. Jay Keyser, pp. 53-109. Cambridge, MA: The MIT Press. ISBN 978-0-262-58124-0

External links

- Nanosyntax project at Center for Advanced Study in Theoretical Linguistics (<http://nanosyntax.auf.net>)

Negative inversion

In linguistics, **negative inversion** is one of many types of subject-auxiliary inversion in English. A negation (e.g. *not*, *no*, *never*, *nothing*, etc.) or a word that implies negation (*only*, *hardly*, *scarcely*) or a phrase containing one of these words precedes the finite auxiliary verb necessitating that the subject and finite verb undergo inversion.^[1] Negative inversion is a phenomenon of English syntax. The V2 word order of the other Germanic languages (other than English) does not allow one to acknowledge negative inversion as a specific phenomenon, since the V2 principle of those languages, which is mostly absent from English, allows inversion to occur much more broadly than in English. While negative inversion is a common occurrence in English, a solid understanding of just what elicits the inversion has not yet been established. It is, namely, not entirely clear why certain fronted expressions containing a negation elicit negative inversion, but others do not.

As with subject-auxiliary inversion in general, negative inversion results in a discontinuity and is therefore a problem for theories of syntax. This problem exists both for the relatively layered structures of phrase structure grammars as well as for the flatter structures of dependency grammars.

Basic examples

Negative inversion is illustrated with the following b-sentences. The relevant expression containing the negation is underlined and the subject and finite verb are bolded:

- a. **Sam** **will** relax at no time.
- b. At no time **will Sam** relax. - Negative inversion
- a. **Jim** **has** never tried that.
- b. Never has Jim tried that. - Negative inversion
- a. **He** **would** do a keg stand at no party.
- b. At no party **would he** do a keg stand. - Negative inversion

When the phrase containing the negation appears in its canonical position to the right of the verb, standard subject-auxiliary word order obtains. When this phrase is fronted however, as in the b-sentences, subject-auxiliary inversion, i.e. negative inversion, must occur. If negative inversion does not occur in such cases, the sentence is bad, as the following c-sentences illustrate:

- c. *At no time, **Sam** **will** relax. - Sentence is bad because negative inversion has not occurred.
- d. At some time, **Sam** **will** relax. - Sentence is fine because there is no negation requiring inversion to occur.
- c. *Never Jim has tried that. - Sentence is bad because negative inversion has not occurred.
- d. Perhaps Jim has tried that. - Sentence is fine because there is no negation requiring inversion to occur
- c. *At no party, **he** **would** do a keg stand. - Sentence is bad because negative inversion has not occurred.
- d. At any party, **he** **would** do a keg stand. - Sentence is fine because there is no negation requiring inversion to occur.

The c-sentences are bad because the fronted phrase containing the negation requires inversion to occur. In contrast, the d-sentences are fine because there is no negation present requiring negative inversion to occur.

Noteworthy traits

There are number of noteworthy traits of negative inversion. The following subsections enumerate some of these traits: 1) negative inversion involving arguments is possible, but the result is stilted; 2) certain cases where one would expect negative inversion to occur actually do not allow it; and 3) at times both the inversion and non-inversion variants are possible, whereby there are concrete meaning differences distinguishing between the two.

Negative inversion with fronted arguments

Negative inversion in the b-sentences above is elicited by a negation appearing inside a fronted adjunct. Negative inversion is also obligatory when the negation is (or is contained in) a fronted argument, although the inversion is a bit stilted in such cases:^[2]

- a. **Fred said nothing.**
- b. **Nothing did Fred say.** - Fronted argument; *do*-support appears to enable subject-auxiliary inversion.
- c. ***Nothing Fred said.** - Fronted argument; sentence is bad because negative inversion has not occurred.
- a. **Larry did that to nobody.**
- b. **To nobody did Larry do that.** - Fronted argument; *do*-support appears to enable subject-auxiliary inversion
- c. ***To nobody, Larry did that.** - Fronted argument; sentence is bad because negative inversion has not occurred.

The fronted phrase containing the negation in the b-sentences is an argument of the matrix predicate, not an adjunct. The result is that the b-sentences seem forced, although they are nevertheless acceptable for most speakers. And if inversion does not occur in such cases as in the c-sentences, the sentence is simply bad.

Negative inversion absent?

A less than fully understood aspect of negative inversion concerns fronted expressions containing a negation that do not elicit negative inversion. Fronted clauses containing a negation do not elicit negative inversion:

- a. ***When nothing happened were we surprised.** - Negative inversion blocked
- b. **When nothing happened, we were surprised.**
- a. ***Because nobody tried did nobody learn anything.** - Negative inversion blocked
- b. **Because nobody tried, nobody learned anything.**

Due to the presence of the negations *nothing* and *nobody* in the fronted clauses, one might expect negative inversion to occur in the main clauses, but it does not, a surprising observation. Yet more surprising still, certain adjunct phrases containing a negation do not elicit negative inversion, e.g.

- a. ***Behind no barrier was Fred plastered.** (snowball fight) - Negative inversion blocked
- b. **Behind no barrier, Fred was plastered.**
- a. ***With no jacket did Bill go out in the cold.** - Negative inversion blocked
- b. **With no jacket, Bill went out in the cold.**

A close examination of the fronted phrases in these sentences reveals that each is a depictive predication over the subject argument (an adjunct over the subject), as opposed to a predication over the entire main clause (an adjunct over the clause). The examples therefore demonstrate that negative inversion is sensitive to how the fronted expression functions within the clause as a whole.

Optional inversion

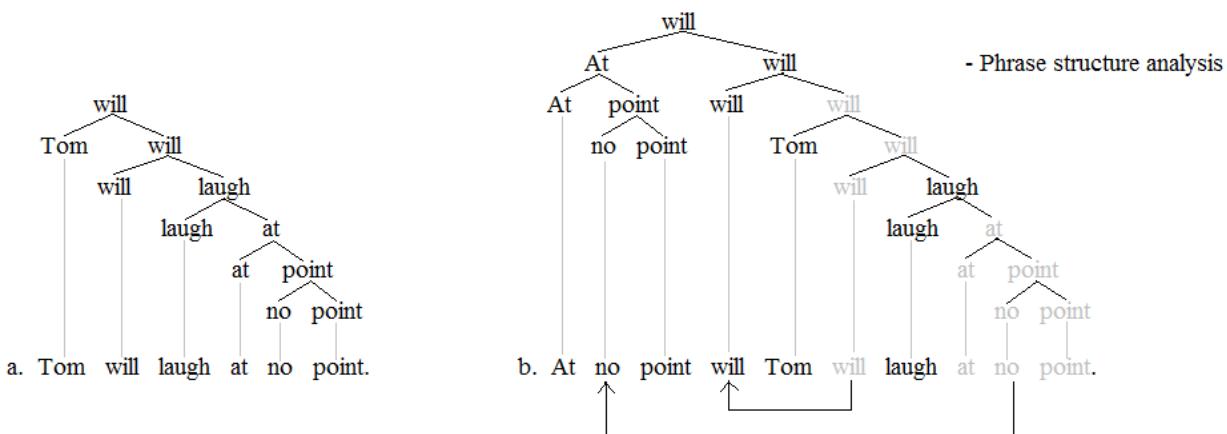
The most intriguing cases of negative inversion are those where inversion is optional, whereby the meaning of the sentence shifts significantly based upon whether inversion has or has not occurred, e.g.^[3]

- a. In no clothes **does Mary** look good. - Negative inversion present
'It doesn't matter what Mary wears, she does NOT look good.'
- b. In no clothes, **Mary looks** good. - Negative inversion absent
'When Mary is nude, she looks good.'
- a. With no job **is Fred** happy. - Negative inversion present
'It doesn't matter which job Fred has, he is NOT happy.'
- b. With no job, **Fred is** happy. - Negative inversion absent
'When Fred is unemployed, he is happy.'

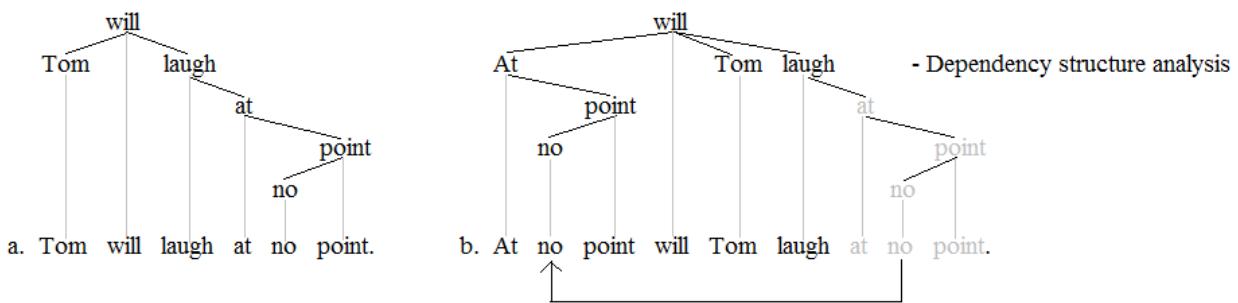
The paraphrases below the examples restate the meaning of each sentence. When negative inversion occurs as in the a-sentences, the meaning is much different than when it does not occur as in the b-sentences. The meaning difference is a reflection of the varying status of the fronted expressions. In the a-sentences, the fronted expression is a clause adjunct or argument of the main predicate, whereas in the b-sentences, it is a depictive predication over the subject argument.

Structural analysis

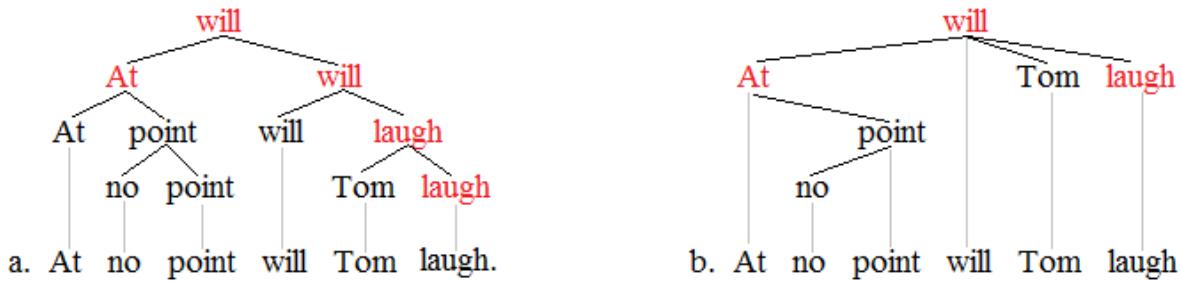
Like many types of inversion, negative inversion challenges theories of sentence structure. This challenge is due to the fronting of the phrase containing the negation. This phrase is separated from its governor in the linear order of words, which means a discontinuity is perceived. This discontinuity is present regardless of whether one assumes a constituency-based theory of syntax (phrase structure grammar) or a dependency-based theory (dependency grammar). The following trees illustrate how this discontinuity is addressed in some phrase structure grammars:^[4]



The convention is used where the words themselves appear as labels on the nodes in the trees. The tree on the left has canonical word order. When the phrase containing the negation is fronted, movement (or copying) is necessary to maintain the strictly binary branching structures, as the tree on that right shows. Note that in order to maintain the strictly binary and right branching structure, at least two instances of movement (or copying) are necessary. The following trees show a similar movement-type analysis, but this time a flatter, dependency-based understanding of sentence structure is assumed:



Note that the flatter structure allows for a simpler analysis to an extent. The subject and auxiliary verb can easily invert without affecting the basic hierarchy assumed, hence only one discontinuity is perceived. The following two trees illustrate a different sort of analysis, one where feature passing occurs instead of movement (or copying):^[5]



The phrase structure analysis is on the left, and the dependency structure analysis on the right. These analyses reject movement/copying, and in its stead, they assume information passing (feature passing). The nodes in red mark the path (chain of words, catena) along which information about the fronted phrase is passed to the governor of the fronted expression. In this manner, a link of a sort is established between the fronted phrase and the position in which it canonically appears.

The trees showing movement/copying illustrate the analysis of discontinuities that might find in derivational theories such as Government and Binding Theory and the Minimalist Program, and the trees showing feature passing are similar to what one might find in representational theories like Lexical Functional Grammar, Head-Driven Phrase Structure Grammar, and some dependency grammars.

Notes

[1] Negative inversion is explored directly by, for instance, Rudanko (1982), Haegemann (2000), Kato (2000), Sabin (2003), Büring (2004).

[2] That negative inversion with a fronted argument is stilted is noted by Büring (2004:3).

[3] Examples like the ones produced here are frequently discussed in the literature on negative inversion. See for instance Klima (1964:300f.), Jackendoff (1972:364f.), Rudanko (1982:357), Haegeman (2000a:21ff.), Kato (2000:67ff.), Büring (2004:5).

[4] For examples of phrase structure grammars that posit strictly binary branching structures and leftward movement similar (although varying in significant ways) to what is shown here in order to address negative inversion, see Haegeman (2000), Kato (2000), and Sabin (2003).

[5] For a dependency grammar analysis of discontinuities like the one shown here on the right, see Groß and Osborne (2009).

Literature

- Büring, D. 2004. Negative inversion. NELS 35, 1-19.
- Groß, T. and T. Osborne 2009. Toward a practical dependency grammar theory of discontinuities. SKY Journal of Linguistics 22, 43-90.
- Haegeman, L. 2000. Negative preposing, negative inversion, and the split CP. In Negation and polarity: syntactic and semantic perspectives, eds. L. Horn and Y. Kato, 21-61. Oxford: Oxford University Press.
- Jackendoff, R. 1972. Semantic interpretation in Generative Grammar. Cambridge, MA: The MIT Press.
- Kato, Y. 2000. Interpretive asymmetries of negation. In Negation and polarity: syntactic and semantic perspectives, eds. L. Horn and Y. Kato, 62-87, Oxford: Oxford University Press.
- Rudanko, J. 1982. Towards a description of negatively conditioned subject operator inversion in English. English Studies 63, 348-359.
- Slobin, N. 2003. Negative inversion as nonmovement. Syntax 6, 183-212.

Non-finite verb

A **non-finite verb** (sometimes called a **verbal**) is any of several verb forms that are not finite verbs; that is, they cannot serve as the root of an independent clause. The non-finite verb forms found in English are infinitives, participles and gerunds; additional such forms found in some other languages include gerundives and supines. Non-finite verbs are typically not inflected for tense, and compared with finite verbs usually display less inflection for other grammatical categories as well.^[1] They also typically lack a subject dependent. A typical finite clause is based on a single finite verb, but it may in addition contain one or more non-finite verbs, building a verb catena with the finite verb.

Since English lacks inflectional morphology to a large extent, the finite and non-finite forms of a given verb are often identical. In such cases, one has to examine the environment in which the verb appears to know whether it is finite or non-finite.

Examples

The following sentences each contain one finite verb (underlined) and multiple **non-finite** verbs (bolded):

The proposal has been intensively **examined** today.

What did they **want** to **have done** about that?

Someone tried to **refuse** to **accept** the offer.

Coming downstairs, she saw the man **running** away.

In the above sentences, *been*, *examined* and *done* are past participles, *want*, *have*, *refuse* and *accept* are infinitives, and *coming* and *running* are present participles (for alternative terminology, see the sections below).

In languages like English that have little inflectional morphology, certain finite and non-finite forms of a given verb are often identical, e.g.

- a. They **laugh** a lot. - Finite verb (present tense) in bold
- b. They will **laugh** a lot. - Non-finite infinitive in bold
- a. Tom **tried** to help. - Finite verb (past tense) in bold
- b. Tom has **tried** to help. - Non-finite participle in bold

Despite the fact that the verbs in bold have the same outward appearance, the first in each pair is finite and the second is non-finite. To distinguish the finite and non-finite uses, one has to consider the environments in which they appear. Finite verbs in English usually appear as the leftmost verb in a verb catena.^[2] For details of verb inflection in

English, see English verbs.

Types of non-finite verbs

English has three kinds of non-finite verbs:

1. infinitives,
2. participles, and
3. gerunds

Each of these non-finite forms appears in a variety of environments.

Infinitives

The infinitive of a verb is considered the "base" form; it is the form that is listed in dictionaries. Infinitives in English appear in verb catenae where they are introduced by an auxiliary verb or by a certain limited class of main verbs. They are also often frequently introduced by a main verb followed by the particle *to* (as illustrated in the trees above). Further, infinitives introduced by *to* can function as noun phrases, or even as modifiers of nouns. The following table illustrates these environments:

Infinitive	Introduced by a (modal) auxiliary verb	Introduced by a main verb	Introduced by a main verb plus <i>to</i>	Functioning as noun phrase	Functioning as the modifier of a noun
laugh	Do not laugh!	That made me laugh .	I tried not to laugh .	To laugh would have been unwise.	the reason to laugh
leave	They may leave .	We let them leave .	They refused to leave .	To leave was not an option.	the thing to leave behind
expand	You should expand the explanation.	We had them expand the explanation.	We hope to expand the explanation.	To expand the explanation would have been folly.	the effort to expand

Participles

Participles in English can be divided along two lines: according to aspect (progressive vs. perfect/perfective) and voice (active vs. passive). The following table illustrates these distinctions:

Infinitive	Progressive active participle	Perfect active participle	Passive participle
fix	The guy is fixing my bike.	He has fixed my bike	My bike was fixed .
open	the flower opening up	The flower has opened up.	The flower has been opened up.
support	the news supporting the point	The news has supported the point.	the point supported by the news
drive	She is driving our car.	She has driven our car.	Our car should be driven often.

Participles appear in a variety of environments. They can appear in periphrastic verb catenae, in which case they help form the main predicate of a clause (as illustrated with the trees above), or they can appear essentially as an adjective modifying a noun. The form of a given perfect or passive participle is strongly influenced by the status of the verb at hand. The perfect and passive participles of strong verbs in Germanic languages are irregular (e.g. *driven*); their form is idiosyncratic. The perfect and passive participles of weak verbs, in contrast, are regular; they are formed with the suffix *-ed* (e.g. *fixed*, *supported*, *opened*).

Gerunds

A gerund is a verb form that appears in positions that are usually reserved for nouns. In English, a gerund has the same form as a progressive active participle (see above), ending in *-ing*. Gerunds typically appear as subject or object noun phrases, or even as the object off a preposition:

Infinitive	Gerund as subject	Gerund as object	Gerund as object of a preposition
solve	Solving problems is satisfying.	I like solving problems.	No one is better at solving problems.
jog	Jogging is boring.	He has started jogging .	Before jogging , she stretches.
eat	Eating too much made me sick.	She avoids eating too much.	That prevents you from eating too much.
investigate	Investigating the facts won't hurt.	We tried investigating the facts.	After investigating the facts, we made a decision.

Often distinguishing between a gerund and a progressive active participle is not easy; the line between the two non-finite verb forms is not clear.

Non-finite verbs in other languages

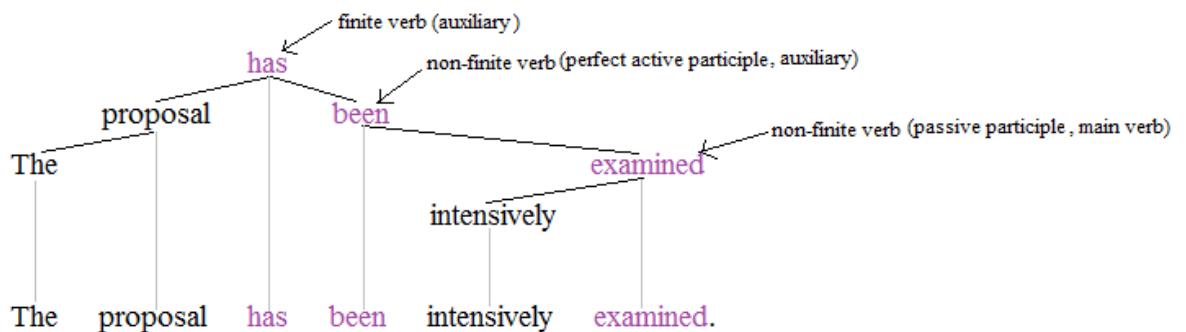
Some languages, including many Native American languages, form non-finite constructions using nominalized verbs.^[3] Others do not have any non-finite verbs; where most European or Asian languages use non-finite verbs, they use ordinary verb forms.

Non-finite verb form in Modern Greek

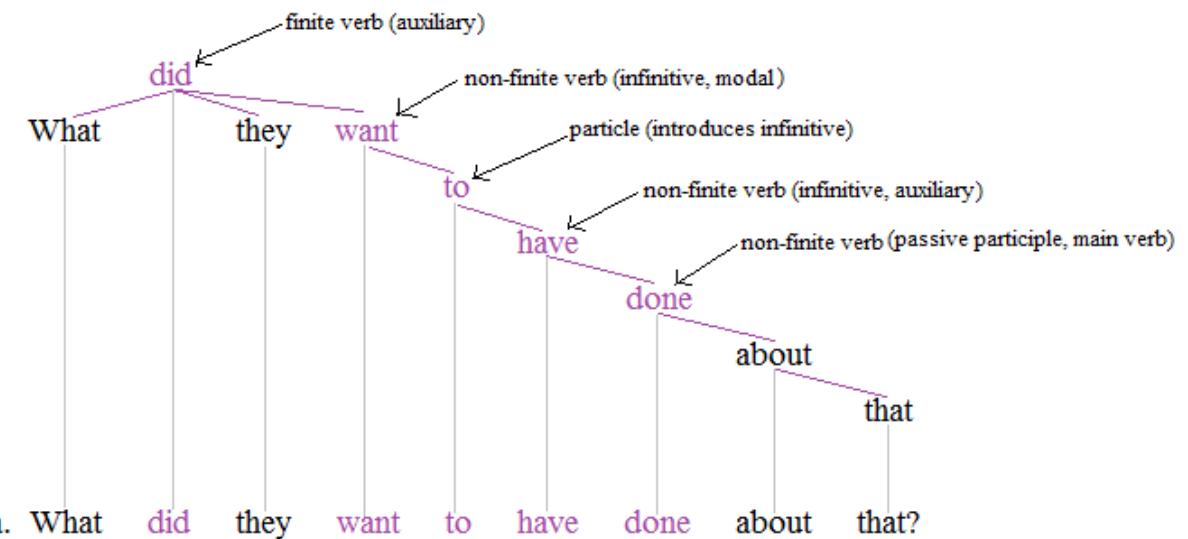
The Modern Greek non-finite verb form is identical to the third person of the *dependent* (or aorist subjunctive) and it is also called the *aorist infinitive*. It is used with the auxiliary verb *έχω* (to have) to form the perfect, pluperfect and future perfect tenses.

Non-finite verbs in theories of syntax

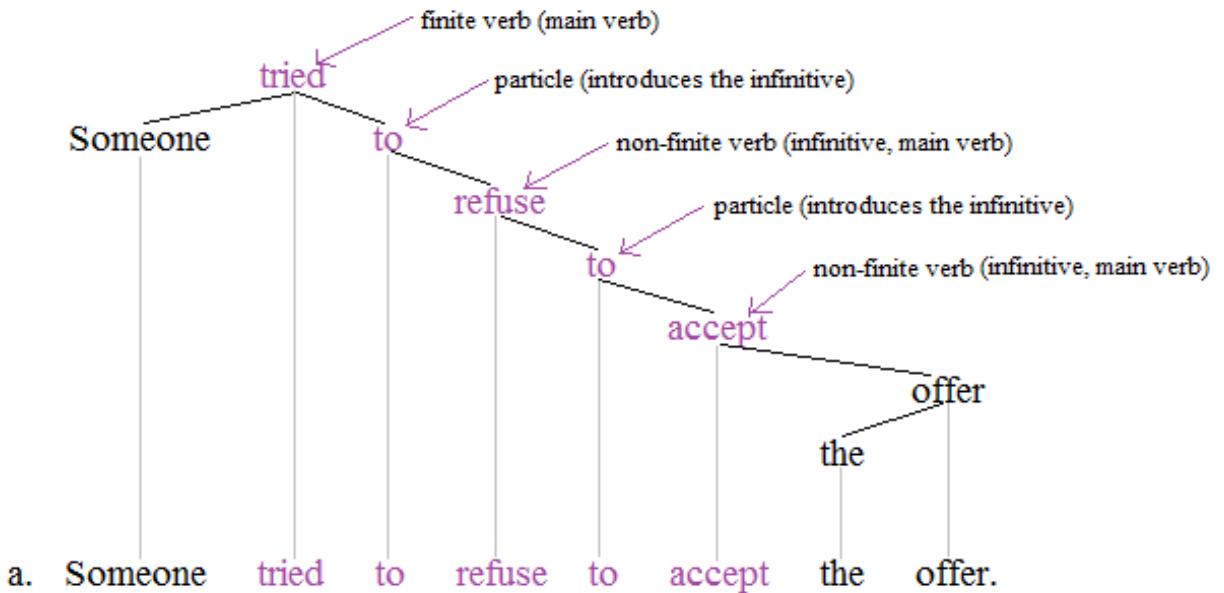
On a dependency grammar account of sentence structure, the first of the example sentences given earlier ("The proposal has been intensively examined today") receives the following analysis:



The three verbs together form a verb catena (in purple). This verb catena functions as the matrix predicate of the sentence. The finite verb *has* is inflected for person (3rd person), number (singular), tense (present), and mood (indicative). The non-finite verbs are not inflected in this sense; they are neutral with respect to these categories. The subject is a dependent of the finite verb, whereby the non-finite verbs lack a subject dependent. The finite verb is the root (highest word) in its verb catena. The second sentence has the following dependency structure:



The verb catena in this case (in purple) contains four verbs and the particle *to*. The particle *to* always introduces an infinitive. Three of the four verbs are non-finite verbs. The one finite verb is again necessarily the root of the entire verb catena. The subject is again dependent of the finite verb. The third sentence has the following dependency structure:



The verb catena in this sentence contains three main verbs, which means there are three separate predicates in this one verb catena (each of which can be negated). The three examples demonstrate the key distinction between finite and non-finite verbs and the role that the distinction plays in sentence structure. Non-finite verbs can be auxiliary verbs or main verbs and they appear as infinitives or participles or gerunds or etc.

Notes

- [1] Concerning the lack of inflection for these grammatical categories, see for instance Radford (1997:508f.), Tallerman (1998:68), and Finch (2000:92f.).
- [2] Concerning the fact that the left-most verb is the finite verb, see Tallerman (1998:65).
- [3] Mithun, Marianne. 1999. The languages of native America. Cambridge: Cambridge University Press.

References

- Dodds, J. 2006. The ready reference handbook, 4th Edition. Pearson Education, Inc.. ISBN 0-321-33069-2
- Finch, G. 2000. Linguistic terms and concepts. New York: St. Martin's Press.
- Radford, A. 1997. Syntactic theory and the structure of English: A minimalist approach. Cambridge, UK: Cambridge University Press.
- Rozakis, L. 2003. The complete idiot's guide to grammar and style, 2nd Edition. *Alpha. ISBN*
- Tallerman, M. 1998. Understanding syntax. London: Arnold.

External links

- Owl Online Writing Lab: Verbals: Gerunds, Participles, and Infinitives (http://owl.english.purdue.edu/handouts/grammar/g_verbals.html)

Non-configurational language

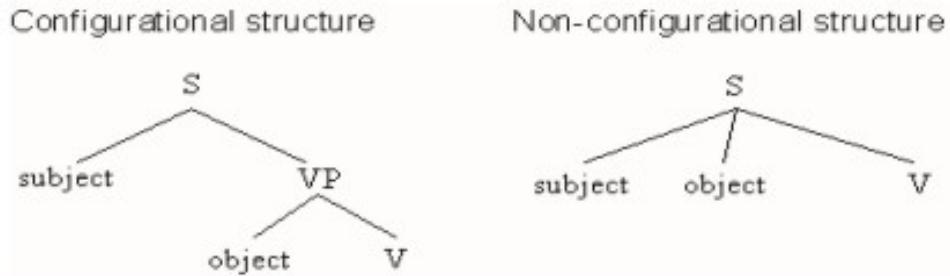
In generative grammar, **non-configurational languages** are languages characterized by a non-rigid phrase structure, which allows syntactically discontinuous expressions, and a relatively free word order.^[1] In configurational languages in contrast, the subject of a sentence is outside the finite VP (directly under S below) but the object is inside it. Since there is no VP constituent in non-configurational languages, there is no structural difference between subject and object. The distinction (configurational vs. non-configurational) can exist in phrase structure grammars only. In a dependency-based grammar, the distinction is meaningless because dependency-based structures do not acknowledge a finite VP constituent.

Development

The concept of non-configurationality was developed by grammarians working within Noam Chomsky's generative framework. Some of these linguists observed that the Syntactic Universals proposed by Chomsky and which required a rigid phrase structure was challenged by the syntax of some of the world's languages that had a much less rigid syntax than that of the languages on which Chomsky had based his studies.^[1] The concept was invented by Ken Hale who described the syntax of Warlpiri as being non-configurational. However the first to publish a description of non-configurationality was Chomsky himself in his 1981 lectures on Government and Binding, in which he referred to an unpublished paper by Hale^[2] Chomsky made it a goal of the Government and Binding framework to accommodate languages such as Japanese and Warlpiri that apparently did not conform to his proposed language universal of Move α . Hale later published his own description of non-configurationality in Warlpiri.^{[3][4]}

The distinction

The following trees illustrate the distinction:



The presence of the VP constituent in the configurational tree on the left allows one to define the syntactic relations (subject vs. object) in terms of the configuration. The subject is the argument that appears outside of the VP, whereas the object appears inside it. The flatter structure on the right, where there is no VP, forces/allows one to view aspects of syntax differently. More generally, Hale proposed that non-configurational languages have the following characteristics:

1. free (or more accurately, pragmatically determined) word order
2. extensive use of null anaphora
3. syntactically discontinuous expressions

However, it is not clear that these properties all cluster together. Languages that have been described as non-configurational include Mohawk,^[5] Warlpiri,^[6] Nahuatl^[5] and O'odham (Papago).^[7]

Controversy amongst phrase structure grammars

The analysis of non-configurational languages has been controversial among phrase structure grammars.^[8] On the one hand, much work on these languages in Principles and Parameters has attempted to show that they are in fact configurational. On the other hand, it has been argued in Lexical Functional Grammar that these attempts are flawed, and that truly non-configurational languages exist.^[9] From the perspective of syntactic theory, the existence of non-configurational languages bears on the question of whether grammatical functions like subject and object are independent of structure. If they are not, no language can be truly non-configurational.

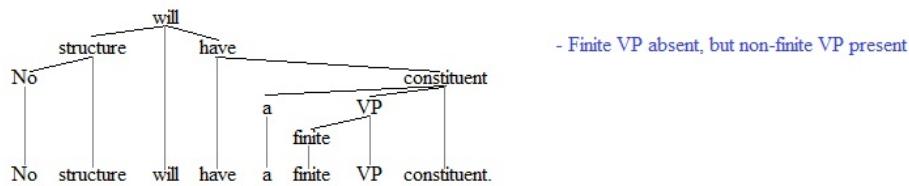
Controversy with dependency grammars

The distinction between configurational and non-configurational languages can exist for phrase structure grammars only. Dependency grammars (DGs), since they lack a finite VP constituent altogether, do not acknowledge the distinction. In other words, all languages are non-configurational for DGs, even English, which all phrase structure grammars take for granted as having a finite VP constituent. The point is illustrated with the following examples:

No structure **will have a finite VP constituent.** - Finite VP in bold

No structure **will have a finite VP constituent.** - Non-finite VP in bold

Phrase structure grammars almost unanimously assume that the finite VP in bold in the first sentence is a constituent. DGs, in contrast, do not see finite VPs as constituents. Both phrase structure grammars and DGs do, however, see non-finite VPs as constituents. The dependency structure of the example sentence is as follows:



Since the finite VP *will have a finite VP constituent* does not qualify as a subtree, it is not a constituent. What this means based upon the criterion of configurationality is that this dependency structure (like all dependency structures) is non-configurational. The distinction between configurational and non-configurational has hence disappeared entirely, all languages being non-configurational in the relevant sense. Note, however, that while the finite VP is not a constituent in the tree, the non-finite VP *have a finite VP constituent* is a constituent (because it qualifies as a subtree).

Dependency grammars point to the results of standard constituency tests as evidence that finite VP does not exist as a constituent^[10] While these tests deliver clear evidence for the existence of a non-finite VP constituent in English (and other languages), they do not do the same for finite VP.

Notes

- [1] David Columbia, The interpretation of nonconfigurationality, *Language & Communication*, Volume 24, Issue 1, January 2004, Pages 1-22, ISSN 0271-5309, 10.1016/S0271-5309(02)00058-7. (<http://www.sciencedirect.com/science/article/pii/S0271530902000587>)
- [2] Chomsky, N., 1981. *Lectures on Government and Binding: The Pisa Lectures*. Foris, Dordrecht.
- [3] Hale, K., 1989. On nonconfigurational structures. In: Mara'cz, L., Muysken, P. (Eds.), *Configurationality: The Typology of Asymmetries*. Foris, Dordrecht, pp. 293–300
- [4] Hale, K., 1983. Warlpiri and the grammar of non-configurational languages. *Natural Language & Linguistic Theory* 1, 5–47
- [5] Baker, Mark C. (1996). *The Polysynthesis Parameter*. Oxford Studies in Comparative Syntax. New York: Oxford University Press. ISBN 0-19-509308-9. OCLC 31045692.
- [6] Hale 1984, 1989
- [7] Smith, Marcus. 2004. A Pre-group Grammar for a non-configurational language. URL <http://www.bol.ucla.edu/smithma/papers.html>, UCLA ms., revised 3/12/2004.
- [8] See for instance Hale 1984 and Marácz and Muysken 1989.
- [9] Austin and Bresnan 1996
- [10] See Osborne et al. 2011:323-324.

References

- Austin, Peter and Joan Bresnan 1996. Non-configurationality in Australian aboriginal languages. *Natural Language and Linguistic Theory* 14, 215–268.
- Hale, Kenneth 1982. Preliminary remarks on configurationality. In J. Pustejovsky & P. Sells (Eds.), *NELS* 12, 86–96.
- Hale, Kenneth 1983. Warlpiri and the grammar of non-configurational languages. (<http://www.springerlink.com/content/v27711736t5k4863/fulltext.pdf>) *Natural Language and Linguistic Theory* 1, 5-47.
- Marácz, L.; & Muysken, P. (Eds.) 1989. *Configurationality: The typology of asymmetries*. Dordrecht: Foris.
- Osborne, Timothy, Michael Putnam, and Thomas Gross 2011. Bare phrase structure, label-less structures, and specifier-less syntax: Is Minimalism becoming a dependency grammar? *The Linguistic Review* 28, 315-364.

External links

- Non-configurational language (<http://www2.let.uu.nl/UiL-OTS/Lexicon/zoek.pl?lemma=Non-configurational+language>) (Lexicon of Linguistics)
- Configurational language (<http://www2.let.uu.nl/UiL-OTS/Lexicon/zoek.pl?lemma=configurational+language>) (Lexicon of Linguistics)
- Scrambling (<http://www2.let.uu.nl/UiL-OTS/Lexicon/zoek.pl?lemma=scrambling>) (Lexicon of Linguistics)
- Cartoon Theories of Linguistics: Non-Configurational Languages (<http://specgram.com/CLII.1/11.phlogiston.cartoon.i.html>) A simplification of the basic idea of non-configurational languages into a cartoon.

Noun

Examples
<ul style="list-style-type: none"> • The cat sat on the mat. • Please hand in your assignments by the end of the week. • Cleanliness is next to godliness. • Plato was an influential philosopher in ancient Greece. • Please complete this assignment with black or blue pen only, and keep your eyes on your own paper. <p>A noun can co-occur with an article or an attributive adjective. Verbs and adjectives can't. In the following, an asterisk (*) in front of an example means that this example is ungrammatical.</p> <ol style="list-style-type: none"> 1. the name (<i>name</i> is a noun: can co-occur with a definite article <i>the</i>.) 2. *the baptise (<i>baptise</i> is a verb: cannot co-occur with a definite article.) 3. constant circulation (<i>circulation</i> is a noun: can co-occur with the attributive adjective <i>constant</i>.) 4. *constant circulate (<i>circulate</i> is a verb: cannot co-occur with the attributive adjective <i>constant</i>.) 5. a fright (<i>fright</i> is a noun: can co-occur with the indefinite article <i>a</i>.) 6. *an afraid (<i>afraid</i> is an adjective: cannot co-occur with the article <i>a</i>.) 7. terrible fright (The noun <i>fright</i> can co-occur with the adjective <i>terrible</i>.) 8. *terrible afraid (The adjective <i>afraid</i> cannot co-occur with the adjective <i>terrible</i>.)

A **noun** is a part of speech typically denoting a person, thing, place or idea.

In linguistics, a noun is a member of a large, open lexical category whose members can occur as the main word in the subject of a clause, the object of a verb, or the object of a preposition.^[1]

Lexical categories are defined in terms of the ways in which their members combine with other kinds of expressions. The syntactic rules for nouns differ from language to language. In English, nouns are those words which can occur with articles and attributive adjectives and can function as the head of a noun phrase.

History

The English word *noun* comes from the Latin *nōmen*, meaning "name" or "noun",^[2], a cognate of the Ancient Greek *ónoma* (also meaning "name" or "noun").^[3]

Word classes like nouns were first described by Pāṇini in the Sanskrit language and by Ancient Greek grammarians, and were defined by the grammatical forms that they take. In Greek and Sanskrit, for example, nouns are categorized by gender and inflected for case and number.

Because nouns and adjectives share these three categories, Dionysius Thrax does not clearly distinguish between the two, and uses the term *ónoma* for both, although some of the words that he describes as *paragōgón* (pl. *paragōgá*) "derived"^[4] are adjectives.^[5]

Definitions of nouns

Nouns have sometimes been defined in terms of the grammatical categories to which they are subject (classed by gender, inflected for case and number). Such definitions tend to be language-specific, since nouns do not have the same categories in all languages.

Nouns are frequently defined, particularly in informal contexts, in terms of their semantic properties (their meanings). Nouns are described as words that refer to a *person, place, thing, event, substance, quality, quantity*, etc. However this type of definition has been criticized by contemporary linguists as being uninformative.^[6]

Linguists often prefer to define nouns (and other lexical categories) in terms of their formal properties. These include morphological information, such as what prefixes or suffixes they take, and also their syntax – how they combine with other words and expressions of particular types. Such definitions may nonetheless still be language-specific, since syntax as well as morphology varies between languages. For example, in English it might be noted that nouns are words that can co-occur with definite articles (as stated at the start of this article), but this would not apply in Russian, which has no definite articles.

There have been several attempts, sometimes controversial, to produce a stricter definition of nouns on a semantic basis. Some of these are referenced in the Further reading section below.

Forms of nouns

A noun in its basic form will often consist of a single stem, as in the case of the English nouns *cat, man, table* and so on. In many languages nouns can also be formed from other nouns and from words of other types through morphological processes, often involving the addition of prefixes and suffixes. Examples in English are the verbal nouns formed from verbs by the addition of *-ing*, nouns formed from verbs using other suffixes such as *organization* and *discovery*, agent nouns formed from verbs usually with the suffix *-er* or *-or*, as in *actor* and *worker*, feminine forms of nouns such as *actress, lioness*, nouns formed from adjectives such as *happiness*, and many other types.

Nouns may be identical in form to words that belong to other parts of speech, often as a result of conversion (or just through coincidence). For example the English word *hit* can be both a noun and a verb, and the German *Arm/arm* can be a noun or an adjective. In such cases the word is said to represent two or more lexemes.

In many languages nouns inflect (change their form) for number, and sometimes for case. Inflection for number usually involves forming plural forms, such as *cats* and *children* (see English plural), and sometimes other forms such as duals, which are used in some languages to refer to exactly two of something. Inflection for case involves changing the form of a noun depending on its syntactic function – languages such as Latin, Russian and Finnish have extensive case systems, with different forms for nominatives (used principally for verb subjects), accusatives (used especially for direct objects), genitives (used to express possession and similar relationships) and so on. The only real vestige of the case system in Modern English is the "Saxon genitive", where 's is added to a noun to form a possessive.

Gender

In some languages, nouns are assigned to genders, such as masculine, feminine and neuter (or other combinations). The gender of a noun (as well as its number and case, where applicable) will often entail agreement in words that modify or are related to it. For example, in French, the singular form of the definite article is *le* with masculine nouns and *la* with feminines; adjectives and certain verb forms also change (with the addition of *-e* with feminines). Grammatical gender often correlates with the form of the noun and the inflection pattern it follows; for example, in both Italian and Russian most nouns ending *-a* are feminine. Gender also often correlates with the sex of the noun's referent, particularly in the case of nouns denoting people (and sometimes animals). Nouns do not have gender in Modern English, although many of them denote people or animals of a specific sex.

Classification of nouns

Proper nouns and common nouns

A *proper noun* or *proper name* is a noun representing unique entities (such as *Earth*, *India*, *Jupiter*, *Harry*, or *BMW*), as distinguished from common nouns which describe a class of entities (such as *city*, *planet*, *person* or *car*).^[7]

Countable and uncountable nouns

Count nouns are common nouns that can take a plural, can combine with numerals or quantifiers (e.g., *one*, *two*, *several*, *every*, *most*), and can take an indefinite article (*a* or *an*). Examples of count nouns are *chair*, *nose*, and *occasion*.

Mass nouns (or *non-count nouns*) differ from count nouns in precisely that respect: they can't take plural or combine with number words or quantifiers. Examples from English include *laughter*, *cutlery*, *helium*, and *furniture*. For example, it is not possible to refer to *a furniture* or *three furnitures*. This is true even though the pieces of furniture comprising *furniture* could be counted. Thus the distinction between mass and count nouns should not be made in terms of what sorts of things the nouns *refer* to, but rather in terms of how the nouns *present* these entities.^{[8][9]}

Collective nouns

Collective nouns are nouns that refer to *groups* consisting of more than one individual or entity, even when they are inflected for the singular. Examples include *committee*, *herd*, and *school* (of fish). These nouns have slightly different grammatical properties than other nouns. For example, the noun phrases that they head can serve as the subject of a collective predicate, even when they are inflected for.

Concrete nouns and abstract nouns

Concrete nouns refer to physical entities that can, in principle at least, be observed by at least one of the senses (for instance, *chair*, *apple*, *Janet* or *atom*). *Abstract nouns*, on the other hand, refer to abstract objects; that is, ideas or concepts (such as *justice* or *hatred*). While this distinction is sometimes exclusive, some nouns have multiple senses, including both concrete and abstract ones; consider, for example, the noun *art*, which usually refers to a concept (e.g., *Art is an important element of human culture*) but which can refer to a specific artwork in certain contexts (e.g., *I put my daughter's art up on the fridge*).

Some abstract nouns developed etymologically by figurative extension from literal roots. These include *drawback*, *fraction*, *holdout*, and *uptake*. Similarly, some nouns have both abstract and concrete senses, with the latter having developed by figurative extension from the former. These include *view*, *filter*, *structure*, and *key*.

In English, many abstract nouns are formed by adding noun-forming suffixes (-ness, -ity, -ion) to adjectives or verbs. Examples are *happiness* (from the adjective *happy*), *circulation* (from the verb *circulate*) and *serenity* (from the adjective *serene*).

Noun phrases

A noun phrase is a phrase based on a noun, pronoun, or other noun-like word (nominal) optionally accompanied by modifiers such as adjectives.

Pronouns

Nouns and noun phrases can typically be replaced by pronouns, such as *he*, *it*, *which*, and *those*, in order to avoid repetition or explicit identification, or for other reasons. For example, in the sentence *Janet thought that he was weird*, the word *he* is a pronoun standing in place of the name of the person in question. The English word *one* can

replace parts of noun phrases, and it sometimes stands in for a noun. An example is given below:

John's car is newer than *the one* that Bill has.

But *one* can also stand in for bigger sub parts of a noun phrase. For example, in the following example, *one* can stand in for *new car*.

This new car is cheaper than *that one*.

Substantive as a word for noun

Starting with old Latin grammars, many European languages use some form of the word *substantive* as the basic term for noun (for example, Spanish *sustantivo*, "noun"). Nouns in the dictionaries of such languages are demarcated by the abbreviation *s.* or *sb.* instead of *n.*, which may be used for proper nouns instead. This corresponds to those grammars in which nouns and adjectives phase into each other in more areas than, for example, the English term predicate adjective entails. In French and Spanish, for example, adjectives frequently act as nouns referring to people who have the characteristics of the adjective. The most common metalanguage to name this concept is *nominalization*. An example in English is:

This legislation will have the most impact on the *poor*.

Similarly, an adjective can also be used for a whole group or organization of people:

The Socialist *International*.

Hence, these words are substantives that are usually adjectives in English.

The word *nominal* also overlaps in meaning and usage with *noun* and *adjective*.

References

- [1] Loos, Eugene E., et al. 2003. Glossary of linguistic terms: What is a noun? (<http://www.sil.org/linguistics/GlossaryOfLinguisticTerms/WhatIsANoun.htm>)
- [2] nōmen (<http://www.perseus.tufts.edu/hopper/text?doc=Perseus:text:1999.04.0059:entry=nomen>). Charlton T. Lewis and Charles Short. *A Latin Dictionary* on Perseus Project.
- [3] ὄνομα[[Category:Articles containing Ancient Greek language text (<http://www.perseus.tufts.edu/hopper/text?doc=Perseus:text:1999.04.0057:entry=o/noma>)]] Liddell, Henry George; Scott, Robert; *A Greek–English Lexicon* at Perseus Project
- [4] παραγωγός[[Category:Articles containing Ancient Greek language text (<http://www.perseus.tufts.edu/hopper/text?doc=Perseus:text:1999.04.0057:entry=paragwgo/s>)]] in Liddell and Scott
- [5] Dionysius Thrax. τέχνη γραμματική (http://www.hs-augsburg.de/~harsch/graeca/Chronologia/S_ante02/DionysiosThrax/dio_tech.html) (Art of Grammar), section ιβ' (10b): περὶ ὀνόματος (On the noun). Bibliotheca Augustana.
εἰδη δὲ παραγώνων ἐστὶν ἑπτά· πατρωνυμικόν, κτητικόν, συγκριτικόν, ὑπερθετικόν, ὑποκοριστικόν, παρώνυμον, ῥηματικόν.
- There are seven types of derived [nouns]: patronymic, possessive, comparative, superlative, diminutive, derived from a noun, [and] verbal.
- [6] Jackendoff, Ray. 2002. *Foundations of language: brain, meaning, grammar, evolution*. Oxford University Press. Page 124.
- [7] Lester, Mark; Larry Beason (2005). *The McGraw-Hill Handbook of English Grammar and Usage*. McGraw-Hill. p. 4. ISBN 0-07-144133-6.
- [8] Krifka, Manfred. 1989. "Nominal Reference, Temporal Constitution and Quantification in Event Semantics". In R. Bartsch, J. van Benthem, P. von Emde Boas (eds.), *Semantics and Contextual Expression*, Dordrecht: Foris Publication.
- [9] Borer, Hagit. 2005. *In Name Only. Structuring Sense, Volume I*. Oxford: Oxford University Press.

Further reading

- Laycock, Henry (2005). " Mass nouns, Count nouns and Non-count nouns (<http://post.queensu.ca/~laycockh/Mass%20nouns%20Count%20nouns%20Non-count%20nouns.pdf>)", Draft version of entry in *Encyclopedia of Language and Linguistics* Oxford: Elsevier.

For definitions of nouns based on the concept of "identity criteria":

- Geach, Peter. 1962. *Reference and Generality*. Cornell University Press.

For more on identity criteria:

- Gupta, Anil. 1980, *The logic of common nouns*. New Haven and London: Yale University Press.

For the concept that nouns are "prototypically referential":

- Croft, William. 1993. "A noun is a noun is a noun - or is it? Some reflections on the universality of semantics". Proceedings of the Nineteenth Annual Meeting of the Berkeley Linguistics Society, ed. Joshua S. Guenter, Barbara A. Kaiser and Cheryl C. Zoll, 369-80. Berkeley: Berkeley Linguistics Society.

For an attempt to relate the concepts of identity criteria and prototypical referentiality:

- Baker, Mark. 2003, Lexical Categories: verbs, nouns, and adjectives. Cambridge University Press, Cambridge.

External links

- Nouns - Singular and Plural Agreement (<http://www.brighthub.com/education/languages/articles/19457.aspx>)
- ESL Guide to Countable and Uncountable Nouns (http://esl.about.com/od/grammarforbeginners/a/g_cucount.htm)
- Nouns (<http://grammar.ecc.commnet.edu/GRAMMAR/nouns.htm>)

Noun ellipsis

Noun ellipsis (N-ellipsis), also **noun phrase ellipsis** (NPE), is a mechanism that elides, or appears to elide, part of a noun phrase that can be recovered from context. The mechanism is present in many languages, English being one of them, although the occurrence of N-ellipsis in English is more restricted than in related languages. Theoretical analyses of N-ellipsis vary, there being at least three types of approaches to the phenomenon that a theory can pursue: 1) the true ellipsis analysis, 2) the covert pronoun analysis, and 3) the overt pronoun analysis.

Examples

Standard instances of N-ellipsis in English are introduced by a limited set of determiner- and adjective-like elements (possessives, cardinal and ordinal numbers, other quantifiers). In the examples throughout this article, the ellipsis is indicated using a smaller font and subscripts, the element that introduces the ellipsis is in bold, and the antecedent to the ellipsis is underlined:

When Susan brings her dog, Sam brings **his** _{dog} too. - N-ellipsis introduced by possessive

Jill likes your story even though she hates **Bill's** _{story}. - N-ellipsis introduced by possessive *-s*

Because you bought two donuts, I bought **three** _{donuts}. - N-ellipsis introduced by cardinal number

I caught the first train before you caught the **second** _{train}. - N-ellipsis introduced by ordinal number

Some school kids like syntax, and **some** _{school kids} don't. - N-ellipsis introduced by a quantifier

Each student was helped so that **each** _{student} would understand. - N-ellipsis introduced by a quantifier

The set of elements that can introduce N-ellipsis in English is limited. Similar quantificational elements, for instance, cannot introduce N-ellipsis:

*No school kid likes syntax, and **no** _{school kid} likes semantics. - Failed attempt to introduce N-ellipsis with *no*

*Every student was helped, so that **every** _{student} would understand. - Failed attempt to introduce N-ellipsis with *every*

Most adjectives in English are also incapable of introducing N-ellipsis:

*Fred watches stupid programs, but Jim watches **intelligent** _{programs}. - Failed attempt to introduce N-ellipsis with a standard adjective

*I value long walks although I only get to take **short** _{walks}. - Failed attempt to introduce N-ellipsis with a standard adjective

This aspect of N-ellipsis in English distinguishes English from other languages (e.g. German and Dutch), which are much more permissive; they allow most any determiner or adjective to introduce N-ellipsis. Note that English employs the indefinite pronoun *one* to make such sentences acceptable, e.g. *Fred watches stupid programs, but Jim watches intelligent ones.*

The examples so far all have the ellipsis following its antecedent. The opposite arrangement is also possible: the N-ellipsis can precede its "antecedent":

If he brings **his** _{dog}, I'll bring my dog too. - N-ellipsis preceding its "antecedent"

Because he did the first **two** _{problems}, she is going to do that last three problems. - N-ellipsis preceding its "antecedent"

Even though he skipped **one** _{task}, he did do the rest of the tasks. - N-ellipsis preceding its "antecedent"

N-ellipsis behaves like standard personal pronouns in this area; personal pronouns can also precede their antecedents at times, e.g. *When he arrives, Bill immediately takes a shower.*

Systematic variation

There is systematic variation in forms across some noun phrases that do and do not involve N-ellipsis. This variation is apparent in English with possessives. Possessive determiners cannot introduce N-ellipsis, whereas one can interpret possessive pronouns as doing so. The following table summarizes the competing forms:

Possessive determiner	Possessive pronoun
my	mine
your	yours
his	his
her	hers
our	ours
their	theirs

The possessive determiners are systematically incapable of introducing N-ellipsis; if a possessive appears in such cases, it must be the possessive pronoun:

- a. *You like your dog, but you don't like **my** _{dog}. - Possessive determiner *my* cannot introduce N-ellipsis
- b. You like your dog, but you don't like **mine** _{dog}. - Possessive pronoun *mine* can introduce N-ellipsis
- a. *We helped your friends, before we helped **our** _{friends}. - Possessive determiner *our* cannot introduce N-ellipsis
- b. We helped your friends, before we helped **ours** _{friends}. - Possessive pronoun *ours* can introduce N-ellipsis

This same sort of data occurs in numerous other languages, where the variation is visible with many other determiner- and adjective-like elements (not just with possessives). The obvious conclusion that one can reach based upon this variation is that the possessive pronouns are in fact in no way introducing N-ellipsis, but rather they are, as their name suggests, simply pronouns. In other words, there is no ellipsis in such cases. This observation is important for the theory N-ellipsis in general, and the discussion returns to the point below.

The elided material

An important aspect of N-ellipsis concerns the material that can (and cannot) be elided. Much more than just a noun can be included in the ellipsis, e.g.

- a. Susan likes her big red fish with a stripe and Tom likes **his** _{big red fish with a stripe} too.
- b. Susan likes her big red fish with a stripe and Tom likes **his** _{big red fish} with spots.
- a. I will read your first long draft on gapping from last semester if you read my **second** _{long draft on gapping from last semester}.
- b. I will read your first long draft on gapping from last semester if you read **mine** _{first long draft on gapping} from this semester.
- c. I will read your long draft on gapping from last semester if you read **mine** _{long draft on stripping} on stripping.

The preferred readings for these sentences are the ones indicated by the underlines and small subscripts. Each time, N-ellipsis appears to be eliding more than just the noun. A more extensive examination of such data would demonstrate that N-ellipsis elides minimally a noun and maximally everything else in the noun phrase that follows the word that introduces the ellipsis. At times, the elided material can appear medially in the noun phrase, as just illustrated here with the b- and c-examples. A related point is that N-ellipsis must be introduced by a pre-noun element in the noun phrase. In other words, the ellipsis cannot be phrase-initial, e.g.

*He likes papers about gapping and she likes **mine** _{papers} about stripping. - Failed attempt at N-ellipsis; the ellipsis must be "introduced"

*We have pictures of Sam, and we have _{pictures} of Bill too. - Failed attempt at N-ellipsis; the ellipsis must be "introduced"

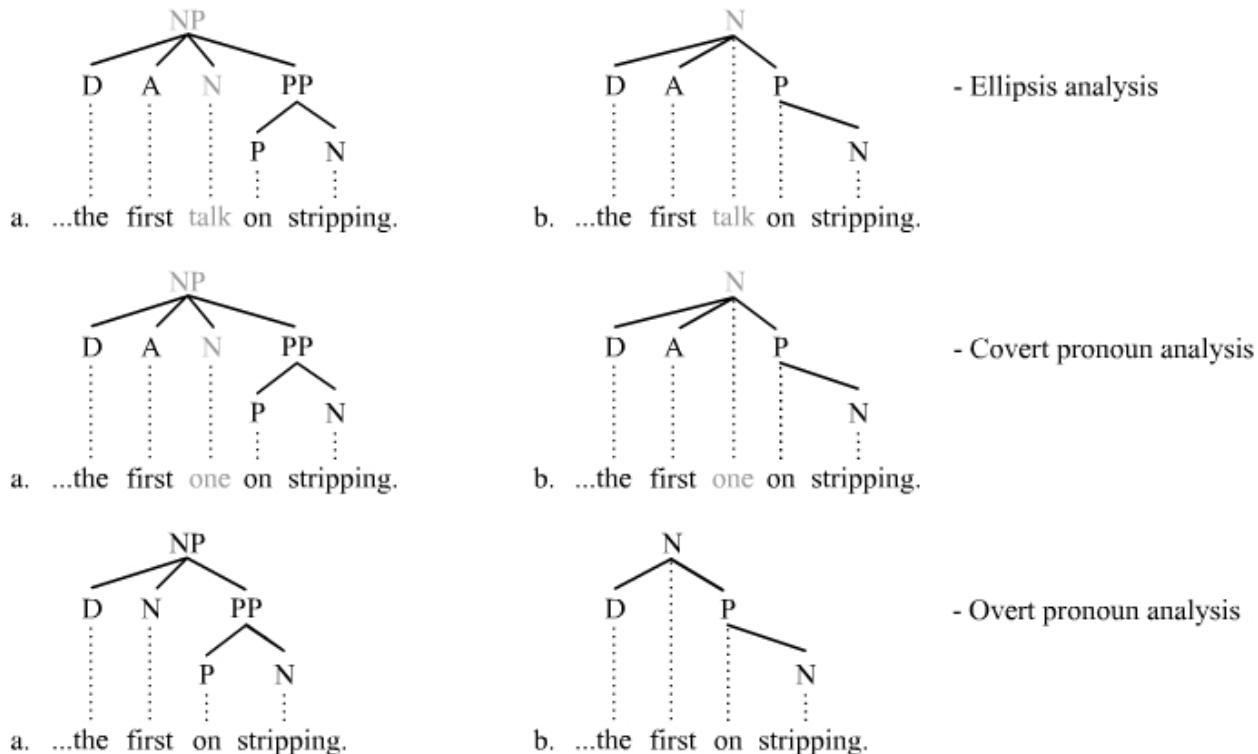
These data are (also) important because they bear on the formal account of N-ellipsis, a point that is considered in the next section.

Theoretical possibilities

There are three basic possibilities that one might pursue in order to develop a formal account of N-ellipsis:

- 1) N-ellipsis is truly ellipsis; part of the noun phrase has indeed been elided.^[1]
- 2) A covert pronoun is present, which means ellipsis in the traditional sense is actually not involved.
- 3) An overt pronoun is present; the word that appears to introduce the ellipsis is actually functioning like a pronoun, which means ellipsis is in no way present.^[2]

Each of these three analyses is illustrated here using tree structures of an example NP. The example sentence *She gave the first talk on gapping, and he gave the first on stripping* is the context, whereby the trees focus just on the structure of the noun phrase showing ellipsis. For each of the three theoretical possibilities, both a constituency-based representation (associated with phrase structure grammars) and a dependency-based representation (associated with dependency grammars) is employed:



The constituency trees are on the left, and the corresponding dependency trees on the right. These trees are merely broadly representative of each of the possible analyses (many modern constituency grammars would likely reject the relatively flat structures on the left, opting instead for more layered trees). The ellipsis analysis assumes the presence of the elided noun. The null pronoun analysis also assumes ellipsis, but what is absent is not an actual noun, but rather it is a covert pronoun that would perhaps surface as *one* if it were not elided. The overt pronoun analysis entirely rejects the notion that ellipsis is involved. Instead, it grants the one pre-nominal element the status of an indefinite pronoun.

Each of these three analyses has its strengths and weaknesses, and which analysis is preferred varies based in part on the theoretical framework adopted. The traditional ellipsis analysis has an advantage insofar as it is the most straightforward; a simple ellipsis mechanism is involved, which explains the fact that ellipsis in such cases is

(usually) optional. The ellipsis analysis cannot, however, so easily account for the systematic variation in forms seen with possessives, since it suggests that there should be no such variation. The covert pronoun analysis can easily accommodate the fact that N-ellipsis has a distribution that is close to that of the indefinite pronoun *one*, but it too has difficulty with the systematic variation in forms seen with possessives. Both analyses are challenged by the fact that they cannot explain why N-ellipsis is limited in occurrence in English to a relatively small number of pre-nominal elements. Both are also challenged by the observation that the null element must be "introduced".

The third analysis, the overt pronoun analysis, accommodates the systematic variation in possessive forms, since it assumes that the distinct pronoun forms appear precisely in order to indicate when a pronoun is present. The overt pronoun analysis can also account for the relatively small number of pre-nominal elements that can "introduce" ellipsis, since it reduces this ability down to a simple lexical characteristic of the pre-nominal elements involved. Furthermore, it quite obviously accounts for the fact that the "ellipsis" must be introduced, for there is in fact no ellipsis, but rather a pronoun appears.

The overt pronoun analysis is challenged, however, by other data. The overt pronouns would have to be unlike most other pronouns, since they would have to allow modification by an adverb, e.g. *You took the second train after I had taken the very first*. The adverb *very* is modifying *first*, which should not be possible if *first* is a pronoun.

In sum, the theoretical analysis of N-ellipsis is open to innovation.

Notes

[1] See examples of the ellipsis approach, see Lobeck (1995) and Netter (1996).

[2] See Winhart (1997) and Werner (2011) for examples of the overt pronoun approach.

Literature

- Corver, N. and M. van Koppen 2009. Let's Focus on Noun Phrase Ellipsis. In: J.-W. Zwart (ed.), Groninger Arbeiten zur germanistischen Linguistik 48, 3–26.
- Lobeck, A. 1995. Ellipsis: Functional heads, licensing, and identification. New York: Oxford University Press.
- Netter, K. 1996. Functional categories in an HPSG for German, volume 3 of Saarbrücken Dissertations in Computational Linguistics and Language Technology.
- Werner, E. 2011. The ellipsis of "ellipsis". A reanalysis of "elided" noun phrase structures in German. Master's Thesis, Utrecht University.
- Winhart, H. 1997. Die Nominalphrase in einem HPSG-Fragment des Deutschen. In E. Hinrichs et al. eds., Ein HPSG-Fragment des Deutschen. Teil 1: Theorie, chapter 5, pages 319{384. Universität Tübingen, Tübingen.

Noun phrase

A **noun phrase** or **nominal phrase** (abbreviated **NP**) 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.^[1] 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 or postpositions. 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*.



Those five beautiful shiny Arkansas Black apples sitting on the chair.

This is a noun phrase of which *apples* is the head. They could be substituted for the whole noun phrase, as in *they are delicious*.

Identifying noun phrases

Some examples of noun phrases are underlined in the sentences below. The head noun appears in bold.

The election year politics are annoying for many people.

Almost every sentence contains at least one noun **phrase**.

Current economic weakness may be a result of high energy prices.

Noun phrases can be identified by the possibility of pronoun substitution, as is illustrated in the examples below.

- a. This sentence contains two noun **phrases**.
- b. **It** contains **them**.
 - a. The subject noun phrase that is present in this sentence is long.
 - b. **It** is long.
 - a. Noun phrases can be embedded in other noun phrases.
 - b. **They** can be embedded in **them**.

A string of words that can be replaced by a single pronoun without rendering the sentence grammatically unacceptable is a noun phrase. As to whether the string must contain at least two words, see the following section.

Status of single words as phrases

Traditionally, a phrase is understood to contain two or more words. The traditional progression in the size of syntactic units is *word < phrase < clause*, and in this approach a single word (such as a noun or pronoun) would not be referred to as a phrase. However, many modern schools of syntax – especially those that have been influenced by X-bar theory – make no such restriction.^[2] Here many single words are judged to be phrases based on a desire for theory-internal consistency. A phrase is deemed to be a word or a combination of words that appears in a set syntactic position, for instance in subject position or object position.

On this understanding of phrases, the nouns and pronouns in bold in the following sentences are noun phrases (rather than just nouns and pronouns):

- a. **He** saw **someone**.
- b. **Milk** is good.
- c. **They** spoke about **corruption**.

The words in bold are called phrases since they appear in the syntactic positions where multiple-word phrases (i.e. traditional phrases) can appear. This practice takes the constellation to be primitive rather than the words themselves. The word *he*, for instance, functions as a pronoun, but within the sentence it also functions as a noun phrase. The phrase structure grammars of the Chomskyan tradition (government and binding theory and the minimalist program) are primary examples of theories that apply this understanding of phrases. Other grammars, for instance dependency grammars, are likely to reject this approach to phrases, since they take the words themselves to be primitive. For them, phrases must contain two or more words.

Components of noun phrases

A typical noun phrase consists of a noun (the head of the phrase) together with zero or more modifiers of various types. The chief types of these modifiers are:

- determiners, such as *the, this, my, some*
- attributive adjectives, such as *large, beautiful, sweeter*
- adjective phrases and participial phrases, such as *extremely large, hard as nails, made of wood, sitting on the step*
- noun adjuncts, such as *college* in the noun phrase *a college student*
- prepositional phrases, such as *in the drawing room, of his aunt*
- relative clauses, such as *which we noticed*
- other clauses serving as complements to the noun, such as *that God exists* in the noun phrase *the belief that God exists*
- infinitive phrases, such as *to sing well* and *to beat* in the noun phrases *a desire to sing well* and *the man to beat*

The allowability, form and position of these elements depend on the syntax of the language in question. In English, determiners, adjectives (and some adjective phrases) and noun modifiers precede the head noun, whereas the heavier units – phrases and clauses – generally follow it. This is part of a strong tendency in English to place heavier constituents to the right, making English more of a head-initial language. Head-final languages (e.g. Japanese and Turkish) are more likely to place all modifiers before the head noun. Other languages, such as French, often place even single-word adjectives after the noun.

Noun phrases can take different forms than that described above, for example when the head is a pronoun rather than a noun, or when elements are linked with a coordinating conjunction such as *and, or, but*. For more information about the structure of noun phrases in English, see English grammar: Noun phrases.

Syntactic function

Noun phrases typically bear argument functions.^[3] That is, the syntactic functions that they fulfill are those of the arguments of the main clause predicate, particularly those of subject, object and predicative expression. They also function as arguments in such constructs as participial phrases and prepositional phrases. For example:

For us the news is a concern. - *the news* is the subject argument

Have you heard the news? - *the news* is the object argument

That is the news. - *the news* is the predicative expression following the copula *is*

They are talking about the news. - *the news* is the argument in the prepositional phrase *about the news*

The man reading the news is very tall. - *the news* is the object argument in the participial phrase *reading the news*

Sometimes a noun phrase can also function as an adjunct of the main clause predicate, thus taking on an adverbial function, e.g.

Most days I read the newspaper.

She has been studying all night.

Noun phrases with and without determiners

In some languages, including English, noun phrases are required to be "completed" with a determiner in many contexts, and thus a distinction is made in syntactic analysis between phrases that have received their required determiner (such as *the big house*), and those in which the determiner is lacking (such as *big house*).

The situation is complicated by the fact that in some contexts a noun phrase may nonetheless be used without a determiner (as in *I like big houses*); in this case the phrase may be described as having a "null determiner". (Situations in which this is possible depend on the rules of the language in question; for English, see English articles.)

In the original X-bar theory, the two respective types of entity are called noun phrase (NP) and N-bar (N, N'). Thus in the sentence *Here is the big house*, both *house* and *big house* are N-bars, while *the big house* is a noun phrase. In the sentence *I like big houses*, both *houses* and *big houses* are N-bars, but *big houses* also functions as a noun phrase (in this case without an explicit determiner).

In some modern theories of syntax, however, what are called "noun phrases" above are no longer considered to be headed by a noun, but by the determiner (which may be null), and they are thus called *determiner phrases* (DP) instead of noun phrases. (In some accounts that take this approach, the constituent lacking the determiner – that called N-bar above – may be referred to as a noun phrase.)

This analysis of noun phrases is widely referred to as the *DP hypothesis*. It has been the preferred analysis of noun phrases in the minimalist program from its start (since the early 1990s), though the arguments in its favor tend to be theory-internal. By taking the determiner, a function word, to be head over the noun, a structure is established that is analogous to the structure of the finite clause, with a complementizer. Apart from the minimalist program, however, the DP hypothesis is rejected by most other modern theories of syntax and grammar, in part because these theories lack the relevant functional categories.^[4] Dependency grammars, for instance, almost all assume the traditional NP analysis of noun phrases.

For illustrations of different analyses of noun phrases depending on whether the DP hypothesis is rejected or accepted, see the next section.

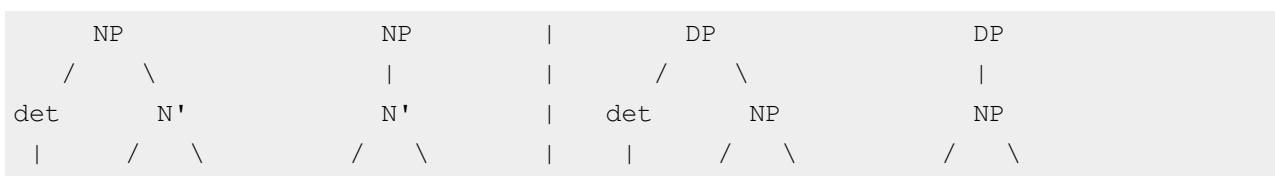
Tree representations of noun phrases

The representation of noun phrases using parse trees depends on the basic approach to syntactic structure adopted. The layered trees of many phrase structure grammars grant noun phrases an intricate structure that acknowledges a hierarchy of functional projections. Dependency grammars, in contrast, since the basic architecture of dependency places a major limitation on the amount of structure that the theory can assume, produce simple, relatively flat structures for noun phrases.

The representation also depends on whether the noun or the determiner is taken to be the head of the phrase (see the discussion of the DP hypothesis in the previous section).

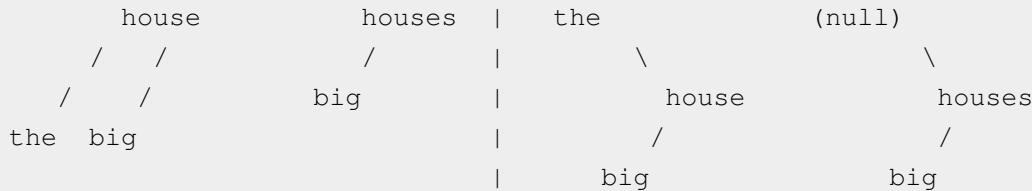
Below are some possible trees for the two noun phrases *the big house* and *big houses* (as in the sentences *Here is the big house* and *I like big houses*).

1. Phrase-structure trees, first using the original X-bar theory, then using the modern DP approach:



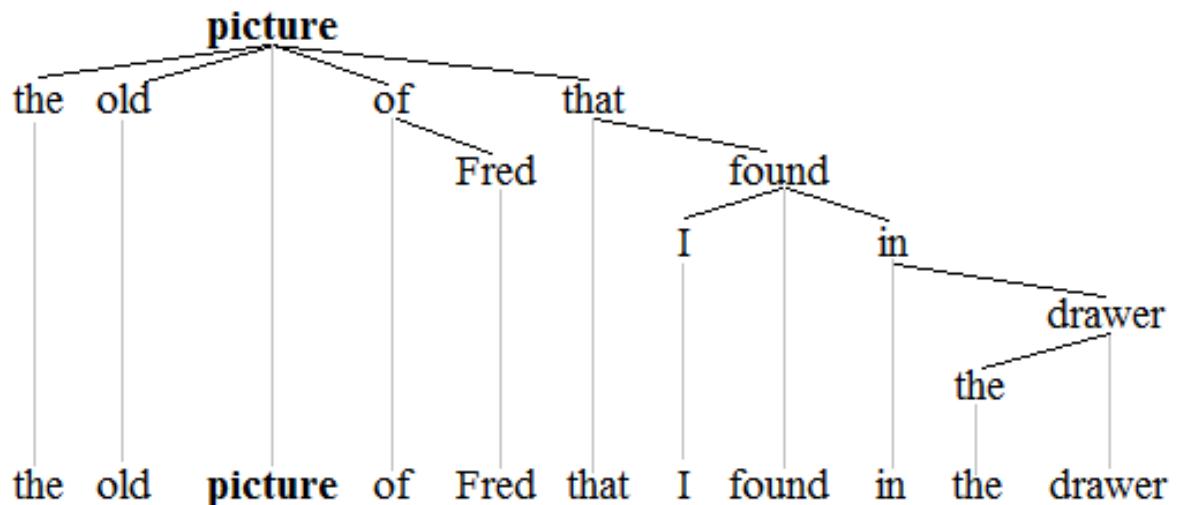
the	adj	N'	adj	N'		the	adj	NP	adj	NP
big	N	big	N	N		big	N	big	N	
house		houses				house		houses		

2. Dependency trees, first using the traditional NP approach, then using the DP approach:



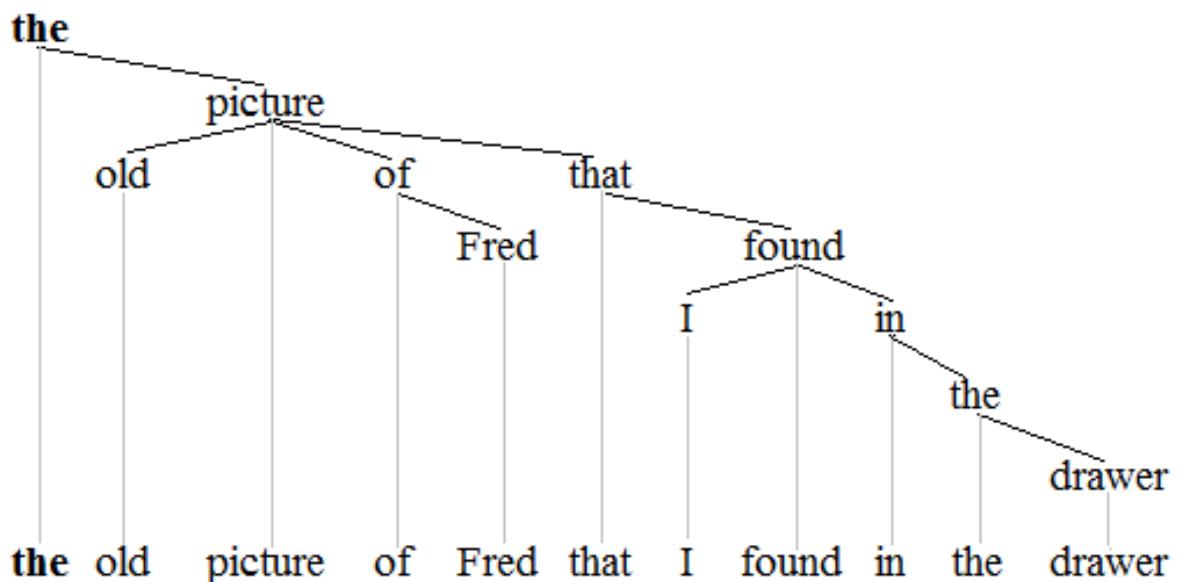
The following trees represent a more complex phrase. For simplicity, only dependency-based trees are given.^[5]

The first tree is based on the traditional assumption that nouns, rather than determiners, are the heads of phrases.



The head noun *picture* has the four dependents *the*, *old*, *of Fred*, and *that I found in the drawer*. The tree shows how the lighter dependents appear as pre-dependents (preceding their head) and the heavier ones as post-dependents (following their head).

The second tree assumes the DP hypothesis, namely that determiners rather than nouns serve as phrase heads.



The determiner *the* is now depicted as the head of the entire phrase, thus making the phrase a determiner phrase. Note that there is still a noun phrase present (*old picture of Fred that I found in the drawer*) but this phrase is below the determiner.

Footnotes

- [1] For definitions and discussions of the noun phrase that point to the presence of a head noun, see for instance Crystal (1997:264), Lockwood (2002:3), and Radford (2004: 14, 348).
- [2] For direct examples of approaches that obscure the distinction between nouns and pronouns on the one hand and noun phrases on the other, see for instance Matthews (1981:160f.) and (Lockwood (2002:3).
- [3] Concerning how noun phrases function, see for instance Stockwell (1977:55ff.).
- [4] For discussion and criticism of the DP analysis of noun phrases, see Matthews (2007:12ff.).
- [5] For a dependency grammar analysis of noun phrases similar to the one represented by the trees here, see for instance Starosta (1988:219ff.).
For an example of a relatively "flat" analysis of NP structure like the one produced here, but in a phrase structure grammar, see Culicover and Jackendoff (2005:140).

References

- Crystal, D. 1997. A dictionary of linguistics and phonetics, fourth edition. Oxford, UK: Blackwell Publishers.
- Culicover, P. and R. Jackendoff. 2005. Simpler syntax. Oxford, UK: Oxford University Press.
- Lockwood, D. 2002. Syntactic analysis and description: A constructional approach. London: Continuum.
- Matthews, P. 1981. Syntax. Cambridge, UK: Cambridge University Press.
- Matthews, P. 2007. Syntactic relations: A critical survey. Cambridge, UK: Cambridge University Press.
- Radford, A. 2004. English syntax: An introduction. Cambridge, UK: Cambridge University Press.
- Starosta, S. 1988. The case for lexicase. London: Pinter Publishers.
- Stockwell, P. 1977. Foundations of syntactic theory Englewood Cliffs, NJ: Prentice Hall, Inc.

Grammatical number

In linguistics, **grammatical number** is a grammatical category of nouns, pronouns, and adjective and verb agreement that expresses count distinctions (such as "one", "two", or "three or more").^[1] In many languages including English, the number categories are **singular** and **plural**. Some languages also have a dual number or other arrangements.

The count distinctions typically, but not always, correspond to the actual count of the referents of the marked noun or pronoun.

The word "number" is also used in linguistics to describe the distinction between certain grammatical aspects that indicate the number of times an event occurs, such as the semelfactive aspect, the iterative aspect, etc. For that use of the term, see "Grammatical aspect".

Overview

Most languages of the world have formal means to express differences of number. One widespread distinction, found in English and many other languages, involves a simple two-way number contrast between singular and plural (*car/cars, child/children*, etc.). Discussion of other more elaborate systems of number appears below.

Grammatical number is a morphological category characterized by the expression of quantity through inflection or agreement. As an example, consider the English sentences below:

That apple on the table is fresh.

Those two apples on the table are fresh.

The number of apples is marked on the noun—"apple" **singular number** (one item) vs. "apples" **plural number** (more than one item)—on the demonstrative, "that/those", and on the verb, "is/are". Note that, especially in the second sentence, all this information can seem redundant, since quantity is already indicated by the numeral "two".

A language has grammatical number when its nouns are subdivided into morphological classes according to the quantity they express, such that:

1. Every noun belongs to a unique number class. (Nouns are partitioned into disjoint classes by number.)
2. Noun modifiers (such as adjectives) and verbs have different forms for each number class and must be inflected to match the number of the nouns to which they refer. (Number is an agreement category.)

This is the case in English: every noun is either singular or plural (a few, such as "fish", can be either, according to context), and at least some modifiers of nouns—namely the demonstratives, the personal pronouns, the articles, and verbs—are inflected to agree with the number of the nouns to which they refer: "this car" and "these cars" are correct, while "*this cars" or "*these car" are ungrammatical and, therefore, incorrect. Only count nouns can be freely used in the singular and in the plural. Mass nouns, like "wine", "silverware", and "wisdom", are normally used in only the singular.^[2] Many languages distinguish between count nouns and mass nouns.

Not all languages have number as a grammatical category. In those that do not, quantity must be expressed either directly, with numerals, or indirectly, through optional quantifiers. However, many of these languages compensate for the lack of grammatical number with an extensive system of measure words.

There is a hierarchy among number categories: no language distinguishes a trial unless having a dual, and no language has dual without a plural.^[3]

Geographical distribution

Obligatory plural marking of all nouns is found throughout western and northern Eurasia and in most parts of Africa. The rest of the world presents a heterogeneous picture. Optional plural marking is particularly common in Southeast and East Asia and Australia, and complete lack of plural marking is particularly found in New Guinea and Australia. In addition to the areal correlations, there also seems to be at least one correlation with morphological typology: Isolating languages appear to favor no or non-obligatory plural marking. This can be seen particularly in Africa, where optionality or absence of plural marking is found particularly in the isolating languages of West Africa.^[4]^[5]

Number in specific languages

English

English is typical of most world languages, in distinguishing only between singular and plural number. The plural form of a noun is usually created by adding the suffix *-e)s*. The pronouns have irregular plurals, as in "I" versus "we", because they are ancient and frequently used words. English verbs distinguish singular from plural number in the third person ("He goes" versus "They go").

Swedish

Swedish inflects nouns in singular and plural. The plural of the noun is usually obtained by adding a suffix, according to the noun's declension. The suffixes are as follows: -or in the 1st declension (e.g. flicka - flickor), -ar in the 2nd (e.g. bil - bilar), -er in the 3rd (e.g. katt - katter), -n in the 4th (e.g. äpple - äpplen) and no inflectional suffix is added for the nouns in the 5th declension (e.g. bord - bord). Verbs in Swedish do not distinguish singular from plural number.

Romance languages

In modern Romance languages, nouns, adjectives and articles are declined according to number (singular or plural only). Verbs are conjugated for number as well as person.

French

In its written form, French declines nouns for number (singular or plural). In speech, however, the majority of nouns (and adjectives) are not for the most part declined for number. This is because the typical plural suffix *-s* or *-es*, is silent, and thus does not really indicate a change in pronunciation. Some report that spoken number marking on the noun appears when liaison occurs.

- some plurals do differ from the singular in pronunciation; for example, masculine singulars in *-al* [al] sometimes form masculine plurals in *-aux* [o].
- Proper nouns are not pluralized, even in writing. (*Les voitures*, but *Les Peugeot 404*)

Normally, the article or determiner is the primary indicator of number.

Hebrew

In Modern Hebrew, a Semitic language, most nouns have only singular and plural forms, such as סִפְר /'sɛfər/ "book" and סִפְרִים /sfa'ʁim/ "books", but some have distinct dual forms using a distinct dual suffix (largely nouns pertaining to numbers or time, such as אלפָיִים /al'pajim/ "two thousand" and שְׁבּוּעִים /ʃvu'ajim/ "two weeks"), some use this dual suffix for their regular plurals (largely body parts that tend to come in pairs, such as עֵינִים /eɪ'najim/ "eyes", as well as some that do not, such as שֵׁנִים /ʃi'najim/ "teeth"), and some are inherently dual (such as מַכְנִיסִים /mɪxna'sajim/ "pants" and אֲוֹפְנִים /ofa'najim/ "bicycle"). Adjectives, verbs, and pronouns agree with their subjects' or antecedents' numbers, but only have a two-way distinction between singular and plural; dual nouns entail plural

adjectives, verbs, and pronouns.

Russian

Modern Russian has a singular vs plural number system, but the declension of noun phrases containing numeral expressions follows complex rules. For example, "У меня есть одна книга / три книги / пять книг" ("I have one book-*nom.sing.* / three book-*gen.sing.* / five book-*gen.plur.*"). See Dual number: Slavic languages for a discussion of number phrases in Russian and other Slavic languages.

The numeral "one" also has a plural form, used with pluralia tantum: одни джинсы / одни часы "one pair of jeans, one clock".^[6]

Finnish

The Finnish language has a plural form of every noun case.

talo – house

talot – houses

taloissa – in the houses

However, when a number is used, or a word signifying a number (monta- many), the singular version of the partitive case is used.

kolme taloa – three houses

and where no specific number is mentioned, the plural version of the partitive case is used

taloja

and in the possessive (genitive)

talon ovi (the house's door) *talojen ovet* (the houses' doors)

Types of number

Singular versus plural

In most languages with grammatical number, nouns, and sometimes other parts of speech, have two forms, the singular, for one instance of a concept, and the plural, for more than one instance. Usually, the singular is the unmarked form of a word, and the plural is obtained by inflecting the singular. This is the case in English: *car/cars*, *box/boxes*, *man/men*. There may be exceptional nouns whose plural is identical to the singular: *one sheep/two sheep*.

Singulative versus collective

Some languages differentiate between an unmarked form, the collective, which is indifferent in respect to number, and a marked form for single entities, called the singulative in this context. For example, in Welsh, *moch* ("pigs") is a basic form, whereas a suffix is added to form *mochyn* ("pig"). It is the collective form which is more basic, and it is used as an adjectival modifier, e.g. *cig moch* ("pig meat", "pork"). The collective form is therefore similar in many respects to an English mass noun like "rice", which in fact refers to a collection of items which are logically countable. However, English has no productive process of forming singulative nouns (just phrases such as "a grain of rice"). Therefore, English cannot be said to have a singulative number.

In other languages, singulatives can be regularly formed from collective nouns; e.g. Standard Arabic حجر *hajar* "stone" → حجرة *hajara* "(individual) stone", بقر *baqar* "cattle" → بقرة *baqara* "(single) cow". In Russian, the suffix for forming singulative form is *-ин-* *-in-*; e.g. град *grad* "hail" → градина *gradina* "hailstone", лёд *lyod* "ice" → льдина *ldina* "block of ice". In both Russian and Arabic, the singulative form always takes on the feminine gender.

Dual

The distinction between a "singular" number (one) and a "plural" number (more than one) found in English is not the only possible classification. Another one is "singular" (one), "dual" (two) and "plural" (more than two). Dual number existed in Proto-Indo-European, persisted in many of the now extinct ancient Indo-European languages that descended from it—Sanskrit, Ancient Greek and Gothic for example—and can still be found in a few modern Indo-European languages such as Slovene.^[7] Many more modern Indo-European languages show residual traces of the dual, as in the English distinctions *both* vs. *all*, *either* vs. *any*, *neither* vs. *none*, and so on. (Note, however, that Norwegian *både*, for example, though cognate with English *both*, can be used with more than two things, as in *X sparar både tid, penger, og arbeid*, literally "X saves both time, money, and labour".)

Many Semitic languages also have dual number. For instance, in Arabic all nouns can have singular, plural, or dual forms. For non-broken plurals, masculine plural nouns end with و -ūn and feminine plural nouns end with ا -āt, whilst ن -ān, is added to the end of a noun to indicate that it is dual (even among nouns that have broken plurals).

Pronouns in Polynesian languages such as Tahitian exhibit the singular, dual, and plural numbers.

Trial

The trial number is a grammatical number referring to 'three items', in contrast to 'singular' (one item), 'dual' (two items), and 'plural' (four or more items). Several Austronesian or Austronesian-based languages such as Tolomako, Lihir, Manam, Bislama, and some registers of Tok Pisin have trial number in their pronouns; no language is known with trial number in its nouns.

Quadral

The quadral^[8] number, if it existed, would denote four items together, as trial does three. No natural language has it, nor is there any proof that any natural language ever did. It was once thought to exist in the pronoun systems of Marshallese, spoken in the Marshall Islands in the Pacific Ocean,^[9] and in Sursurunga (Hutchisson 1986), in Tangga (Capell 1971:260-262; Beaumont 1976:390), and in several other Austronesian languages. While not all of these languages are adequately attested, it turns out that Sursurunga instead has both a "lesser paucal" (labeled "trial", but in fact referring to small groups, with typically three or four members) and a "greater paucal" (misnamed the "quadral", as it has a minimum of four, e.g. a pair of dyadic kin terms)—the distinction is along the lines of "a few" vs. "several";—and that what Marshallese actually has is a trial and a paucal.^[10] None of them has a "quadral"; in at least two cases the field workers who originally suggested they did have a "quadral" were also the first to publish a peer-reviewed article contradicting that suggestion.

Paucal

Paucal number, for a few (as opposed to many) instances of the referent (e.g. in Hopi, Warlpiri and in Arabic for some nouns). See Quadral and Plural for some examples.

Distributive plural

Distributive plural number, for many instances viewed as independent individuals (for example, in Navajo).

Formal expression of number

Synthetic languages typically distinguish grammatical number by inflection. (Note that analytic languages, such as Chinese, do not have grammatical number.) Some languages have no marker for the plural in certain cases, e. g. Swedish *hus* --"house, houses" (but *huset* --"the house", *husen* --"the houses"). In most languages, the singular is formally unmarked, whereas the plural is marked in some way. Other languages, most notably the Bantu languages, mark both the singular and the plural, for instance Swahili (see example below). The third logical possibility, rarely

found in languages, is an unmarked plural contrasting with marked singular. Below are some examples of number affixes for nouns (where the inflecting morphemes are underlined):

- Affixation (by adding or removing prefixes, suffixes, infixes, or circumfixes):
 - Estonian *puu* "tree, wood" (singular) – *puud* "the trees, woods" (nominative plural)
 - Finnish: *lehmä* "cow, the cow" (singular) – *lehmät* "the cows" (nominative plural)
 - Slovene: *lipa* "linden" (singular) – *lipi* "linden" (dual) – *lige* "linden" (plural)
 - Tamil "Aan", "Pen" "Man, Woman, (Male, Female)" (Singular) – *AanKal, Penkal* "Two or more Man, Woman (Males, Females)
 - Sanskrit *puruṣas* "man" (singular) – *puruṣau* "two men" (dual) – *puruṣāḥ* "men" (plural)
 - Swahili: *mtoto* "child" (singular) – *watoto* "children" (plural)
 - Ganda: *omusajja* "man" (singular) – *abasajja* "men" (plural)
 - Georgian: კაცი *k'aci* "man" (singular) – კაცები *k'acebi* "men" (where *-i* is the nominative case marker)
- Simulfix (through various kinds of internal sound alternations):
 - Arabic: كِتَاب *kitāb* "book" (singular) – كُتُب *kutub* "books" (plural)
- Apophony (alternating between different vowels):
 - Welsh: *bachgen* "boy" – *bechgyn* "boys"
- Reduplication (through doubling):
 - Indonesian: *orang* "person" (singular) – *orang-orang* "people" (plural); **BUT** *dua orang* "two people" and *banyak orang* "many people" (reduplication is not done when the context is clear and when the plurality is not emphasized)
 - Somali: *buug* "book" (singular) – *buug-ag* "books" (plural)
- Suppletion (the use of the one word as the inflected form of another word):
 - Serbo-Croatian: *čovjek* "man" (singular) – *ljudi* "men, folks" (plural)^[11]
- Tonality (by changing a drag tone to a push tone)
 - Limburgish: *daāg* "day" (singular) – *daàg* "days" (plural)

Elements marking number may appear on nouns and pronouns in dependent-marking languages or on verbs and adjectives in head-marking languages.

English (dependent-marking)	Western Apache (head-marking)
Paul is teaching the cowboy.	Paul idilohí yiłch'ígó'aah.
Paul is teaching the cowboys.	Paul idilohí yiłch'ídagó'aah.

In the English sentence above, the plural suffix *-s* is added to the noun *cowboy*. In the equivalent in Western Apache, a head-marking language, a plural infix *da-* is added to the verb *yiłch'ígó'aah* "he is teaching him", resulting in *yiłch'ídagó'aah* "he is teaching them" while noun *idilohí* "cowboy" is unmarked for number.

Number particles

Plurality is sometimes marked by a specialized number particle (or number word). This is frequent in Australian and Austronesian languages. An example from Tagalog is the word *mga* [mə'ŋa]: compare *bahay* "house" with *mga bahay* "houses". In Kapampangan, certain nouns optionally denote plurality by secondary stress: *ing laláki* "man" and *ing babái* "woman" become *ding láláki* "men" and *ding bábái* "women".

Classifiers with number morphology

In Sanskrit and some other languages, number and case are fused category and there is concord for number between a noun and its predicator. Some languages however (for example, Assamese), lack this feature.

Languages that show number inflection for a large enough corpus of nouns and/or allow them to combine directly with singular and plural numerals can be described as non-classifier languages. On the other hand, there are languages that obligatorily require a counter word or the so-called classifier for all nouns. For example, the category of number in Assamese is fused with the category of classifier, which always carries a definite/indefinite reading. The singularity or plurality of the noun is determined by the addition of the classifier suffix either to the noun or to the numeral. Number system in Assamese is either realized as numeral or as nominal inflection, but not both. Numerals [ek] 'one' and [dui] 'two', can be realized as both free morpheme and clitics. When used with classifiers, these two numerals are cliticised to the classifiers.

Obligatoriness of number marking

In many languages, such as English, number is obligatorily expressed in every grammatical context. Some limit number expression to certain classes of nouns, such as animates or referentially prominent nouns (as with proximate forms in most Algonquian languages, opposed to referentially less prominent obviative forms). Still others, like Chinese and Japanese, number marking is not consistently applied to most nouns unless a distinction is needed or already present.

A very common situation is for plural number to not be marked if there is any other overt indication of number, as for example in Hungarian: *virág* "flower"; *virágok* "flowers"; *hat virág* "six flowers".

Transnumeral

Many languages, such as Chinese, Indonesian, Japanese and Malay, have optional number marking. In such cases, an unmarked noun is neither singular nor plural, but rather ambiguous as to number. This is called *transnumeral* or sometimes *general number*, abbreviated **TRN**. Many such languages have optional number marking, which tends to be used for definite and highly animate referents, most notable first-person pronouns.

Inverse number

The languages of the Tanoan family have three numbers – singular, dual, and plural – and exhibit an unusual system of marking number, called *inverse number* (or *number toggling*). In this scheme, every countable noun has what might be called its "inherent" or "expected" numbers, and is unmarked for these. When a noun appears in an "inverse" (atypical) number, it is inflected to mark this. For example, in Jemez, where nouns take the ending *-sh* to denote an inverse number, there are four noun classes which inflect for number as follows:

class	description	singular	dual	plural
I	animate nouns	-	-sh	-sh
II	some inanimate nouns	-sh	-sh	-
III	other inanimate nouns	-	-sh	-
IV	mass (non-countable) nouns	(n/a)	(n/a)	(n/a)

As can be seen, class-I nouns are inherently singular, class-II nouns are inherently plural, class-III nouns are inherently singular or plural. Class-IV nouns cannot be counted and are never marked with *-sh*. (From Sprott 1992, p. 53.)

A similar system is seen in Kiowa (Kiowa is distantly related to Tanoan languages like Jemez):

class	singular	dual	plural
I	-	-	-go
II	-go	-	-
III	-go	-	-go
IV	(n/a)	(n/a)	(n/a)

(See also Taos language: Number inflection for a description of inverse number suffixes in another Tanoan language.)

Number agreement

Verbs

In many languages, verbs are conjugated according to number. Using French as an example, one says *je vois* (*I see*), but *nous voyons* (*we see*). The verb *voir* (*to see*) changes from *vois* in the first person singular to *voyons* in the plural. In everyday English, this often happens in the third person (*she sees, they see*), but not in other grammatical persons, except with the verb *to be*.

Adjectives and determiners

Adjectives often agree with the number of the noun they modify. For example, in French, one says *un grand arbre* [œ̃ grãt aʁbʁ] "a tall tree", but *deux grands arbres* [dø̃ grãt zaʁbʁ] "two tall trees". The singular adjective *grand* becomes *grands* in the plural, unlike English "tall", which remains unchanged.

Other determiners may agree with number. In English, the demonstratives "this", "that" change to "these", "those" in the plural, and the indefinite article "a", "an" is either omitted or changes to "some". In French and German, the definite articles have gender distinctions in the singular but not the plural. In Spanish and Portuguese, both definite and indefinite articles are inflected for gender and number, e.g. Portuguese *o, a* "the" (singular, masc./fem.), *os, as* "the" (plural, masc./fem.); *um, uma* "a(n)" (singular, masc./fem.), *uns, umas* "some" (plural, masc./fem.), *dois, duas* "two" (plural, masc./fem.).

In the Finnish sentence *Yöt ovat pimeitä* "Nights are dark", each word referring to the plural noun *yöt* "nights" ("night" = *yö*) is pluralized (night-PL is-PL dark-PL-partitive).

Exceptions

Sometimes, grammatical number will not represent the actual quantity. For example, in Ancient Greek neuter plurals took a singular verb. The plural form of a pronoun may also be applied to a single individual as a sign of importance, respect or generality, as in the *pluralis majestatis*, the T-V distinction, and the generic "you", found in many languages, or, in English, when using the singular "they" for gender-neutrality.

In Arabic, the plural of a non-human noun (one that refers to an animal or to an inanimate entity regardless of whether the noun is grammatically masculine or feminine in the singular) is treated as feminine singular—this is called the inanimate plural. For example:

beautiful (rajul jamīl) 'beautiful/handsome man': *rajul* (man) is masculine singular, so it takes the masculine singular adjective *jamīl*.

beautiful house (bayt jamīl) 'beautiful house': *bayt* (house) is masculine singular, so it takes the masculine singular *jamīl*.

beautiful dog (kalb jamīl) 'beautiful dog': *kalb* (dog) is masculine singular, so it takes the masculine singular *jamīl*.

beautiful girl (bint jamīlah) 'beautiful girl': *bint* is feminine singular, so it takes the feminine singular *jamīlah*.

beautiful car (sayyārah jamīlah) 'beautiful car': *sayyārah* is feminine singular, so it takes the feminine singular *jamīlah*.

beautiful men (rijāl jamīlūn) 'beautiful/handsome men': *rijāl* (men) is masculine plural, so it takes the masculine plural *jamīlūn*.

beautiful girls (banāt jamīlāt) 'beautiful girls': *banāt* is feminine plural, so it takes the feminine plural *jamīlāt*.

but

beautiful houses (buyūt jamīlah) 'beautiful houses': *buyūt* (houses) is non-human plural, and so takes the inanimate plural (feminine singular) *jamīlah*.

beautiful cars (sayyārāt jamīlah) 'beautiful cars': *sayyārāt* is non-human plural, and so takes the inanimate plural *jamīlah*.

beautiful dogs (kilāb jamīlah) 'beautiful dogs': *kilāb* is non-human plural, and so takes the inanimate plural *jamīlah*.

Collective nouns

A collective noun is a word that designates a group of objects or beings regarded as a whole, such as "flock", "team", or "corporation". Although many languages treat collective nouns as singular, in others they may be interpreted as plural. In British English, phrases such as *the committee are meeting* are common (the so-called agreement *in sensu* "in meaning"; with the meaning of a noun, rather than with its form). The use of this type of construction varies with dialect and level of formality.

Semantic vs. grammatical number

All languages are able to specify the quantity of referents. They may do so by lexical means with words such as English *a few*, *some*, *one*, *two*, *five hundred*. However, not every language has a grammatical category of number. Grammatical number is expressed by morphological and/or syntactic means. That is, it is indicated by certain grammatical elements, such as through affixes or number words. Grammatical number may be thought of as the indication of semantic number through grammar.

Languages that express quantity only by lexical means lack a grammatical category of number. For instance, in Khmer, neither nouns nor verbs carry any grammatical information concerning number: such information can only be conveyed by lexical items such as *khlah* 'some', *pii-bey* 'a few', and so on.^[12]

Auxiliary languages

Auxiliary languages often have fairly simple systems of grammatical number. In one of the most common schemes (found, for example, in Interlingua and Ido), nouns and pronouns distinguish between singular and plural, but not other numbers, and adjectives and verbs do not display any number agreement. Note however that in Esperanto adjectives must agree in both number and case with the nouns that they qualify.

Notes

- [1] SIL Dictionary of Linguistic Terms: What is Number? (<http://www.sil.org/linguistics/GlossaryOfLinguisticTerms/WhatIsNumber.htm>)
- [2] Nicolas, David (2008). "Mass nouns and plural logic." *Linguistics and Philosophy* 31.2, pp. 211–244 <http://d.a.nicolas.free.fr/Nicolas-Mass-nouns-and-plural-logic-Revised-2.pdf>
- [3] Greenberg, 1972.
- [4] <http://www.acsu.buffalo.edu/~jcgood/jcgood-KwaNoun.pdf>
- [5] Occurrence of Nominal Plurality (<http://wals.info/chapter/34>)
- [6] Lunt (1982, p. 204).
- [7] Kordić 2001, pp. 63, 72–73.
- [8] <http://en.wiktionary.org/wiki/quadral>
- [9] Gregersen, Edgar A., "Language in Africa", p. 62. (Note that Marshallese is not a language spoken in Africa.)
- [10] Corbett, Greville G., "Number", pages 25–30, 40, 46, 224, 317, 358, Cambridge Textbooks in Linguistics, P240.8.C67 2000, ISBN 0-521-64016-4
- [11] Kordić 2001, p. 64.
- [12] See, for example, the *Linguistic sketch* in *Khmer* (<http://www.lmp.ucla.edu/Profile.aspx?LangID=75>) article at UCLA Language Materials project (<http://www.lmp.ucla.edu/>).

Bibliography

- Beard, R. (1992) Number. In W. Bright (ed.) *International Encyclopedia of Linguistics*.
- Corbett, G. (2000). *Number*. Cambridge University Press.
- Greenberg, Joseph H. (1972) Numeral classifiers and substantival number: Problems in the genesis of a linguistic type. *Working Papers on Language Universals* (Stanford University) 9. 1-39.
- Kordić, Snježana (2001). "Die grammatische Kategorie des Numerus [Grammatical category of number]" (<http://www.webcitation.org/6A9uLZvic>). In Jachnow, Helmut; Norman, Boris; Suprun, Adam E (in German). *Quantität und Graduierung als kognitiv-semantische Kategorien*. Slavistische Studienbücher, Neue Folge ; vol. 12. Wiesbaden: Harrassowitz. pp. 62–75. ISBN 3-447-04408-X. OCLC 48560579. Archived from the original (http://bib.irb.hr/datoteka/426611.DIE_GRAMMATISCHE_KATEGO.PDF) on 24 August 2012. Retrieved 28 August 2012.
- Laycock, Henry. (2005) 'Mass nouns, Count nouns and Non-count nouns' *Encyclopedia of Language and Linguistics*. Oxford: Elsevier.
- Laycock, Henry. (2006) *Words without Objects*. Oxford: Clarendon Press.
- Lunt, Horace G. (1982) *Fundamentals of Russian*. Revised edition (1968). Reprinted by Slavica Publishers, Columbus Ohio.
- Merrifield, William (1959). "Classification of Kiowa nouns". *International Journal of American Linguistics* 25 (4): 269–271. doi:10.1086/464544.
- Mithun, Marianne (1999). *The languages of native North America* (pp. 81–82, 444-445). Cambridge University Press, ISBN 0-521-23228-7.
- Nicolas, David (2008). "Mass nouns and plural logic". *Linguistics and Philosophy* 31.2, pp. 211–244 <http://d.a.nicolas.free.fr/Nicolas-Mass-nouns-and-plural-logic-Revised-2.pdf>
- Sprott, Robert (1992). Jemez syntax. (Doctoral dissertation, University of Chicago, USA).
- Sten, Holgar (1949) *Le nombre grammatical*. (Travaux du Cercle Linguistique de Copenhague, 4.) Copenhagen: Munksgaard.

- Watkins, Laurel J.; & McKenzie, Parker. (1984). *A grammar of Kiowa*. Studies in the anthropology of North American Indians. Lincoln: University of Nebraska Press. ISBN 0-8032-4727-3.
- Weigel, William F. (1993). Morphosyntactic toggles. *Papers from the 29th Regional Meeting of the Chicago Linguistic Society* (Vol. 29, pp. 467–478). Chicago: Chicago Linguistic Society.
- Wiese, Heike (2003). *Numbers, language, and the human mind*. Cambridge University Press, ISBN 0-521-83182-2.
- Wonderly, William L.; Gibson, Lorna F.; Kirk, Paul L. (1954). "Number in Kiowa: Nouns, demonstratives, and adjectives". *International Journal of American Linguistics* 20: 1–7. doi:10.1086/464244. JSTOR 1263186.
- Unicode's plural rules collection http://www.unicode.org/cldr/data/charts/supplemental/language_plural_rules.html
- "Cultural Constraints on Grammar and Cognition in Pirahã" (<http://www.sil.org/americas/brasil/publcns/anthro/PHGrCult.pdf>).

Object (grammar)

An **object** in grammar is part of a sentence, and often part of the predicate. It denotes somebody or something involved in the subject's "performance" of the verb. Basically, it is what or whom the verb is acting upon. As an example, the following sentence is given:

In the sentence "*Bobby scored a goal*", "a goal" is the object.

"Bobby" is the subject (the agent, doer, or performer of the action), "score" is the action, and "goal" is the object (what or whom the action of the verb is acting upon). The verb in the clause determines whether there can or must be objects in the sentence, and if so how many and of what type. (See also Valency (linguistics).) In many languages, including English, the same verb can allow different structures: "Bobby scored" and "Bobby scored a goal" are both valid English sentences. Note that the meaning of the verb can be affected by the presence or absence of an object.

Types of object

Objects fall into classes: direct objects, adpositional objects, and non-prepositional indirect objects. A direct object answers the question "What?", while an indirect object answers the question "To whom?" or "For whom?". An indirect object is the recipient of the direct object, or an otherwise affected participant in the event. There must be a direct object for an indirect object to be placed in a sentence. Some examples:

- In "The girl ate fruit", *fruit* is a **direct object** of the verb *ate*. It corresponds to the accusative of languages with grammatical cases.
- In "They sent him a postcard", *him* is a (non-prepositional) **indirect object** of the verb *sent* (which uses a double-object construction). It typically corresponds to the dative case.
- In "I envied him his success", *his success* is an **oblique object** of the verb *envied* (it could be expressed *for his success* instead).
- In "We listened to the radio", *radio* is the object of the preposition *to*, and the **prepositional object** of the simple past of the phrasal verb *to listen to*. It can correspond to a variety of cases and complements.

In many languages, including German, Latin, and Classical Arabic, objects can change form slightly (*decline*) to indicate what kind of object they are (their *case*). This does not happen in English (except for a few pronouns that do have separate subject and object forms, such as *he* versus *him*); rather, the type of object is indicated strictly by word order. Also, some objects are treated differently from others in particular languages. In Spanish, for example, human objects have to get a preposition 'a'. This is called differential object marking.

Forms of object

An object may take any of a number of forms, all of them nominal in some sense. Common forms include:

- A noun or noun phrase, as in "I remembered *her advice*."
- An infinitive or infinitival clause, as in "I remembered *to eat*."
- A gerund or gerund phrase, as in "I remembered *being there*."
- A declarative content clause, as in "I remembered *that he was blond*."
- An interrogative content clause, as in "I remembered *why she had left*."
- A fused relative clause, as in "I remembered *what she wanted me to do*."

The object in linguistics

In inflected languages, objects may be marked using morphological case. In many languages, the patient of a ditransitive verb is marked in the same way as the single object of a monotransitive verb, and is called the **direct object**. The recipient has its own marking, and is called the **indirect object**. In Latin and many other languages, the direct object is marked by the accusative case, while the indirect object is typically marked by the dative case.

In more isolating languages such as English, objects are marked by their position in the sentence or using adpositions (like *to* in *I gave a book to him*). Modern English preserves a case distinction for pronouns, but it has conflated the accusative and dative into a single oblique case, the object pronouns *him*, *her*, *me*, etc., which may function either as direct or indirect objects.

In some languages, the recipient of a ditransitive verb is marked in the same way as the single object of a monotransitive verb, and is called the **primary object**. The patient of ditransitive verbs has its own marking, and is called the **secondary object**. Such languages are called deicticaetiative languages, and are mostly found among African languages.

An object can be turned into a syntactic subject using passive voice, if the language in question has such a construction. In dative languages, the direct object is promoted, while in deicticaetiative languages the primary object is promoted. English shares this property with deicticaetiative languages, since non-prepositional indirect objects can be promoted:

Direct object: His colleagues sent **him** a **postcard**.

A postcard was sent to **him** (by his colleagues).

Indirect object: His colleagues sent **him** a **postcard**.

He was sent a **postcard** (by his colleagues).

In the immense majority of languages, where there is a preferred word order in the sentence, the object is placed somewhere after the subject. Analytic languages additionally tend to place the object after the verb, so that it remains separate from the subject.

External links

- Direct Objects ^[1] at [chompchomp.com](http://www.chompchomp.com/terms/directobject.htm) ^[2]

References

[1] <http://www.chompchomp.com/terms/directobject.htm>

[2] <http://www.chompchomp.com>

Open class (linguistics)

In linguistics, a word class may be either an **open class** or a closed class. Open classes accept the addition of new morphemes (words), through such processes as compounding, derivation, inflection, coining, and borrowing; closed classes generally do not.

Content words, or lexical words, (including nouns, verbs, adjectives, and most adverbs) are words that carry the content or the meaning of a sentence and are open-class words. They contrast with function words, such as articles, prepositions, conjunctions, auxiliary verbs, and pronouns, which can be found in almost any utterance, no matter what it is about. Words in open classes (content/lexical words) carry the primary communicative force of an utterance, and are usually variable in form (inflected). Their distribution is not definable by the grammar.

Typical open classes are the class of nouns, the class of verbs, the class of adjectives,^[1] and the class of adverbs.^[2] However, this varies between languages; for example, in Japanese, pronouns form an open class, while verbs form a closed class. With a few exceptions, such as サボる (*saboru*, "to ditch class") and ググる (*guguru*, "to google"), new "verbs" in Japanese are formed by appending する (*suru*, "to do") to a noun.

Open-class words are not considered part of the core language and as such they can be changed, replaced or dropped from the common lexicon, which can encompass many thousands of them. For living languages, this change is noticeable within an individual lifespan, and usually faster. Closed-class words, on the other hand, are always relatively few and resistant to change. They are unproductively and are generally invariable in form (except demonstratives, modals and some pronouns).

English open word classes

In English, open classes include the following parts of speech:

- Nouns
- Main verbs (not auxiliary verbs)
- Adjectives
- Adverbs
- Interjections

References

[1] <http://strazny.com/encyclopedia/sample-function-words.html> Open class words

[2] <http://www.ucl.ac.uk/internet-grammar/wordclas/open.htm> Open and Closed Word Classes

Parasitic gap

In grammar, a **parasitic gap** is a construction wherein the dropping of an argument is dependent on a co-varying argument having been fronted in a local context.

Discovery

The phenomenon appears to have been discovered by John Robert Ross in the 1960s,^[1] but remained undiscussed until papers by Knut Tarald Taraldsen and Elisabet Engdahl explored the properties of parasitic gaps in great depth. This work was extended by Noam Chomsky in 1982,^[2] arguing that parasitic gaps are actually silent pronouns, licensed under particular conditions predicted by the general theory of grammar. Aspects of this analysis were developed in the framework of Generalized Phrase Structure Grammar (GPSG) in the mid 1980s, and refined in the Head-driven Phrase Structure Grammar (HPSG), done by Carl Pollard and Ivan Sag. More recent research by Chomsky and his student Jonathan Nissenbaum^[3] has refined this view, arguing (in effect) that the pronouns themselves undergo a syntactic rule not unlike the rule that moves phrases like *which book* to the front of a sentence.

Example

An English example is:

Which book did she review __ without reading __?

The key feature here is that both *review* and *reading* have a "gap" where their objects should be (indicated above with underscores), and both gaps appear to function as variables bound by *which book*; i.e. "Which book x did she review x without reading x?". The second gap is considered to be "parasitic" on the first, since it (unlike the first gap) cannot easily stand on its own, shown by the following example.

**She reviewed the book without reading __.*

This has a similar structure as the first sentence but with a non-WH matrix object that doesn't front.

Parasitic gaps are typically found in structures that would otherwise be islands to extraction, such as adjuncts as in the above example, or subjects, as in the following example (where the subject *even supporters of __* hosts the parasitic gap licensed by the true gap following *dislike*). This example further shows that parasitic gaps need not follow their licensing gap.

Which candidate do even supporters of __ tend to dislike __?

Parasitic gaps are an important topic of study in syntax, especially in the framework of generative grammar. It has been argued by some linguists working in generative frameworks that speakers' intuitive knowledge of the construction can only be explained by an innate universal grammar. The question of how these sentences should be analysed is still very much open.

References

- [1] Ross, John Robert (1967). *Constraints on Variables in Syntax*. MIT PhD dissertation.
- [2] Chomsky, Noam (1982). *Some Concepts and Consequences of the Theory of Government and Binding*. *Linguistic Inquiry Monograph Six*. MIT Press.
- [3] Jonathan Nissenbaum (2000). *Investigations of Covert Phrase Movement*. MIT PhD dissertation.

Part of speech

In grammar, a **part of speech** (also a **word class**, a **lexical class**, or a **lexical category**) is a linguistic category of words (or more precisely *lexical items*), which is generally defined by the syntactic or morphological behaviour of the lexical item in question. Common linguistic categories include *noun* and *verb*, among others. There are open word classes, which constantly acquire new members, and closed word classes, which acquire new members infrequently if at all.

Almost all languages have the lexical categories noun and verb, but beyond these there are significant variations in different languages.^[1] For example, Japanese has as many as three classes of adjectives where English has one; Chinese, Korean and Japanese have nominal classifiers whereas European languages do not; many languages do not have a distinction between adjectives and adverbs, adjectives and verbs (see stative verbs) or adjectives and nouns, etc. This variation in the number of categories and their identifying properties entails that analysis be done for each individual language. Nevertheless the labels for each category are assigned on the basis of universal criteria.^[1]

History

The classification of words into lexical categories is found from the earliest moments in the history of linguistics.^[2] In the *Nirukta*, written in the 5th or 6th century BCE, the Sanskrit grammarian Yāska defined four main categories of words:^[3]

1. nāma – nouns or substantives
2. ākhyāta – verbs
3. upasarga – pre-verbs or prefixes
4. nipāta – particles, invariant words (perhaps prepositions)

These four were grouped into two large classes: inflected (nouns and verbs) and uninflected (pre-verbs and particles).

The ancient work on the grammar of the Tamil language, *Tolkappiyam*, dated variously between 1st and 10th centuries CE, classifies words^[4] in Tamil as

1. *peyar* (noun),
2. *vinai* (verb),
3. *idai* (part of speech which modifies the relationships between verbs and nouns) and
4. *uri* (word that further qualifies a noun or verb)

A century or two after the work of Nirukta, the Greek scholar Plato wrote in the *Cratylus* dialog that "... sentences are, I conceive, a combination of verbs [*rhēma*] and nouns [*ónoma*]".^[5] Another class, "conjunctions" (covering conjunctions, pronouns, and the article), was later added by Aristotle.

By the end of the 2nd century BCE, the classification scheme had been expanded into eight categories, seen in the *Art of Grammar* (Τέχνη Γραμματική) :

1. Noun: a part of speech inflected for case, signifying a concrete or abstract entity
2. Verb: a part of speech without case inflection, but inflected for tense, person and number, signifying an activity or process performed or undergone
3. Participle: a part of speech sharing the features of the verb and the noun
4. Interjection: a part of speech expressing emotion alone
5. Pronoun: a part of speech substitutable for a noun and marked for a person
6. Preposition: a part of speech placed before other words in composition and in syntax
7. Adverb: a part of speech without inflection, in modification of or in addition to a verb, adjective, clause, sentence, or other adverb
8. Conjunction: a part of speech binding together the discourse and filling gaps in its interpretation

The Latin grammarian Priscian (fl. 500 CE) modified the above eightfold system, substituting "article" for "interjection". It was not until 1767 that the adjective was taken as a separate class.^[6]

Traditional English grammar is patterned after the European tradition above, and is still taught in schools and used in dictionaries. It names eight parts of speech: noun, verb, adjective, adverb, pronoun, preposition, conjunction, and interjection (sometimes called an exclamation).

Controversies

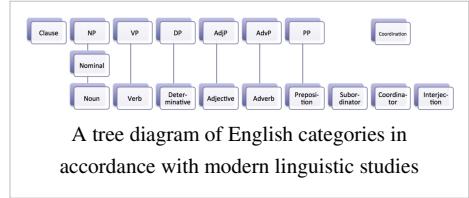
Since the Greek grammar of 2nd century BCE, parts of speech have been defined by morphological, syntactic and semantic criteria. However, there is currently no generally agreed-upon classification scheme that can apply to all languages, or even a set of criteria upon which such a scheme should be based.

Linguists recognize that the above list of eight word classes is drastically simplified and artificial.^[7] For example, "adverb" is to some extent a catch-all class that includes words with many different functions. Some have even argued that the most basic of category distinctions, that of nouns and verbs, is unfounded,^[8] or not applicable to certain languages.^[9]

English

English words have been traditionally classified into eight lexical categories, or parts of speech (and are still done so in most dictionaries):

- Noun: any abstract or concrete entity; a person (*police officer, Michael*), place (*coastline, London*), thing (*necktie, television*), idea (*happiness*), or quality (*bravery*)
- Pronoun: any substitute for a noun or noun phrase
- Adjective: any qualifier of a noun
- Verb: any action (*walk*), occurrence (*happen*), or state of being (*be*)
- Adverb: any qualifier of an adjective, verb, clause, sentence, or other adverb
- Preposition: any establisher of relation and syntactic context
- Conjunction: any syntactic connector
- Interjection: any emotional greeting (or "exclamation")



Although these are the traditional eight English parts of speech, modern linguists have been able to classify English words into even more specific categories and sub-categories based on function.

The four main parts of speech in English, namely nouns, verbs, adjectives and adverbs, are labelled form classes as well. This is because prototypical members of each class share the ability to change their form by accepting derivational or inflectional morphemes. The term form is used because it refers literally to the similarities in shape of the word in its pronunciation and spelling for each part of speech.^[10]

Neither written nor spoken English generally marks words as belonging to one part of speech or another, as they tend to be understood in the context of the sentence. Words like *neigh, break, outlaw, laser, microwave* and *telephone* might all be either verb forms or nouns. Although *-ly* is a frequent adverb marker, not all adverbs end in *-ly* (*-wise* is another common adverb marker) and not all words ending in *-ly* are adverbs. For instance, *tomorrow, fast, very* can all be adverbs, while *early, friendly, ugly* are all adjectives (though *early* can also function as an adverb). Verbs can also be used as adjectives (e.g. "The *astonished* child watched the spectacle unfold" instead of the verb usage "The unfolding spectacle *astonished* the child"). In such cases, the verb is in its participle form.

In certain circumstances, even words with primarily grammatical functions can be used as verbs or nouns, as in "We must look to the *how's* and not just the *why's*" or "Miranda was *to-ing* and *fro-ing* and not paying attention".

Functional classification

The study of linguistics has expanded the understanding of lexical categories in various languages and allowed for better classifying words by function. Common lexical categories in English by function may include:

- **Open word classes:**

- adjectives
- adverbs
- nouns
- verbs (except auxiliary verbs)
- interjections

- **Closed word classes:**

- auxiliary verbs
- clitics
- coverbs
- conjunctions
- determiners (articles, quantifiers, demonstrative adjectives, and possessive adjectives)
- particles
- measure words
- adpositions (prepositions, postpositions, and circumpositions)
- preverbs
- pronouns
- contractions
- cardinal numbers

References

- [1] Kroeger, Paul (2005). *Analyzing Grammar: An Introduction*. Cambridge: Cambridge University Press. pp. 35. ISBN 978-0-521-01653-7.
 - [2] Robins, R. H. (1989). *General Linguistics*. 4th ed. London: Longman.
 - [3] Bimal Krishna Matilal (1990). *The word and the world: India's contribution to the study of language*. Oxford. Yaska is dealt with in Chapter 3.
 - [4] Dr. S. Ilakkuvanar (1994). *Tholkappiyam in English with critical studies*, 2nd Ed.. Educational Publishers.
 - [5] Cratylus 431b
 - [6] Beauzée, Nicolas, *Grammaire générale, ou exposition raisonnée des éléments nécessaires du langage*. (Paris, 1767).
 - [7] Zwicky, Arnold (30 March 2006). "What part of speech is "the"" (<http://itre.cis.upenn.edu/~myl/languagelog/archives/002974.html>). *Language Log*. Retrieved 26 December 2009. "...the school tradition about parts of speech is so desperately impoverished"
 - [8] Hopper, P. and S. Thompson. 1985. "The Iconicity of the Universal Categories 'Noun' and 'Verbs'". In *Typological Studies in Language: Iconicity and Syntax*. John Hajnal (ed), vol. 6, pp. 151–183, Amsterdam: John Benjamins Publishing Company
 - [9] Broschart, Jürgen 1997. "Why Tongan does it differently: Categorial Distinctions in a Language without Nouns and Verbs." *Linguistic Typology* 1(2):123–165.
 - [10] Klammer, Thomas, Muriel R. Schulz and Angela Della Volpe. (2009). *Analyzing English Grammar*. Longman (6th edition)
- ^ a b Kroeger, Paul (2005). *Analyzing Grammar: An Introduction*. Cambridge: Cambridge University Press. pp. 35. ISBN 978-0-521-01653-7.

External links

- The Eight Classes Grouping All Words In The English Language (<http://wakish.info/the-eight-classes-grouping-all-words-in-the-english-language/>)
- How To Classify Words Into Parts Of Speech (<http://wakish.info/how-to-classify-words-into-parts-of-speech/>)
- The parts of speech (<http://www.arts.uottawa.ca/writcent/hypergrammar/partsp.html>)
- Parts of Speech Activities at Quia (<http://www.quia.com/jg/65832.html>)
- Guide to Grammar and Writing (<http://grammar.ccc.commnet.edu/grammar/>)
- Martin Haspelmath. 2001. "Word Classes and Parts of Speech." In: Baltes, Paul B. & Smelser, Neil J. (eds.) *International Encyclopedia of the Social and Behavioral Sciences*. Amsterdam: Pergamon, 16538-16545. ([http://email.eva.mpg.de/~haspelmt/2001wcl.pdf](mailto:email.eva.mpg.de/~haspelmt/2001wcl.pdf)) (PDF)

Periphrasis

In linguistics, **periphrasis** is a device by which grammatical meaning is expressed by one or more free morphemes (typically one or more function words accompanying a content word), instead of by inflectional affixes or derivation.^[1] Periphrastic forms are analytic, whereas the absence of periphrasis is a characteristic of synthesis. While periphrasis concerns all categories of syntax, it is most visible with verb catenae. The verb catenae of English are highly periphrastic.

Examples

The distinction between inflected and periphrastic forms is usually illustrated across distinct languages. However, comparative and superlative forms of adjectives (and adverbs) in English provide a straightforward illustration of the phenomenon.^[2] For many speakers, both the simple and periphrastic forms in the following table are possible:

Inflected form of the comparative (-er)	Periphrastic equivalent
loveli-er	more lovely
friendli-er	more friendly
happi-er	more happy
Inflected form of the superlative (-est)	Periphrastic equivalent
loveli-est	most lovely
friendli-est	most friendly
happi-est	most happy

The periphrastic forms are periphrastic by virtue of the appearance of *more* or *most*, and they therefore contain two words instead of just one. The words *more* and *most* contribute functional meaning only, just like the inflectional affixes *-er* and *-est* contribute just functional meaning. The distinction is also evident across full verbs and the corresponding light verb constructions:

Full verb	Periphrastic light verb alternative
(to) present	(to) give a presentation
(to) shower	(to) take a shower
(to) converse	(to) have a conversation
(to) smoke	(to) have a smoke

The light verb constructions are periphrastic because the light verbs (*give*, *take*, *have*) have little semantic content. They contribute mainly functional meaning. The main semantic content of these light verb constructions lies with the noun phrase.

Periphrasis across languages

Distinctions of this sort abound across languages. The following table provides some examples across Latin and English:

Latin (inflected)	English (periphrastic)
stēll-ae	of a star
patient-issimus	most patient
amā-be-ris	(you) will be loved

Periphrasis is a characteristic of analytic languages, which tend to avoid inflection. Even strongly inflected synthetic languages sometimes make use of periphrasis to fill out an inflectional paradigm that is missing certain forms.^[3] A comparison of some Latin forms of the verb *dūcere* 'lead' with their English translations illustrates further that English uses periphrasis in many instances where Latin uses inflection.

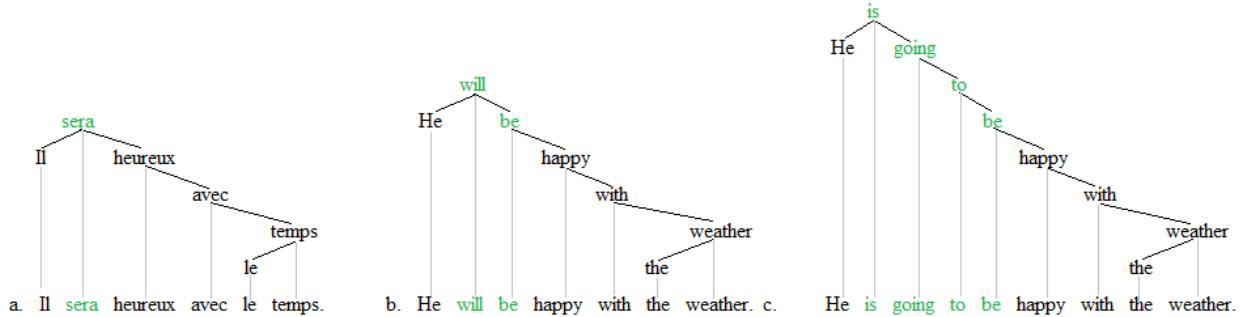
Latin	English equivalent	grammatical classification
dūc-ē-bāmur	(we) were led	1st person plural imperfect indicative passive
dūc-i-mur	(we) are led	1st person plural present indicative passive
dūc-ē-mur	(we) will be led	1st person plural future indicative passive

English often needs two or three verbs to express the same meaning that Latin expresses with a single verb. Latin is a relatively synthetic language; it expresses grammatical meaning using inflection, whereas the verb system of English, a Germanic language, is relatively analytic; it uses auxiliary verbs to express functional meaning.

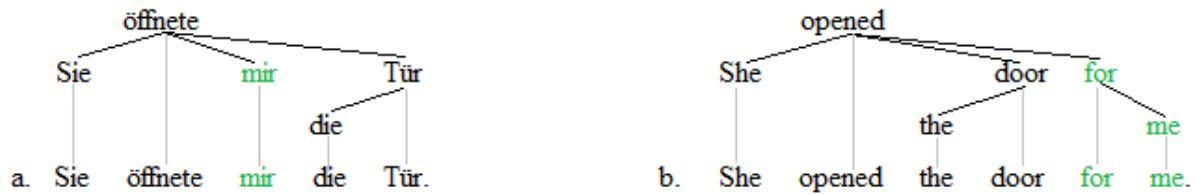
Catena

The correspondence in meaning across inflected forms and their periphrastic equivalents within the same language or across different languages leads to a basic question. Individual words are always constituents, but their periphrastic equivalents are often NOT constituents. Given this mismatch in syntactic form, one can pose the following questions: how should the form-meaning correspondence across periphrastic and non-periphrastic forms be understood?; how does it come to pass that a specific meaning bearing unit can be a constituent in one case but in another case, it is a combination of words that does not qualify as a constituent? An answer to this question that has recently come to light is expressed in terms of the catena unit, as implied above.^[4] The periphrastic word combinations are catenae even when they are not constituents, and individual words are also catenae. The form-meaning correspondence is therefore consistent. A given inflected one-word catena corresponds to a periphrastic multiple-word catena.

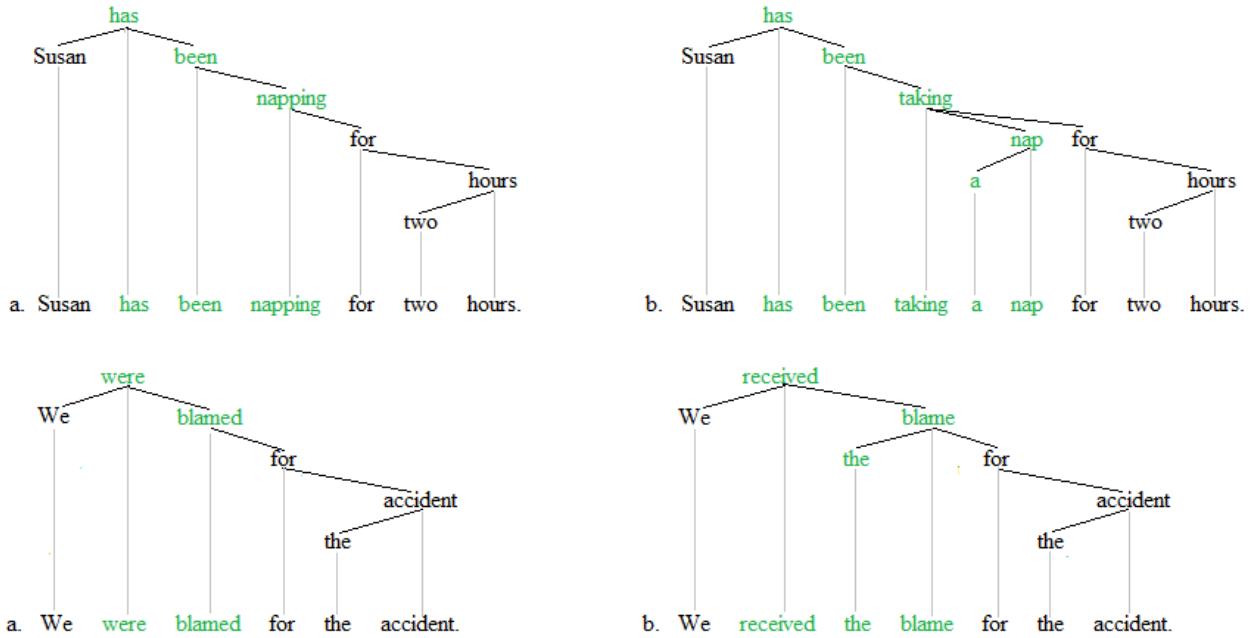
The role of catenae for the theory of periphrasis is illustrated with the trees that follow. The first example is across French and English. Future tense/time in French is often constructed with an inflected form, whereas English typically employs a periphrastic form, e.g.



Where French expresses future tense/time using the single (inflected) verb catena *sera*, English employs a periphrastic two-word catena, or perhaps a periphrastic four-word catena, to express the same basic meaning. The next example is across German and English:



German often expresses a benefactor with a single dative case pronoun. For English to express the same meaning, it usually employs the periphrastic two-word prepositional phrase with *for*. The following trees illustrate the periphrasis of light verb constructions:



Each time, the catena in green is the matrix predicate. Each of these predicates is a periphrastic form insofar at least one function word is present. The b-predicates are, however, more periphrastic than the a-predicates since they contain more words. The closely similar meaning of these predicates across the a- and b-variants is accommodated in terms of catenae, since each predicate is a catena.

Notes

- [1] Concerning periphrasis in general, see Matthews (1991:11f., 236-238).
- [2] Concerning the competing forms of the comparative and superlative in English as an illustration of periphrasis, see Matthews (1981:55).
- [3] Concerning the use of periphrasis in strongly inflected languages, see Stump (1998).
- [4] Concerning catenae, see Osborne and Groß (2012) and Osborne et al (2013).

References

- Matthews, P. 1981. Syntax. Cambridge, UK: Cambridge University Press.
- Matthews, P. 1991. Morphology, 2nd edition. Cambridge, UK: Cambridge University Press.
- Osborne, T. and T. Groß 2012a. Constructions are catenae: Construction Grammar meets Dependency Grammar. *Cognitive Linguistics* 23, 1, 163-214.
- Osborne, T., M. Putnam, and T. Groß 2013. Catenae: Introducing a novel unit of syntactic analysis. *Syntax* 16, in press.
- Stump, G. 1998. Inflection. In A. Spencer and A. M. Zwicky (eds.), *The handbook of morphology*. Oxford: Blackwell. pp. 13–43.

Pseudogapping

Pseudogapping is an ellipsis mechanism that elides most but not all of a non-finite verb phrase; at least one part of the verb phrase remains, which is called the *remnant*. Pseudogapping occurs in comparative and contrastive contexts, so it appears often after subordinators and coordinators such as *if*, *although*, *but*, *than*, etc. It is similar to verb phrase ellipsis (**VP-ellipsis**) insofar as the ellipsis is introduced by an auxiliary verb, and many grammarians take it to be a particular type of VP-ellipsis.^[1] The distribution of pseudogapping is more restricted than that of VP-ellipsis, however, and in this regard, it has some traits in common with gapping.^[2] But unlike gapping (but like VP-ellipsis), pseudogapping occurs in English but not in closely related languages. The analysis of pseudogapping can vary greatly depending in part on whether the analysis is based in a phrase structure grammar or a dependency grammar. Pseudogapping was first identified, named, and explored by Stump (1977) and has since been studied in detail by Levin (1986) among others, and now enjoys a firm position in the canon of acknowledged ellipsis mechanisms of English.^[3]

Basic examples

The following sentences are basic examples of VP-ellipsis and pseudogapping. Each pair draws attention to the similarities and differences across the two closely related ellipsis mechanisms. A smaller font and subscripts are used to mark the elided material:

- | |
|---|
| He drinks milk more often than she does <small>drink milk</small> . - VP-ellipsis |
| He drinks milk more often than he does <small>drink</small> water. - Pseudogapping |
| She is working today, but he isn't <small>working today</small> . - VP-ellipsis |
| She is working today, and he is <small>working</small> tomorrow. - Pseudogapping |
| Larry might read the short story, but I won't <small>read</small> the short story. - VP-ellipsis |
| Larry might read the short story, but he won't <small>read</small> the play. - Pseudogapping |

The examples show that like VP-ellipsis, the ellipsis of pseudogapping is introduced by an auxiliary verb (*be*, *can*, *could*, *have*, *may*, *might*, *should*, *will*, *would*, etc.). The expression to the immediate right of the "pseudogap" is the remnant (*milk*, *tomorrow*, *the play*). As with the remnants of gapping, the remnant of pseudogapping must stand in contrast to the parallel expression in the antecedent clause,^[4] e.g. *water* must stand in contrast to *milk* in the first

example. If it does not, the attempt at pseudogapping fails, e.g.

- *He drinks milk more often than she does _{drink} milk. - Failed pseudogapping
- *She is working today, and he is _{working} today also. - Failed pseudogapping
- *Larry might read the short story, but she won't _{read} the short story. - Failed pseudogapping

The star * indicates that the sentence is bad. These attempts at pseudogapping fail because the remnant does not stand in contrast to the parallel expression in the antecedent clause.

Further examples

The elided material of pseudogapping need not be continuous. In other words, there can be two gaps, e.g.

- She asks you to help more often than she does _{ask} me _{to help}. - Pseudogapping with discontinuous gap
- The teachers will require the boys to read, but they won't _{require} the girls _{to read}. - Pseudogapping with discontinuous gap
- The boss will assign you to work on Tuesday more readily than he will _{assign} me _{to work} on Wednesday. - Pseudogapping with discontinuous gap

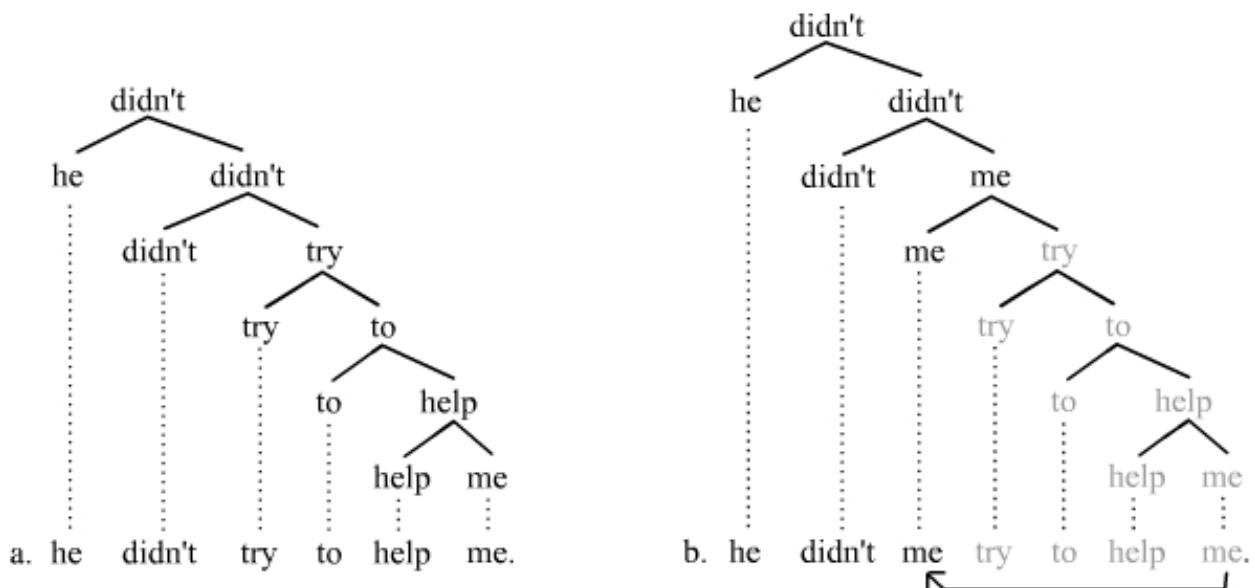
The last of these three examples is of particular interest, since it shows that pseudogapping can leave two remnants, instead of just one.

The examples so far illustrate that pseudogapping is like gapping insofar as the remnants of both ellipsis mechanisms must stand in contrast to the parallel expressions in the antecedent clauses. Another aspect that aligns pseudogapping with gapping is that it must operate forwards; it cannot operate backwards, that is, the gap must follow its filler (= antecedent). This aspect of pseudogapping is unlike VP-ellipsis, which can operate both forwards and backwards, e.g.

- Although he won't _{consider your proposal}, she will consider your proposal. - VP-ellipsis operating backward
- *Although he won't _{consider} mine, he will consider your proposal. - Failed attempt at backward pseudogapping
- He will consider your proposal, although he won't _{consider} mine. - Successful forward pseudogapping
- Although Susan does _{praise the cat}, Fred never praises the cat. - VP-ellipsis operating backward
- *Although he never does _{praise} the cat, Fred always praises the dog. - Failed attempt at backward pseudogapping
- Fred always praises the dog, although he never does _{praise} the cat. - Successful forward pseudogapping

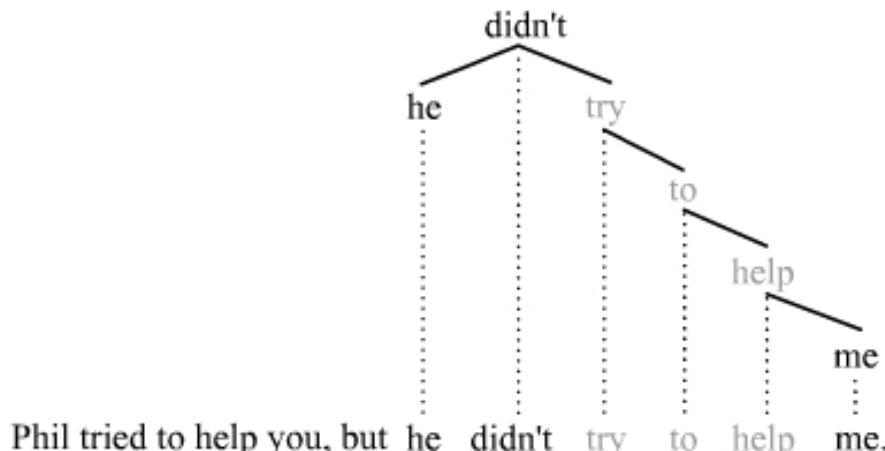
Theoretical analyses

Like many ellipsis mechanisms, pseudogapping challenges theories of syntax. One major difficulty concerns the syntactic status of the elided material. Under normal circumstances, this material often does not qualify as a constituent. Phrase structure grammars that posit the constituent as the fundamental unit of syntax must therefore seek some means of accounting for the fact that the elided material (= the pseudogapped material) does not appear to be a constituent. One widespread account of the phenomenon is to assume movement followed by ellipsis.^[5] The remnant is moved out of the encompassing constituent, so that the encompassing constituent can then be elided. The following trees are representative of the movement plus ellipsis approach (the details will vary); they illustrate the second part of the sentence *Phil tried to help you, but he didn't me*:



A BPS-style (bare phrase structure) tree convention is employed here insofar as the words themselves are used to label the nodes in the tree. The tree on the left illustrates the underlying structure before movement and ellipsis, and the tree on the right shows the actual surface material. The object pronoun *me* is moved leftward out of the encompassing constituent *try to help me*, so that this constituent can then be elided - ellipsis here is indicated using the lighter font. Assuming movement first and ellipsis second in this manner, a constituent-based analysis of pseudogapping (and other ellipsis mechanisms) is possible, since the elided material can be viewed as a constituent after all.

An alternative analysis takes the catena as the fundamental unit of syntactic analysis instead of the constituent.^[6] The catena is a unit of syntactic analysis that is closely associated with dependency grammars.^[7] Any word or any combination of words that is continuous in the vertical dimension with respect to dominance is a catena. In the example, the elided words qualify as a catena in surface syntax, which means movement is not necessary:



The elided words in light gray qualify as a catena (but not a constituent). Thus if the catena is taken as the fundamental unit of syntactic analysis, the analysis of pseudogapping can remain entirely with what is present on the surface.

Notes

- [1] See for instance Johnson (2001, 2009).
- [2] For accounts of gapping, see for instance Ross (1970) and Jackendoff (1971).
- [3] See for instance Jayaseelan (1990), Lasnik (1999), Baltin (2003), and Hoeksema (2006).
- [4] See for instance Kuno (1976: 309) and Hudson (1989: 67).
- [5] See for instance Jayaseelan (1990) and Lasnik (1999).
- [6] See Osborne et al. (2013).
- [7] Concerning dependency grammars, see the compilation of essays on dependency and valency theory in Ágel et al. (2003/6).

References

- Ágel, V., Ludwig Eichinger, Hans-Werner Eroms, Peter Hellwig, Hans Heringer, and Hennig Lobin (eds.) 2003/6. *Dependency and Valency: An International Handbook of Contemporary Research*. Berlin: Walter de Gruyter.
- Baltin, M. 2003. The interaction of ellipsis and binding: Implications for the sequencing of Principle A. *Natural Language and Linguistic Theory* 21, 215–246.
- Hoeksema, J. 2006. Pseudogapping: Its syntactic analysis and cumulative effects on its acceptability. *Research on Language and Computation* 4, 335-352.
- Jackendoff, Ray 1971. Gapping and related rules. *Linguistic Inquiry* 2, 21-35
- Jayaseelan, K. A. 1990. Incomplete VP deletion and gapping. *Linguistic Analysis* 20, 64-81.
- Johnson, K. 2001. What VP ellipsis can do, and what it can't, but not why. In *The handbook of contemporary syntactic theory*, M. Baltin and C. Collins (eds.), 439–479. Oxford: Blackwell Publishers.
- Johnson, K. 2009. Gapping is not (VP) ellipsis. *Linguistic Inquiry* 40, 2, 289-328.
- Kuno, S. 1976. Gapping: A functional analysis. *Linguistic Inquiry* 7, 300–318.
- Hudson, R. 1989. Gapping and grammatical relations. *Linguistics* 25, 57-94.
- Lasnik, H. 1999. Pseudogapping puzzles. In *Fragments: Studies in ellipsis and gapping*, E. Elabbas and S. Lappin (eds.), 141–174. Oxford: Oxford University Press. [Reprinted in *Minimalist investigations in linguistic theory*, H. Lasnik, 55-82. London: Routledge, 2003.]
- Levin, N. 1986. Main-verb ellipsis in epoken English. New York: Garland.
- Osborne, T., M. Putnam, and T. Groß 2013. Catenae: Introducing a novel unit of syntactic analysis. *Syntax* 16, in press.
- Ross, John 1970. Gapping and the order of constituents. In *Progress in linguistics: A collection of papers*, M. Bierwisch and K. Heidolph (eds.), 249-259, The Hague: Mouton.
- Gregory Stump. 1977. Pseudogapping. Ms., Ohio State University.

Grammatical particle

In grammar, a **particle** is a function word that does not belong to any of the inflected grammatical word classes (such as nouns, pronouns, verbs, or articles). It is a catch-all term for a heterogeneous set of words and terms that lack a precise lexical definition. It is mostly used for words that help to encode grammatical categories (such as negation, mood or case), or fillers or discourse markers that facilitate discourse such as *well*, *ah*, *anyway*, etc. Particles are uninflected.^[1] As examples, the English infinitive marker *to* and negator *not* are usually considered particles.

Related concepts

Depending on its context, the meaning of the term may overlap with such notions as "morpheme", "marker", or even "adverb" as in phrasal verbs such as *out* as in *get out*. Under the strictest definition, which demands that a particle be an uninflected word, English deictics like *this* and *that* would not be classed as such (since they have plurals) and are therefore inflected, and neither would Romance articles (since they are inflected for number and gender).

English

Articles, infinitival, prepositional, and adverbial particles

- the definite particle *the* (the indefinite article *a* or *an* cannot really be classed as uninflected due to their inherently singular meaning, debarring them from plural usage)
- the infinitive *to*, as in *to walk*
- prepositions, such as *over* in *I went over the hill*
- adverbs and adverbial portions of phrasal verbs, such as *off* in *we put it off too long*

Interjections, sentence connectors, and conjunctions

Sentence connectors, tags or tag questions, and conjunctions connect to what has been said in a previous clause or sentence. These three types of grammatical particles (similarly to modal particles in some other languages) also reflect the speaker's mood and attitude toward what has come before in the conversation, or is likely to follow later. A particle may be defined simply as an invariable word, in that interjections are to be classed as particles.^{[2][3]} Because of their similar functions, interjections, sentence connectors, and conjunctions should be grouped together:

Interjections

- ah
- alas
- farewell
- goodbye
- hello
- hi
- hmm
- hum
- like
- no
- oh
- ouch
- wow

- yes

The list of interjections is probably never-ending as it belongs to the open class word category and is subject to new creations at all times.

Sentence Connectors

- so (as in *So what*)
- well (as in *Well, we can't help that*)
- still (as in *Still, it could have been a lot worse*)
- yet (as in *I am older now, yet I still enjoy some of the things I used to do*)
- as
- also
- however
- nevertheless
- otherwise
- moreover
- in addition
- furthermore
- besides
- first
- second
- finally
- last but not least
- lastly
- than
- thus
- hence
- on the other hand
- anyway
- too (as in *that, too, has been said in the past*)

Conjunctions

- and (together with)
- or
- nor
- but
- while (as in *The repair takes only a short time while you wait.*)
- although/though
- for (as in *she could not see the film, for she was too young*)
- because
- unless
- since (as in *since you asked, I will tell you*)

Other languages

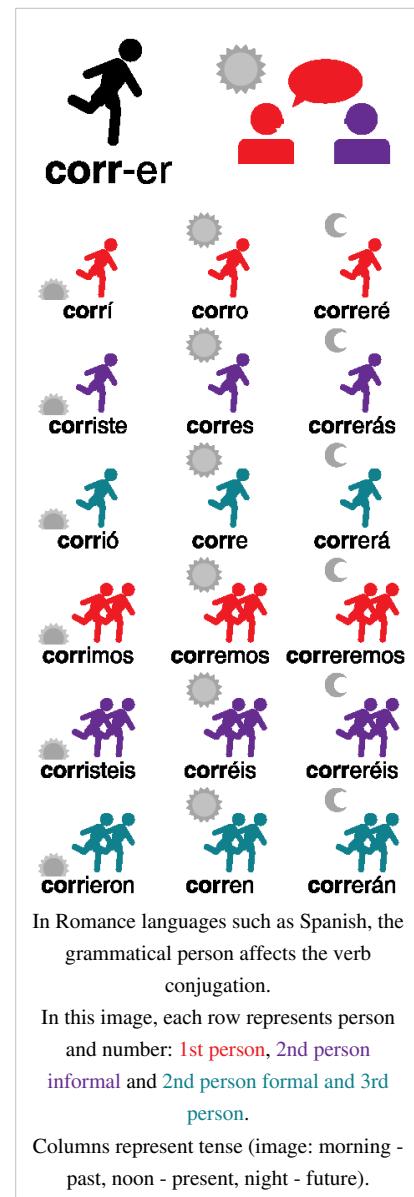
The term *particle* is often used in descriptions of Japanese^[4] and Korean,^[5] where they are used to mark nouns according to their case or their role (subject, object, complement, or topic) in a sentence or clause. Some of these particles are best analysed as case markers and some as postpositions. There are sentence-tagging particles such as Japanese and Chinese question markers. Thai also has particles.^[6]

References

- [1] McArthur, Tom: "The Oxford Companion to the English Language", pp. 72-76, Oxford University Press, 1992. ISBN 0-19-214183-X For various keywords
- [2] <http://www.canoo.net/services/OnlineGrammar/Wort/Ueberblick/Flexionslos.html?lang=en&darj=1> Interjections
- [3] http://www.cs.cf.ac.uk/fun/welsh/Glossary_main.html Interjections
- [4] <http://japanese.about.com/blparticles.htm> List of Japanese particles
- [5] <http://www9.georgetown.edu/faculty/portnerp/nsfsite/KoreanParticlesMiokPak.pdf> List of Korean particles
- [6] <http://siamsmile.webs.com/thaiparticles/thaiparticles.html> Large list of Thai particles and exclamations with explanations and example sentences.

Grammatical person

Grammatical person, in linguistics, is deictic reference to a participant in an event; such as the speaker, the addressee, or others. Grammatical person typically defines a language's set of personal pronouns. It also frequently affects verbs, sometimes nouns, and possessive relationships.



Grammatical person in nominative case English pronouns

Pronoun	Person/plurality	Gender
Standard		
I	First person singular	-
We	First person plural	-
You	Second person singular / second person plural	-
He	Third person masculine singular	masculine
She	Third person feminine singular	feminine
It	Third person neutral singular	-
They	Third person plural / third person gender-neutral singular	-
Colloquial		
Youse	Second person plural, dialect Scouse, Australian English, Scottish English	-
Ye	Second person plural, dialectal Hiberno-English	-
You guys	Second person plural, dialectal American English and Canadian English	-
Y'all	Second person plural, dialectal Southern American and African American English	-
Yinz	Second person plural, dialectal Scottish English, Pittsburgh English	-
Archaic		
Thou	Second person singular, archaic	-
Ye	Second person plural, archaic	-

Additional persons

In Indo-European languages, first-, second-, and third-person pronouns are typically marked for singular and plural form, and sometimes dual form as well (grammatical number). Some languages, especially European, distinguish degrees of formality and informality (T-V distinction).

Other languages use different classifying systems, especially in the plural pronouns. One frequently found difference not present in most Indo-European languages is a contrast between inclusive and exclusive "we", a distinction of first-person pronouns of including or excluding the addressee.

Other languages have much more elaborate systems of formality that go well beyond the T-V distinction, and use many different pronouns and verb forms that express the speaker's relationship with the people they are addressing. Many Malayo-Polynesian languages, such as Javanese and Balinese, are well known for their complex systems of honorifics; Japanese and Korean also have similar systems to a lesser extent.

In many languages, the verb takes a form dependent on this *person* and whether it is singular or plural. In English, this happens with the verb *to be* as follows:

- I *am* (first-person singular)
- you *are/thou art* (second-person singular)
- he, she, one or it *is* (third-person singular)
- we *are* (first-person plural)
- you *are/ye are* (second-person plural)
- they *are* (third-person plural)

The grammars of some languages divide the semantic space into more than three persons. The extra categories may be termed **fourth person**, **fifth person**, etc. Such terms are not absolute but can refer depending on context to any of several phenomena.

Some languages, including among Algonquian languages and Salishan languages, divide the category of third person into two parts: ***proximate*** for a more topical third person, and ***obviative*** for a less topical third person. The obviative is sometimes called the fourth person.

The term fourth person is also sometimes used for the category of indefinite or generic referents, that works like *one* in English phrases such as "one should be prepared" or *people* in *people say that...*, when the grammar treats them differently from ordinary third-person forms. The so-called "zero person" (Laitinen 2006, Leinonen 1983) in Finnish and related languages, in addition to passive voice may serve to leave the subject-referent open. Zero person subjects are sometimes translated as "one," but the problem with that is that English language constructions involving one, e.g. "One hopes that will not happen," are rare and could be considered to be expressing an overly academic tone, while Finnish sentences like "Ei saa koskettaa" ("0 cannot touch") are recognizable to, and even used by, young children.

References

- de Gaynesford, Robert Maximillian (2006). *I: The Meaning of the First Person Term*. Oxford: Oxford University Press.
- Laitinen, L. 2006. 0 person in Finnish: A grammatical resource for construing human evidence. In Grammar from the Human Perspective: Case, space and person in Finnish. M.-L. Helasvuo and L. Campbell, eds. Pp. 209-232 Amsterdam: Benjamins.
- Leinonen, Marja. 1983 Generic zero subjects in Finnish and Russian. *Scando-Slavica*. 29:143-161.

Phrasal verb

The term **phrasal verb** is commonly applied to two or three distinct but related constructions in English: a verb and a particle and/or a preposition co-occur forming a single semantic unit. This semantic unit cannot be understood based upon the meanings of the individual parts in isolation, but rather it must be taken as a whole. In other words, the meaning is non-compositional and thus unpredictable.^[1] Phrasal verbs that include a preposition are known as **prepositional verbs** and phrasal verbs that include a particle are also known as **particle verbs**. Additional alternative terms for *phrasal verb* are *compound verb*, *verb-adverb combination*, *verb-particle construction*, *two-part word/verb*, and *three-part word/verb* (depending on the number of particles), and *multi-word verb*.^[2]

Examples

One can discern at least three main types of phrasal verb constructions depending upon whether the verb combines with a preposition, a particle, or both.^[3] The words constituting the phrasal verb constructions in the following examples are in bold:

Verb + preposition (prepositional phrasal verbs)

- a. Who is **looking after** the kids? - *after* is a preposition that introduces the prepositional phrase *after the kids*.
- b. They **pick on** Billy. - *on* is a preposition that introduces the prepositional phrase *on Billy*.
- c. I **ran into** an old friend. - *into* is a preposition that introduces the prepositional phrase *into an old friend*.^[4]
- d. She **takes after** her mother. - *after* is a preposition that introduces the prepositional phrase *after her mother*.
- e. Sam **passes for** a linguist. - *for* is a preposition that introduces the prepositional phrase *for a linguist*.
- f. You should **stand by** your friend. - *by* is a preposition that introduces the prepositional phrase *by your friend*.

Verb + particle (particle phrasal verbs)

- a. They **brought** that **up** twice. - *up* is a particle, not a preposition.

- b. You should **think it over**. - *over* is a particle, not a preposition.
- c. Why does he always **dress down**? - *down* is a particle, not a preposition.
- d. You should not **give in** so quickly. *in* is a particle, not a preposition.
- e. Where do they want to **hang out**? - *out* is a particle, not a preposition.
- f. She **handed it in**. - *in* is a particle, not a preposition.

Verb + particle + preposition (particle-prepositional phrasal verbs)

- a. Who can **put up with** that? - *up* is a particle and *with* is a preposition.^[5]
- b. She is **looking forward to** a rest. - *forward* is a particle and *to* is a preposition.
- c. The other tanks were **bearing down on** my panther. - *down* is a particle and *on* is a preposition.
- d. They were really **teeing off on** me. - *off* is a particle and *on* is a preposition.
- e. We **loaded up on** Mountain Dew and chips. - *up* is a particle and *on* is a preposition
- f. Susan has been **sitting in for** me. - *in* is a particle and *for* is a preposition.

The difference between these types of phrasal verbs lies with the status of the element(s) that appear in addition to the verb. When the element is a preposition, it is the head of a full prepositional phrase and the phrasal verb is thus a *prepositional phrasal verb*. When the element is a particle, it can not (or no longer) be construed as a preposition, but rather it is a particle by virtue of the fact that it does not take a complement.^[6] Finally, many phrasal verbs are combined with both a preposition and a particle.

The aspect of these types of phrasal verbs that unifies them under the single banner *phrasal verb* is the fact that their meaning cannot be understood based upon the meaning of their parts taken in isolation. When one picks on someone, one is not selecting that person for something, but rather one is harassing them. When one hangs out, one is in no way actually hanging from anything. The meaning of the two or more words together is often drastically different from what one might guess it to be based upon the meanings of the individual parts in isolation.

As a class, particle phrasal verbs belong to the same category as the so-called separable verbs of other Germanic languages. They are commonly found in everyday, informal speech as opposed to more formal English and Latinate verbs, such as *to get together* rather than *to congregate*, *to put off* rather than *to postpone* (or *to deter*), or *to do up* rather than *to fasten*.

Some notes on terminology

The terminology of phrasal verbs is inconsistent. Modern theories of syntax tend to use the term *phrasal verb* to denote particle verbs only; they do not view prepositional verbs as phrasal verbs.^[7] The ESL literature (English as a second language), in contrast, tends to employ the term *phrasal verb* to encompass both prepositional and particle verbs.^[8] The terminology used to denote the particle is also inconsistent. Sometimes it is called an adverb, and at other times an intransitive prepositional phrase.^[9] The inconsistent use of terminology in these areas is a source of confusion about what does and does not qualify as a phrasal verb and about the status of the particle.

Concerning the history of the term *phrasal verb*, Tom McArthur writes:

"...the term *phrasal verb* was first used by Logan Pearsall Smith, in *Words and Idioms* (1925), in which he states that the OED Editor Henry Bradley suggested the term to him."

The value of this choice and its alternatives (including *separable verb* for Germanic languages) is debatable. In origin the concept is based on translation linguistics; as many single-word English and Latinate words are translatable by a phrasal verb complex in English, therefore the logic is that the phrasal verb complex must be a complete semantic unit in itself. One should consider in this regard that the actual term *phrasal verb* suggests that such constructions should form phrases. In most cases however, they clearly do NOT form phrases. Hence the very term *phrasal verb* is misleading and a source of confusion, which has motivated some to reject the term outright.^[10]

The term is nevertheless employed here because that is what the underlying constructions are commonly called in linguistics and language pedagogy in general.

A diagnostic

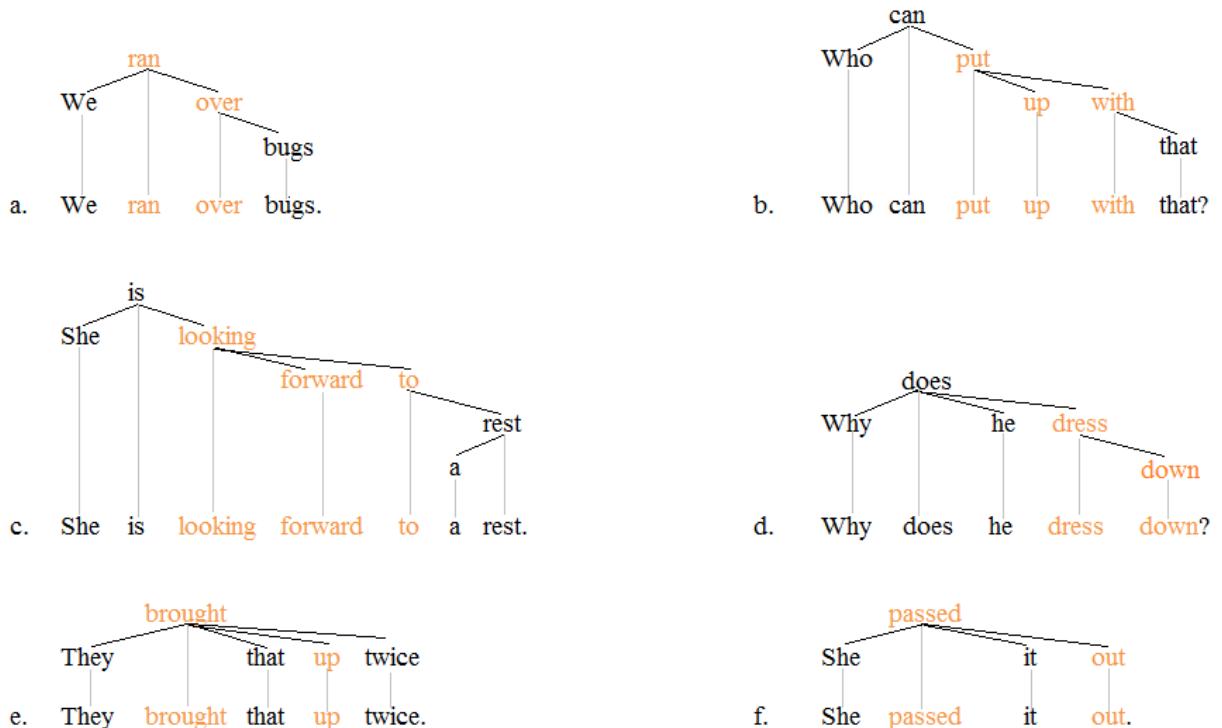
When a particle phrasal verb is transitive, it can look just like a prepositional phrasal verb. This similarity is another source of confusion, since it obscures the difference between prepositional and particle phrasal verbs. A simple diagnostic distinguishes between the two, however. When the object of a particle verb is a definite pronoun, it can and usually does precede the particle.^[11] In contrast, the object of a preposition can never precede the preposition:^[12]

- a. You can **bank on** Susan. - *on* is a preposition.
- b. *You can **bank her on**. - The object of the preposition cannot precede the preposition.
- a. You can **take on** Susan. - *on* is a particle.
- b. You can **take her on**. - The object of the particle verb can precede the particle.
- a. He is **getting over** the situation. - *over* is a preposition.
- b. *He is **getting it over**. - The object of a preposition cannot precede the preposition.
- a. He is **thinking over** the situation. - *over* is a particle.
- b. He is **thinking it over**. - The object of the particle verb can precede the particle.

The object of a preposition must follow the preposition, whereas the object of the particle verb can precede the particle especially if it is a definite pronoun, since definite pronouns are very light.

Catenaæ

The aspect of phrasal verb constructions that makes them difficult to learn for non-native speakers of English is that their meaning is non-compositional. That is, one cannot know what a given phrasal verb construction means based upon what the verb alone and/or the preposition and/or particle alone mean, as emphasized above. This trait of phrasal verbs is also what makes them interesting for linguists, since they appear to defy the principle of compositionality. An analysis of phrasal verbs in terms of catenae (=chains), however, is not challenged by the apparent lack of meaning compositionality. The verb and particle/preposition form a catena, and as such, they qualify as a concrete unit of syntax. The following dependency grammar trees illustrate the point.^[13]



The words of each phrasal verb construction are highlighted in orange. These words form a catena because they are linked together in the vertical dimension. They constitute units of meaning, and these units are stored as multi-part wholes in the lexicon.

Shifting

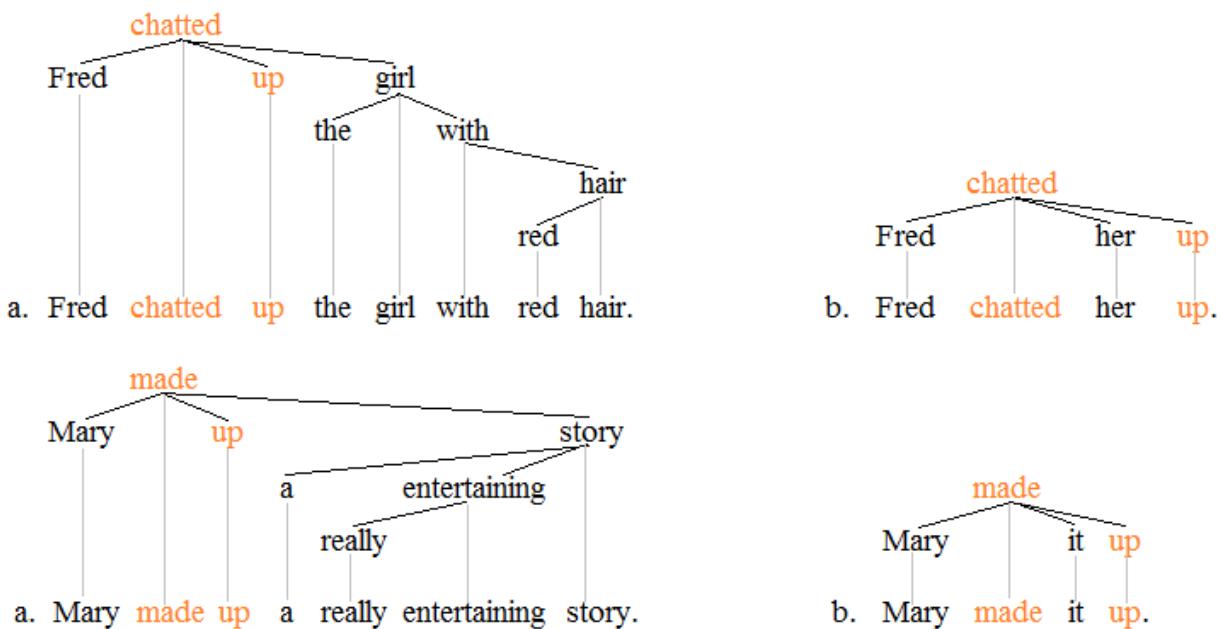
A confusing aspect of phrasal verbs concerns the distinction between prepositional phrasal verbs and particle phrasal verbs that are transitive, as discussed and illustrated above. Particle phrasal verbs that are transitive allow some variability in word order depending on the relative weight of the constituents involved. Shifting often occurs when the object is very light, e.g.

- a. Fred chatted up **the girl with red hair**. - Canonical word order
- b. Fred chatted **her** up. - Shifting occurs because the definite pronoun *her* is very light.
- c. [?]Fred chatted **the girl with red hair** up. - Shifting is unlikely unless it is sufficiently motivated by the weight of the constituents involved.

- a. They dropped off **the kids from the war zone**. - Canonical word order
- b. They dropped **them** off. - Shifting occurs because the definite pronoun *them* is very light.
- c. [?]They dropped **the kids from the war zone** off. - Shifting is unlikely unless it is sufficiently motivated by the weight of the constituents involved.

- a. Mary made up **a really entertaining story**. - Canonical word order
- b. Mary made **it** up. - Shifting occurs because the definite pronoun *it* is very light.
- c. [?]Mary made **a really entertaining story** up. - Shifting is unlikely unless it is sufficiently motivated by the weight of the constituents involved.

Shifting occurs between two (or more) sister constituents that appear on the same side of their head. The lighter constituent shifts leftward and the heavier constituent shifts rightward, and this happens in order to accommodate the relative weight of the two. Dependency grammar trees are again used to illustrate the point:



The trees illustrate when shifting can occur. English sentence structures that grow down and to the right are easier to process. There is a consistent tendency to place heavier constituents to the right, as is evident in the a-trees. Shifting is possible when the resulting structure does not contradict this tendency, as is evident in the b-trees. Note again that the particle verb constructions (in orange) qualify as catenae in both the a- and b-trees. Shifting does not alter this fact.

Origin of phrasal verbs

Prepositions and adverbs can have a literal meaning which is spatial or "orientational", and then, as happens with all words, metaphorical meanings develop that are systematic extensions from the original core meaning.^[14] Many verbs in English can interact with an adverb or a preposition, and the verb + preposition/adverb complex is readily understood when used in its literal sense.

He walked **across** the square.

She opened the shutters and looked **outside**.

When he heard the crash, he looked **up**.

The function of the prepositional phrase/particle in such clauses is to show the relationship between the action (*walked, opened, looked*) and the relative positioning, action or state of the subject. Even when such prepositions appear alone and are hence adverbs/particles, they have a retrievable prepositional object. Thus, *He walked across* clearly shows that the "walking" is "across" a given area. In the case of *He walked across the square*, *across the square* is a prepositional phrase (with *across* as its head word). In both cases, the single-word/multi-word expression (*across* and *across the square*) is independent of the verb. The action of the subject (*walking*) is being portrayed as having happened in/at/on/over a certain location (*across the square*). Similarly in *She opened the shutters and looked outside* and *When he heard the crash, he looked up*, *outside* (of) the house, and *up* is similarly an adjunct (= *upwards, in an upwards direction, he is looking in a direction that is higher than where his eyes were previously directed*).

Phrasal nouns

An extension of the concept of *phrasal verb* is that of *phrasal noun*, where a verb+particle complex is nominalized.^[15] The particle may come before or after the verb.

standby: We are keeping the old equipment on **standby**, in case of emergency.

back-up: Neil can provide technical **backup** if you need it.

onset: The match was halted by the **onset** of rain.

input: Try to come to the meeting - we'd value your **input**.

If the particle is in first place, then the phrasal noun is never written with a hyphen, if the particle comes second, then there is sometimes a hyphen between the two parts of the phrasal noun.

The two categories have different values. Particle-verb compounds in English are of ancient development, and are common to all Germanic languages, as well as to Indo-European languages in general. Those such as *onset* tend to retain older uses of the particles; in Old English **on/an** had a wider domain, which included areas which are now covered by *at* and *in* in English. Some such compound nouns have a corresponding phrasal verb but some do not, partly because of historical developments. The modern English verb+particle complex *set on* exists, but it means "start to attack" (*set* itself means *start a process*). In modern English there is no exact verbal phrase equivalent to the older *set on*, but rather various combinations which give different nuances to the idea of starting a process, such as *winter has set in*, *set off on a journey*, *set up the stand*, *set out on a day trip*, etc. Verb-particle compounds are a more modern development in English, and focus more on the action expressed by the compound; that is to say, they are more overtly "verbal".

Notes

[1] That unpredictable meaning is the defining trait of phrasal verb constructions is widely assumed. See for instance Huddleston and Pullum (2002:273) and Allerton (2006:166).

[2] Concerning these terms, see McArthur (1992:72ff.).

[3] Declerck, R. Comprehensive Descriptive Grammar of English, A - 1991 Page 45 "The term multi-word verb can be used as a cover term for phrasal verbs, prepositional verbs, prepositional phrasal verbs and combinations like put an end to."

[4] Ron Cowan - The Teacher's Grammar of English: A Course Book and Reference 2008 Page 176

"**The Adverb Insertion Test** - Earlier, we saw that intransitive phrasal verbs usually do not permit the insertion of an adverb between the verb and the particle, and the same is true of transitive phrasal verbs, as (25a) and (25b) show. In contrast, prepositional verbs do permit adverb insertion, as (25c) demonstrates.

(25) a. *He turned quickly out the light. = separable phrasal verb.

b. *He ran unexpectedly into his cousin = inseparable phrasal verb.

c. He stared intently at the target = prepositional verb.

The Relative Clause Test Relative clauses in which the relative pronoun is the object of a preposition permit the two patterns shown in (26).

(26) a. The man [that they were waitings/or] was late b. The man [for whom they were waiting] was late. In (26a), the preposition for is at the end of the relative clause enclosed by square brackets, but (26b) shows that this preposition can also occur at the beginning of the clause before the relative pronoun whom."

[5] Jeanette S. DeCarrico The structure of English: studies in form and function - Volume 1 - Page 80 - 2000 "4.6.3 Prepositional Phrasal Verbs - It is also possible to find phrasal verbs that are themselves followed by a preposition. These structures are called prepositional phrasal verbs or multiword verbs. Examples are put up with (e.g., I can't put up with "

[6] For a list of the particles that occur with particle phrasal verbs, see Jurafsky and Martin (2000:319).

[7] For examples of accounts that use the term *phrasal verb* to denote just particle verbs (not prepositional verbs as well), see for example Tallerman (1998:130), Adger (2003:99f.), and Haiden (2006).

[8] This fact can be easily verified by googling "phrasal verb". The online resources for ESL learners produce lists of phrasal verbs. These lists include both particle phrasal verbs and prepositional phrasal verbs.

[9] Huddleston and Pullum (2002:273), for instance, use both particle and intransitive preposition to call what is being called a particle here.

[10] Huddleston and Pullum (2002:274) reject the term *phrasal verb* precisely because the relevant word combinations often do not form phrases.

[11] For an example of the shifting diagnostic used to distinguish particle verbs from prepositional verbs, see Tallerman (1998:129).

[12] Concerning the difference between particles and prepositions with phrasal verbs, see Jurafsky and Martin (2000:318).

[13] That constructions (including phrasal verb constructions) are catenae is a point established at length by Osborne and Groß (2012).

[14] Concerning the extension of literal meaning to metaphorical meaning with phrasal verbs, see Knowles and Moon (2006:17).

[15] Concerning the term phrasal noun, see McCarthy and O'dell (2007).

References

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| <ul style="list-style-type: none">• Adger, D. 2003. Core syntax: A minimalist approach. Oxford, UK: Oxford University Press.• Allerton, D. 2006. Verbs and their satellites. In The handbook of linguistics, ed. by B. Aarts and A. McMcAon, 126-149. Malden, M.: Blackwell Publishing.• Haiden, M. 2006. Verb particle constructions. In M. Everaert and H. van Riemsdijk, The Blackwell companion to syntax, volume V. 344-375. Malden, MA: Blackwell Publishing.• Juraffsky, D. and J. Martin. 2000. Speech and language processing. Dorling Kindersley, India: Pearson Education.• Huddleston, R. and G. Pullum 2002. The Cambridge grammar of the English language. Cambridge, UK: Cambridge University Press.• Knowles, M. and R Moon. 2006. Introducing metaphor. London: Routledge, 2006. | <ul style="list-style-type: none">• Long, T. (ed.). 1979. Longman dictionary of English idioms. Longman Group Limited.• Macmillan phrasal verbs plus dictionary. 2005 Oxford: Macmillan Education 2005.• McArthur, T. 1992. The Oxford companion to the English language. Oxford University Press.• McCarthy M. and F. O'dell. 2007. English phrasal verbs in use. Cambridge University Press.• Osborne, T. and T. Groß 2012a. Constructions are catenae: Construction Grammar meets Dependency Grammar. Cognitive Linguistics 23, 1, 163-214.• Oxford phrasal verbs dictionary. 2001.• Tallerman, M. 1998. Understanding syntax. London: Arnold. |
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External links

- Complete guide to phrasal verbs and a real help with them (<http://www.phrasalverb.demon.com/index.html>)
- English phrasal verbs by categories (<http://owl.english.purdue.edu/handouts/esl/eslphrasal.html>)
- English phrasal verb dictionary with exercises (<http://www.usingenglish.com/reference/phrasal-verbs/>)
- Distinguishing prepositional and phrasal verbs (<http://linguapress.com/grammar/prepositional-verbs.htm>) with examples
- Explanation, list and exercises of English phrasal verbs (<http://www.ego4u.com/en/cram-up/grammar/phrasal-verbs>)
- Ordered list of phrasal verbs (<http://www.uazone.org/friends/esl4rus/pvlist.html>)
- Bibliography of phrasal verb literature (<http://mwe.stanford.edu/phrasalIV.html>)
- *A Multilingual Dictionary of Idioms, Phrasal verbs and Expressions* (<http://www.wikidioms.com>)
- Dictionary of phrasal verbs (<http://www.phrasal.info>)

Phrase

In everyday speech, a **phrase** may refer to any group of words. In linguistics, 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.^[1]

Examples

Examine the following sentence:

The house at the end of the street is not red.

The words in bold form a phrase; together they act like a noun. 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

Phrases can be identified by constituency tests such as proform substitution (=replacement). For instance, the prepositional phrase *at the end of the street* 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*.

Heads and dependents

Most phrases have an important word defining the type and linguistic features of the phrase. This word is the head of the phrase and gives its name to the phrase category.^[2] The heads in the following phrases are in bold:

too slowly - Adverb phrase (AdvP)

very happy - Adjective phrase (AP)

the massive dinosaur - Noun phrase (NP)

at lunch - Preposition phrase (PP)

watch TV - Verb phrase (VP)

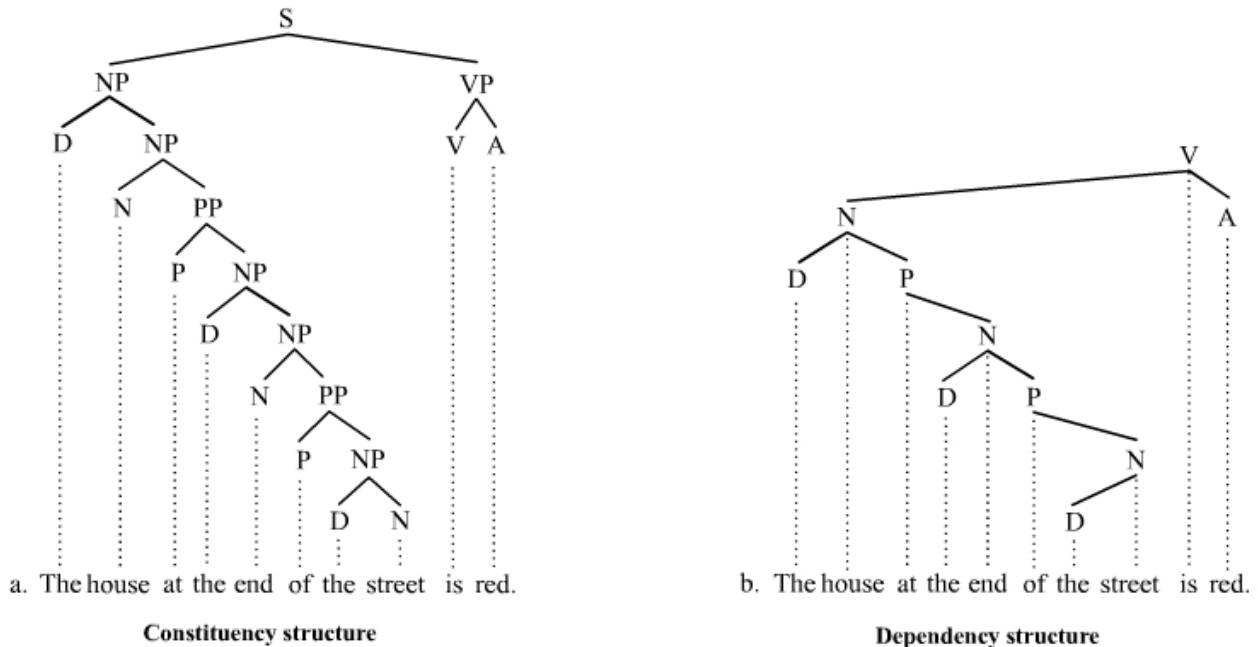
The head can be distinguished from its *dependents* (the rest of the phrase other than the head) because the head of the phrase determines many of the grammatical features of the phrase as a whole. The examples just given show the five most commonly acknowledged types of phrases. Further phrase types can be assumed, although doing so is not common. For instance one might acknowledge subordinator phrases:

before that happened - Subordinator phrase (SP)

This "phrase" is more commonly classified as a full subordinate clause and therefore many grammars would not label it as a phrase. If one follows the reasoning of heads and dependents, however, then subordinate clauses should indeed qualify as phrases. Most theories of syntax see most if not all phrases as having a head. Sometimes, however, non-headed phrases are acknowledged. If a phrase lacks a head, it is known as exocentric, whereas phrases with heads are endocentric.

Representing phrases

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.^[3] 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.

Confusion: phrases in theories of syntax

The common use of the term "phrase" is different from that employed by some phrase structure theories of syntax. The everyday understanding of the phrase is that it consists of two or more words, whereas depending on the theory of syntax that one employs, individual words may or may not qualify as phrases.^[4] The trees in the previous section, for instance, do not view individual words as phrases. Theories of syntax that employ X-bar theory, in contrast, will acknowledge many individual words as phrases. This practice is due to the fact that sentence structure is analyzed in terms of a universal schema, the X-bar schema, which sees each head as projecting at least three levels of structure: a minimal level, an intermediate level, and a maximal level. Thus an individual noun, such as *Susan* in *Susan laughed*, will project up to an intermediate level and a maximal level, which means that *Susan* qualifies as a phrase. This concept of the phrase is a source of confusion for students of syntax.

Many other theories of syntax do not employ the X-bar schema and are therefore less likely to encounter this confusion. For instance, dependency grammars do not acknowledge phrase structure in the manner associated with phrase structure grammars and therefore do not acknowledge individual words as phrases, a fact that is evident in the dependency grammar trees above and below.

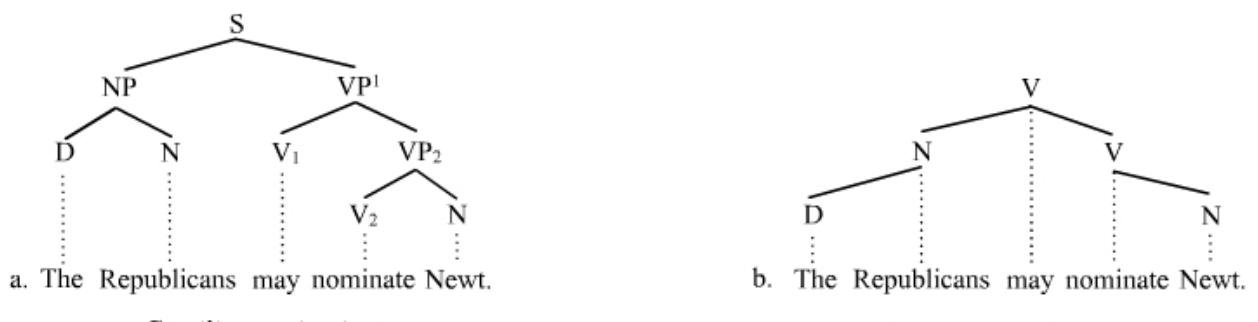
The verb phrase (VP) as a source of controversy

Most if not all theories of syntax acknowledge verb phrases (VPs), but they can diverge greatly in the types of verb phrases that they posit. Phrase structure grammars acknowledge both finite verb phrases and non-finite verb phrases as constituents. Dependency grammars, in contrast, acknowledge just non-finite verb phrases as constituents. The distinction is illustrated with the following examples:

The Republicans **may nominate Newt**. - Finite VP in bold

The Republicans may **nominate Newt**. - Non-finite VP in bold

The syntax trees of this sentence are next:



The constituency tree on the left shows the finite verb string *may nominate Newt* as a phrase (= constituent); it corresponds to VP_1 . In contrast, this same string is not shown as a phrase in the dependency tree on the right. Observe that both trees, however, take the non-finite VP string *nominate Newt* to be a phrase, since in both trees *nominate Newt* corresponds to a complete subtree.

Since there is disagreement concerning the status of finite VPs (whether they are constituents or not), empirical considerations are needed. Grammarians can (again) employ constituency tests to shed light on the controversy. Constituency tests are diagnostics for identifying the constituents of sentences and they are thus essential for identifying phrases. The results of most constituency tests do not support the existence of a finite VP constituent.^[5]

Notes

[1] Kroeger 2005:35

[2] Kroeger 2005:37

[3] For a good introduction and discussion of phrases and the tree structures that represent phrases, see Sabin (2011:29ff.).

[4] Finch (2000:112) sees a phrase consisting of two or more words; individual words do not count as phrases.

[5] Concerning the inability of most constituency tests to identify finite VP as a constituent, see Miller (2011:54f.) and Osborne (2011:323f.).

References

- Finch, G. 2000. Linguistic terms and concepts. New York: St. Martin's Press.
- Kroeger, Paul 2005. Analyzing grammar: An introduction. Cambridge University Press.
- Miller, J. 2011. A critical introduction to syntax. London: continuum.
- Osborne, Timothy, Michael Putnam, and Thomas Gross 2011. Bare phrase structure, label-less structures, and specifier-less syntax: Is Minimalism becoming a dependency grammar? *The Linguistic Review* 28: 315-364.
- Sabin, N. 2011. Syntactic analysis: The basics. Malden, MA: Wiley-Blackwell.

External links

- The Phrase Finder (<http://www.phrases.org.uk/meanings/>) - The meanings and origins of phrases, sayings, and idioms
- Phrases.net (<http://www.phrases.net/>) - A large collection of common phrases that can be heard and translated to several languages.
- Phras.in (<http://phras.in>) - An online tool that helps choosing the correct phrasing, based on web results frequency.
- phraseup* (<http://www.phraseup.com>) - A writing assistant that helps with completing sentences by finding the missing words we can't recall.
- Fraze.it (<http://www.fraze.it>) - A search engine for sentences and phrases. Supports six languages, filtered by form, zone, context, etc.

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,^[1] i.e. rewrite rules of the type studied previously by Emil Post and Axel Thue (see Post canonical systems). 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.

Constituency relation

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.^[2] 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.

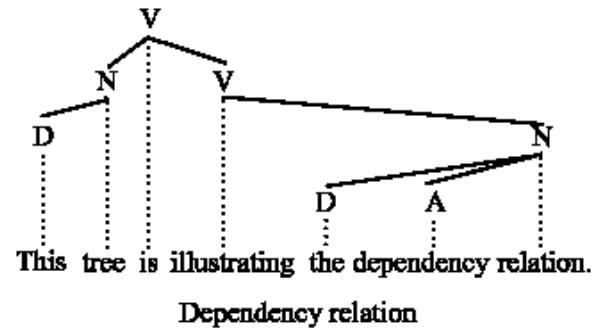
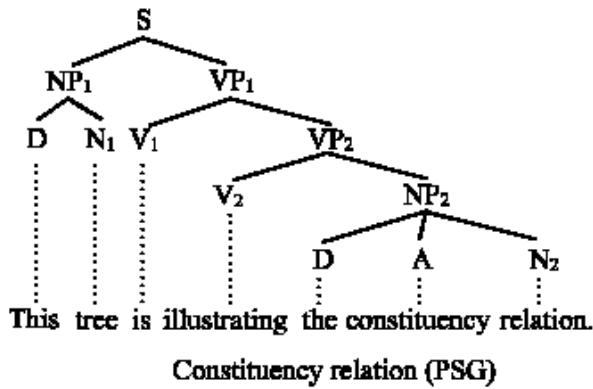
Further grammar frameworks and formalisms also qualify as constituency-based, although they may not think of themselves as having spawned from Chomsky's work, e.g.

- Arc Pair Grammar and
- Categorial 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).

The binary division of the clause results in a one-to-one-or-more correspondence. For each element in a sentence, there are one or more nodes in the tree structure that one assumes for that sentence. A two word sentence such as *Luke laughed* necessarily implies three (or more) nodes in the syntactic structure: one for the noun *Luke* (subject NP), one for the verb *laughed* (predicate VP), and one for the entirety *Luke laughed* (sentence S). The constituency

grammars listed above all view sentence structure in terms of this one-to-one-or-more correspondence.



Dependency relation

By the time of Gottlob Frege, a competing understanding of the logic of sentences had arisen. Frege rejected the binary division of the sentence and replaced it with an understanding of sentence logic in terms of predicates and their arguments. On this alternative conception of sentence logic, the binary division of the clause into subject and predicate was not possible. It therefore opened the door to the dependency relation (although the dependency relation had also existed in a less obvious form in traditional grammars long before Frege). The dependency relation was first acknowledged concretely and developed as the basis for a comprehensive theory of syntax and grammar by Lucien Tesnière in his posthumously published work *Éléments de syntaxe structurale* (Elements of Structural Syntax).^[3]

The dependency relation is a one-to-one correspondence: for every element (word or morph) in a sentence, there is just one node in the syntactic structure. The distinction is thus a graph-theoretical distinction. The dependency relation restricts the number of nodes in the syntactic structure of a sentence to the exact number of syntactic units (usually words) that that sentence contains. Thus the two word sentence *Luke laughed* implies just two syntactic nodes, one for *Luke* and one for *laughed*. Some prominent dependency grammars are listed here:

- Algebraic Syntax
- Functional Generative Description
- Lexicase
- Meaning-Text Theory
- Operator Grammar
- Word Grammar

Since these grammars are all based on the dependency relation, they are by definition NOT phrase structure grammars.

Non-descript grammars

Other grammars generally avoid attempts to group syntactic units into clusters in a manner that would allow classification in terms of the constituency vs. dependency distinction. In this respect, the following grammar frameworks do not come down solidly on either side of the dividing line:

- Construction grammar
- Cognitive grammar

Notes

- [1] See Chomsky (1957).
- [2] Matthews (1981:71ff.) provides an insightful discussion of the distinction between constituency- and dependency-based grammars. See also Allerton (1979:238f.), McCawley (1988:13), Mel'cuk (1988:12-14), Borsley (1991:30f.), Sag and Wasow (1999:421f.), van Valin (2001:86ff.).
- [3] See Tesnière (1959).

References

- Allerton, D. 1979. Essentials of grammatical theory. London: Routledge & Kegan Paul.
- Borsley, R. 1991. Syntactic theory: A unified approach. London: Edward Arnold.
- Chomsky, Noam 1957. Syntactic structures. The Hague/Paris: Mouton.
- Matthews, P. Syntax. 1981. Cambridge, UK: Cambridge University Press.
- McCawley, T. 1988. The syntactic phenomena of English, Vol. 1. Chicago: The University of Chicago Press.
- Mel'cuk, I. 1988. Dependency syntax: Theory and practice. Albany: SUNY Press.
- Sag, I. and T. Wasow. 1999. Syntactic theory: A formal introduction. Stanford, CA: CSLI Publications.
- Tesnière, Lucien 1959. Éléments de syntaxe structurale. Paris: Klincksieck.
- van Valin, R. 2001. An introduction to syntax. Cambridge, UK: Cambridge University Press.

Plural

The **plural** is one of the categories of grammatical number in many languages. Plural forms of nouns typically denote a quantity other than the default quantity represented by a noun, which is generally one (the form that represents this default quantity is said to be of *singular* number). Most commonly, therefore, plurals are used to denote two or more of something, although they may also denote fractional, zero or negative amounts. An example of a plural is the English word *cats*, which is derived from the singular *cat*.

Plurality is a linguistic universal, represented variously among the languages as a separate word (free morpheme), an affix (bound morpheme), or by other morphological indications such as stress or implicit markers/context.

Words of other types, such as verbs, adjectives and pronouns, also frequently have distinct plural forms, which are used in agreement with the number of their associated nouns.

Some languages also have a dual (denoting exactly two of something) or other systems of number categories. However in English and many other languages, singular and plural are the only grammatical numbers, except for possible remnants of the dual in pronouns such as *both* and *either*.

The plural within systems of grammatical number

In many languages, there is also a dual number (used for indicating two objects). Some other grammatical numbers present in various languages include trial (for three objects) and paucal (for an imprecise but small number of objects). In languages with dual, trial, or paucal numbers, plural refers to numbers higher than those. However, numbers besides singular, plural, and (to a lesser extent) dual are extremely rare. Languages with measure words such as Chinese and Japanese lack any significant grammatical number at all, though they are likely to have plural personal pronouns.

Some languages (like Mele-Fila) distinguish between a plural and a greater plural. A greater plural refers to an abnormally large number for the object of discussion. It should also be noted that the distinction between the paucal, the plural, and the greater plural is often relative to the type of object under discussion. For example, in discussing oranges, the paucal number might imply fewer than ten, whereas for the population of a country, it might be used for a few hundred thousand.

The Austronesian languages of Sursurunga and Lihir have extremely complex grammatical number systems, with singular, dual, paucal, greater paucal, and plural.

Traces of the dual and paucal can be found in some Slavic and Baltic languages (apart from those that preserve the dual number, such as Slovene). For example, Polish and Russian use different forms of nouns with the numerals 2, 3 or 4 (and higher numbers ending with these) than with the numerals 5, 6, etc. (genitive singular in Russian and nominative plural in Polish in the former case, genitive plural in the latter case).

Certain nouns in some languages have the unmarked form referring to multiple items, with an inflected form referring to a single item. These cases are described with the terms *collective number* and *singulative number*.

Formation of plurals

A given language may make plural forms of nouns by various types of inflection, including the addition of affixes, like the English -(e)s ending, and ablaut, as in the derivation of the plural *geese* from *goose*. It may be that some nouns are not marked for plural, like *sheep* and *series* in English. In languages which also have a case system, such as Latin and Russian, nouns can have not just one plural form but several, corresponding to the various cases.

For details on the formation of plurals in Modern English, see English plural. For other languages, see the respective articles on those languages and their grammars.

Plural forms of other parts of speech

In many languages, words other than nouns may take plural forms, these being used by way of grammatical agreement with plural nouns (or noun phrases). Such a word may in fact have a number of plural forms, to allow for simultaneous agreement within other categories such as case, person and gender, as well as marking of categories belonging to the word itself (such as tense of verbs, degree of comparison of adjectives, etc.).

Verbs often agree with their subject in number (as well as in person and sometimes gender). Examples of plural forms are the French *mangeons*, *mangez*, *mangent* – respectively the first-, second- and third-person plural of the present tense of the verb *manger*. In English a distinction is made in the third person between forms such as *eats* (singular) and *eat* (plural).

Adjectives may agree with the noun they modify; examples of plural forms are the French *petits* and *petites* (the masculine plural and feminine plural respectively of *petit*). The same applies to some determiners – examples are the French plural definite article *les*, and the English demonstratives *these* and *those*.

It is common for pronouns, particularly personal pronouns, to have distinct plural forms. Examples in English are *we* (*us*, etc.) and *they* (*them* etc.; see English personal pronouns), and again *these* and *those* (when used as demonstrative pronouns).

Nouns lacking plural or singular form

Certain nouns do not form plurals. A large class of such nouns in many languages is that of uncountable nouns, representing mass or abstract concepts such as *air*, *information*, *physics*. However many nouns of this type also have countable meanings or other contexts in which a plural can be used; for example *water* can take a plural when it means water from a particular source (*different waters make for different beers*) and in expressions like *by the waters of Babylon*.

There are also nouns found exclusively or almost exclusively in the plural, such as the English *scissors*. There are referred to with the term *plurale tantum*.

Usage of the plural

The plural is used, as a rule, for quantities other than one (and other than those quantities represented by other grammatical numbers, such as dual, which a language may possess). Thus it is frequently used with numbers higher than one (*two cats, 101 dogs, four and a half hours*) and for unspecified amounts of countable things (*some men, several cakes, how many lumps?, birds have feathers*). The precise rules for the use of plurals, however, depend on language – for example Russian uses the genitive singular rather than the plural after certain numbers (see above).

Treatments differ in expressions of zero quantity: English often uses the plural in such expressions as *no injuries* and *zero points*, although *no* (and *zero* in some contexts) may also take a singular. In French, the singular form is used after *zéro*.

English also tends to use the plural with decimal fractions, even if less than one, as in *0.3 metres, 0.9 children*. Common fractions less than one tend to be used with singular expressions: *half (of) a loaf, two-thirds of a mile*. Negative numbers are usually treated the same as the corresponding positive ones: *minus one degree, minus two degrees*. Again, rules on such matters differ between languages.

In some languages, including English, expressions that appear to be singular in form may be treated as plural if they are used with a plural sense, as in *the government are agreed*. The reverse is also possible: *the United States is a powerful country*. See synesis, and also English plural: Singulars as plural and plurals as singular.

POS tagging

In part-of-speech tagging notation is used to distinguish different types of plurals based on the grammatical and semantic context. Resolution varies, for example the Penn-Treebank tagset (~36 tags) has two tags: *NNS - noun, plural*, and *NPS - Proper noun, plural*,^[1] while the CLAWS 7 tagset (~149 tags)^[2] uses six: *NN2 - plural common noun, NNL2 - plural locative noun, NNO2 - numeral noun, plural, NNT2 - temporal noun, plural, NNU2 - plural unit of measurement, NP2 - plural proper noun*.

Notes

[1] <http://www.ims.uni-stuttgart.de/projekte/CorpusWorkbench/CQP-HTMLDemo/PennTreebankTS.html>

[2] <http://ucrel.lancs.ac.uk/claws7tags.html>

Further reading

- Corbett, Greville. *Number* (Cambridge Textbooks in Linguistics). Cambridge University Press, 2000.
- Huddleston, Rodney and Pullum, Geoffrey K., *The Cambridge Grammar of the English Language*, Cambridge University Press, Suffolk, UK, 2002
- Curme, George O., *A Grammar of the English Language, Volume 1: Parts of Speech*, D.C. Heath and Company, 1935
- Opdycke, John B., *Harper's English Grammar*, Harper & Row, New York, New York, 1965
- Jespersen, Otto, *A Modern English Grammar on Historical Principles, v. II*, George Allen & Unwin, Ltd., London, 1928
- McDavid, Raven I., Jr. et al., *The Plurals of Nouns of Measure in Spoken American English*, Fries Festschrift, Ann Arbor, MI, 1963

External links

- GNU gettext utilities (section 11.2.6 - Additional functions for plural forms) (http://www.gnu.org/software/gettext/manual/html_mono/gettext.html#Plural-forms) (Treatment of zero and the plurality based on the final digits)
- <http://corpus.byu.edu/coca> (<http://corpus.byu.edu/coca>)

Predicate (grammar)

There are two competing notions of the **predicate** in theories of grammar.^[1] Traditional grammar tends to view a predicate as one of two main parts of a sentence, the other part being the subject. The job of the predicate is to modify the subject. The other understanding of predicates is inspired from work in predicate calculus (predicate logic, first order logic) and is prominent in modern theories of syntax and grammar. On this approach, the predicate of a sentence corresponds mainly to the main verb and any auxiliaries that accompany the main verb, whereby the arguments of that predicate (e.g. the subject and object noun phrases) are outside of the predicate. The competition between these two concepts has generated confusion concerning the use of the term *predicate* in theories of grammar. This article considers both of these notions.

Predicates in traditional grammar

The predicate in traditional grammar is inspired by propositional logic of antiquity (as opposed to the more modern predicate logic).^[2] 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.^[3] 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).^[4] 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

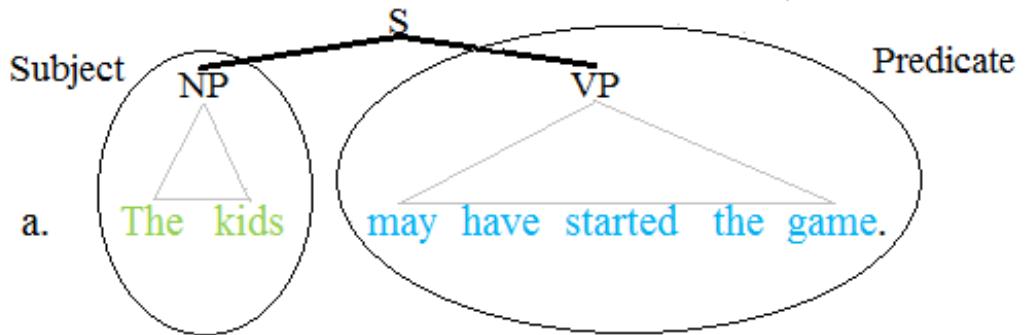
They **elected him president**. - verb + object + predicative noun predicate

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

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

The predicate provides information about the subject, such as what the subject is, what the subject is doing, or what the subject is like. The relation between a subject and its predicate is sometimes called a nexus. A *predicative nominal* is a noun phrase that functions as the main predicate of a sentence, such as *George III is the king of England*, *the king of England* being the predicative nominal. The subject and predicative nominal must be connected by a linking verb, also called a copula. A *predicative adjective* is an adjective that functions as a predicate, such as *Ivano is attractive*, *attractive* being the predicative adjective. The subject and predicative adjective must also be connected by a copula.

This traditional understanding of predicates has a concrete reflex in all phrase structure theories of syntax. These theories divide the generic declarative sentence (S) into a noun phrase (NP) and verb phrase (VP), e.g.^[5]



The subject NP is shown in green, and the predicate VP in blue. This concept of sentence structure stands in stark contrast to dependency structure theories of grammar, which place the finite verb (= conjugated verb) as the root of all sentence structure and thus reject this binary NP-VP division.

Predicates in modern theories of syntax and grammar

Most modern theories of syntax and grammar take their inspiration for the theory of predicates from predicate calculus as associated with Gottlob Frege.^[6] 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.^[7] This understanding of predicates sometimes renders a predicate and its arguments in the following manner:

Bob **laughed**. → laughed (Bob) or, laughed = f(Bob)

Sam **helped** us. → helped (Sam, us)

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

Predicates are placed on the left outside of brackets, whereas the predicate's arguments are placed inside the brackets.^[8] One acknowledges the valency of predicates, whereby a given predicate can be aivalent (not shown), monovalent (*laughed* in the first sentence), divalent (*helped* in the second sentence), or trivalent (*gave* in the third sentence). These types of representations are analogous to formal semantic analyses, where one is concerned with the proper account of scope facts of quantifiers and logical operators. Concerning basic sentence structure however, these representations suggest above all that verbs are predicates and the noun phrases that they appear with are their arguments. On this understanding of the sentence, the binary division of the clause into a subject NP and a predicate VP is hardly possible. Instead, the verb is the predicate, and the noun phrases are its arguments.

Other function words - e.g. auxiliary verbs, certain prepositions, phrasal particles, etc. - are viewed as part of the predicate.^[9] The matrix predicates are in bold in the following examples:

Bill **will have laughed**.

Will Bill have laughed?

That **is funny**.

Has that been funny?

They **had been satisfied**.

Had they been satisfied, ...

The butter **is in** the drawer.

Fred **took a picture** of Sue.

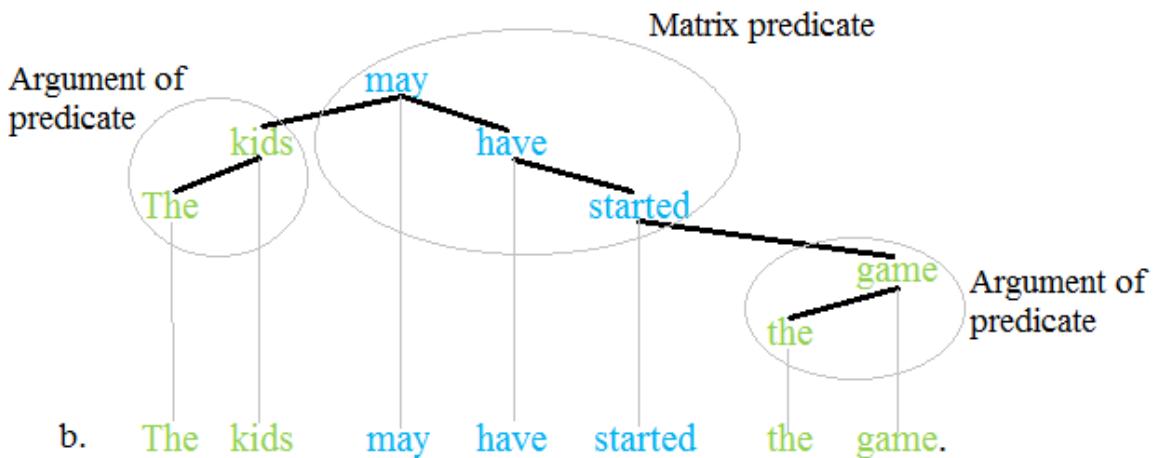
Susan **is pulling your leg**.

Who **did Jim give** his dog to?

You **should give it up**.

Note that not just verbs can be part of the matrix predicate, but also adjectives, nouns, prepositions, etc.^[10] The understanding of predicates suggested by these examples sees the main predicate of a clause consisting of at least one verb and a variety of other possible words. The words of the predicate need not form a string nor a constituent,^[11] but rather they can be interrupted by their arguments (and/or adjuncts). The approach to predicates illustrated with these sentences is widespread in Europe, particularly in Germany, where the understanding of predicates from traditional grammar discussed above seems to hardly exist (for those who know German, see the Wikipedia article in German on the predicate).

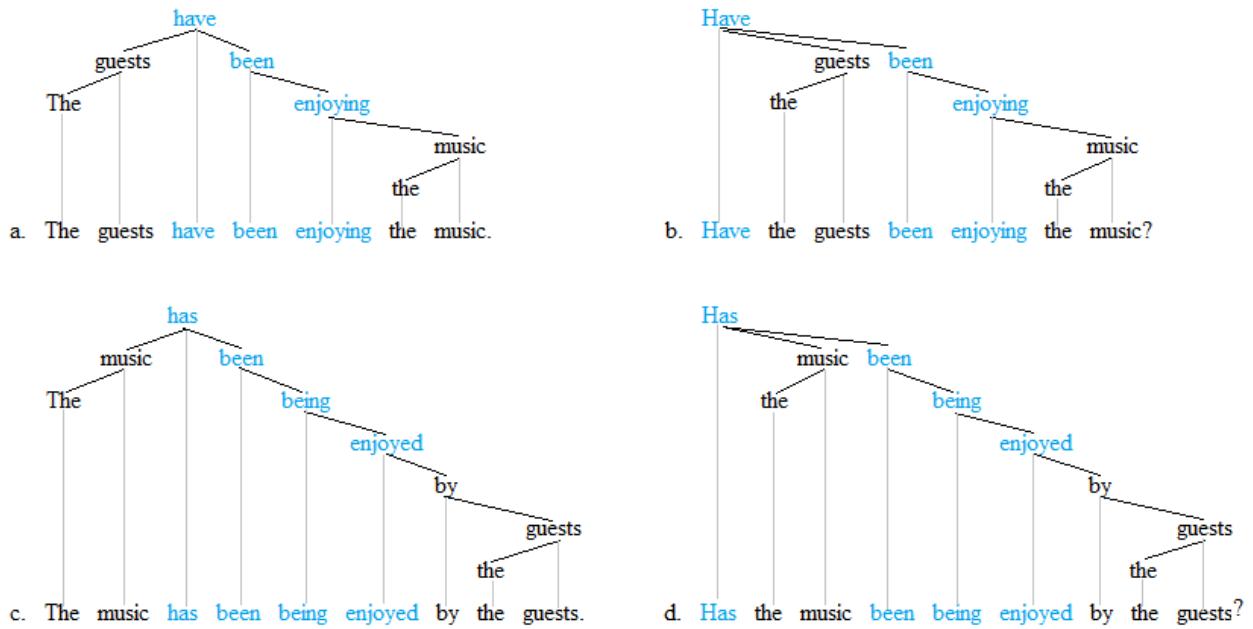
This modern understanding of predicates is compatible with the dependency grammar approach to sentence structure, which places the finite verb as the root of all structure, e.g.^[12]



The matrix predicate is (again) marked in blue and its two arguments are in green. While the predicate cannot be construed as a constituent in the formal sense, it is a catena. Barring a discontinuity, predicates and their arguments are always catenae in dependency structures.

Predicators

Some theories of grammar seek to avoid the confusion generated by the competition between the two predicate notions by acknowledging *predicators*.^[13] The term *predicate* is employed in the traditional sense of the binary division of the clause, whereas the term *predicator* is used to denote the more modern understanding of matrix predicates. On this approach, the periphrastic verb catenae briefly illustrated in the previous section are predicators. Further illustrations are provided next:



The predicates are in blue. These verb catenae generally contain a main verb and potentially one or more auxiliary verbs. The auxiliary verbs help express functional meaning of aspect and voice. Since the auxiliary verbs contribute functional information only, they do not qualify as separate predators, but rather each time they form the matrix predator with the main verb.

Carlson classes

The seminal work of Greg Carlson distinguishes between types of predicates.^[14] Based on Carlson's work, predicates have been divided into the following sub-classes, which roughly pertain to how a predicate relates to its subject.

Stage-level predicates

A *stage-level predicate* is true of a *temporal stage* of its subject. For example, if John is "hungry", then he typically will eat some food, which lasts a certain amount of time, and not his entire lifespan. Stage-level predicates can occur in a wide range of grammatical constructions and are probably the most versatile kind of predicate.

Individual-level predicates

An *individual-level predicate* is true throughout the existence of an individual. For example, if John is "smart", this is a property that he has, regardless of which particular point in time we consider. Individual-level predicates are more restricted than stage-level ones. Individual-level predicates cannot occur in *presentational* "there" sentences (a star in front of a sentence indicates that it is odd or ill-formed):

There are police **available**. - *available* is stage-level predicate

*There are firemen **altruistic**. - *altruistic* is an individual-level predicate

Stage-level predicates allow modification by manner adverbs and other adverbial modifiers. Individual-level predicates do not, e.g.

Tyrone **spoke French** loudly in the corridor. - *speak French* can be interpreted as a stage-level predicate

*Tyrone **knew French** silently in the corridor. - *know French* cannot be interpreted as a stage-level predicate

When an individual-level predicate occurs in past tense, it gives rise to what is called a *lifetime effect*: The subject must be assumed to be dead or otherwise out of existence.

John was available. - Stage-level predicate does NOT evoke the lifetime effect.

John was altruistic. - Individual-level predicate does evoke the lifetime effect.

Kind-level predicates

A *kind-level predicate* is true of a kind of thing, but cannot be applied to individual members of the kind. An example of this is the predicate *are widespread*. One cannot meaningfully say of a particular individual John that he is widespread. One may only say this of kinds, as in

Humans **are widespread**.

Certain types of noun phrases cannot be the subject of a kind-level predicate. We have just seen that a proper name cannot be. Singular indefinite noun phrases are also banned from this environment:

*A cat **is widespread**. - Compare: *Nightmares are widespread*.

Collective vs. distributive predicates

Predicates may also be collective or distributive. Collective predicates require their subjects to be somehow plural, while distributive ones do not. An example of a collective predicate is "formed a line". This predicate can only stand in a nexus with a plural subject:

The students **formed a line**. - Collective predicate appears with plural subject.

*The student **formed a line**. - Collective predicate cannot appear with singular subject.

Other examples of collective predicates include *meet in the woods*, *surround the house*, *gather in the hallway* and *carry the piano together*. Note that the last one (*carry the piano together*) can be made non-collective by removing the word *together*. Quantifiers differ with respect to whether or not they can be the subject of a collective predicate. For example, quantifiers formed with *all the* can, while ones formed with *every* or *each* cannot.

All the students **formed a line**. - Collective predicate possible with *all the*.

All the students **gathered in the hallway**. - Collective predicate possible with *all the*.

All the students **carried a piano together**. - Collective predicate possible with *all the*.

*Every student **formed a line**. - Collective predicate IMpossible with *every*.

*Each student **gathered in the hallway**. - Collective predicate IMpossible with *each*.

Notes

[1] See Carnie (2007:51).

[2] Concerning Aristotelian logic as the source for the binary subject-predicate division of the sentence, see Matthews (1981:102).

[3] See Kroeger (2005:53).

[4] See for instance The American Heritage College Dictionary (1993:1077) and The Miriam Webster's Dictionary (2004:566).

[5] Constituency trees like the one here, which divides the sentence into a subject NP and a predicate VP, can be found in most textbooks on syntax and grammar, e.g. Carnie (2007), although the trees of these textbooks will vary in important details.

[6] There are exceptions to this statement. For instance, Matthews (1981:85), Burton-Roberts (1986:28ff.), Thomas (1993:15) and van Riemsdijk and Williams (1986:326) continue to pursue the traditional stance whereby a predicate corresponds to the finite VP constituent.

[7] For examples of theories that pursue this understanding of predicates, see Langendoen (1970:96ff.), Cattell (1984), Harrocks (1987:49f.), McCawley (1988:187), Napoli (1989), Cowper (1992:54), Haegeman (1994:43ff.), Ackerman and Webelhuth (1998:39), Fromkin et al. (2000:117), Carnie (2007:51).

[8] For examples of this use of notation, see Allerton (1979:259), van Riemsdijk and Williams (1987:241), Bennet (1995:21f.).

[9] See for example Parisi and Antinucci (1976:17ff.), Brown and Miller (1992:63f.), Napoli (1989:14ff., 1993:98), Ackerman and Webelhuth (1998:39f.). While the analyses of these linguists vary, they agree insofar various types of function words are grouped together as part of the predicate, which means complex predicates are very possible.

[10] For examples of theories that extend the predicate to other word classes (beyond verbs), see Cattell (1984), Parisi and Antinucci (1976:34), Napoli (1986:30f.), Haegeman (1994:44ff.).

[11] That many predicates are not constituents is acknowledged by many, e.g. Cattell (1984:50), Napoli (1986:14f.).

[12] Dependency trees like the one here can be found in, for instance, Osborne et al. (2013).

- [13] For examples of grammars that employ the term *predicator*, see for instance Matthews (1981:101), Huddleston (1988:9f.), Downing and Locke (1992:48), and Lockwood (2002:4f.).
- [14] See Carlson (1977a, 1977b).

Literature

- Allerton, D. 1979. Essentials of grammatical theory. London: Routledge & Kegan Paul.
- Ackerman, F. and G. Webelhuth. 1998. A theory of predicates. Stanford, CA: CSLI Publications.
- Burton-Roberts, N. 1997. Analysing sentences: An introduction to English grammar. London: Longman.
- The American Heritage College Dictionary, third edition. 1993 Boston: Houghton Mifflin Company.
- Bennet, P. 1995. A course in Generalized Phrase Structure Grammar. London: UCL Press Limited.
- Carlson, G. 1977a. A unified analysis of the English bare plural. *Linguistics and Philosophy* 1, 3, 413–58.
- Carlson, G. 1977b. Reference to Kinds in English. New York: Garland. (Also distributed by Indiana University Linguistics Club and GLSA UMass/Amherst.)
- Carnie, A. 2007. Syntax: A generative introduction, 2nd edition. Malden, MA: Blackwell Publishing.
- Cattell, R. 1984. Composite predicates in English. *Syntax and Semantics* 17. Sydney: Academic Press.
- Chomsky, N. 1965. Aspects of the theory of syntax. Cambridge, MA: MIT Press.
- Cowper, E. 1992. A concise introduction to syntactic theory: The government-binding approach. Chicago: The University of Chicago Press.
- Culicover, P. 1997. Principles and Parameters: An introduction to syntactic theory. Oxford University Press.
- Downing, A. and P. Locke. 1992. English grammar: A university course, second edition. London: Routledge.
- Fromkin, V. et al. 2000. Linguistics: An introduction to linguistic theory. Malden, MA: Blackwell Publishers.
- Haegeman, L. 1994. Introduction to government and binding theory, 2nd edition. Oxford, UK: Blackwell.
- Harrocks, G. 1987. Generative Grammar. London: Longman.
- Huddleston, R. 1988. English grammar: An outline. Cambridge, UK: Cambridge University Press.
- Kroeger, P. 2005. Analyzing Grammar: An Introduction. Cambridge: Cambridge University Press.
- Langendoen, T. 1970. The study of syntax: The generative-transformational approach to the study of English. New York: Holt, Rinehart and Winston, Inc.
- Lockwood, D. 2002. Syntactic analysis and description: A constructional approach. London: continuum.
- Matthews, P. 1981. Syntax. Cambridge, UK: Cambridge University Press.
- McCawley, T. 1988. The syntactic phenomena of English, Vol. 1. Chicago: The University of Chicago Press.
- The Merriam Webster Dictionary. 2004. Springfield, Massachusetts: Merriam-Webster.
- Napoli, D. 1989. Predication theory: A case study for indexing theory. Cambridge, UK: Cambridge University Press.
- Napoli, D. 1993. Syntax: Theory and problems. New York: Oxford University Press.
- Osborne, T., M. Putnam, and T. Groß 2013. Catena: Introducing a novel unit of syntactic analysis. *Syntax* 16, in press.
- Parisi, D. and F. Antinucci. 1976. Essentials of grammar. Translated by E. Bates. New York: Academic Press.
- van Riemsdijk, H. and E. Williams. 1986. Introduction to the theory of grammar. Cambridge, MA: The MIT Press.
- Thomas, L. 1993. Beginning syntax. Oxford, UK: Blackwell.

Preposition and postposition

Prepositions (or more generally, **adpositions**, see below) are a grammatically distinct class of words whose most central members characteristically express spatial relations (such as the English words *in*, *under*, *toward*) or serve to mark various syntactic functions and semantic roles (such as the English words *of*, *for*).^[1] In that the primary function is relational, a preposition typically combines with another constituent (called its *complement*) to form a prepositional phrase, relating the complement to the context in which the phrase occurs.

The word *preposition* comes from Latin, a language in which such a word is usually placed before its complement. (Thus it is pre-positioned.) English is another such language. In many languages (e.g. Urdu, Turkish, Hindi, Korean and Japanese), the words with this grammatical function come after, not before, the complement. Such words are then commonly called **postpositions**. Similarly, **circumpositions** consist of two parts that appear on both sides of the complement. The technical term used to refer collectively to prepositions, postpositions, and circumpositions is **adposition**. Some linguists use the word "preposition" instead of "adposition" for all three cases.^[2]

Some examples of English prepositions (marked as **bold**) as used in phrases are:

- as an adjunct (locative, temporal, etc.) to a {noun} (marked within curly brackets)
 - the {weather} **in** May
 - {cheese} **from** France **with** live bacteria
- as an adjunct (locative, temporal, etc.) to a {verb}
 - {sleep} **throughout** the winter
 - {danced} **atop** the tables **for** hours
- as an adjunct (locative, temporal, etc.) to an {adjective}
 - {happy} **for** them
 - {sick} **until** recently

Adpositions perform many of the same functions as case markings, but adpositions are syntactic elements, while case markings are morphological elements.

Definitional issues

There are many different types of adpositions, and some adpositions can also be classified as verbs, nouns, or adjectives. It is thus impossible to provide an absolute definition that picks out all and only the adpositions in every language. The following features, however, are often required of adpositions.

- An adposition prototypically combines syntactically with exactly one complement phrase, most often a noun phrase (or, in a different analysis, a determiner phrase). (In some analyses, an adposition need have no complement. See below.) In English, this is generally a noun (or something functioning as a noun, e.g., a gerund), called the *object of the preposition*, together with its attendant modifiers.
- An adposition establishes the grammatical relationship that links its complement to another word or phrase in the context. In English, it may also establish a semantic relationship, which may be spatial (*in*, *on*, *under*, ...), temporal (*after*, *during*, ...), or logical (*via*, ...) in nature. The World Atlas of Language Structures treats a word as an adposition if it takes a noun phrase as complement and indicates the grammatical or semantic relationship of that phrase to the verb in the containing clause.^[3]
- An adposition determines certain grammatical properties of its complement (e.g. its case). In English, the objects of prepositions are always in the objective case (where such case is available: i.e. pronouns). In Koine Greek, certain prepositions always take their objects in a certain case (e.g., ἐν always takes its object in the dative), and other prepositions may take their object in one of several cases, depending on the meaning of the preposition (e.g., διά takes its object in the genitive or in the accusative, depending on the meaning).

- Adpositions are non-inflecting (or "invariant"); i.e., they do not have paradigms of forms (for different tenses, cases, genders, etc.) in the same way as verbs, adjectives, and nouns in the same language. There are exceptions, though, for example in Celtic languages (see Inflected preposition).

Properties

The following properties are characteristic of most adpositional systems.

- Adpositions are among the most frequently occurring words in languages that have them. For example, one frequency ranking for English word forms^[4] begins as follows (adpositions in bold):

the, of, and, to, a, in, that, it, is, was, I, for, on, you, ...

- The most common adpositions are single, monomorphemic words. According to the ranking cited above, for example, the most common English prepositions are the following:

on, in, to, by, for, with, at, of, from, as, ...

- Adpositions form a closed class of lexical items and cannot be productively derived from words of other categories.

Stranding

Preposition stranding is a syntactic construct in which a preposition with an object occurs somewhere other than immediately next to its object. For example: *Whom did you give it to?* where *to* refers to *whom*, which is placed at the beginning of the sentence because it is an interrogative word. The above sentence is much more common and natural than the equivalent sentence without stranding: *To whom did you give it?* Preposition stranding is most commonly found in English,^[5] as well as North Germanic languages such as Swedish. The existence of preposition stranding in German and Dutch is debated. Preposition stranding is also found in languages outside the Germanic family, such as Vata and Gbadi (languages of the Niger–Congo) and the dialects of some North American French speakers.

Stranding and English prescriptivism

Students are commonly taught that prepositions cannot end a sentence, although there is no rule prohibiting that use.^{[6][7]} Similar rules arose during the rise of classicism, when they were applied to English in imitation of classical languages in which they were found, such as Latin.

Winston Churchill is said to have written, "This is the sort of English up with which I will not put,"^[7] illustrating the awkwardness that would result from a rule against the use of terminal prepositions. However, the attribution of this quote to Churchill is almost certainly apocryphal.^[8] The example is also not a perfect example, because in that sentence, *up* is a particle of the verb "put", rather than a true preposition. A correct rearrangement would be "This is the sort of English **with** which I will not put up" (preposition in bold), which still sounds awkward, at least in casual speech.

Classification

Adpositions can be organized into subclasses according to various criteria. These can be based on directly observable properties (such as the adposition's form or its position in the sentence) or on less visible properties (such as the adposition's meaning or function in the context at hand).

Simple vs complex

Simple adpositions consist of a single word, while **complex** adpositions consist of a group of words that act as one unit. Some examples of complex prepositions in English are:

- in spite of, with respect to, except for, by dint of, next to

The boundary between simple and complex adpositions is not clear-cut and for the most part arbitrary. Many simple adpositions are derived from complex forms (e.g. *with* + *in* → *within*, *by* + *side* → *beside*) through grammaticalization. This change takes time, and during the transitional stages the adposition acts in some ways like a single word, and in other ways like a multi-word unit. For example, current German orthographic conventions recognize the indeterminate status of the following adpositions, allowing two spellings:^[9]

- *anstelle / an Stelle* ("instead of"), *aufgrund / auf Grund* ("because of"), *mithilfe / mit Hilfe* ("thanks to"), *zugunsten / zu Gunsten* ("in favor of"), *zuungunsten / zu Ungunsten* ("to the disadvantage of"), *zulasten / zu Lasten* ("at the expense of")

The boundary between complex adpositions and free combinations of words is also a fuzzy one. For English, this involves structures of the form "preposition + (article) + noun + preposition". Many sequences in English, such as *in front of*, that are traditionally regarded as prepositional phrases are not so regarded by linguists.^[10] The following characteristics are good indications that a given combination is "frozen" enough to be considered a complex preposition in English:

- It contains a word that cannot be used in any other context: *by dint of, in lieu of*.
- The first preposition cannot be replaced: *with a view to* but not **for/without a view to*
- It is impossible to insert an article, or to use a different article: *on *an/*the account of, for the/*a sake of*
- The range of possible adjectives is very limited: *in great favor of*, but not **in helpful favor of*
- The number of the noun cannot be changed: *by virtue/*virtues of*
- It is impossible to use a possessive determiner: *in spite of him*, not **in his spite*

Complex prepositions develop through the grammaticalization of commonly used free combinations. This is an ongoing process that introduces new prepositions into English.^[11]

Classification by position

The position of an adposition with respect to its complement allows the following subclasses to be defined:

- A **preposition** precedes its complement to form a prepositional phrase.

German: **auf** dem Tisch, French: **sur** la table, Polish: **na** stole ("on the table")

- A **postposition** follows its complement to form a postpositional phrase.

Chinese: 桌子上 zhuōzi shàng (lit. "table on"), Finnish: (minun) **kanssani** (lit. "my with"), Turkish: **benimle** (or "benim ile"), Latin: **mecum** (both lit. "me with")

The two terms are more commonly used than the general *adposition*. Whether a language has primarily prepositions or postpositions is seen as an important aspect of its typological classification, correlated with many other properties of the language.

It is usually straightforward to establish whether an adposition precedes or follows its complement. In some cases, the complement may not appear in a typical position. For example, in preposition stranding constructions, the complement appears before the preposition:

- {How much money} did you say the guy wanted to sell us the car **for**?
- She's going to the Bahamas? {Whom} **with**?

In other cases, the complement of the adposition is absent:

- I'm going to the park. Do you want to come with?
- French: Il fait trop froid, je ne suis pas habillée **pour**. ("It's too cold, I'm not dressed **for** [the situation].")

The adpositions in the examples are generally still considered prepositions because when they form a phrase with the complement (in more ordinary constructions), they must appear first.

Some adpositions can appear on either side of their complement; these can be called **ambipositions** (Reindl 2001, Libert 2006):

- He slept {**through** the whole night}/{the whole night **through**}.
- German: {meiner Meinung **nach**}/{**nach** meiner Meinung} ("in my opinion")

An ambiposition **entlang** (along). It can be put before or after the noun related to it (but with different noun cases attached to it).

die Straße **entlang**

entlang der Straße

along the road

Another adposition surrounds its complement, called a **circumposition**:

- A **circumposition** has two parts, which surround the complement to form a circumpositional phrase.
 - English: **from now on**
 - Dutch: **naar het einde toe** ("towards the end", lit. "to the end to")
 - Mandarin: 從 冰箱 裡 **cóng bīngxiāng lǐ** ("from the inside of the refrigerator", lit. "from refrigerator inside")
 - French: **à un détail près** ("except for one detail", lit. "at one detail near")
 - Swedish: **för tre timmar sedan** ("three hours ago", lit. "for three hours since")

"Circumposition" can be a useful descriptive term, though most circumpositional phrases can be broken down into a more hierarchical structure, or given a different analysis altogether. For example, the Mandarin example above could be analyzed as a prepositional phrase headed by *cóng* ("from"), taking the postpositional phrase *bīngxiāng lǐ* ("refrigerator inside") as its complement. Alternatively, the *cóng* may be analyzed as not a preposition at all (see the section below regarding coversbs).

- An **inposition** is an adposition between constituents of a complex complement.^[12]
- **Ambiposition** is sometimes used for an adposition that can function as either a preposition or a postposition.^[13]

Melis (2003) proposes the descriptive term **interposition** for adpositions in the structures such as the following:

- word **for** word, page **upon** page, (French) coup **sur** coup (*one after another, repeatedly*), (Russian) друг **с** другом (*with each other*)

An interposition is not an adposition which appears inside its complement as the two nouns do not form a single phrase (there is no *word word or *page page). Examples of actually interposed adpositions can be found in Latin (e.g. *summa cum laude*, lit. "highest with praise"). But they are always related to a more basic prepositional structure.

Classification by complement

Noun phrases are the most typical complements to adpositions, but adpositions can in fact be the adjuncts to a variety of syntactic categories, much like verbs.

- noun phrases:
 - *It was on {the table}.*
- adpositional phrases:
 - *Come out from {under the bed}.*
- adjectives and adjective phrases:
 - *The scene went from {blindingly bright} to {pitch black}.*
- adverbs or adverb phrases:
 - *I worked there until {recently}*
- infinitival or participial verb phrases:
 - *Let's think about {solving this problem}.*
 - insist **on** {staying home}
- nominal clauses:
 - *We can't agree on {whether to have children or not}*
- full sentences (see Conjunctions below)

Also like verbs, adpositions can appear without a complement; see Adverbs below.

Some adpositions could be described as combining with two complements:

- {**With** Sammy president}, we can all come out of hiding again.
- {**For** Sammy to become president}, they'd have to seriously modify the Constitution.

It is more commonly assumed, however, that *Sammy* and the following predicate first forms a “small clause”, which then becomes the single complement of the preposition. (In the first example above, a word (such as *as*) may be considered to be elided, which, if present, would clarify the grammatical relationship.)

An adposition can also, in itself, function as a complement:

- as the complement of a {noun}
 - a {thirst} **for** revenge
 - an {amendment} **to** the constitution
- as the complement of an {adjective} or {adverb}
 - {attentive} **to** their needs
 - {separately} **from** its neighbors
- as the complement of {another preposition}
 - {until} **after** supper
 - {from} **beneath** the bed

Semantic classification

Adpositions can be used to express a wide range of semantic relations between their complement and the rest of the context. The following list is not an exhaustive classification:

- **spatial** relations: location (inclusion, exclusion, proximity), direction (origin, path, endpoint)
- **temporal** relations
- **comparison**: equality, opposition, price, rate
- **content**: source, material, subject matter
- **agent**
- **instrument, means, manner**
- **cause, purpose**
- **Reference**

Most common adpositions are highly **polysemous**, and much research is devoted to the description and explanation of the various interconnected meanings of particular adpositions. In many cases a primary, spatial meaning can be identified, which is then extended to non-spatial uses by metaphorical or other processes.

In some contexts, adpositions appear in contexts where their semantic contribution is minimal, perhaps altogether absent. Such adpositions are sometimes referred to as **functional** or **case-marking** adpositions, and they are lexically selected by another element in the construction, or fixed by the construction as a whole.

- English: dispense **with** formalities, listen **to** my advice, good **at** mathematics
- Russian: otvechat' **na** vopros (*lit.* "answer **on** the question"), obvinenie **v** obmane ("accusation **in** [i.e. **of**] fraud")
- Spanish: soñar **con** ganar el título ("dream **with** [i.e. **about**] winning the title"), consistir **en** dos grupos ("consist **in** [i.e. **of**] two groups")

It is usually possible to find some semantic motivation for the choice of a given adposition, but it is generally impossible to explain why other semantically motivated adpositions are excluded in the same context. The selection of the correct adposition in these cases is a matter of syntactic well-formedness.

Subclasses of spatial adpositions

Spatial adpositions can be divided into two main classes, namely **directional** and **static** ones. A *directional* adposition usually involves motion along a *path* over time, but can also denote a non-temporal path. Examples of directional adpositions include *to*, *from*, *towards*, *into*, *along* and *through*.

- Bob went **to** the store. (movement over time)
- A path **into** the woods. (non-temporal path)
- The fog extended **from** London **to** Paris. (non-temporal path)

A *static* adposition normally does not involve movement. Examples of these include *at*, *in*, *on*, *beside*, *behind*, *under* and *above*.

- Bob is **at** the store.

Directional adpositions differ from static ones in that they normally can't combine with a copula to yield a predicate, though there are some exceptions to this, as in *Bob is from Australia*, which may perhaps be thought of as special uses.

- Fine: Bob is **in** his bedroom. (*in* is static)
- Bad: *Bob is **to** his bedroom. (*to* is directional)

Directional spatial adpositions can only combine with verbs that involve motion; static prepositions can combine with other verbs as well.

- Fine: Bob is lying down **in** his bedroom.
- Bad: *Bob is lying down **into/from** his bedroom.

When a static adposition combines with a motion verb, it sometimes takes on a directional meaning. The following sentence can either mean that Bob jumped *around* in the water, or else that he jumped so that he *ended up* in the water.

- Bob jumped **in** the water.

In some languages, directional adpositions govern a different case on their complement than static ones. These are known as casally modulated prepositions. For example, in German, directional adpositions govern accusative while static ones govern dative. Adpositions that are ambiguous between directional and static interpretations govern accusative when they are interpreted as directional, and dative when they are interpreted as static.

- **in** seinem Zimmer (in his-DATIVE room) "in his room" (static)
- **in** sein Zimmer (in his-ACCUSATIVE room) "into his room" (directional)

Directional adpositions can be further divided into telic ones and atelic ones. *To*, *into* and *across* are telic: they involve movement all the way to the endpoint denoted by their complement. Atelic ones include *towards* and *along*. When telic adpositions combine with a motion verb, the result is a telic verb phrase. Atelic adpositions give rise to atelic verb phrases when so combined.^[14]

Static adpositions can be further subdivided into **projective** and **non-projective** ones. A non-projective static adposition is one whose meaning can be determined by inspecting the meaning of its complement and the meaning of the preposition itself. A *projective* static adposition requires, in addition, a *perspective* or *point of view*. If I say that *Bob is behind the rock*, you need to know where I am to know on which side of the rock Bob is supposed to be. If I say that *your pen is to the left of my book*, you also need to know what my point of view is. No such point of view is required in the interpretation of sentences like *your pen is on the desk*. Projective static prepositions can sometimes take the complement itself as "point of view," if this provides us with certain information. For example, a *house* normally has a *front* and a *back*, so a sentence like the following is actually ambiguous between two readings: one has it that Bob is at the back of the house; the other has it that Bob is on the *other side* of the house, with respect to the speaker's point of view.

- Bob is **behind** the house.

A similar effect can be observed with *left of*, given that objects that have fronts and backs can also be ascribed *lefts* and *rights*. The sentence, *My keys are to the left of the phone*, can either mean that they are on the *speaker's* left of the phone, or on the *phone's* left of the phone.^[15]

Classification by grammatical function

Particular uses of adpositions can be classified according to the function of the adpositional phrase in the sentence.

- Modification
 - adverb-like

The athlete ran {**across** the goal line}.
 - adjective-like
 - attributively

A road trip {**with** children} is not the most relaxing vacation.
- in the predicate position

The key is {**under** the plastic rock}.
- Syntactic functions
 - complement

Let's dispense **with** the formalities.

Here the words *dispense* and *with* complement one another, functioning as a unit to mean *forego*, and they share the direct object (*the formalities*). The verb *dispense* would not have this meaning without the

word *with* to complement it.

{**In** the cellar} was chosen as the best place to hide the bodies.

Adpositional languages typically single out a particular adposition for the following special functions:

- marking possession
- marking the agent in the passive construction
- marking the beneficiary role in transfer relations

Overlaps with other categories

Adverbs

There are many similarities in form between adpositions and adverbs. Some adverbs are clearly derived from the fusion of a preposition and its complement, and some prepositions have adverb-like uses with no complement:

- {**down** the stairs}/downstairs, {**under** the ground}/underground.
- {**inside** (the house)}, {**aboard** (the plane)}, {**underneath** (the surface)}

It is possible to treat all of these adverbs as **intransitive prepositions**, as opposed to transitive prepositions, which select a complement (just like transitive vs intransitive verbs). This analysis^[16] could also be extended to other adverbs, even those that cannot be used as "ordinary" prepositions with a nominal complement:

- here, there, abroad, downtown, afterwards, ...

A more conservative approach is to say simply that adverbs and adpositional phrases share many common functions.

Particles

Phrasal verbs in English are composed of a verb and a "particle" that also looks like an intransitive preposition. The same can be said for the separable verb prefixes found in Dutch and German.

- give **up**, look **out**, sleep **in**, carry **on**, come **to**
- Dutch: **op**bellen ("to call (by phone)"), **aan**bieden ("to offer"), **voor**stellen ("to propose")
- German: **ein**kauen ("to purchase"), **aus**sehen ("to resemble"), **an**bieten ("to offer")

Although these elements have the same lexical form as prepositions, in many cases they do not have relational semantics, and there is no "missing" complement whose identity can be recovered from the context.

Conjunctions

The set of adpositions overlaps with the set of subordinating conjunctions (or complementizers):

- (preposition) **before/after/since** the end of the summer
- (conjunction) **before/after/since** the summer ended
- (preposition) It looks **like** another rainy day
- (conjunction) It looks **like** it's going to rain again today

All of these words can be treated as prepositions if we extend the definition to allow clausal complements. This treatment could be extended further to conjunctions that are never used as ordinary prepositions:

- **unless** they surrender, **although** time is almost up, **while** you were on the phone

Coverbs

In some languages, the role of adpositions is served by coverbs, words that are lexically verbs, but are generally used to convey the meaning of adpositions.

For instance, whether prepositions exist in Chinese is sometimes considered an open question. Coverbs are often referred to as prepositions because they appear before the noun phrase they modify. However, unlike prepositions, coverbs can sometimes stand alone as main verbs. For instance, in Standard Chinese, *dào* can be used in a prepositional or a verb sense:

- *qù* ("to go") is the main verb: 我到北京去。Wǒ dào Běijīng qù. ("I go to Beijing.")
- *dào* ("to arrive") is the main verb: 我到了。Wǒ dào le. ("I have arrived.")

Case affixes

From a functional point of view, adpositions and morphological case markings are similar. Adpositions in one language can correspond precisely to case markings in another language. For example, the agentive noun phrase in the passive construction in English is introduced by the preposition *by*, while in Russian it is marked by the instrumental case. Sometimes both prepositions and cases can be observed within a single language. For example, the genitive case in German is in many instances interchangeable with a phrase using the preposition *von*.

Despite this functional similarity, adpositions and case markings are distinct grammatical categories:

- Adpositions combine syntactically with their complement phrase. Case markings combine with a noun morphologically.
- Two adpositions can usually be joined with a conjunction and share a single complement, but this is normally not possible with case markings:

{**of** and **for** the people} vs. Latin *populi* et *populo*, not **populi* et **-o** ("people-genitive and -dative")

- One adposition can usually combine with two coordinated complements, but this is normally not possible with case markings:

of {the city and the world} vs. Latin *urbis* et *orbis*, not **urb-* et *orbis* ("city and world-genitive")

- Case markings combine primarily with nouns, whereas adpositions can combine with phrases of many different categories.
- A case marking usually appears directly on the noun, but an adposition can be separated from the noun by other words.
- Within the noun phrase, determiners and adjectives may agree with the noun in case (**case spreading**), but an adposition only appears once.
- A language can have hundreds of adpositions (including complex adpositions), but no language has this many distinct morphological cases.

It can be difficult to clearly distinguish case markings from adpositions. For example, the post-nominal elements in Japanese and Korean are sometimes called case particles and sometimes postpositions. Sometimes they are analysed as two different groups because they have different characteristics (e.g. ability to combine with focus particles), but in such analysis, it is unclear which words should fall into which group.

- Japanese: 電車で (*densha de*, "by train")
- Korean: 한국에 (*Hangug-e*, "to Korea")

Turkish and Finnish have both extensive case-marking and postpositions, and here there is evidence to help distinguish the two:

- Turkish: (case) *sinemaya* (cinema-dative, "to the cinema") vs (postposition) *sinema içiñ* ("for the cinema")
- Finnish: (case) *talossa* (house-inessive, "in the house") vs (postposition) "talon *edessä* (house-gen in front, "in front of the house")

In these examples, the case markings form a word with their hosts (as shown by vowel harmony, other word-internal effects and agreement of adjectives in Finnish), while the postpositions are independent words.

Some languages, like Sanskrit, use postpositions to emphasize the meaning of the grammatical cases, and eliminate possible ambiguities in the meaning of the phrase. For example: रामेण सह (Rāmeṇa saha, "in company of Rāma"). In this example, "Rāmeṇa" is in the instrumental case, but, as its meaning can be ambiguous, the postposition *saha* is being used to emphasize the meaning of company.

In Indo-European languages, each case often contains several different endings, some of which may be derived from different roots. An ending is chosen depending on gender, number, whether the word is a noun or a modifier, and other factors.

Word choice

The choice of preposition (or postposition) in a sentence is often idiomatic, and may depend either on the verb preceding it or on the noun which it governs: it is often not clear from the sense which preposition is appropriate. Different languages and regional dialects often have different conventions. Learning the conventionally preferred word is a matter of exposure to examples. For example, most dialects of American English have "to wait *in* line", but some have "to wait *on* line". Because of this, prepositions are often cited as one of the most difficult aspects of a language to learn, for both non-native speakers and native speakers.^[17] Where an adposition is required in one language, it may not be in another. In translations, adpositions must be dealt with on a case-by-case basis, and one may be either supplied or omitted. For instance:

- Those learning English may find it hard to choose between *on*, *in*, and *at*, as other languages may use only one or two prepositions as the equivalents of these three in English.
- Speakers of English learning Spanish or Portuguese have difficulty distinguishing between the prepositions *por* and *para*, as both frequently mean *for* in English.
- The German preposition *von* might be translated as *by*, *of*, or *from* in English depending on the sense.

Notes

- [1] Huddleston & Pullum (2002), chapter 7.
- [2] An example is Huddleston & Pullum (2002) ("CGEL"), whose choice of terms is discussed on p. 602.
- [3] "Chapter 85: Order of Adposition and Noun Phrase" (<http://wals.info/chapter/85>). *World Atlas of Language Structures*. . Retrieved 29 August 2011.
- [4] WordCount website (<http://www.wordcount.org/main.php>)
- [5] Lundin, Leigh (2007-09-23). "The Power of Prepositions" (<http://criminalbrief.com/?p=216>). *On Writing*. Cairo: Criminal Brief. .
- [6] Mignon Fogarty (4 March 2010). "Top Ten Grammar Myths" (<http://grammar.quickanddirtytips.com/top-ten-grammar-myths.aspx>). *Grammar Girl: Quick and Dirty Tips for Better Writing*. . Retrieved 27 March 2010.
- [7] O'Conner, Patricia T.; Kellerman, Stewart (2009). *Origins of the Specious: Myths and Misconceptions of the English Language*. New York: Random House. p. 17. ISBN 978-1-4000-6660-5.
- [8] <http://itre.cis.upenn.edu/~myl/languagelog/archives/001715.html>
- [9] Duden: Neue Rechtschreibung Crashkurs (Regel 11 (http://www.duden.de/deutsche_sprache/neue_rechtschreibung/crashkurs/getrenntzusammen/regel_11.php)).
- [10] CGEL, p. 618ff; Pullum (2005).
- [11] Quirk and Mulholland (1964).
- [12] Haspelmath, "Adpositions"; citing Martin Haspelmath et al., eds, *World Atlas of Language Structures* (Oxford: Oxford University Press, 2005).
- [13] Haspelmath, "Adpositions".
- [14] Zwarts, Joost. 2005. "Prepositional Aspect and the Algebra of Paths." *Linguistics and Philosophy* 28.6, 739–779.
- [15] Creswell, Max. 1978. "Prepositions and points of view." *Linguistics and Philosophy*, 2: 1–41.
- [16] Notably that of CGEL, pp. 612–16.
- [17] Regarding the use and misuse of prepositions see: Thatcher, David. "Saving Our Prepositions: A Guide for the Perplexed" (<http://www.savingourprepositions.com>). savingourprepositions.com. .

References

- Mark, L Hernandez *The power of the letter* (2001). ISBN 978-0-534-42066-6.
- Bennett, David C. (1975) *Spatial and Temporal Uses of English Prepositions: An Essay in Stratification Semantics*. London: Longman.
- Emonds, Joseph E. (1985) *A Unified Theory of Syntactic Categories*. Dordrecht: Foris.
- Haspelmath, Martin. (2003) "Adpositions". *International Encyclopedia of Linguistics*. 2nd ed. New York: Oxford University Press. ISBN 0-19-513977-1.
- Huddleston, Rodney, and Geoffrey K. Pullum. (2002) *The Cambridge Grammar of the English Language*. Cambridge: Cambridge University Press. ISBN 0-521-43146-8.
- Jackendoff, Ray S. (1973) "Base Rules for PPs". In S. R. Anderson and P. Kiparsky (eds), *A Festschrift for Morris Halle*, pp. 345–356. New York: Holt, Rinehart, and Winston.
- Koopman, Hilda. (2000) "Prepositions, postpositions, circumpositions, and particles". In *The Syntax of Specifiers and Heads*, pp. 204–260. London: Routledge.
- Libert, Alan R. (2006) *Ambipositions*. LINCOM studies in language typology (No. 13). LINCOM. ISBN 3-89586-747-0.
- Maling, Joan. (1983) "Transitive adjectives: A case of categorial reanalysis". In F. Heny and B. Richards (eds), *Linguistic Categories: Auxiliaries and Related Puzzles*, Vol. 1, pp. 253–289. Dordrecht: Reidel.
- Melis, Ludo. (2003) *La préposition en français*. Gap: Ophrys.
- Pullum, Geoffrey K. (2005) "Phrasal Prepositions in a Civil Tone (<http://itre.cis.upenn.edu/~myl/languagelog/archives/001871.html>)."*Language Log*. Accessed 9 September 2007.
- Quirk, Randolph, and Joan Mulholland. (1964) "Complex Prepositions and Related Sequences". *English Studies*, suppl. to vol. 45, pp. 64–73.
- Rauh, Gisa. (1991) *Approaches to Prepositions*. Tübingen: Gunter Narr.
- Reindl, Donald F. (2001) "Areal Effects on the Preservation and Genesis of Slavic Postpositions". In Lj. Šarić and D. F. Reindl *On Prepositions* (= *Studia Slavica Oldenburgensia* 8), pp. 85–100. Oldenburg: Carl-von-Ossietzky-Universität Oldenburg.
- Thatcher, David (2008) *Saving Our Prepositions: A Guide for the Perplexed* (<http://www.savingourprepositions.com>) by angel martinez

External links

- Prepositions in the German language: Prepositions I (<http://www.deutsched.com/Grammar/Lessons/0206prep1.php>), Prepositions II (<http://www.deutsched.com/Grammar/Lessons/0207prep2.php>)
- Merriam Webster Editor's take on whether it is ok to end a sentence with a Preposition (<http://www.merriam-webster.com/video/0025-preposition.htm>)
- With or Without a Complement: The Form and Function of Prepositions (<http://www.rockpicklepublishing.com/essays/formandfunctionofprepositions.html>)
- The Functions of Prepositions in English (<http://www.brighthub.com/education/languages/articles/22684.aspx>)
- Some prepositions (<http://owl.english.purdue.edu/owl/resource/594/02/>)
- Английский предлог: "кем он дружит с?" (Сравнение русского и английского предлога) (<http://www.study.ru/support/lib/note141.html>)

Personal pronoun

Examples
<ul style="list-style-type: none"> • He shook her* hand. • Why do you always rely on me to do your* homework for you? • They tried to run away from the hunter, but he set his* dogs after them. The effect this has on the reader is forming a connection between them and the text <p>*Possessive determiners like <i>her</i> and <i>his</i> are sometimes called pronouns as well, at least informally.</p>

Personal pronouns are pronouns that are associated primarily with a particular grammatical person – first person (as *I*), second person (as *you*), or third person (as *he*, *she*, *it*). Personal pronouns may also take different forms depending on number (usually singular or plural), grammatical or natural gender, case, and formality. The term "personal" is used here purely to signify the grammatical sense; personal pronouns are not limited to people and can also refer to animals and objects (as the English personal pronoun *it* usually does).

The re-use in some languages of one personal pronoun to indicate a second personal pronoun with formality or social distance - commonly a second person plural to signify second person singular formal - is known as the T–V distinction, from the Latin pronouns *tu* and *vos*. Examples are the majestic plural in English and the use of "*vous*" in place of "*tu*" in French

- For details on the personal pronouns used in the English language, see English personal pronouns.

Types and forms of personal pronouns

Person and number

Languages typically have personal pronouns for each of the three grammatical persons:

- **first-person** pronouns normally refer to the speaker, in the case of the singular (as the English *I*), or to the speaker and others, in the case of the plural (as the English *we*).
- **second-person** pronouns normally refer to the person or persons being addressed (as the English *you*); in the plural they may also refer to the person or persons being addressed together with third parties.
- **third-person** pronouns normally refer to third parties other than the speaker or the person being addressed (as the English *he*, *she*, *it*, *they*).

As noted above, within each person there are often different forms for different grammatical numbers, especially singular and plural. Languages which have other numbers, such as dual (e.g. Slovene)^[1], may also have distinct pronouns for these.

Some languages distinguish between *inclusive* and *exclusive* first-person plural pronouns – those that do and do not include their audience. For example, Tok Pisin has seven first-person pronouns according to number (singular, dual, trial, plural) and clusivity, such as *mitripela* ("they two and I") and *yumitripela* ("you two and I"). This is common in languages spoken in traditional societies, such as Quechua and Melanesian languages; it may be related to the existence of moieties in the culture.

Some languages do not have third-person personal pronouns, instead using demonstratives (e.g. Macedonian)^[2] or full noun phrases. Latin used demonstratives rather than third-person pronouns (in fact the third-person pronouns in the Romance languages are descended from the Latin demonstratives).

In some cases personal pronouns can be used in place of indefinite pronouns, referring to someone unspecified or to people generally. In English and other languages the second-person pronoun can be used in this way: instead of the formal *one should hold one's oar in both hands* (using the indefinite pronoun *one*), it is more common to say *you*

should hold your oar in both hands.

Gender

Personal pronouns, particularly those of the third person, may differ depending on the grammatical gender or natural gender of their antecedent or referent. This occurs in English with the third-person singular pronouns, where (simply put) *he* is used when referring to a male, *she* to a female, and *it* to something inanimate or an animal of unspecific sex. This is an example of pronoun selection based on natural gender; many languages also have selection based on grammatical gender (as in French, where the pronouns *il* and *elle* are used with masculine and feminine antecedents respectively, as are the plurals *ils* and *elles*). Sometimes natural and grammatical gender do not coincide, as with the German noun *Mädchen* ("girl"), which is grammatically neuter but naturally feminine; either neuter or feminine pronouns may then be used. (See Grammatical gender: Grammatical vs. natural gender for more details.)

Issues may arise when the referent is someone of unspecified or unknown sex. In a language such as English, it is derogatory to use the inanimate pronoun *it* to refer to a person (except in some cases to a small child), and although it is traditional to use the masculine *he* to refer to a person of unspecified sex, the movement towards gender-neutral language requires that another method be found, such as saying *he or she*. A common solution, particularly in informal language, is to use singular *they*. For more details see Gender in English.

Similar issues arise in some languages when referring to a group of mixed gender; these are dealt with according to the conventions of the language in question (in French, for example, the masculine *ils* "they" is used for a group containing both men and women or antecedents of both masculine and feminine gender).

A pronoun can still carry gender even if it does not inflect for it; for example, in the French sentence *je suis petit* ("I am small") the speaker is male and so the pronoun *je* is masculine, whereas in *je suis petite* the speaker is female and the pronoun is treated as feminine, the feminine ending *-e* consequently being added to the predicate adjective.

On the other hand, many languages originally do not distinguish female & male in the third person pronoun.

Some languages that have/had a non-gender-specific third person pronoun:

- Indonesian/Malay, Malagasy of Madagascar, Philippine languages, Maori, Rapa Nui, Hawaiian, and other Austronesian languages
- Chinese, Burmese, and other Sino-Tibetan languages
- Vietnamese and other Mon-Khmer languages
- Swahili, Yoruba, and other Niger-Congo languages
- Turkish and other Turkic languages
- Luo and other Nilo-Saharan languages
- Hungarian, Finnish, Estonian, and other Uralic languages
- Hindi-Urdu
- Georgian
- Japanese
- Armenian
- Korean
- Mapudungun
- Basque
- Persian

Some of these languages started to distinguish gender in the third person pronoun due to influence from European languages.

Mandarin, for example, introduced in the early 20th century a different character for *she* (她) which is pronounced identically as *he* (他) and thus still indistinguishable in speech.

Korean *geunnyeo* (그녀) is found in writing to translate "she" from European languages. In the spoken language it still sounds awkward and rather unnatural.

Formality

Many languages have different pronouns, particularly in the second person, depending on the degree of formality or familiarity. It is common for different pronouns to be used when addressing friends, family, children and animals than when addressing superiors and adults with whom the speaker is less familiar. Examples of such languages include French, where the singular *tu* is used only for familiars, the plural *vous* being used as a singular in other cases (Russian follows a similar pattern); German, where the third-person plural *sie* (capitalized as *Sie*) is used as both singular and plural in the second person in non-familiar uses; and Polish, where the noun *pan* ("gentleman") and its feminine and plural equivalents are used as polite second-person pronouns. For more details, see T–V distinction. Some languages, such as Japanese and Korean, have pronouns that reflect deep-seated societal categories. In these languages there is a small set of nouns that refer to the discourse participants, but these referential nouns are not usually used, with proper nouns, deictics, and titles being used instead (and once the topic is understood, usually no explicit reference is made at all). A speaker chooses which word to use depending on the rank, job, age, gender, etc. of the speaker and the addressee. For instance, in formal situations, adults usually refer to themselves as *watashi* or the even more polite *watakushi*, while young men may use the student-like *boku* and police officers may use *honkan* ("this officer"). In informal situations, women may use the colloquial *atashi*, and men may use the rougher *ore*.

Case

Pronouns also often take different forms based on their syntactic function, and in particular on their grammatical case. English distinguishes the nominative form (*I, you, he, she, it, we, they*), used principally as the subject of a verb, from the oblique form (*me, you, him, her, it, us, them*), used principally as the object of a verb or preposition. Languages whose nouns inflect for case often inflect their pronouns according to the same case system; for example, German personal pronouns have distinct nominative, genitive, dative and accusative forms (*ich, meiner, mir, mich*; etc.). Pronouns often retain more case distinctions than nouns – this is true of both German and English, and also of the Romance languages, which (with the exception of Romanian) have lost the Latin grammatical case for nouns, but preserve certain distinctions in the personal pronouns.

Other syntactic types of pronouns which may adopt distinct forms are disjunctive pronouns, used in isolation and in certain distinct positions (such as after a conjunction like *and*), and prepositional pronouns, used as the complement of a preposition.

Strong and weak forms

Some languages have strong and weak forms of personal pronouns, the former being used in positions with greater stress. Some authors further distinguish weak pronouns from clitic pronouns, which are phonetically less independent.^{[3][4]}

Examples are found in Polish, where the masculine third-person singular accusative and dative forms are *jego* and *jemu* (strong) and *go* and *mu* (weak). English has strong and weak pronunciations for some pronouns, such as *them* (pronounced /ðɛm/ when strong, but /ð(ə)m/ when weak).

Reflexive and possessive forms

Languages may also have reflexive pronouns (and sometimes reciprocal pronouns) closely linked to the personal pronouns. English has the reflexive forms *myself, yourself, himself, herself, itself, ourselves, yourselves, themselves* (there is also *oneself*, from the indefinite pronoun *one*). These are used mainly to replace the oblique form when referring to the same entity as the subject of the clause; they are also used as intensive pronoun (as in *I did it myself*).

Personal pronouns are also often associated with possessive forms. English has two sets of such forms: the possessive determiners (also called possessive adjectives) *my, your, his, her, its, our* and *their*, and the possessive pronouns *mine, yours, his, hers, its* (rare), *ours, theirs* (for more details see English possessive). In informal usage both types of words may be called "possessive pronouns", even though the former kind do not function in place of nouns, but qualify a noun, and thus do not themselves function grammatically as pronouns.

Some languages, such as the Slavic languages, also have reflexive possessives (meaning "my own", "his own", etc.). These can be used to make a distinction from ordinary third-person possessives. For example, in Slovene:

Eva je dala Maji svojo knjigo ("Eva gave Maja **her** [reflexive] book", i.e. Eva's own book)

Eva je dala Maji njeno knjigo ("Eva gave Maja **her** [non-reflexive] book", i.e. Maja's book)

The same phenomenon occurs in the North Germanic languages, such as Danish, which can produce the sentences *Anna gav Maria sin bog* and *Anna gav Maria hendes bog*, the distinction being analogous to that in the Slovene example above.

Syntax

Antecedents

Third-person personal pronouns, and sometimes others, often have an explicit antecedent – a noun phrase which refers to the same person or thing as the pronoun (see anaphora). The antecedent usually precedes the pronoun, either in the same sentence or in a previous sentence (although in some cases the pronoun may come before the antecedent). The pronoun may then be said to "replace" or "stand for" the antecedent, and to be used so as to avoid repeating the antecedent. Some examples:

- *John hid and we couldn't find him.* (*John* is the antecedent of *him*)
- *After he lost his job, my father set up a small grocer's shop.* (*my father* is the antecedent of *he*, although it comes after the pronoun)
- *We invited Mary and Tom. He came but she didn't.* (*Mary* is the antecedent of *she*, and *Tom* of *he*)
- *I loved those bright orange socks. Can you lend them to me?* (*those bright orange socks* is the antecedent of *them*)
- *Jane and I went out cycling yesterday. We did 30 miles.* (*Jane and I* is the antecedent of *we*)

Sometimes pronouns, even third-person ones, are used without specific antecedent, and the referent has to be deduced from the context. In other cases there may be ambiguity as to what the intended antecedent is:

- *Alan was going to discuss it with Bob. He's always dependable.* (the meaning of *he* is ambiguous; the intended antecedent may be either *Alan* or *Bob*)

Pronoun dropping

In some languages, subject or object pronouns can be dropped in certain situations (see Pro-drop language). In particular, in a null-subject language, it is permissible for the subject of a verb to be omitted. Information about the grammatical person (and possibly gender) of the subject may then be provided by the form of the verb. In such languages it is common for personal pronouns to appear in subject position only if they are needed to resolve ambiguity or if they are stressed.

Dummy pronouns

In some cases pronouns are used purely because they are required by the rules of syntax, even though they do not refer to anything; they are then called dummy pronouns. This can be seen in English with the pronoun *it* in such sentences as *it is raining* and *it is nice to relax* (This is less likely in pro-drop languages, since such pronouns would probably be omitted.)

Capitalization

Personal pronouns are not normally capitalized, except in particular cases. In English the first-person subject pronoun *I* is always capitalized, and in some Christian texts the personal pronouns referring to Jesus or God are capitalized (*He*, *Thou*, etc.).

In many European languages, but not English, the second-person pronouns are often capitalized for politeness when they refer to the person one is writing to (such as in a letter).

For details, see Capitalization: Pronouns.

References

- [1] Kordić, Snježana (2002) (in Serbo-Croatian). *Riječi na granici punoznačnosti [Words on the Border Between Lexicon and Grammar]* (<http://www.webcitation.org/690BKb4xm>). Zagreb: Hrvatska sveučilišna naklada. p. 11. ISBN 953-169-073-1. LCCN 2009386657. OCLC 54680648. OL{{1}}. Archived from the original (http://bib.irb.hr/datoteka/426493.Kordic_Rijeci_na_granici_punoznacnosti.pdf) on 8 July 2012. . Retrieved 15 August 2012.
- [2] Kordić, Snježana (1999). "Personal- und Reflexivpronomina als Träger von Personalität [Personal pronouns and reflexive pronouns]" (<http://www.webcitation.org/6A9u5pTCP>). In Jachnow, Helmut; Mečkovskaja, Nina; Norman, Boris et al. (in German). *Personalität und Person. Slavistische Studienbücher, Neue Folge* ; vol. 9. Wiesbaden: Harrassowitz. p. 136. ISBN 3-447-04141-2. OCLC 42311684. Archived from the original (http://bib.irb.hr/datoteka/426625.PERSONAL_UND_REFLEXIVPR.PDF) on 24 August 2012. . Retrieved 29 August 2012.
- [3] Grohmann, Kleantzes K. (2000), "Towards a Syntactic Understanding of Prosodically Reduced Pronouns" (<http://www.punksinscience.org/kleantzes/papers/tl26.pdf>), *Theoretical Linguistics* 26 (3): 175–210, doi:10.1515/thli.2000.26.3.175,
- [4] Baauw, Sergio, Greenhill, A.; Littlefield, H.; Tano, C., eds., "The Role of the Clitic-Full Pronoun Distinction in the Acquisition of Pronominal Coreference" (<http://www.let.uu.nl/~Sergio.Baauw/personal/bu98proc2.pdf>), *BUCLD Proceedings* (Somerville, Mass.: Cascadilla Press) 23,

Further reading

- Gaynesford, M. de (2006). *I: The Meaning of the First Person Term*. Oxford: Oxford University Press. ISBN 0-19-928782-1.

Pronoun

Personal pronouns
Standard English personal pronouns: <ul style="list-style-type: none">• You Thou We They Them It
Parts of speech: <ul style="list-style-type: none">• Subjective• Possessive
Determinacy: <ul style="list-style-type: none">• Dummy• Generic you• Singular they• Inclusive and exclusive we• Pluralis majestatis• T-V distinction
Gender issues: <ul style="list-style-type: none">• Androgynous• Gender-specific• Gender-neutral<ul style="list-style-type: none">• Spivak Ve Xe Ze Sie/hir
Slang: <ul style="list-style-type: none">• Y'all Yinz
Other languages: <ul style="list-style-type: none">• French, personal• Spanish• Portuguese• Chinese• Japanese• Vietnamese

In linguistics and grammar, a **pronoun** is a word or form that substitutes for a noun or noun phrase. It is a particular case of a pro-form.

Pronouns have traditionally been regarded as one of the parts of speech, although many modern theorists would not regard them as a single distinct word class, because of the variety of functions performed by words which are classed as pronouns. Common types include the personal pronouns, relative pronouns, interrogative pronouns, demonstrative pronouns and indefinite pronouns.

The use of pronouns often involves anaphora, where the meaning of the pronoun is dependent on another referential element. This applies particularly to the (third-person) personal pronouns. The referent of the pronoun is often the same as that of a preceding (or sometimes following) noun phrase, called the *antecedent* of the pronoun. For example, in the sentence *That poor man looks as if he needs a new coat*, the antecedent of the pronoun *he* is the noun phrase *that poor man*. (Pronouns used without antecedents are sometimes called *unprecursed* pronouns.) Another type of antecedent is that found with relative pronouns, as in *the woman who looked at you*, where *the woman* is the antecedent of the relative pronoun *who*.

Types of pronouns

Common types of pronouns found in the world's languages are as follows:

- **Personal pronouns** denote an entity of a specific grammatical person: first person (as in the case of *I, me, we*, etc.), second person (as in the case of *you*), or third person (*he, she, they*, etc.)
- **Subject pronouns** are used when the person or thing is the subject of the sentence or clause. English example: *I like to eat chips, but she does not.*
- **Second person formal and informal pronouns** (T-V distinction). For example, *vous* and *tu* in French. There is no distinction in modern English though Elizabethan English marked the distinction with "thou" (singular informal) and "you" (plural or singular formal).
- **Inclusive and exclusive "we" pronouns** indicate whether the audience is included. There is no distinction in English.
- **Intensive pronouns**, also known as emphatic pronouns, re-emphasize a noun or pronoun that has already been mentioned. English uses the same forms as the reflexive pronouns; for example: *I did it myself* (contrast reflexive use, *I did it to myself*).
- **Object pronouns** are used when the person or thing is the object of the sentence or clause. English example: *John likes me but not her.*
 - **Direct and indirect object pronouns.** English uses the same oblique form for both; for example: *Mary loves him* (direct object); *Mary sent him a letter* (indirect object).
 - **Reflexive pronouns** are used when a person or thing acts on itself. English example: *John cut himself.*
 - **Reciprocal pronouns** refer to a reciprocal relationship. English example: *They do not like each other.*
- **Prepositional pronouns** come after a preposition. No distinct forms exist in English; for example: *Anna and Maria looked at him.*
- **Disjunctive pronouns** are used in isolation or in certain other special grammatical contexts. No distinct forms exist in English; for example: *Who does this belong to? Me.*
- **Dummy pronouns** are used when grammatical rules require a noun (or pronoun), but none is semantically required. English example: *It is raining.*
- **Weak pronouns.**
- **Possessive pronouns** are used to indicate possession or ownership.
 - In a strict sense, the **possessive pronouns** are only those that act syntactically as nouns. English example: *Those clothes are mine.*
 - Often, though, the term "possessive pronoun" is also applied to the so-called **possessive determiners** (or **possessive adjectives**). For example, in English: *I lost my wallet.* They are not strictly speaking pronouns because they do not substitute for a noun or noun phrase, and as such, some grammarians classify these terms in a separate lexical category called determiners (they have a syntactic role close to that of adjectives, always qualifying a noun).
- **Demonstrative pronouns** distinguish the particular objects or people that are referred to from other possible candidates. English example: *I'll take these.*
- **Indefinite pronouns** refer to general categories of people or things. English example: *Anyone can do that.*
 - **Distributive pronouns** are used to refer to members of a group separately rather than collectively. English example: *To each his own.*
 - **Negative pronouns** indicate the non-existence of people or things. English example: *Nobody thinks that.*
- **Relative pronouns** refer back to people or things previously mentioned. English example: *People who smoke should quit now.*
- **Indefinite relative pronouns** have some of the properties of both relative pronouns and indefinite pronouns. They have a sense of "referring back", but the person or thing to which they refer has not previously been

explicitly named. English example: *I know what I like.*

- **Interrogative pronouns** ask which person or thing is meant. English example: ***Who did that?***

- In many languages (e.g., Czech, English, French, Interlingua, and Russian), the sets of relative and interrogative pronouns are nearly identical. Compare English: ***Who is that?*** (interrogative) to ***I know who that is.*** (relative).

Pronouns and determiners

Pronouns and determiners are closely related, and some linguists think pronouns are actually determiners without a noun or a noun phrase.^[1] The following chart shows their relationships in English.

	Pronoun	Determiner
Personal (1st/2nd)	<i>we</i>	<i>we</i> Scotsmen
Possessive	<i>ours</i>	<i>our</i> freedom
Demonstrative	<i>this</i>	<i>this</i> gentleman
Indefinite	<i>some</i>	<i>some</i> frogs
Interrogative	<i>who</i>	<i>which</i> option

The views of different schools

Pronouns have been classified as one of the parts of speech since at least the 2nd century BC when they were included in the Greek treatise *Art of Grammar*. Objections to this approach have appeared among grammatical theories in the 20th century. Their grammatical heterogeneity, many-sided pronouns were underlined, which were classified as follows:

- "indicative words" (Karl Brugmann, Karl Bühler, Uriel Weinreich);
- "indexes" or "indicators" (Charles Sanders Peirce, William Edward Collinson);
- "words with changeable signification" (Adolf Noreen);
- "moveable identifiers" (Otto Jespersen, Roman Jakobson);
- "updating" or "means of transferring from language to speech" (Charles Bally, Émile Benveniste);
- "words of subjective-objective lexical meaning" (Alexey Peshkovsky);
- "word remnants" or "substitutes" (Lev Shcherba, Leonard Bloomfield, Zellig Harris);
- "determiners whose NP complements have been deleted" (Paul Postal);^[1]
- "represents" (Ferdinand Brunot);
- "survivals of a special part of speech" (Viktor Vinogradov),

Pronominals

A **pronominal** is a phrase that acts as a pronoun. For example, in *I want that kind*, the phrase *that kind* stands for a noun phrase that can be deduced from context, and may thus be called a pronominal.

References

- [1] Postal, Paul (1966), Dinneen, Francis P., ed., "On So-Called "Pronouns" in English", *Report of the Seventeenth Annual Round Table Meeting on Linguistics and Language Studies* (Washington, D.C.: Georgetown University Press): 177–206

External links

- Mark Baltin, "The copy theory of movement and the binding-theoretic status of A-traces" (http://linguistics.as.nyu.edu/docs/IO/13775/NYUWPL_vol_3_Baltin.pdf)

Raising (linguistics)

In linguistics, **raising** is construction where a given predicate/verb takes a dependent that is not its semantic argument, but rather it is the semantic argument of an embedded predicate. In other words, an argument that belongs to an embedded predicate is realized syntactically as a dependent of a higher predicate/verb. Not all languages have raising predicates, but English is one that does. The term *raising* has its origins in the transformational analysis of such constructions; the one constituent is seen as "raised" from its initial position as the subject of the embedded predicate to its final position as a dependent of the matrix predicate/verb.^[1] Raising predicates/verbs are related to control predicates, although there are important differences between the two predicate/verb types.

Examples

There are at least two types of raising predicates/verbs: raising-to-subject verbs and raising-to-object predicates. Raising-to-object predicates overlap to a large extent with so-called ECM-verbs (= exceptional case-marking). These types of raising predicates/verbs are illustrated with the following sentences:

- a. **They** seem to be trying. - *seem* is a raising-to-subject verb.
 - b. **Prices** appear to be increasing. - *appear* is a raising-to-subject verb.
 - c. **You** seem to be impatient. - *seem* is a raising to subject verb.
-
- a. Fred wants **us** to help. - *want* can be a raising-to-object predicate.
 - b. That proves **him** to be hiding something. - *prove* can be a raising-to-object predicate.
 - c. She predicts **there** to be a problem. - *predict* can be a raising-to-object predicate.

The primary trait of raising predicates/verbs like these is that they are NOT semantically selecting one of their dependents.^[2] The raising-to-subject verbs are not selecting their subject dependent, and the raising-to-object predicates are not selecting their object dependent. These dependents appear to have been raised from the lower predicate.

Alternation with *it*-extraposition

Raising predicates/verbs can be identified in part by the fact that they alternatively take a full clause dependent and can take part in *it*-extraposition,^[3], e.g.

- a. **Tom** seems to have won the race.
- b. It seems that **Tom** won the race. - Raising-to-subject verb *seem* occurs with *it*-extraposition
- a. **Larry** appears to be doing the work.
- b. It appears that **Larry** is doing the work. - Raising-to-subject predicate verb *appear* occurs with *it*-extraposition.
- a. Sam believed **someone** to know the answer.
- b. Sam believed it that **someone** knew the answer. - Raising-to-object predicate *believe* occurs with *it*-extraposition.
- c. Sam believed that **someone** knew the answer. - Raising-to-object predicate *believe* occurs with clausal object argument.
- a. That proves **Susan** to be a jackass.
- b. That proves it that **Susan** is a jackass. - Raising-to-object predicate *prove* occurs with *it*-extraposition.
- c. That proves that **Susan** is a jackass. - Raising-to-object predicate *prove* occurs with clausal object argument.

Raising predicates/verbs can appear with *it*-extraposition and/or a full clausal dependent. They appear to be subcategorizing for a propositional argument.

Raising-to-subject verbs vs. auxiliary verbs

The raising-to-subject verbs *seem* and *appear* are similar to auxiliary verbs insofar as both verb types have little to no semantic content. The content that they do have is functional in nature. In this area, auxiliary verbs cannot be viewed as separate predicates; they are, rather, part of a predicate. The raising-to-subject verbs *seem* and *appear* are similar insofar it is difficult to view them as predicates. They serve, rather, to modify a predicate. That this is so can be seen in the fact that the following pairs of sentences are essentially synonymous:

- a. Fred does **not** seem to have done it.
- b. Fred seems to have **not** done it. - Position of the negation is flexible.
- a. Mary does **not** appear to like pudding.
- b. Mary appears to **not** like pudding. - Position of the negation is flexible.

The fact that position of the negation can change without influencing the meaning is telling. It means that the raising-to-subject verbs can hardly be viewed as predicates.

While raising-to-subject verbs are like auxiliary verbs insofar as they lack the content of predicates, they are unlike auxiliaries in syntactic respects. Auxiliary verbs undergo subject-aux inversion, raising-to-subject verbs do not. Auxiliary verbs license negation, raising-to-subject verbs do so only reluctantly:

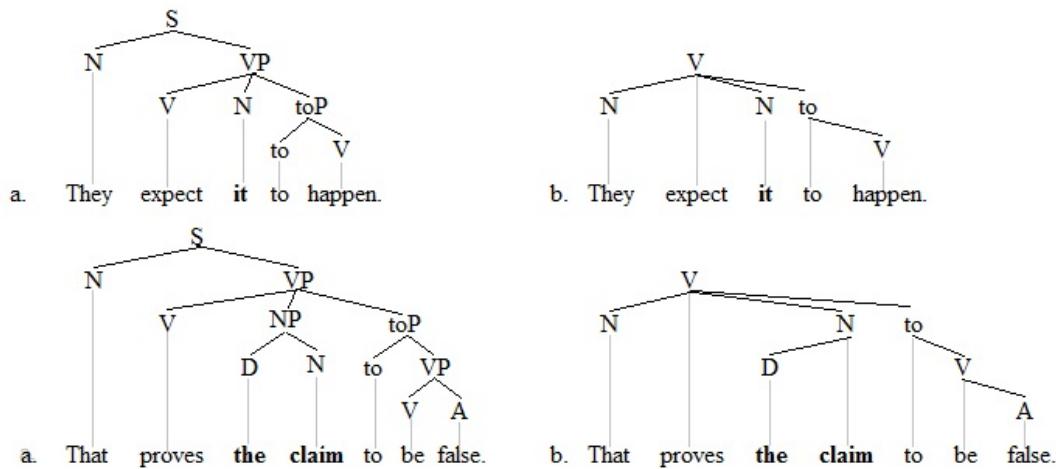
- a. Fred **is** happy.
- b. **Is** Fred happy? - Auxiliary verb *be* takes part in subject-auxiliary inversion.
- c. Fred is **not** happy. - Auxiliary verb *be* licenses negation.
- a. Fred **seems** happy.
- b. ***Seems** Fred happy? - Raising-to-subject verb *seem* cannot take part in subject-auxiliary inversion.
- c. ??Fred seems **not** happy. - Raising-to-subject verb *seem* can hardly license negation.
- a. Susan **should** stay.
- b. **Should** Susan stay? - Modal auxiliary *should* takes part in subject-auxiliary inversion.
- c. Susan should **not** stay. - Modal auxiliary *should* can license negation.

- a. Susan **appears** to be staying.
- b. ***Appears** Susan to be staying? - Raising-to-subject verb *appear* cannot take part in subject-auxiliary inversion.
- c. ?Susan appears **not** to be staying. - Raising-to-subject verb *appear* reluctantly licenses negation.

Raising-to-object verbs are also clearly NOT auxiliary verbs. Unlike raising-to-subject verbs, however, raising-to-object verbs have clear semantic content, so they are hence indisputably predicates.

Representing raising

The fact that the raised constituent behaves as though it is a dependent of the higher predicate is generally reflected in the syntax trees that are employed to represent raising structures. The following trees are illustrative of the type of structures assumed for raising-to-object predicates.^{[4][5]} In contrast, others assume Both constituency-based trees of phrase structure grammar and dependency-based trees of dependency grammar are employed here:^[6]



The constituency-based trees are the a-trees on the left, and the dependency-based trees are the b-trees on the right. While the structures assumed here can be disputed - especially the constituency structures - the trees all show the main stance toward raising structures. This stance is that the "subject" of the lower predicate appears as a dependent of the higher predicate - the relevant constituents are in bold. Relatively flat structures are assumed to accommodate this behavior. Both *it* and *the claim* are shown as dependents of *expects* and *proves*, respectively, although they are semantic arguments of the lower predicates *to happen* and *to be false*, respectively.

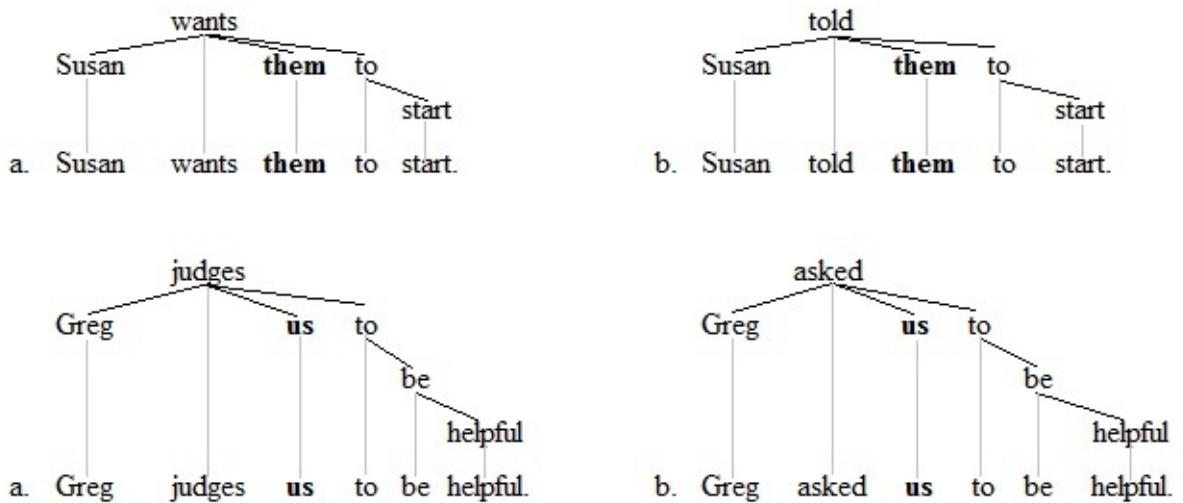
A number of empirical considerations support the relatively flat structures shown here. That is, empirical considerations support the position of the "raised" constituent as a dependent of the matrix predicate/verb. These dependents can appear in object form, they can appear as the subject of passive sentences, and they can appear as reflexives coindexed with the matrix subjects:^[7]

- a. We expect **him** to help. - Pronoun *him* appears in object form.
- b. **He** is expected to help. - Object pronoun becomes subject in passive.
- c. **He**₁ expects **himself**₁ to help. - Reflexive is coindexed with subject.
- a. You proved **her** to be competent. - Pronoun *her* appears in object form.
- b. **He** was proved to be competent. - Object pronoun becomes subject in passive.
- c. She₁ proved **herself**₁ to be competent. - Reflexive is coindexed with subject.

This behavior speaks strongly for the general analysis reflected in the trees, namely that the "raised" constituent is a dependent of the higher predicate.

Raising vs. control

An understanding of raising is significantly expanded by comparing and contrasting raising with control. Examine the following (dependency) trees:



The a-trees contain the raising predicates *wants* and *judges*, whereas the b-trees contain the control predicates *told* and *asked*. Despite the fact that structures assumed for these different predicate types are essentially the same, there is a major distinction to be drawn. This distinction is that the control predicates semantically select their objects, whereas the raising predicates do not. In other words, the object is a semantic argument of the control predicate in each case, whereas it is not an argument of the raising predicate. This situation obtains despite the fact that both predicate types take the object to be the "subject" of the lower predicate.

The distinction between raising-to-object and control predicates is identified using the *there*-insertion diagnostic. Expletive *there* can appear as the object (or subject) of raising predicates, but it cannot appear as the object of control predicates,^[8] e.g.:

- a. Sam judges there to be a problem. - Expletive *there* can appear as the object of a raising-to-object predicate.
- b. *Sam asked there to be a problem. - Expletive *there* cannot appear as the object of an object control predicate.
- a. We want there to be a revision. - Expletive *there* can appear as the object of a raising-to-object predicate.
- b. ??We helped there (to) be a revision. - Expletive *there* cannot appear as the object of an object control predicate.

Since the raising predicates place no semantic restrictions on their object dependents, expletive *there* is free to appear. In contrast, object control predicates do place semantic restrictions on their object arguments, which means expletive *there* usually cannot appear.

Notes

- [1] Early seminal accounts of raising were produced by Rosenbaum (1967) and Postal (1974). See further Grinder and Elgin (1973:141ff.), Bach (1974:120ff., 146ff.), Emonds (1976:75ff.), Borsley (1996:126-144), Carnie (2007:285ff.).
- [2] That raising predicates, unlike control predicates, do not semantically select one of their arguments is emphasized in all accounts of raising and control. See for instance van Riemsdijk and Williams (1986:130), Borsley (1996:133), Culicover (1997:102).
- [3] Concerning the ability of raising predicates to appear with full clausal arguments, see Bach (1974:149), Borsley (1996:127f.), Carnie (2007:291).
- [4] The flat VP analysis of raising structures shown in the a-sentences was posited by some in the 1970s and later. For examples of the "flat" analysis, see for instance Bach (1974:146), Emonds (1976:77), and Borsley (1996:128). Most modern dependency grammars (also) assume a flat structure for raising structures.
- [5] For an early layered analysis, however, see Culicover (1982:251ff.).
- [6] The dependency trees are like those found, for instance, in Osborne et al. (2013).
- [7] Concerning these points, see Bach (1974:147f.), Postal (1974), Lasnik and Saito (1999:9ff.).

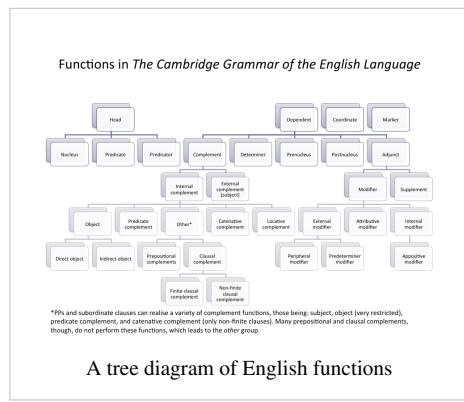
- [8] The expletive is widely employed to distinguish control from raising constructions. Concerning there-insertion as a diagnostic for distinguishing between control and raising, see for instance Grinder and Elgin (1973:142-143), Bach (1973:151), Culicover (1982:256ff.), Borsley (1996:127), Culicover (1997:102), Lasnik and Saito (1999:8-9), Falk (2001:131).

References

- Bach, E. 1974. Syntactic theory. New York: Holt, Rinehart and Winston, Inc.
- Borsley, R. 1996. Modern phrase structure grammar. Cambridge, MA: Blackwell Publishers.
- Carnie, A. 2007. Syntax: A generative introduction, 2nd edition. Malden, MA: Blackwell Publishing.
- Cowper, E. 1992. A concise introduction to syntactic theory: The government-binding approach. Chicago: The University of Chicago Press.
- Culicover, P. 1982. Syntax, 2nd edition. New York: Academic Press.
- Culicover, P. 1997. Principles and Parameters: An introduction to syntactic theory. Oxford University Press.
- Emonds, J. 1976. A transformational approach to English syntax: Root, strucure-preserving, and local transformations, New York: Academic Press.
- Falk, Y. 2001. Lexical-Functional Grammar: An introduction to parallel constraint-based syntax. Stanford, CA: CSLI Publications.
- Grinder, J. and S. Elgin. 1973. Guide to transformational grammar: History, theory, and practice. New York: Holt, Rinehart, and Winston, Inc.
- Haegeman, L. 1994. Introduction to government and binding theory, 2nd edition. Oxford, UK: Blackwell.
- Lasnik, H. and M. Saito. 1999. On the subject of infinitives. In H. Lasnik, Minimalist analysis, 7-24. Malden, MA: Blackwell.
- Osborne, T., Michael P., and T. Groß 2013. Catena: Introducing a novel unit of syntactic analysis. *Syntax* 16, in press.
- Postal, P. 1974. On raising: One rule of English grammar and its theoretical implications. Cambridge, MA: MIT Press.
- van Riemsdijk, H. and E. Williams. 1986. Introduction to the theory of grammar. Cambridge, MA: The MIT Press.
- Rosenbaum, P. 1967. *The grammar of English predicate complement constructions*. Cambridge, MA: MIT Press.

Grammatical relation

In linguistics, **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. Beyond these concepts from traditional grammar, more modern theories of grammar are likely to acknowledge many further types of grammatical relations (e.g. complement, specifier, predicative, etc.). The role of grammatical relations in theories of grammar is greatest in many dependency grammars, which tend to posit dozens of distinct grammatical relations. Every head-dependent dependency bears a grammatical function.



In traditional grammar

The grammatical relations are exemplified in traditional grammar by the notions of subject, direct object, and indirect object:

Fred gave Susan the book.

The subject *Fred* performs or is the source of the action. The direct object *the book* is acted upon by the subject, and the indirect object *Susan* receives the direct object or otherwise benefits from the action. Traditional grammars often begin with these rather vague notions of the grammatical functions. When one begins to examine the distinctions more closely, it quickly becomes clear that these basic definitions do not provide much more than a loose orientation point.

What is indisputable about the grammatical relations is that they are relational. That is, subject and object can exist as such only by virtue of the context in which they appear. A noun such as *Fred* or a noun phrase such as *the book* cannot qualify as subject and direct object, respectively, unless they appear in an environment, e.g. a clause, where they are related to each other and/or to an action or state. In this regard, the main verb in a clause is responsible for assigning grammatical relations to the clause "participants".

Defining the grammatical relations

Most grammarians and students of language intuitively know in most cases what the subject and object in a given clause are. But when one attempts to produce theoretically satisfying definitions of these notions, the results are usually less than clear and therefore controversial.^[1] The contradictory impulses have resulted in a situation where most theories of grammar acknowledge the grammatical relations and rely on them heavily for describing phenomena of grammar but at the same time, avoid providing concrete definitions of them. Nevertheless, various principles can be acknowledged that attempts to define the grammatical relations are based on.

Thematic criteria

The thematic relations (=**thematic roles**, **semantic roles**, e.g. agent, patient, theme, goal, etc.) can provide semantic orientation for defining the grammatical relations. There is a tendency for subjects to be agents and objects to be patients or themes. However, the thematic relations cannot be substituted for the grammatical relations, nor vice versa. This point is evident with the active-passive diathesis and ergative verbs:

Marge has fixed **the coffee table**.

The coffee table has been fixed (by **Marge**).

The torpedo sunk **the ship**.

The ship sunk.

Marge is the agent in the first pair of sentences because she initiates and carries out the action of fixing, and *the coffee table* is the patient in both because it is acted upon in both sentences. In contrast, the subject and direct object are not consistent across the two sentences. The subject is the agent *Marge* in the first sentence and the patient *The coffee table* in the second sentence. The direct object is the patient *the coffee table* in the first sentence, and there is no direct object in the second sentence. The situation is similar with the ergative verb *sunk/sink* in the second pair of sentences. The noun phrase *the ship* is the patient in both sentences, although it is the object in the first of the two and the subject in the second.

The grammatical relations belong to the level of surface syntax, whereas the thematic relations reside on a deeper semantic level. If, however, the correspondences across these levels are acknowledged, then the thematic relations can be seen as providing prototypical thematic traits for defining the grammatical relations.

Configurational criteria

Another prominent means used to define the syntactic relations is in terms of the syntactic configuration. The subject is defined as the verb argument that appears outside of the canonical finite verb phrase, whereas the object is taken to be the verb argument that appears inside the verb phrase.^[2] This approach takes the configuration as primitive, whereby the grammatical relations are then derived from the configuration. This "configurational" understanding of the grammatical relations is associated with Chomskyan phrase structure grammars (Transformational grammar, Government and Binding and Minimalism).

The configurational approach is limited in what it can accomplish. It works best for the subject and object arguments. For other clause participants (e.g. attributes and modifiers of various sorts, prepositional arguments, etc.), it is less insightful, since it is often not clear how one might define these additional syntactic functions in terms of the configuration. Furthermore, even concerning the subject and object, it can run into difficulties, e.g.

There were **two lizards** in the drawer.

The configurational approach has difficulty with such cases. The plural verb *were* agrees with the post-verb noun phrase *two lizards*, which suggests that *two lizards* is the subject. But since *two lizards* follows the verb, one might view it as being located inside the verb phrase, which means it should count as the object. This second observation suggests that the expletive *there* should be granted subject status.

Morphological criteria

Many efforts to define the grammatical relations emphasize the role inflectional morphology. In English, the subject can or must agree with the finite verb in person and number, and in languages that have morphological case, the subject and object (and other verb arguments) are identified in terms of the case markers that they bear (e.g. nominative, accusative, dative, genitive, ergative, absolute, etc.). Inflectional morphology may be a more reliable means for defining the grammatical relations than the configuration, but its utility can be very limited in many cases. For instance, inflectional morphology is not going to help in languages that lack inflectional morphology almost entirely such as Mandarin, and even with English, inflectional morphology does not help much, since English largely

lacks morphological case.

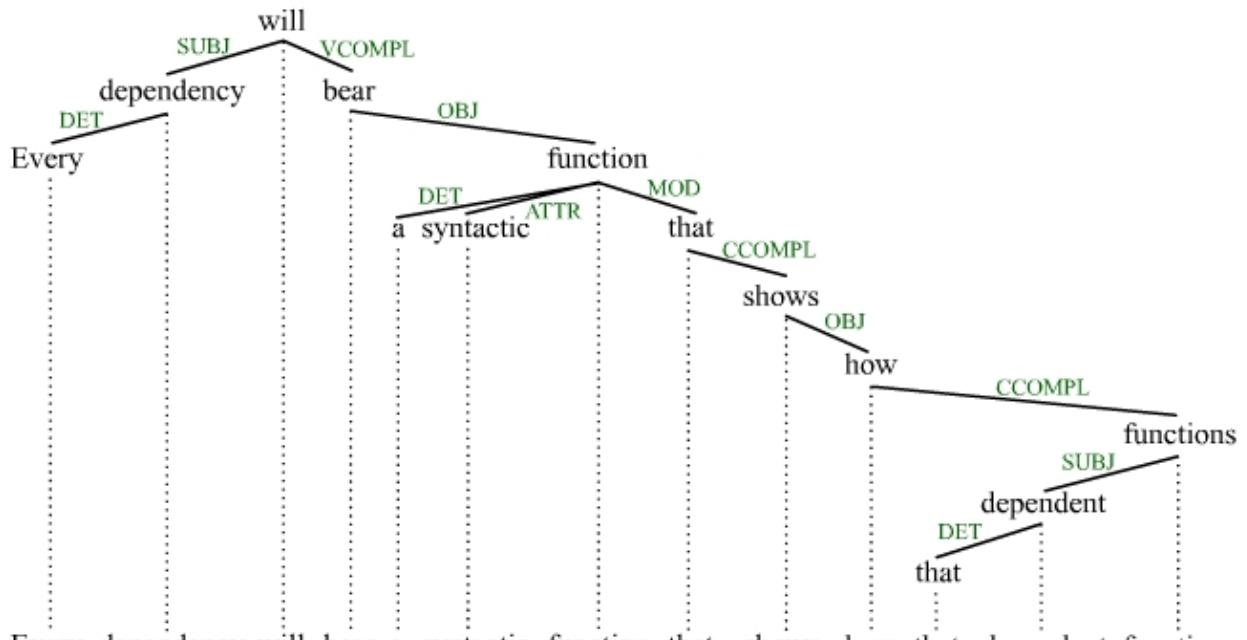
Prototypical traits

The difficulties facing attempts to define the grammatical relations in terms of thematic or configurational or morphological criteria can be overcome by an approach that posits prototypical traits. The prototypical subject has a cluster of thematic, configurational, and/or morphological traits, and the same is true of the prototypical object and other verb arguments. Across languages and across constructions within a language, there can be many cases where a given subject argument may not be a prototypical subject, but it has enough subject-like traits to be granted subject status. Similarly, a given object argument may not be prototypical in one way or another, but if it has enough object-like traits, then it can nevertheless receive the status of object.

This third strategy is tacitly preferred by most work in theoretical syntax. All those theories of syntax that avoid providing concrete definitions of the grammatical relations but yet reference them often are (perhaps unknowingly) pursuing an approach in terms of prototypical traits.

Heads and dependents

The importance of the syntactic functions (= grammatical relations) reaches its greatest extent in dependency grammar (DG) theories of syntax.^[3] Every head-dependent dependency bears a syntactic function.^[4] The result is that an inventory consisting of dozens of distinct syntactic functions is needed for each language. For example, a determiner-noun dependency might be assumed to bear the DET (determiner) function, and an adjective-noun dependency is assumed to bear the ATTR (attribute) function. These functions are often produced as labels on the dependencies themselves in the syntactic tree, e.g.



The tree contains the following syntactic functions: ATTR (attribute), CCOMP (clause complement), DET (determiner), MOD (modifier), OBJ (object), SUBJ (subject), and VCOMP (verb complement). The actual inventories of syntactic functions will differ from the one suggested here in the number and types of functions that are assumed. In this regard, this tree is merely intended to be illustrative of the importance that the syntactic functions can take on in some theories of syntax and grammar.

Notes

- [1] Napoli (1993:26, 46ff., 91ff.) provides an insightful discussion of notions such as 'subject' and 'direct object'.
- [2] See for instance Chomsky (1965), Bach (1974:39), Cowper (1992:40), Culicover (1997:167f.), Carnie (2007:118-120).
- [3] The most comprehensive source on DG is Ágel et al. (2003/6).
- [4] See Mel'čuk (1988:22, 69).

References

- Ágel, V., Ludwig Eichinger, Hans-Werner Eroms, Peter Hellwig, Hans Heringer, and Hennig Lobin (eds.) 2003/6. Dependency and Valency: An International Handbook of Contemporary Research. Berlin: Walter de Gruyter.
- Bach, E. 1974. Syntactic theory. New York: Holt, Rinehart and Winston, Inc.
- Carnie, A. 2007. Syntax: A generative introduction, 2nd edition. Malden, MA: Blackwell Publishing.
- Chomsky, N. 1965. Aspects of the theory of syntax. Cambridge, MA: MIT Press.
- Cowper, E. 1992. A concise introduction to syntactic theory: The government-binding approach. Chicago: The University of Chicago Press.
- Culicover, P. 1997. Principles and Parameters: An introduction to syntactic theory. Oxford University Press.
- Mel'čuk, I. 1988. Dependency syntax: Theory and practice. Albany: SUNY Press.
- Napoli, D. 1993. Syntax: Theory and problems. New York: Oxford University Press.

Restrictiveness

In semantics, a modifier is said to be **restrictive** (or *defining*) if it restricts the reference of its head. For example, in "the red car is fancier than the blue one", *red* and *blue* are restrictive, because they restrict which cars *car* and *one* are referring to. ("The car is fancier than the one" would make little sense.) By contrast, in "John's beautiful mother", *beautiful* is non-restrictive; "John's mother" identifies her sufficiently, while "beautiful" only serves to add more information.

Restrictive modifiers are also called *defining*, *identifying*, *essential*, or *necessary*; non-restrictive ones are also called *non-defining*, *non-identifying*, *descriptive*, or *unnecessary* (though this last term can be misleading). In certain cases, generally when restrictiveness is marked syntactically through the lack of commas, restrictive modifiers are called *integrated* and non-restrictive ones are called *non-integrated* or *supplementary*.

Restrictiveness in English

English does not generally mark modifiers for restrictiveness. The only modifiers that are consistently marked for restrictiveness are relative clauses: non-restrictive ones are set off in writing by using commas, and in speech through intonation (with a pause beforehand and an uninterrupted melody), while restrictive ones are not. Further, while restrictive clauses are often headed by the relative pronoun *that* or by a zero relative pronoun, non-restrictive clauses are not. For example:

- Restrictive: *We saw two puppies this morning: one that was born yesterday, and one that was born last week. The one that (or which*) was born yesterday is tiny.*
- Non-restrictive: *We saw a puppy and a kitty this morning. The puppy, which was born yesterday, was tiny.*

(*In formal American English, the use of *which* as a restrictive pronoun is often considered to be incorrect. See *That* or *which*.)

While English does not consistently mark ordinary adjectives for restrictiveness, they can be marked by moving them into relative clauses. For example, "the red car is fancier than the blue one" can be rewritten as, "the car that's red is fancier than the one that's blue," and "John's beautiful wife" can be rewritten as "John's wife, who is beautiful."

English speakers do not generally find such locutions necessary, however.

Sources

On the intonation question, see Beverly Colins and Inger M. Mees, *Practical Phonetics and Phonology*, Routledge 2003.

Right node raising

In linguistics, the term **right node raising** (RNR) denotes a sharing mechanism that sees the material to the immediate right of parallel structures being in some sense "shared" by those parallel structures, e.g. *[Sam likes] but [Fred dislikes] the debates*.^[1] The parallel structures of RNR are typically the conjuncts of a coordinate structure, although the phenomenon is not limited to coordination, since it can also appear with parallel structures that do not involve coordination. The term *right node raising* itself is due to Postal (1974). Postal assumed that the parallel structures are complete clauses below the surface. The shared constituent was then raised rightward out of each conjunct of the coordinate structure and attached as a single constituent to the structure above the level of the conjuncts, hence "right node raising" was occurring in a literal sense. While the term *right node raising* survives, the actual analysis that Postal proposed is not (or no longer) widely accepted. RNR occurs in many languages, including English and related languages.

RNR is a phenomenon that challenges theories of syntax in significant ways. The difficulties are due to the status of the parallel structures as well as to the status of the shared material. The parallel structures typically do not qualify as constituents, and the shared material can also fail to qualify as a single constituent.

Typical examples

The following examples are typical instances of RNR in English. The square brackets mark the conjuncts of the coordinate structures involved and the material shared by the conjuncts is bolded:

- a. [Fred prepares] and [Susan eats] **the food**.
- b. [[Larry has promised] but [Jim refuses] **to support reform**].
- c. [[Jim can] but [Jerry cannot] **make the meeting**].
- d. [When did he] and [why did he] **suffer a setback**.
- e. [Sometimes she carefully reads] and [at other times she merely skims] **the report**.

One easily observable fact about these examples is that they prefer a unique intonation pattern. There tends to be emphasis on the contrasting words within the conjuncts and a pause immediately after the right-most conjunct and immediately before the shared material. This special intonation contour is sometimes indicated using commas, e.g. *Fred prepares, and Susan eats, the food*. A key observation about the conjuncts is that they are not constituents. Word combinations such as *Fred prepares* and *Susan eats* do not qualify as constituents in most theories of syntax. This fact casts doubt on the usefulness of coordination as a test for identifying the constituent structure of sentences.

Some noteworthy traits

The following subsections enumerate some noteworthy traits of RNR: 1) RNR is independent of coordination; 2) it occurs at various levels of structure (not just at the clausal level); 2) it is unlike instances of forward sharing in crucial respects; 4) the shared material can fail to qualify as a constituent; and 5) it at times requires the conjunct-final elements to stand in contrast to each other.

RNR without coordination

Perhaps the most important trait of RNR is that it can occur in the absence of coordination, e.g.^[2]

- a. [The man who supports] would never get along with [the woman who rejects] **Romney's proposed tax cut.** - RNR without coordination
- b. ?[Those who admire] are outnumbered by [those who despise], **books about grammatical theory.**^[3] - RNR without coordination
- c. I [talked to] without [actually meeting] **everyone in the committee.**^[4] - RNR without coordination

Since the parallel structures in these cases (marked by brackets) are not adjacent to each other, one really cannot view them as involving coordination. What this means is that the RNR mechanism is independent of coordination. In this regard, exactly what renders two or more structures parallel enough so that RNR can occur is not clear. What is clear, however, is that while coordination does commonly produce the parallel structures that allow RNR to occur, the RNR mechanism is independent of coordination.

At various levels of structure

Most discussions of RNR produce examples where the RNR mechanism is occurring at the sentence or clause level, meaning the conjuncts contain finite verbs. One should note in this respect, however, that RNR is not limited to occurring within clauses; it can also occur at the level of phrases. The following examples illustrate the backward sharing of RNR at the VP level, the NP level, and the PP level:

- [Having to read] and [being forced to summarize] **that theory** is horrible. - RNR within VPs
- She is [trying to examine] and [wanting to explain] **the problem?** - RNR within VPs
- [The old] and [the new] **submarines** submerged side by side. - RNR within NPs
- [My presentation] and [your explanation] **of the new theory** could not be understood. - RNR within NPs
- [Right before his] and [right after her] **presentation**, we drank coffee. - RNR within PPs
- [Before a meager] and [after a meager] **meal**, I am always dissatisfied. - RNR within PPs

Whatever the analysis of RNR, one has to acknowledge that the mechanism is flexible insofar it can be not reliant on the presence of one specific type of syntactic category (e.g. finite verb), but rather it can occur at various levels of the syntactic structure.

Unlike forward sharing

An examination of coordination quickly reveals that the shared material often precedes the coordinate structures. The shared material preceding the conjuncts is now in bold:

- Larry** [cooks a lot] and [eats everything he cooks].
- Sam gave** [his girlfriend flowers] and [his mother chocolates].

The shared material in these sentences precedes the coordinate structures. There is a limitation on this sort of forward sharing, however. Certain material preceding the conjuncts of coordinate structures cannot be shared, e.g.

***Too** [many boys came] and [few girls wanted to dance].^[5] - Forward sharing fails.

***The university's** [students are intelligent] and [faculty is committed to freedom].^[6] - Forward sharing fails.

***Three** [blue cars arrived] and [red cars departed].^[7] - Forward sharing fails.

While explanations for the block on forward sharing have been provided in the literature on coordination,^[8] the importance of these data for RNR is that there is no such similar block on RNR. The backward sharing of RNR is not limited in this way. What this means is that backward sharing cannot be construed as the mirror image of forward sharing. The acknowledgment of RNR as a separate sharing mechanism is therefore warranted.

Non-constituents

The conjuncts of standard cases of RNR do not qualify as constituents on the surface. This fact is evident in the examples throughout this article, where the bracketed strings are shown as what most theories of syntax take to be non-constituents. In contrast, the shared material of most examples of RNR in English does qualify as a constituent. There are exceptions to this observation, however. Certain instances of RNR do not qualify as constituents, e.g.^[9]

- a. [Smith loaned] and [his widow later donated] **a valuable collection of manuscripts to the library.** - Shared material is a non-constituent string.
- b. [Leslie played] and [Mary sang] **some C&W songs at George's party.** - Shared material is a non-constituent string.
- c. [I borrowed] and [my sisters stole] **large sums of money from the Chase Manhattan bank.** - Shared material is a non-constituent string.

Given a traditional left-branching analysis of the VPs in these examples, the shared material (in bold) fails to qualify as a constituent. That the shared material need not qualify as a constituent is perhaps more visible in other languages, for instance in German:^[10]

- b. dass [mich heute] und [dich gestern] **jemand gesehen hat**
that me today and you yesterday someone seen has 'that someone saw me today and you yesterday'

The shared material in this example, which consists of the subject and the verb chain, can in no way be construed as constituent. The fact that both the parallel structures and the shared material can qualify as non-constituent strings challenges a constituent-based theory of RNR in significant ways (see below), since it is not evident how one should characterize these strings.

Contrast requirement

At times there appears to be a contrast requirement on the conjunct-final elements of RNR, e.g.^[11]

- a. *[He must] and [she must] **stop.**
- b. [He must] and [she should] **stop.**
- a. *[He sits on] and [she lies on] **the bed.**
- b. [He sits] and [she lies] **on the bed.**
- a. *[Sam supports] and [Susan supports] **Romney.**
- b. [Sam supports] but [Susan rejects] **Romney.**

The a-sentences appear to be bad because the conjunct-final elements are identical, e.g. *must* and *must*. The b-sentence, in contrast, are much better because the conjunct-final elements are NOT identical, e.g. *must* and *should*. These data suggest that there is a contrast constraint on the conjunct-final elements of RNR. However, the matter is not as straightforward as the three examples suggest, since other cases allow the conjunct-final elements to be identical,^[12] e.g.

- a. [When does he] and [why does he] **do that?**
- b. [Can I] and [should I] **try it?**

Despite the fact that the conjunct-final elements in these examples do not contrast, the sentences can be acceptable given an appropriate intonation contour. Some similar data from German reinforces the point:^[13]

- a. dass [sie zu lange geschlafen] und [er zu lange geschlafen] **hat**
that she too long slept and he too long slept has 'that she slept too long and he slept too long'
- b. dass [er helfen] und [sie helfen] **will**
that he help and she help wants 'that he wants to help and she wants to help'

This aspect of RNR is mysterious. It remains unclear exactly when the conjunct-final elements of RNR can and cannot be identical.

Theoretical accounts

One can discern between three basic theoretic approaches to RNR: 1) the large conjunct approach in terms of movement, 2) the large conjunct approach in terms of ellipsis, and 3) the small conjunct approach.

Large conjuncts in terms of movement

The large conjunct approach in terms of movement assumes that the parallel structures of RNR are full clauses or phrases below the surface. A movement mechanism is responsible for raising the shared material out of both conjuncts to a position in the hierarchy that is above the level of the parallel structures. Given this movement, the parallel structures actually qualify as constituents before movement. The movement analysis is illustrated here using t (trace) and indices to mark the positions of the shared material before movement occurs.

- a. [Fred prepares t_1] and [Susan eats t_1] **the food**₁. - Movement analysis
- b. [[Larry has promised t_1] but [Jim refuses t_1]] **to support reform**₁. - Movement analysis

Below the surface before movement occurs, the conjuncts in these cases are in fact constituents. Thus by assuming movement, the account of RNR can maintain a theory of syntax that is constituent-based, i.e. the constituent is the fundamental unit of syntactic analysis. The main problem with the movement analysis, however, is that the movements of RNR would have to be able to ignore the islands and barriers that are otherwise established as limitations on movement. The movement approach is the account originally pursued by Postal (1974).^[14]

Large conjuncts in terms of ellipsis

The large conjunct approach in terms of ellipsis also assumes that the parallel structures of RNR are full clauses or phrases below the surface. But in contrast to the movement approach, the ellipsis approach assumes that ellipsis alone occurs, without movement. An ellipsis mechanism elides the redundant material from all the conjuncts except the right-most one.^[15] A smaller font and subscripts are now used to indicate ellipsis:

- a. [Fred prepares the food] and [Susan eats **the food**]. - Ellipsis analysis
- b. [[Larry has promised to support reform] but [Jim refuses **to support reform**]]. - Ellipsis analysis

By assuming large conjuncts and ellipsis in this manner, this account also succeeds at maintaining a constituent-based theory of syntactic analysis. The parallel structures of RNR are constituents before ellipsis occurs. Like the movement account, the ellipsis account has a significant shortcoming. At times the pre-ellipsis structure would be nonsensical and/or simply ungrammatical, e.g.^[16]

- a. [Sam hummed the same tune] and [Susan sang **the same tune**].
- b. [Fred already has $\text{pictures of each other}$] and [Larry just found **pictures of each other**].
- c. [I met a man $\text{who know each other}$] and [you met a woman **who know each other**].

If the indicated ellipses were not to occur in these cases, the sentences would be bad. These sentences only make sense on the collective readings, where, for instance, only one tune was hummed and only one tune, the same tune, was sung. Thus there is a semantic and syntactic mismatch across the pre- and post-ellipsis sentences.

Small conjuncts

The small conjunct approach dispenses with the desire to see the parallel structures as complete constituents at some level of structure below the surface.^[17] Instead, it assumes that what you see is what you get; the parallel structures are non-constituent strings that share the material to the immediate right of the final bracket. Neither movement nor ellipsis occurs. This approach has tacitly been taken for granted in this article. It avoids all the problems facing the previous two approaches. However, this success comes at a cost, since the small conjuncts do not qualify as constituents. The challenge facing the small conjunct approach is therefore to provide a principled account of how the RNR mechanism allows the parallel structures to be non-constituents.

Notes

- [1] Some prominent sources on RNR are Postal (1974), Hudson (1976), and Hartmann (2000).
- [2] Examples like the ones (re)produced here can also be found in Hudson (1976).
- [3] The example is from Hudson (1988:333).
- [4] The example is from Wilder (1997:87).
- [5] The example is taken from Hudson (1988:331)
- [6] The example is taken from Neijt (1989:354).
- [7] The example is taken from Wilder (1997:76).
- [8] The limitation on forward sharing is addressed by, for instance, Phillips (2003) and Osborne (2006:72ff.).
- [9] The three examples are taken from Abbot (1976:369).
- [10] For further examples like the one produced here, see Klein (1981:60f.).
- [11] Concerning the requirement that the conjunct-final elements of RNR be non-identical, see Hartmann (2000:112).
- [12] Concerning the acceptability of sentences where the conjunct-final elements are identical, see Osborne (2006:51f.).
- [13] For examples similar to the ones produced here, where the conjunct-final elements are identical, see Osborne (2006:51f.).
- [14] The movement approach for RNR is also pursued by Ross (1967).
- [15] For examples of the movement approach, see Wilder (1994, 1997) and Johannessen (1998).
- [16] Concerning nonsensical pre-ellipsis structures, see for instance Erteschik-Shir (1987:110) and Wesche (1995:53).
- [17] Some prominent examples of the small conjunct approach are Jackendoff (1977), Hudson (1988, 1989), Gazdar et al. (1985).

Literature

- Abbot, B. 1976. Right node raising as a test for constituenthood. *Linguistic Inquiry* 7, 639-642.
- Erteschik-Shir, N. 1987. Right node raising. *MIT Working Papers in Linguistics* 9, 105-117.
- Gazdar, G., E. Klein, G. Pullum, and I. Sag. (1985). *Generalized Phrase Structure Grammar*. Oxford: Blackwell.
- Hartmann, K. 2000. Right node raising and gapping: Interface conditions on prosodic deletion. Philadelphia: Benjamins.
- Hudson, R. 1976. Conjunction reduction, gapping, and right-node raising. *Language* 52, 535-562.
- Hudson, R. 1988. Coordination and grammatical relations. *Journal of Linguistics* 24, 303-342.
- Hudson, R. 1989. Gapping and grammatical relations. *Linguistics Linguistics* 25, 57-94.
- Jackendoff, R. 1977. *X-bar syntax*. Cambridge: MIT Press.
- Johannessen, J. 1998. *Coordination*. New York: Oxford University Press.
- Klein, W. Some rules of regular ellipsis in German. In: A Festschrift for Manfred Bierwisch, ed. by W. Klein and W. Levelt, 51-78. Dordrecht.
- Neijt, A. 1989. Review of the "They syntax of coordination". *Lingua*, 343-357.
- Osborne, T. 2006. Shared material and grammar: A dependency grammar theory of non-gapping coordination. *Zeitschrift für Sprachwissenschaft* 25, 39-93.
- Phillips, C. 2003. Linear order and constituency. *Linguistic Inquiry* 34, 37-90.

- Postal, P. 1974. On raising. Cambridge: MIT Press.
- Ross, J. 1967. Constraints on variables in syntax. Doctoral dissertation, MIT.
- Wesche, B. Symmetric coordination: An alternative theory of phrase structure. Tübingen: Niemeyer.
- Wilder, C. 1994. Coordination, ATB and ellipsis. In: Minimalism and Kayne's asymmetry hypothesis, 291-329.
- Wilder, C. 1997. Some properties of ellipsis in coordination. In: Studies on universal grammar and typological variation, ed. by A. Alexiadou and T. Hall, 59-106. Amsterdam: John Benjamins.

Sandhi

Sandhi (Sanskrit: संधि sandhi^[1] "joining") is a cover term for a wide variety of phonological processes that occur at morpheme or word boundaries (thus belonging to what is called *morphophonology*). Examples include the fusion of sounds across word boundaries and the alteration of sounds due to neighboring sounds or due to the grammatical function of adjacent words. Sandhi occurs particularly prominently in the phonology of Indian languages (especially Telugu, Tamil, Kannada, Malayalam language, Marathi, Bengali and most importantly Sanskrit, which have complex sandhi rules), hence its name, but many other languages have it.

Types

- Internal sandhi** features the alteration of sounds within words at morpheme boundaries, as in *sympathy* (*syn-* + *pathy*).
- External sandhi** refers to changes found at word boundaries, such as in the pronunciation *tem books* for *ten books* in some dialects of English. The linking *r* of some dialects of English is a kind of external sandhi, as are the processes called *liaison* in the French language and *raddoppiamento fonosintattico* in Italian.

While it may be extremely common in speech, sandhi (especially for the external) is typically ignored in spelling, as is the case in English, with the exception of the distinction between "a" and "an" (sandhi is, however, reflected in the writing system of both Sanskrit and many other Indian languages, as also in Italian in the case of compound words with lexicalized *raddoppiamento fonosintattico*).

In Japanese phonology, sandhi is primarily exhibited in rendaku (consonant mutation from voiced to unvoiced when not word-initial, in some contexts) and conversion of つ or く (tsu, ku) to a geminate consonant (orthographically, the sokuon っ), both of which are reflected in spelling – indeed, っ symbol for gemination is morphosyntactically derived from つ, and voicing is indicated by adding two dots as in か／が ka, ga, making the relation clear. It also occurs much less often in *renjō* (連声), where, most commonly, a terminal /n/ on one morpheme results in an /n/ (or /m/) being added to the start of the next morpheme, as in 「天皇」てん+おう → てんのう (ten + ō = tennō); this is also shown in the spelling (as done here – the kanji do not change, but the kana, which specify pronunciation, do change). See 連声 for further examples.

External sandhi effects can sometimes become morphologized, i.e., apply only in certain morphological and syntactic environments (e.g., Tamil^{[2][3]}) and, over time, turn into consonant mutations.

Most tonal languages have **tone sandhi**, in which the tones of words alter according to pre-determined rules. An example is the behavior of tone 3 in Mandarin Chinese. Mandarin has four tones, and in isolation tone 3 is often pronounced as a falling-rising tone. When a tone 3 occurs before another tone 3, however, it changes into tone 2 (a rising tone), and when occurring before any of the other tones, it is pronounced as a low falling tone, with no rise at the end. A simple example of this occurs in the common greeting *nǐ hǎo* (with two words containing underlying tone 3), which is normally pronounced as if written *ní hǎo*.

References

- [1] the pronunciation of the word "sandhi" is rather diverse among English speakers. In Sanskrit it is pronounced Sanskrit pronunciation: [sənd̪hi]. English pronunciations include /'sʌnd̪i/ (identical with "Sunday" for some British English speakers), /'sænd̪i/ (like the first name "Sandy"), and /'sɔ:nd̪i/.
- [2] <http://books.google.com/books?id=Oqe-QsaZnnQC&lpg=PP1&pg=PA20#v=onepage&q=sandhi&f=false>
- [3] <http://www.ucl.ac.uk/psychlangsci/research/linguistics/publications/wpl/95papers/NAGARAJA>

External links

- Vedic Society Sandhi Calculator (<http://vedicsociety.org/sanskrit/sandhi/>)
- Online tool to perform and undo Sanskrit sandhi effects (<http://flaez.ch/cgi-bin/sandhi.pl>)

Scrambling (linguistics)

Scrambling is a common term for pragmatic word order.^[1] In the Chomskyan tradition, word orders of all languages are taken to be derived from a common source with a fundamental word order, so languages which do not follow a set pattern can be said to be "scrambled" from "normal" word order.^[2] The notion of scrambling has spread beyond the Chomskyan tradition and become a general concept that denotes many non-canonical word orders in numerous languages. Scrambling often (but not always) results in a discontinuity; the scrambled expression appears at a distance from its head in such a manner that crossing lines are present in the syntactic tree. Scrambling discontinuities are distinct from topicalization, wh-fronting, and extraposition discontinuities. Scrambling does not occur in English, but it is frequent in languages with freer word order, such as German, Russian and specially Persian.

Examples

The following examples from German illustrate typical instances of scrambling:

- a. dass der Mann der Frau die Bohnen gab
that the man the woman the beans gave 'that the man gave the woman the beans'
- b. dass der Mann die Bohnen der Frau gab
- c. dass der Frau der Mann die Bohnen gab
- d. dass der Frau die Bohnen der Mann gab
- e. dass die Bohnen der Mann der Frau gab
- f. dass die Bohnen der Frau der Mann gab

These examples illustrate typical cases of scrambling in the midfield of a subordinate clause in German. All six clauses are acceptable, whereby the actual order that appears is determined by pragmatic considerations such as emphasis. If one takes the first clause (clause a) as the basic order, then scrambling has occurred in clauses b–f. The three constituents *der Mann*, *der Frau*, and *die Bohnen* have been scrambled.

Scrambling in German is associated with the midfield, i.e. the part of the sentence that appears between the finite verb and a non-finite verb in main clauses and between the subordinator (= subordinate conjunction) and the finite verb in an embedded clause (= subordinate clause). There is a clear tendency for definite pronouns to appear to the left in the midfield. In this regard, definite pronouns are frequent candidates to undergo scrambling, e.g.

weil	mich	die Kinder	oft	ärgern	
because	me	the kids	often	bother	'because the kids often bother me'
ob	uns	jemand	helfen	wird	
whether	us	someone	help	will	'whether someone will help us'

The canonical position of the object in German is to the right of the subject. In this regard, the object pronouns *mich* in the first example and *uns* in the second example have been scrambled to the left, so that the clauses now have OS (object-subject) order. The second example is unlike the first example insofar as it, due to the presence of the auxiliary verb *wird* 'will', necessitates an analysis in terms of a discontinuity.

Further examples

Standard instances of scrambling in German occur in the midfield, as stated above. There are, however, many non-canonical orderings where the displaced constituents do not appear in the midfield. One can argue that such examples also involve scrambling, e.g.

Erwähnt	hat	er	das	nicht.	
mentioned	has	he	that	not	'He didn't mention that.'

The past participle *erwähnt* has been topicalized in this sentence. It's object, the pronoun *das*, appears, however, on the other side of the finite verb. There is no midfield involved in this case, which means the non-canonical position in which *das* appears in relation to its governor *erwähnt* cannot be addressed in terms of midfield scrambling. The position of *das* also cannot be addressed in terms of extraposition, since extraposed constituents are relatively heavy, much heavier than *das*, which is a very light definite pronoun. Given these facts, one can argue that a scrambling discontinuity is present. The definite pronoun *das* has been scrambled rightward out from under its governor *erwähnt*. Hence the example suggests that the scrambling mechanism is quite flexible.

Scrambling is like extraposition (but unlike topicalization and *wh*-fronting) in a relevant respect; it is clause-bound. That is, one cannot scramble a constituent out of one clause into another, e.g.

Sie	hat	gesagt,	dass	wir	das	machen	sollten.	
she	has	said	that	we	that	do	should	'She said that we should do that.'
*Sie	hat	das	gesagt,	dass	wir	machen	sollten.	
she	has	that	said,	that	we	do	should	

The first example has canonical word order; scrambling has not occurred. The second example illustrates what happens when one attempts to scramble the definite pronoun *das* out of the embedded clause into the main clause. The sentence becomes strongly unacceptable. Extraposition is similar. When one attempts to extrapose a constituent out of one clause into another, the result is unacceptable.

Scrambling within a constituent

Classical Latin and Ancient Greek were known for a more extreme type of scrambling known as *hyperbaton*, defined as a "violent displacement of words".^[3] This involves the scrambling (extraposition) of individual words out of their syntactic constituents. Perhaps the most well-known example is *magnā cum laude* "with great praise" (lit. "great with praise"). This was possible in Latin and Greek because of case-marking: For example, both *magnā* and *laude* are in the ablative case.

Hyperbaton is found in a number of prose writers, e.g. Cicero:

Hic optimus illis temporibus est patrōnus habitus^[4]

(word-for-word) he (the) best in those times was lawyer considered

(meaning) 'He was considered the best lawyer in those times.'

Much more extreme hyperbaton occurred in poetry, often with criss-crossing constituents. An example from Ovid^[5] is

Grandia per multōs tenuantur flūmina rīvōs.

(word-for-word) great into many are channeled rivers brooks.

(meaning) 'Great rivers are channeled into many brooks.'

An interlinear gloss is as follows:

grandia	per	multōs	tenuantur	flūmina	rīvōs
great.NOM.NEUT.PL	through	many.ACC.MASC.PL	are.tapered	rivers.NOM.NEUT.PL	brooks.ACC.MASC.PL

The two nouns (subject and object) are placed side-by-side, with both corresponding adjectives extraposed on the opposite side of the verb, in a non-embedding fashion.

Even more extreme cases are noted in the poetry of Horace, e.g.^[6]

Quis multā gracilis tē puer in rōsā // perfūsus liquidīs urget odoribus // grātō, Pyrrha, sub antrō?

(word-for-word) "Which many slender you boy in rose // infused liquid urges odors // pleasant, Pyrrha, under cave?"

(meaning) 'What slender Youth bedew'd with liquid odors // Courts thee on (many) Roses in some pleasant cave, // Pyrrha ...?'^[7]

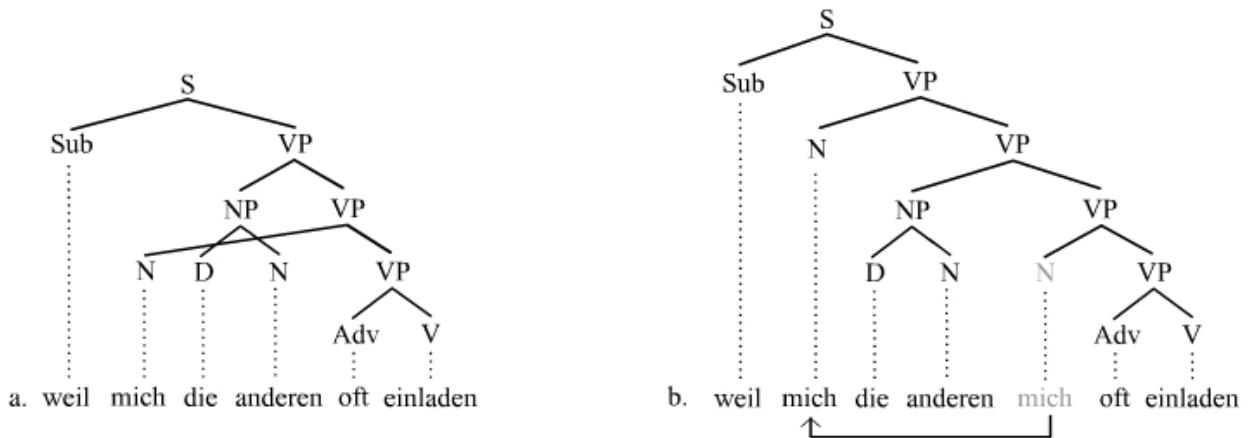
Glossed interlinearly, the lines are as follows:

Quis	multā	gracilis	tē	puer	in rōsā
which.NOM.M.SG	many.ABL.F.SG	slender.NOM.M.SG	you.ACC.SG	boy.NOM.M.SG	in rose.ABL.F.SG
perfūsus	liquidīs	urget	odoribus		
infused.NOM.M.SG	liquid.ABL.M.PL	urges.3RD.SG	odors.ABL.M.PL		
grātō	Pyrrha	sub	antrō?		
pleasant.ABL.N.SG	Pyrrha.VOC.F.SG	under	cave.ABL.N.SG		

Because of the case, gender and number marking on the various nouns, adjectives and determiners, a careful reader can connect the discontinuous and interlocking phrases *Quis ... gracilis ... puer, multā ... in rōsā, liquidīs ... odoribus* in a way that would be impossible in English.

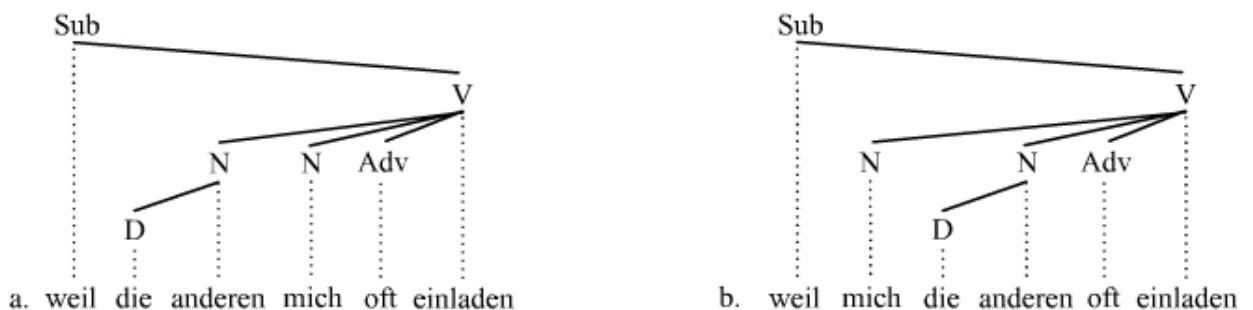
Theoretical analyses

The theoretical analysis of scrambling can vary a lot depending on the theory of sentence structure that one adopts. Constituency-based theories (= phrase structure theories) that prefer strictly binary branching structures are likely to address most cases of scrambling in terms of movement (or copying).^[8] One or more constituents is assumed to move out of its base position into a derived position. Many other theories of sentence structure, for instance those that allow n-ary branching structures (such as all dependency grammars),^[9] see many (but not all!) instances of scrambling involving just shifting; a discontinuity is not involved. The varying analyses are illustrated here using trees. The first tree illustrates the movement analysis of the example above in a theory that assumes strictly binary branching structures. The sentence *weil mich die anderen oft einladen* is used, which translates as *because the others often invite me*:



The abbreviation "Sub" stands for "subordinator" (= subordinate conjunction), and "SubP" stands for "subordinator phrase" (= embedded clause). The tree on the left shows a discontinuity (= crossing lines) and the tree on the right illustrates how a movement analysis deals with the discontinuity. The pronoun *mich* is generated in a position immediately to the right of the subject; it then moves leftward to reach its surface position. The binary branching structures necessitate this analysis in terms of a discontinuity and movement.

A theory of syntax that rejects the subject-predicate division of traditional grammar ($S \rightarrow NP+VP$) and assumes relatively flat structures (that lack a finite VP constituent) instead will acknowledge no discontinuity in this example. Instead, a shifting analysis addresses many instances of scrambling. The following trees illustrate the shifting-type analysis in a dependency-based grammar.^[10] The sentence from above is again used (*weil mich die anderen oft einladen* 'because the others often invite me'):



The tree on the left shows the object in its canonical position to the right of the subject, and the tree on the right shows the object in the derived position to the left of the subject. The important thing to acknowledge about these two trees is that there are no crossing lines. In other words, there is no discontinuity. The absence of a discontinuity is due to the flat structure assumed (which, again, lacks a finite VP constituent). The point, then, is that the relative flatness/layeredness of the structures that one assumes influences significantly the theoretical analysis of scrambling.

The example just examined can be, as just shown, accommodated without acknowledging a discontinuity (if a flat structure is assumed). There are many other cases of scrambling, however, where the analysis must acknowledge a discontinuity, almost regardless of whether relatively flat structures are assumed or not. This fact means that scrambling is generally acknowledged as one of the primary discontinuity types (in addition topicalization, *wh*-fronting, and extraposition).

Notes

- [1] This term was coined by John R. Ross in his 1967 dissertation, published as Ross 1986, and is widely used in generative approaches.
- [2] See Grewendorf and Sternefeld (1990), Riemsdijk and Corver (1994), and Karimi (2003) for works on scrambling in the Chomskyan tradition.
- [3] Gildersleeve, B.L. (1895). *Gildersleeve's Latin Grammar*. 3rd edition, revised and enlarged by Gonzalez Lodge. Hounds-mills Basingstoke Hampshire: St. Martin's.
- [4] Brut. line 106, cited in Brett Kesler, *Discontinuous constituents in Latin* (December 26, 1995).
- [5] Remedia Amoris, line 445. Quoted in Brett Kesler, *Discontinuous constituents in Latin* (December 26, 1995), quoting in turn Harm Pinkster (1990), *Latin syntax and semantics*, London: Routledge, p. 186.
- [6] Ode 1.5, lines 1–3.
- [7] Translated by John Milton (1673). The word "many" from the phrase *multā in rōsā* "in/with many a rose" is left out of Milton's translation.
- [8] The works of Larson (1988) and Kayne (1994) contributed much to the establishment of strictly binary branching structures in the Chomskyan tradition.
- [9] Concerning dependency grammars, See Ágel et al. (2003/6).
- [10] See Groß and Osborne (2009) for a dependency-based analysis of shifting, scrambling, and further mechanisms that alter word order.

References

- Ágel, V., L. Eichinger, H.-W. Eroms, P. Hellwig, H. Heringer, and H. Lobin (eds.) 2003/6. *Dependency and valency: An international handbook of contemporary research*. Berlin: Walter de Gruyter.
- Grewendorf, S. and W. Sternefeld (eds.) 1990. *Scrambling and barriers*. Amsterdam: Benjamins.
- Groß, T. and T. Osborne 2009. Toward a practical dependency grammar theory of discontinuities. *SKY Journal of Linguistics* 22, 43–90.
- Karimi, S. 2003. *Word order and scrambling*. Wiley-Blackwell.
- Kayne, R. 1994. *The antisymmetry of syntax*. Linguistic Inquiry Monograph Twenty-Five. MIT Press.
- Larson, R. 1988. *On the double object construction*. Linguistic Inquiry 19, 335–392.
- Müller, G. 1998. *Incomplete category fronting*. Kluwer: Dordrecht.
- Riemsdijk, H. van and N. Corver (eds.) 1994. *Studies on scrambling: Movement and non-movement approaches to free word order*. Berlin and New York.
- Ross, J. 1986. *Infinite syntax!* Norwood, NJ: ABLEX, ISBN 0-89391-042-2.

Selection (linguistics)

In linguistics, **selection** denotes the ability of predicates to determine the semantic content of their arguments.^[1] Predicates select their arguments, which means they limit the semantic content of their arguments. One sometimes draws a distinction between types of selection; one acknowledges both *s(semantic)-selection* and *c(category)-selection*. Selection in general stands in contrast to subcategorization:^[2] predicates both select and subcategorize for their complement arguments, whereas they only select their subject arguments. Selection is a semantic concept, whereas subcategorization is a syntactic one.

Examples

The following pairs of sentences illustrate the concept of selection:

- a. The plant is wilting.
- b. #The building is wilting. - The argument *the building* violates the selectional restrictions of the predicate *is wilting*.
- a. Sam drank a coffee.
- b. #Sam drank a car. - The argument *a car* contradicts the selectional restrictions of the predicate *drank*.

The # indicates semantic deviance. The predicate *is wilting* selects a subject argument that is a plant or is plant-like. A building really cannot be understood as wilting. Similarly, the predicate *drank* selects an object argument that is a liquid or is liquid-like. A car can hardly be interpreted as a liquid. The b-sentences are possible only given an unusual context that establishes appropriate metaphorical meaning. The deviance of the b-sentences is addressed in terms of selection. The selectional restrictions of the predicates *is wilting* and *drank* are violated.

S-selection vs. c-selection

One sometimes encounters the terms *s(emanic)-selection* and *c(category)-selection*.^[3] The concept of c-selection overlaps to an extent with subcategorization. Predicates c-select the syntactic category of their complement arguments - e.g. noun (phrase), verb (phrase), adjective (phrase), etc. - i.e. they determine the syntactic category of their complements. In contrast, predicates s-select the semantic content of their arguments. Thus s-selection is a semantic concept, whereas c-selection is a syntactic one. When the term *selection* or *selectional restrictions* appears alone without the *c-* or *s-*, s-selection is usually understood.^{[4][5]}

The b-sentences above do not contain violations of the c-selectional restrictions of the predicates *is wilting* and *drank*; they are, rather, well-formed from a syntactic point of view (hence #, not *), for the arguments *the building* and *a car* satisfy the c-selectional restrictions of their respective predicates, these restrictions requiring their arguments to be nouns or noun phrases. Just the s-selectional restrictions of the predicates *is wilting* and *drank* are violated in the b-sentences.

C-selection vs. subcategorization

The concepts of c-selection and subcategorization overlap in meaning and use to a significant degree.^[6] If there is a difference between these concepts, it resides with the status of the subject argument. Traditionally, predicates are interpreted as NOT subcategorizing for their subject argument because the subject argument appears outside of the minimal VP containing the predicate.^[7] Predicates do, however, c-select their subject arguments, e.g.

Fred eats beans.

The predicate *eats* c-selects both its subject argument *Fred* and its object argument *beans*, but as far as subcategorization is concerned, *eats* subcategorizes for its object argument *beans* only. This difference between c-selection and subcategorization depends crucially on the understanding of subcategorization. An approach to

subcategorization that sees predicates as subcategorizing for their subject arguments as well as for their object arguments will draw no distinction between c-selection and subcategorization; the two concepts are synonymous for such approaches.

Thematic relations

Selection can be closely associated with thematic relations (e.g. agent, patient, theme, goal, etc.).^[8] By limiting the semantic content of their arguments, predicates are determining the thematic relations/roles that their arguments bear.

Notes

- [1] For discussions of selection in general, see Chomsky (1965), Horrocks (1986:35f.), van Riemsdijk and Williams (1986:130), Cowper (1992:58), Napoli (1993:260ff.), Carnie (2007:220-221).
- [2] See Fowler (1971:58) concerning the distinction between selection and subcategorization.
- [3] Concerning the distinction between s-selection and c-selection, see for instance Ouhalla (1994:125), Lasnik (1999:21), and Fromkin et al. (2000:228ff.).
- [4] For examples of selection used in the sense of "s-selection", see for instance Chisholm (1981:139), Brinton (2000:153), van Valin (2001:87).
- [5] Haegeman and Guérion (1999:22f), however, mean *c-selection* when they write just *selection*.
- [6] Concerning the overlap in meaning and use of the terms c-selection and subcategorization, see Fromkin (2000:230).
- [7] See for instance Chomskys (1965) original discussion of subcategorization.
- [8] Concerning the connection between selection and thematic relations/roles, see Ouhalla (125).

Literature

- Brinton, L. 2000. The structure of modern English. Amsterdam:John Benjamins Publishing Company.
- Carnie, A. 2007. Syntax: A generative introduction, 2nd edition. Malden, MA: Blackwell Publishing.
- Chisholm, W. 1981. Elements of English linguistics. New York: Longman.
- Chomsky, N. 1965. Aspects of the thoery of syntax. Cambridge, MA: MIT Press.
- Cowper, E. 1992. A concise introduction to syntactic theory: The government-binding approach. Chicago: The University of Chicago Press.
- Fowler, R. 1971. An introduction to transformational syntax. ???
- Fromkin, V. (ed.). 2000. Linguistics: An introduction to linguistic theory. Malden, MA: Blackwell Publishers.
- Haegeman, L. and J. Guérion. 1999. English grammar: A generative perspective. Oxford, UK: Oxford University Press.
- Horrocks, G. 1986. Generative Grammar. Longman: London.
- Napoli, D. 1993. Syntax: Theory and problems. New York: Oxford University Press.
- Ouhalla, J. 1994. Transformational grammar: From rules to principles and parameters. London: Edward Arnold.
- van Riemsdijk, H. and E. Williams. 1986. Introduction to the theory of grammar. Cambridge, MA: The MIT Press.
- van Valin, R. 2001. An introduction to synax. Cambridge, UK: Cambridge University Press.

Sentence (linguistics)

A **sentence** is a grammatical unit consisting of one or more words that bear minimal syntactic relation to the words that precede or follow it. A sentence can include words grouped meaningfully to express a statement, question, exclamation, request, command, or suggestion.^[1]

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.^[2] 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 may contain both 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".

Components of a sentence

Clauses

A clause typically contains at least a subject noun phrase and a finite verb. While the subject is usually a noun phrase, other kinds of phrases (such as gerund phrases) work as well, and some languages allow subjects to be omitted. There are two types of clauses: **independent** and **subordinate (dependent)**. An independent clause demonstrates a complete thought; it is a complete sentence: for example, *I am sad*. A subordinate clause is not a complete sentence: for example, *because I have no friends*. See also copula for the consequences of the verb *to be* on the theory of sentence structure.

A simple complete sentence consists of a single clause. Other complete sentences consist of two or more clauses (see below).

Classification

By structure

One traditional scheme for classifying English sentences is by the number and types of finite clauses:

- 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 at least one independent clause and 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.

By purpose

Sentences can also be classified based on their purpose:

- A *declarative sentence* or declaration, the most common type, commonly makes a statement: "I have to go to work."
- An *interrogative sentence* or question is commonly used to request information — "Do I have to go to work?" — but sometimes not; see rhetorical question.
- An *exclamatory sentence* or exclamation is generally a more emphatic form of statement expressing emotion: "I have to go to work!"
- An *imperative sentence* or command tells someone to do something (and if done strongly may be considered both imperative and exclamatory): "Go to work." or "Go to work!"

Major and minor sentences

A major sentence is a *regular sentence*; it has a subject and a predicate. For example: "I have a ball." In this sentence one can change the persons: "We have a ball." However, a minor sentence is an irregular type of sentence. It does not contain a finite verb. For example, "Mary!" "Yes." "Coffee." etc. Other examples of minor sentences are headings (e.g. the heading of this entry), stereotyped expressions ("Hello!"), emotional expressions ("Wow!"), proverbs, etc. This can also include nominal sentences like "The more, the merrier". These do not contain verbs in order to intensify the meaning around the nouns and are normally found in poetry and catchphrases.^[3]

Sentences that comprise a single word are called word sentences, and the words themselves sentence words.^[4]

Sentence length

After a slump of interest, sentence length came to be studied in the 1980s, mostly "with respect to other syntactic phenomena".^[5]

By some definitions, the average size length of a sentence is given by "no. of words / no. of sentences".^[6] The textbook Mathematical linguistics, written by András Kornaiin suggests that in "journalistic prose the median sentence length is above 15 words".^[7] The average length of a sentence generally serves as a measure of sentence difficulty or complexity.^[8] The general trend is that as the average sentence length increases, the complexity of the sentences also increases.^[9]

In some circumstances "sentence length" is expressed by the number of clauses, while the "clause length" is expressed by the number of phones.^[10]

D. L. Olmsted points out that the length of a sentence, even without any testing, can arbitrarily reach a maximum, because "[every] sentence [has a] length of less than a million words".^[11]

A test done by Erik Schils and Pieter de Haan (by sampling five texts) showed that any two adjacent sentences are more likely to have similar lengths, and almost certainly have similar length when from a text in the fiction genre. This countered the theory that "authors may aim at an alternation of long and short sentence".^[12] Sentence length, as well as word difficulty, are both factors in the readability of a sentence.^[13] However, other factors, such as the presence of conjunctions, have been said to "facilitate comprehension considerably".^[14]

References

- [1] "Sentence' - Definitions from Dictionary.com" (<http://dictionary.reference.com/browse/sentence>). Dictionary.com. . Retrieved 2008-05-23.
- [2] Halliday, M.A.K. and Matthiessen, C.M.I.M. 2004. An Introduction to Functional Grammar. Arnold: p6.
- [3] Exploring Language: Sentences (http://english.unitecology.ac.nz/resources/resources/exp_lang/sentence.html)
- [4] Jan Noordegraaf (2001). "J. M. Hoogvliet as a teacher and theoretician". In Marcel Bax, C. Jan-Wouter Zwart, and A. J. van Essen. *Reflections on Language and Language Learning*. John Benjamins B.V.. pp. 24. ISBN 90-272-2584-2.
- [5] Těšitlová, Marie (1992). *Quantitative Linguistics* (http://books.google.com.au/books?id=8eiUEh5OYgIC&pg=PA126&dq=sentence+length+linguistics&hl=en&ei=Bz7pTu_IE_CPiAehsP3nCA&sa=X&oi=book_result&ct=result&redir_esc=y#v=onepage&q=sentence length linguistics&f=false). pp. 126. . Retrieved December 15, 2011.
- [6] "Calculate Average Sentence Length" (http://www.reddit.com/r/linguistics/comments/lv7b7/language_log_on_twitter_and_real_trends_in_word/). Linguistics Forum. Jun 23, 2011. . Retrieved December 12, 2011.
- [7] Kornai, András. *Mathematical linguistics* (http://books.google.com.au/books?id=9VCHgEpVXysC&pg=PA188&dq=sentence+length+linguistics&hl=en&ei=Yj_pTvPuFuyUiQfKvdWFDA&sa=X&oi=book_result&ct=result&redir_esc=y#v=onepage&q=sentence length linguistics&f=false). pp. 188. . Retrieved December 15, 2011.
- [8] Perera, Katherine. *The assessment of sentence difficulty* (http://books.google.com.au/books?id=1Zw9AAAAIAAJ&pg=PA108&dq=sentence+length+linguistics&hl=en&ei=4zjpToblNOGaiAfFh5jPCA&sa=X&oi=book_result&ct=result&redir_esc=y#v=onepage&q=sentence length linguistics&f=false). pp. 108. . Retrieved December 15, 2011.
- [9] Troia, Gary A.. *Instruction and assessment for struggling writers: evidence-based practices* (http://books.google.com.au/books?id=D0KuDYr-lU0C&pg=PA370&dq=sentence+length+linguistics+history&hl=en&ei=jULpTo7UGqKjiAebq-HOCA&sa=X&oi=book_result&ct=result&redir_esc=y#v=onepage&q=sentence length linguistics history&f=false). pp. 370. . Retrieved December 15, 2011.
- [10] Reinhard Köhler, Gabriel Altmann, Rařmond Genrikhovich Piotrovskij (2005). *Quantitative Linguistics* (http://books.google.com.au/books?id=ODC4ZTwn81wC&pg=PA352&dq=sentence+length+linguistics&hl=en&ei=4zjpToblNOGaiAfFh5jPCA&sa=X&oi=book_result&ct=result&redir_esc=y#v=onepage&q=sentence length linguistics&f=false). p. 352. . Retrieved December 15, 2011. "Caption):Table 26.3: Sentence length (expressed by the number of clauses) and clause length (expressed by the number of phones) in a Turkish text"
- [11] Olmsted, D. L. (March, 1967). "On some Axioms about Sentence Length" (<http://www.jstor.org/pss/411399>). Linguistic Society of America. pp. 303–305. . Retrieved December 12, 2011.
- [12] Erik Schils, Pieter de Haan (1993). "Characteristics of Sentence Length in Running Text" (<http://llc.oxfordjournals.org/content/8/1/20.abstract>). Oxford University Press. . Retrieved December 12, 2011.
- [13] Perera, Katherine. *The assessment of sentence difficulty* (http://books.google.com.au/books?id=1Zw9AAAAIAAJ&pg=PA108&dq=sentence+length+linguistics&hl=en&ei=4zjpToblNOGaiAfFh5jPCA&sa=X&oi=book_result&ct=result&redir_esc=y#v=onepage&q=sentence length linguistics&f=false). pp. 108. . Retrieved December 15, 2011.
- [14] Fries, Udo. *Sentence Length, Sentence Complexity, and the Noun Phrase in 18th-Century News Publications* (http://books.google.com.au/books?id=eer_Pg7ZAGAC&pg=PA21&dq=sentence+length+linguistics&hl=en&ei=4zjpToblNOGaiAfFh5jPCA&sa=X&oi=book_result&ct=result&redir_esc=y#v=onepage&q=sentence length linguistics&f=false). pp. 21. . Retrieved December 15, 2011.

External links

- Basic Sentence Structures (<http://grammar.about.com/od/basicsentencegrammar/a/basicstructures.htm>)
- The definition and meaning of the words "idea", "thought" and "sentence". (<http://cnx.org/content/m14812/latest/>)
- Sentence Variety: Sentence Types (<http://owl.english.purdue.edu/owl/resource/573/02/>)
- The Sentence: A Group of Words Expressing a Meaning (<http://www.brighthub.com/education/languages/articles/20570.aspx>)
- "The Book-Length Sentence" (<http://www.nytimes.com/2010/12/26/books/review/Park-t.html>) and "The Art of the Very Long Sentence" (<http://papercuts.blogs.nytimes.com/2011/01/03/the-art-of-the-very-long-sentence/>), a history of very long sentences. Ed Park, *New York Times Book Review*, December 24, 2010 and January 3, 2011 (respectively).
- phraseup* (<http://www.phraseup.com/>) - A writing assistant that helps with completing sentences by finding the missing words we can't recall.
- Fraze.it (<http://www.fraze.it>) - A search engine for sentences and phrases. Supports six languages, filtered by form, zone, context, etc.

Separable verb

A **separable verb** is a verb that is composed of a lexical core and a separable particle. In some sentence positions, the core verb and the particle appear in one word, whilst in others the core verb and the particle are separated. The particle cannot be accurately referred to as a prefix because it can be separated from the core verb. German, Dutch, and Hungarian are notable for having many separable verbs. Separable verbs challenge theories of sentence structure because when they are separated, it is not evident how the compositionality of meaning should be understood.

Examples

The German verb *ankommen* is a separable verb, and is used here as the first illustration:

- a. Sie **kommt** sofort **an**.
she comes immediately at - 'She is arriving immediately.'
- b. Sie **kam** sofort **an.**
she came immediately at - 'She arrived immediately.'
- c. Sie wird sofort **ankommen.**
she will immediately at.come - 'She will arrive immediately.'
- d. Sie ist sofort **angekommen.**
she is immediately at.come - 'She arrived immediately.'

The first two examples, sentences a and b, contain the "simple" tenses. In matrix declarative clauses that lack auxiliary verbs, the verb and its particle (both in bold) are separated, the verb appearing in V2 position and the particle appearing in clause-final position. The second two examples, sentences c and d, contain the so-called "complex tenses"; they show that when an auxiliary verb appears, the separable verb is not separated, but rather the stem verb and particle appear together as a single word.

The following two examples are from Dutch:

- a. Ik **kom** morgen **aan**.
I come tomorrow at - 'I am arriving tomorrow.'
- b. Hij is **aangekomen.**
he is arrived - 'He has arrived.'

The Dutch verb *aankomen* is separable, as illustrated in the first sentence with the simple present tense, whereas when an auxiliary verb appears (here *is*) as in the second sentence with present perfect tense/aspect, the lexical verb and its particle appear together as a single word. The following examples are from Hungarian.

- a. **Leteszem** a telefont
 up.I.hang the phone - 'I hang up the phone.'
- b. Nem **teszem le** a telefont.
 not I.hang up the phone - 'I do not hang up the phone.'

The verb *letesz* is separated in the negative sentence. Affixes in Hungarian are also separated from the verb in imperative and prohibitive moods. Moreover, word order influences the strength of prohibition, as the following examples show:

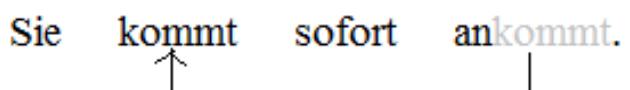
- c. Ne **tedd le** a telefont
 not hang up the phone - 'Don't hang up the phone.'
- d. **Le ne tedd** a telefont.
 up not hang the phone - 'Don't you hang up the phone!' (stronger prohibition)

Analogy to English

English has many phrasal or compound verb forms that are somewhat analogous to separable verbs. However, in English the preposition or verbal particle is either an invariable prefix (e.g. *understand*) or is always a separate word (e.g. *give up*), without the possibility of grammatically conditioned alternations between the two. An adverbial particle can be separated from the verb by intervening words (e.g. *up* in the phrasal verb *screw up* appears after the direct object, *things*, in the sentence *He is always screwing things up*). Although the verbs themselves never alternate between prefix and separate word, the alternation is occasionally seen across derived words (e.g. something that is *outstanding* stands *out*).

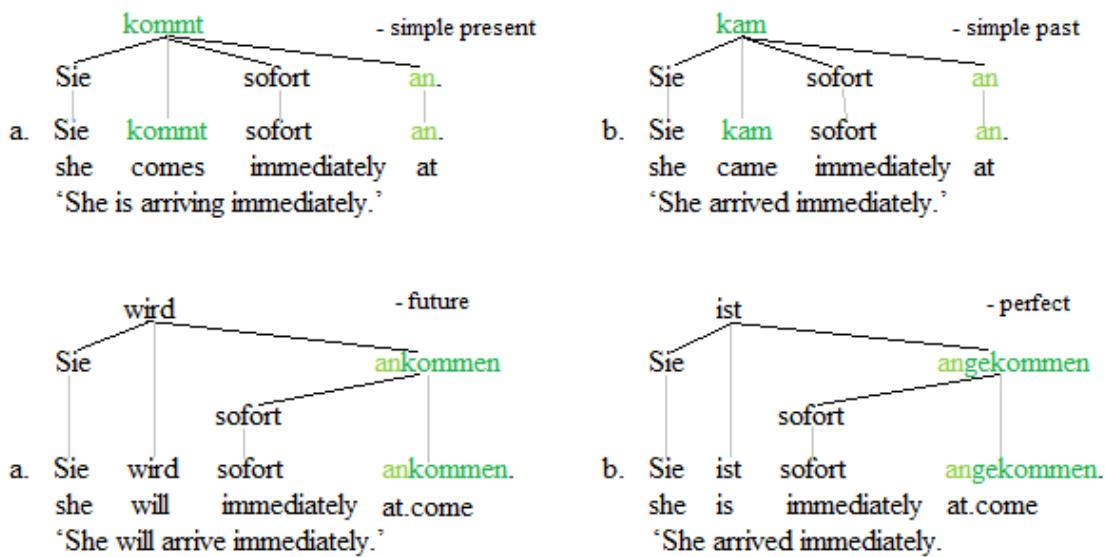
Structural analysis

Separable verbs challenge the understanding of meaning compositionality because when they are separated, the two parts do not form a constituent. Hence theories of syntax that assume that form-meaning correspondences should be understood in terms of syntactic constituents are faced with a difficulty, for it is not apparent what sort of syntactic unit the verb and its particle build. One prominent means of addressing this difficulty is via movement. One stipulates that languages like German and Dutch are actually SOV languages (as opposed to SVO) and that when separation occurs, the lexical verb has moved out of the clause final position to a derived position further to the left, e.g.

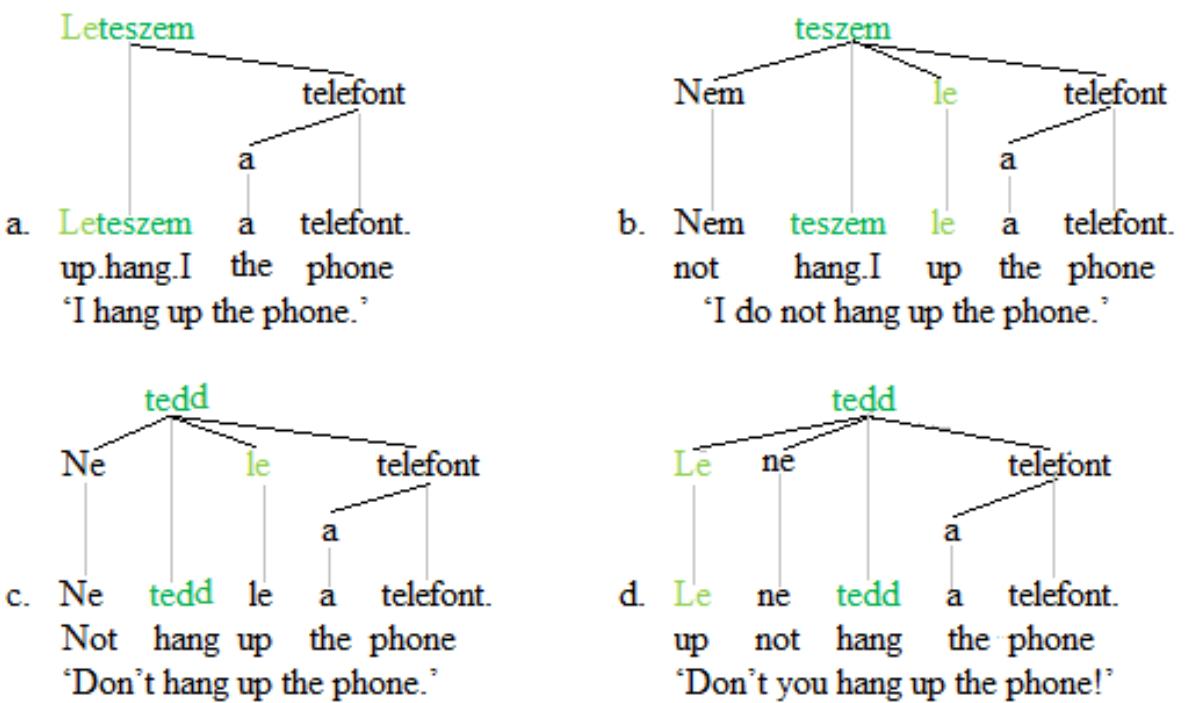


The verb *kommt* is seen as originating in a position where it appeared with its particle *an*, but it then moves leftward to the V2 position.

An alternative analysis of the structure of separable verbs dispenses with the notion that the constituent is the fundamental unit of syntactic analysis. Instead, the catena is taken to be primary. The following dependency grammar trees illustrate the catena-based analysis:



The verb and particle (in green) form a catena when they are separated in the first two trees, and they also form a catena when they appear together as a single word in the second two trees (since a single word is always a catena). The principle of compositionality is hence understood in terms of catenae. The catena is the basic meaning-bearing unit, not the constituent. The four Hungarian examples from above are analyzed in terms of catenae as follows:



The particle *le* is separated from its verb when the negation appears (trees b-d). Despite this fact, the particle still forms a catena with its verb in all four trees. These structures are therefore consistent with the catena-based understanding of meaning compositionality. The fundamental meaning bearing unit is the catena, not the constituent.

Notes

External links

- http://www.ucl.ac.uk/dutch/grammatica/separable_verbs.htm

Shifting (linguistics)

In linguistics, **shifting** occurs when two or more constituents appearing on the same side of their common *head* exchange positions in a sense, so that non-canonical order obtains. The most widely acknowledged type of shifting is *heavy NP shift*,^[1] although shifting involving a heavy NP is but one particular manifestation of the shifting mechanism. Shifting occurs in most if not all European languages, and it may in fact be possible in all natural languages. Shifting is not *inversion*, and inversion is not shifting, but the two mechanisms are similar insofar as they are both present in languages like English that have relatively strict word order. The theoretical analysis of shifting varies in part depending on the theory of sentence structure that one adopts. If one assumes relatively flat structures, inversion does not result in a *discontinuity*. Shifting is often motivated by the relative weight of the constituents involved. The weight of a constituent is determined by a number of factors, e.g. number of words, contrastive focus, semantic content, etc.^[2]

Basic examples

Shifting is illustrated with the following pairs of sentences. The first sentence of each pair shows what can be considered canonical order, whereas the second gives an alternative order that results from shifting:

?I gave **the books which my uncle left to me as part of his inheritance** to her.

I gave to her **the books which my uncle left to me as part of his inheritance**.

The first sentence with canonical order, where the object noun phrase (NP) precedes the oblique prepositional phrase (PP), is marginal due to the relative 'heaviness' of the NP compared to the PP. The second sentence, which shows shifting, is better because it has the lighter PP preceding the much heavier NP. The following examples illustrate shifting with particle verbs:

He picked **it up**. (compare: *He picked up **it**.)

He picked up **the flashlight**.

John took **him on**. (compare: *John took on **him**.)

John took on **the new player**.

When the object of the particle verb is a pronoun, the pronoun must precede the particle, whereas when the object is an NP, the particle can precede the NP. Each of the two constituents involved is said to shift, whereby this shifting is motivated by the weight of the two relative to each other. In English verb phrases, heavier constituents tend to follow lighter constituents. The following examples illustrate shifting using pronouns, clauses, and PPs:

She said **that** to her friends.

She said to her friends **that she had solved the problem**.

They hid **that** from me.

They hid from me **that I was going to pass the course**.

When the pronoun appears, it is much lighter than the PP, so it precedes the PP. But if the full clause appears, it is heavier than the PP and can therefore follow it.

Further examples

The syntactic category of the constituents involved in shifting is not limited; they can even be of the same type, e.g.

It happened **on Tuesday** due to the weather.

It happened due to the weather **on Tuesday**.

Sam considers **him** a cheater.

Sam considers a cheater **anyone who used Wikipedia**.

In the first pair, the shifted constituents are PPs, and in the second pair, the shifted constituents are NPs. The second pair illustrates again that shifting is often motivated by the relative weight of the constituents involved; the NP *anyone who used Wikipedia* is heavier than the NP *a cheater*.

The examples so far have shifting occurring in verb phrases. Shifting is not restricted to verb phrases. It can also occur, for instance, in NPs:

the book **on the shelf** about linguistics

the book about linguistics **on the second shelf down from top**

the picture **of him** that I found

the picture that I found **of that old friend of mine with funny hair**

These examples again illustrate shifting that is motivated by the relative weight of the constituents involved. The heavier of the two constituents prefers to appear further to the right.

The example sentences above all have the shifted constituents appearing after their head (see below). Constituents that precede their head can also shift, e.g.

Probably Susan left.

Susan **probably** left.

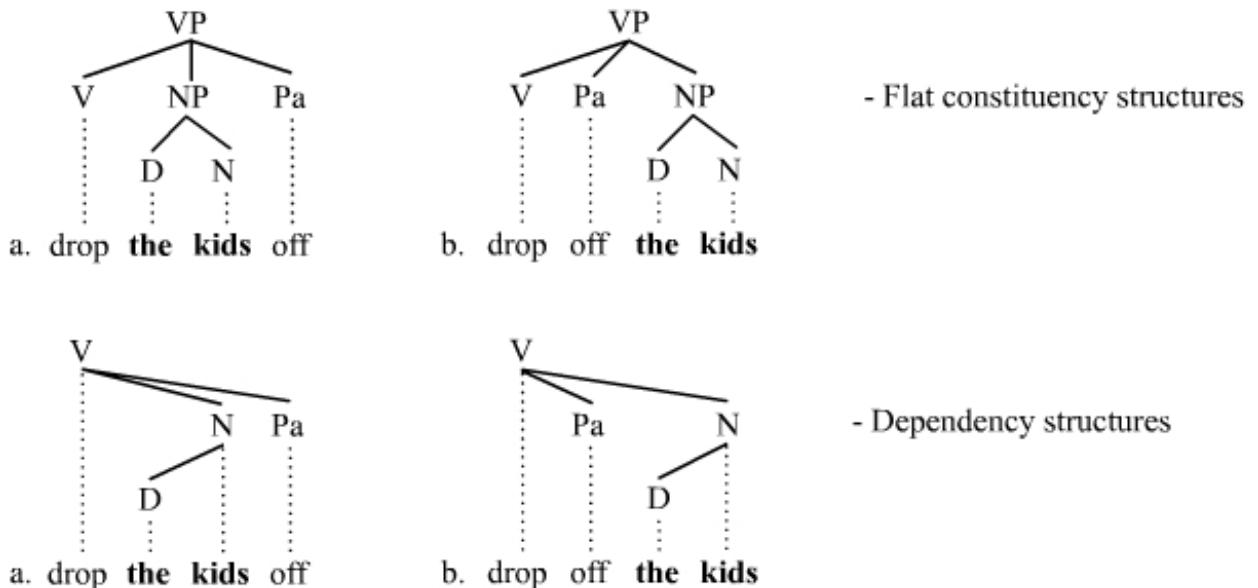
Certainly that happened more than once.

That **certainly** happened more than once.

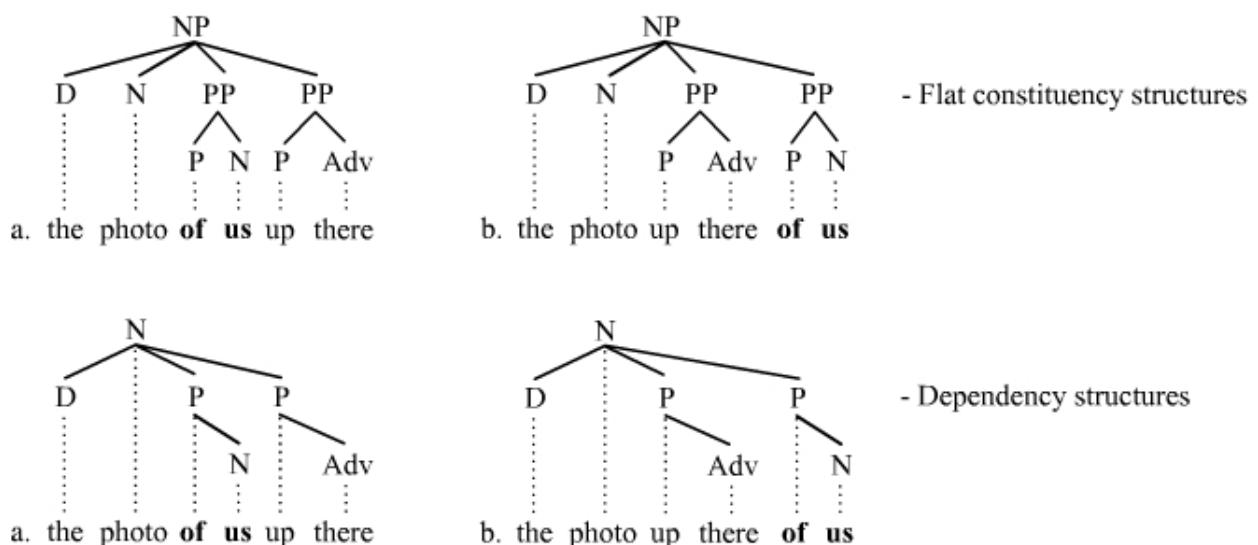
Since the finite verb is viewed as the head of the clause in each case, these data allow an analysis in terms of shifting. The subject and modal adverb have swapped positions. In other languages that have many head-final structures, shifting in the pre-head domain is a common occurrence.

Theoretical analyses

If one assumes relatively flat structures, the analysis of many canonical instances of shifting is straightforward. Shifting occurs among two or more sister constituents that appear on the same side of their head.^[3] The following trees illustrate the basic shifting constellation in a *phrase structure grammar* (= constituency grammar) first and in a dependency grammar second:

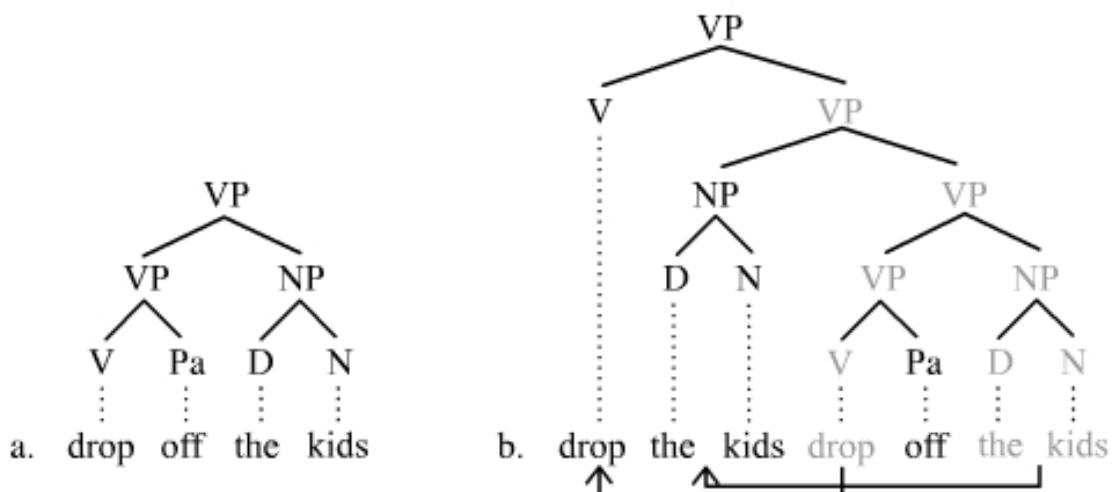


The two constituency-based trees show a flat VP that allows n-ary branching (as opposed to just binary branching). The two trees dependency-based trees show the same VP. Regardless of whether one chooses the constituency- or the dependency-based analysis, the important thing about these examples is the relative flatness of the structure. This flatness results in a situation where shifting does not necessitate a discontinuity (i.e. no long distance dependency), for there can be no crossing lines in the trees. The following trees further illustrate the point:



Again due to the flatness of structure, shifting does not result in a discontinuity. In this example, both orders are acceptable because there is little difference in the relative weight between the two constituents that switch positions.

An alternative analysis of shifting is necessary in a constituency grammar that posits strictly binary branching structures.^[4] The more layered binary branching structures would result in crossing lines in the tree, which means movement (or copying) is necessary to avoid these crossing lines. The following trees are (merely) representative of the type of analysis that one might assume given strictly binary branching structures:



The analysis shown with the trees assumes binary branching and leftward movement only. Given these restrictions, two instances of movement might be necessary to accommodate the surface order seen in tree b. The material in light gray represents copies that must be deleted in the phonological component.

This sort of analysis of shifting has been criticized by Ray Jackendoff, among others.^[5] Jackendoff and Culicover argue for an analysis like that shown with the flatter trees above, whereby heavy NP shift does not result from movement, but rather from a degree of optionality in the ordering of a verb's complements. The preferred order in English is for the indirect object to follow the direct object, and for adjuncts to follow objects of all kinds, but if the direct object is "heavy", the opposite order may be preferred (since this leads to a more right-branching tree structure which is easier to process).

A mystery

A mysterious property of shifting is that in the case of ditransitive verbs, a shifted direct object prevents extraction of the indirect object via wh-movement:

Who did you give **the books written by the venerable Professor Plum** to?

*Who did you give to **the books written by the venerable Professor Plum**?

This would arguably be unexpected if shifting merely resulted from optionality in complement ordering, or from a rightward movement operation. An analysis like that in the strictly binary branching tree above may be able to explain this restriction.

Notes

[1] See Ross (1967).

[2] See Osborne (2007) concerning the weight of constituents.

[3] See Groß and Osborne (2009: 66-71).

[4] See for instance Larson (1988) and Kayne (1981, 1994).

[5] See Jackendoff (1990) and Culicover and Jackendoff (2005) in this regard.

References

- Ross, J. 1967. Constraints on variables in syntax. Ph.D. Dissertation, MIT.
- Larson, R. 1988. On the double object construction. *Linguistic Inquiry* 19, 335–392.
- Groß, T. and T. Osborne 2009. Toward a practical dependency grammar theory of discontinuities. *SKY Journal of Linguistics* 22, 43-90.
- Jackendoff, R. 1990. On Larson's treatment of the double object construction. *Linguistic Inquiry* 21, 427–456.

- **Kayne, R.** 1981. Unambiguous paths. In R. May and J. Koster (eds.), *Levels of syntactic representation*, 143-183. Dordrecht: Kluwer.
- **Kayne, R.** 1994. The antisymmetry of syntax. *Linguistic Inquiry Monograph Twenty-Five*. MIT Press.
- **Cullicover, P.** and **R. Jackendoff** 2005. *Simpler syntax*. MIT Press.
- **Osborne, T.** 2007. The weight of predicates: A dependency grammar analysis of predicate weight in German. *Journal of Germanic Linguistics* 19/1, 23-72.

Sluicing

In syntax, **sluicing** is a type of ellipsis that occurs in both direct and indirect interrogative clauses. The ellipsis is introduced by a *wh*-expression, whereby in most cases, everything except the *wh*-expression is elided from the clause. Sluicing has been studied in detail in recent years and is therefore a relatively well understood type of ellipsis.^[1] Sluicing occurs in most languages (unlike for instance VP-ellipsis, which occurs primarily in just English).

Basic examples

Sluicing is illustrated with the following examples. The "sluiced" material is indicated via subscripts and a smaller font and the antecedent to the sluiced material is shown in bold:

Phoebe wants to eat something, but she doesn't know what _{she wants to eat}.

Jon doesn't like the lentils, but he doesn't know why _{he doesn't like the lentils}.

Someone **has eaten the soup**. Unfortunately, I don't know who _{has eaten the soup}.

Sluicing in these examples occurs in indirect questions. It is also frequent in direct questions across speakers, e.g.

Somebody **is coming for dinner tonight**. - Who _{is coming for dinner tonight}?

They put something **in the mailbox**. - What _{did they put in the mailbox}?

The examples of sluicing above have the sluiced material following its antecedent. This material can also precede its "antecedent", e.g.

Although I don't know why _{the pictures have been moved}, **the pictures have been moved**.

When and how _{somebody should say something} is unclear, but **somebody should say something**.

Multiple sluicing

In some languages, sluicing can leave behind more than one *wh*-phrase (multiple remnant sluicing). Multiple sluicing in English is rare, but it is marginally possible in constructions like the following ones:

Someone **wants to eat** something. ?I wish I knew who _{wants to eat} what.

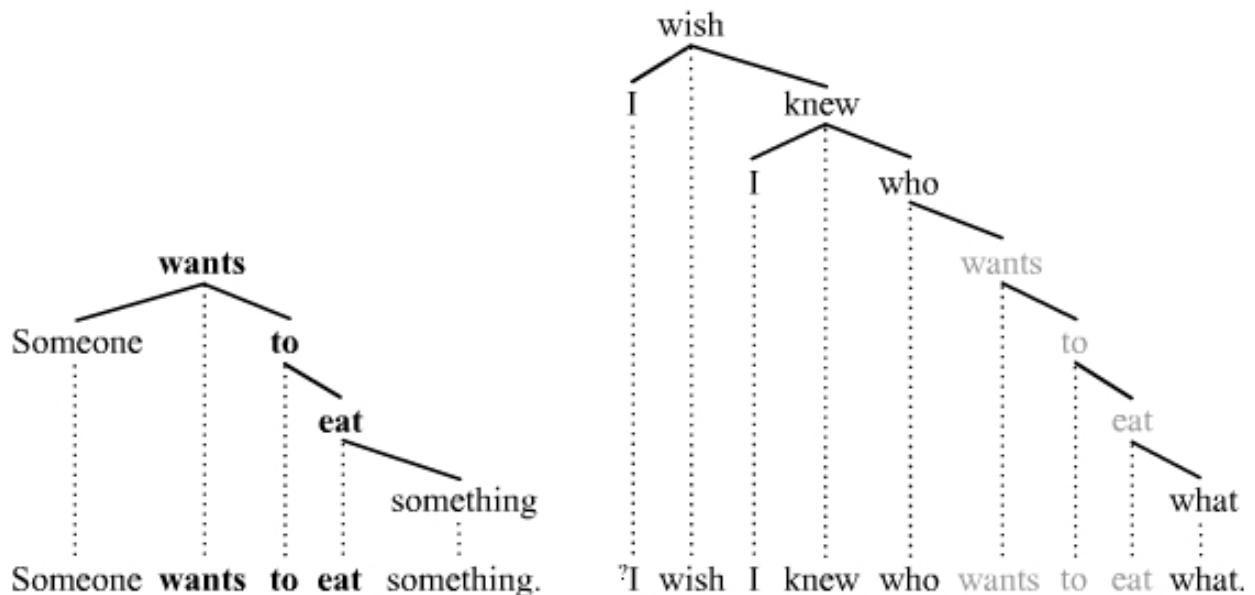
?Something **is causing** someone **big problems**, although it's not clear what _{is causing} who _{big problems}.

Sentences like these are considered grammatical in languages like German, Japanese, Turkish, Russian, and others, although in English, their acceptability seems marginal. Multiple sluicing raises a potential problem for syntax, since the elided content appears to form a non-constituent.

Theoretical analyses

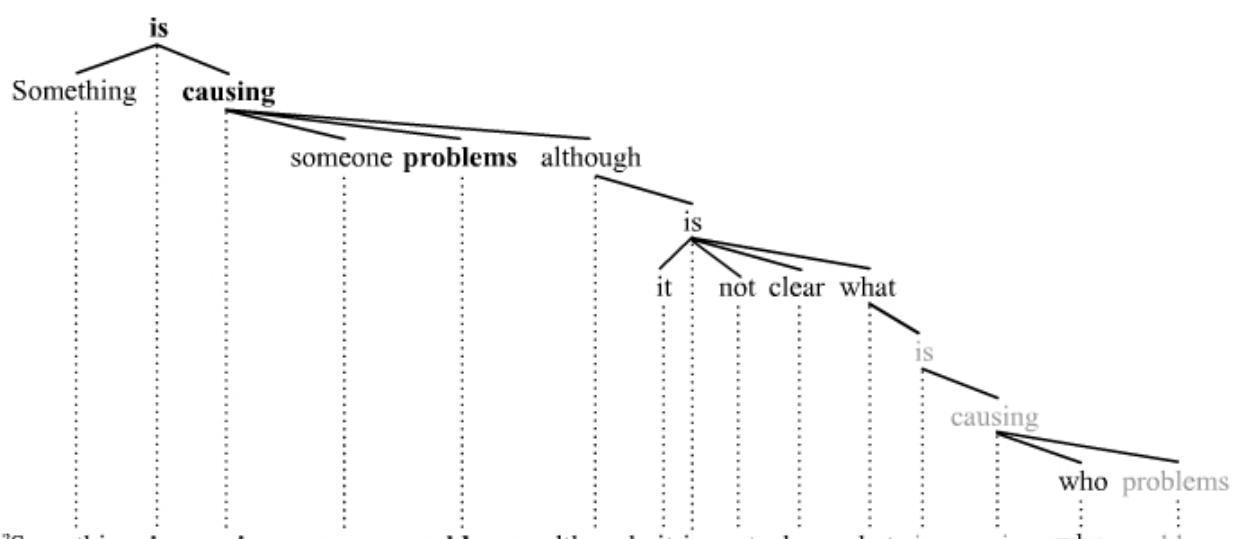
Ross (1969), who was the first to examine sluicing, assumed that sluicing involves regular *wh*-fronting followed by deletion of the sister constituent of the *wh*-phrase. This analysis has been expanded in greater detail in Merchant 2001, which is the most comprehensive treatise on sluicing and ellipsis. The fronting plus deletion analysis is challenged by instances of multiple sluicing, however, since it is not clear how both *wh*-expressions could be fronted (or otherwise moved) in such a manner that would allow the remaining constituent to then be deleted.

An alternative analysis of sluicing, and of multiple sluicing in particular, takes the catena (as opposed to the constituent of phrase structure grammars) as the fundamental unit of syntax.^[2] The catena is a unit of syntactic analysis that is closely associated with dependency grammars; it is defined as *any word or any combination of words that is continuous with respect to dominance*. The elided material of all instances of sluicing, even of multiple sluicing, are catenae. The following dependency trees of the two examples of multiple sluicing from above illustrate the point:



The antecedent to the sluiced material is in bold, and in the sluiced material itself is indicated with a lighter font.

Both the antecedent and the sluiced material qualify as catenae. The same is true of the second example:



The antecedent to the sluiced material and the sluiced material itself again qualify as catenae (but not as constituents).

Notes

- [1] See for instance Ross 1969, Chung 1994, and Merchant 2001.
[2] See Osborne et al. 2013.

References

- Chung, Sandra, William Ladusaw, and James McCloskey. 1995. Sluicing and Logical Form. *Natural Language Semantics*.
- Ross, John 1969. Guess who? CLS.
- Merchant, J. 2001. The syntax of silence: Sluicing, identity, and the theory of ellipsis. Oxford University Press.
- Osborne, T., M. Putnam, and T. Groß 2013. Catenae: Introducing a novel unit of syntactic analysis. *Syntax* 16, in press.

Small clause

In linguistics, a **small clause** is a frequently occurring construction that has the semantic subject-predicate characteristics of a clause, but that lacks the tense of a finite clause and appears to lack the status of a constituent. The structural analyses of small clauses vary in part based upon whether a flat or layered analysis is pursued. The small clause is closely related to the phenomena of raising-to-object, exceptional case-marking, accusativus cum infinitivo, and even object control.

Examples

The following sentences contain (what some theories of syntax judge to be) small clauses.^[1] The actual small clause is in bold in each example:

- a. Susan considers **Sam a dope**.
- b. We want **you sober**.
- c. Jim called **me a liar**.
- d. They named **him Pedro**.
- e. Fred wiped **the table clean**.
- f. Larry pounded **the nail flat**.

In each of these sentences, the underlined expression functions as a predicate over the nominal immediately to its left. The verbs that license small clauses like these are a heterogeneous bunch. So-called *raising-to-object* or *ECM* verbs like *consider* and *want* license small clauses, and verbs like *call* and *name*, which subcategorize for an object NP and a predicative expression, also license small clauses. And verbs like *wipe* and *pound*, which allow the appearance of a resultative expression, can also be seen as allowing small clauses. One should note that what does and does not qualify as a small clause varies in the literature. Early discussions of small clauses were limited to the *ECM*-verbs like *consider*.

An important trait that all six examples above have in common is that the small clause lacks a verb. Indeed, this has been taken as a defining aspect of small clauses, i.e. to qualify as a small clause, a verb must be absent.^[2] If, however, one allows a small clause to contain a verb, then the following sentences can also be interpreted as containing small clauses:^[3]

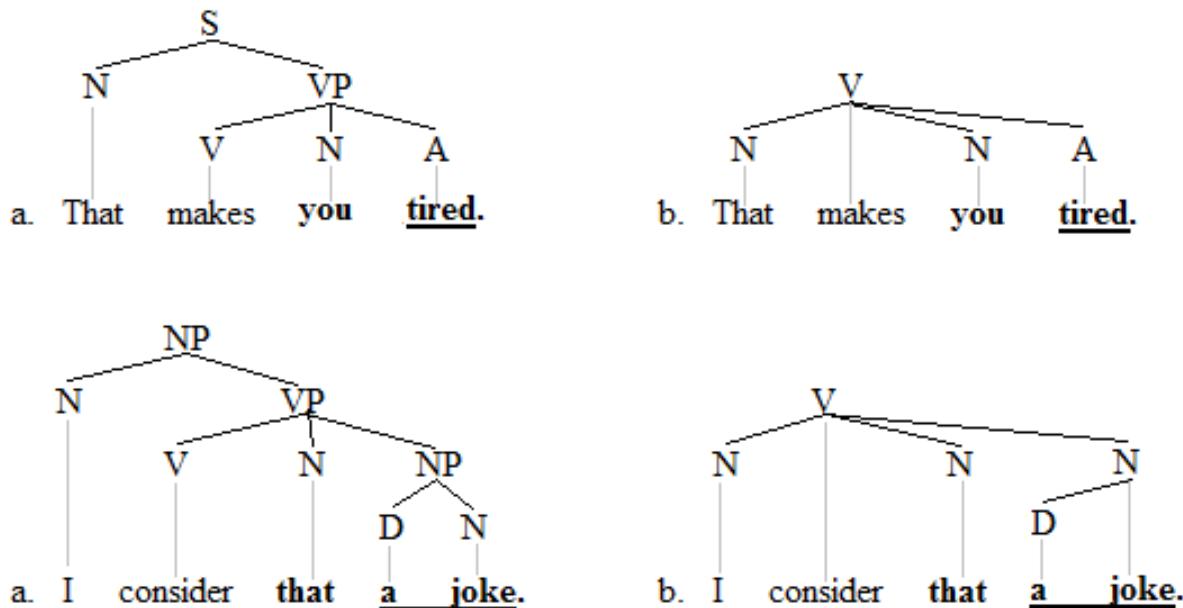
- g. We saw **Fred leave**.
- h. Did you hear **them arrive**?
- i. Larry believes **that to be folly**.

j. Do you judge it **to be possible**?

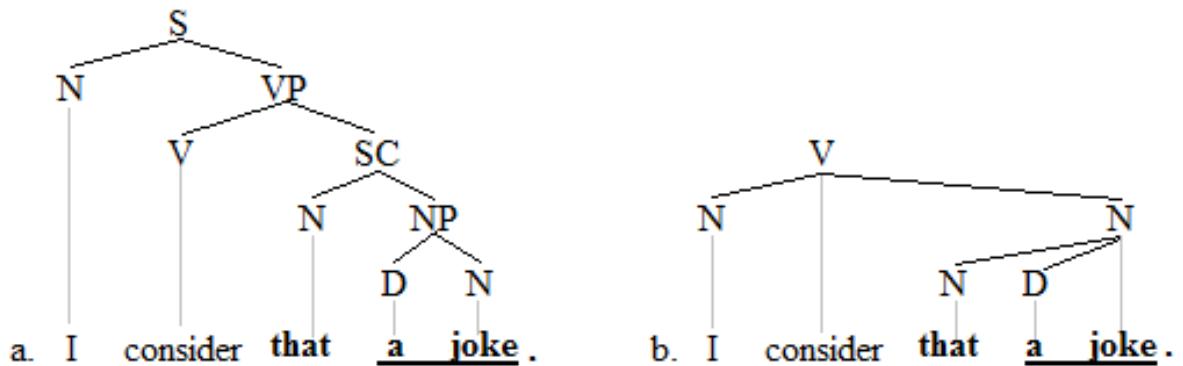
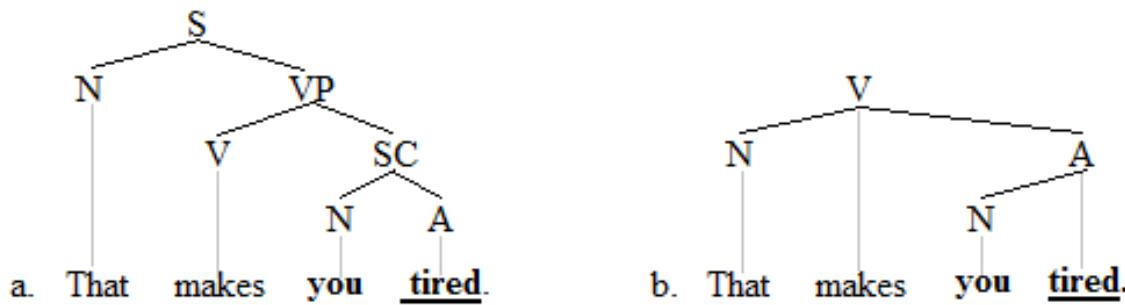
The similarity across the sentences a-f and these four sentences g-j is obvious, since the same subject-predicate relationship is present in all ten sentences. Hence if one interprets sentences a-f as containing small clauses, one can also judge sentences g-j as containing small clauses. A defining characteristic of all ten of the small clauses in a-j is that the tense associated with finite clauses, which contain a finite verb, is absent.

Structural analysis

Broadly speaking, there are two competing analyses of the structure of small clauses, flat vs. layered.^[4] The flat analysis judges the subject and predicate of the small clause to be sister constituents, whereas the layered analysis takes them to form a single constituent.^[5] These two competing analyses are illustrated here. Both constituency-based structures of a phrase structure grammar and dependency-based structures of a dependency grammar are produced in the illustration. The flat analysis is given first:^[6]



The a-trees on the left are the phrase structure trees, and the b-trees on the right are the dependency trees. The key aspect of these structures is that the small clause material consists of two separate sister constituents. The layered analysis is given next:



The phrase structure trees are again on the left, and the dependency trees on the right. To mark the small clause in the phrase structure trees, the node label SC is used. The main difference between these layered trees and the flat trees further above resides with the status of the small clause as a constituent or not. The layered analysis is preferred by those working in the Government and Binding framework and its tradition,^[7] whereas the flat analysis is preferred by those working in dependency grammars and representational phrase structure grammars (e.g. Generalized Phrase Structure Grammar and Head-Driven Phrase structure Grammar).

Empirical considerations

There are a number of considerations that support or refute the one or the other analysis. The layered analysis, which, again, views the small clause as a constituent, is supported by the basic insight that the small clause functions as a single semantic unit, i.e. as a clause consisting of a subject and a predicate. The layered analysis is also supported by the fact that in certain cases, a small clause can function as the subject of the greater clause, e.g.^[8]

Bill behind the wheel is a scary thought. - Small clause functioning as subject

Sam drunk is something everyone wants to avoid. - Small clause functioning as subject

Most theories of syntax judge subjects to be single constituents, hence the small clauses *Bill behind the wheel* and *Sam drunk* here should each be construed as one constituent. Further, small clauses can appear as the complement of *with*, e.g.:^[9]

With **Bill behind the wheel**, we're in trouble. - Small clause as complement of *with*

With **Sam drunk**, we've got a big problem. - Small clause as complement of *with*

These data are also easier to accommodate if the small clause is a constituent.

One can argue, however, that small clauses in subject position and as the complement of *with* are fundamentally different from small clauses in object position. The data further above have the small clause following the matrix verb, whereby the subject of the small clause is also the object of the matrix clause. In such cases, the matrix verb appears to be subcategorizing for its object noun (phrase), which then functions as the subject of the small clause. In this regard, there are a number of observations suggesting that the object/subject noun phrase is a direct dependent of

the matrix verb, which means the flat structure is correct: the small clause generally does not behave as a single constituent with respect to constituency tests; the object becomes the subject of the corresponding passive sentence; and when the object is a reflexive pronoun, it is coindexed with the matrix subject:

- a. She proved **him guilty**.
- b. ***Him guilty** she proved. - Small clause fails the topicalization diagnostic for identifying constituents.
- c. *It is **him guilty** that she proved. - Small clause fails the clefting diagnostic for identifying constituents.
- d. *What she proved was **him guilty**. - Small clause fails the pseudoclefting diagnostic for identifying constituents.
- e. *What did she prove? - ??**Him guilty**. - Small clause fails the answer fragment diagnostic for identifying constituents.
- f. **He** was proved **guilty**. - Subject of small clause becomes the subject of matrix clause in the corresponding passive sentence.
- g. She₁ proved **herself₁ guilty**. - Reflexive pronoun takes the matrix subject as its antecedent.

These data are consistent with the flat analysis of small clauses. The object of the matrix clause plays a dual role insofar as it is also the subject of the embedded predicate.

Notes

- [1] For a general discussion of small clauses, see Haegeman (1994:123ff.).
- [2] For instance, Chomsky (1981:107), Ouhalla (1994:109ff), and Wardbaugh, R. (2003:85) take the absence of a verb to be a distinguishing characteristic of small clauses.
- [3] See Haegeman and Guérón (1999:111f.) for an account that acknowledges small clauses that contain verbs.
- [4] For an insightful discussion of these two competing analyses, flat vs. layered, see Matthews (2007:163ff.).
- [5] Borsley (1991:64f.) provides a good illustration of the two competing analyses (flat vs. layered).
- [6] For an example of the flat analysis of small clauses, see Culicover and Jackendoff (2005:131ff.).
- [7] For examples of analyses that take small clauses to be constituents, see for instance Chomsky (1986:20), Ouhalla (1994:109ff.), Culicover (1997:47f.), Haegeman and Guérón (1999:108ff.).
- [8] Concerning small clauses in subject position, see Culicover (1997:48), Haegeman and Guérón (1999:109).
- [9] Haegeman and Guérón (1999:109) point out that *with* can take a small clause complement.

Literature

- Borsley, R. 1991. Syntactic theory: A unified approach. London: Edward Arnold.
- Chomsky, N. 1981. Lectures on government and binding: The Pisa lectures. Berlin:Mouton de Gruyter.
- Chomsky, N. 1986. Barriers. Cambridge, MA: MIT Press.
- Culicover, P. 1997. Principles and parameters: An introduction to syntactic theory. Oxford, UK: Oxford University Press.
- Culicover, P. and R. Jackendoff. 2005. Simpler syntax. Oxford, UK: Oxford University Press.
- Haegeman, L. 1994. Introduction to government and binding theory, 2nd edition. Oxford, UK: Blackwell.
- Haegeman, L. and J. Guérón 1999. English grammar: A generative perspective. Oxford, UK: Blackwell Publishers.
- Matthews, P. 2007. Syntactic relations: A critical survey. Cambridge, UK: Cambridge University Press.
- Ouhalla, J. 1994. Transformational grammar: From rules to principles and parameters. London: Edward Arnold.
- Wardbaugh, R. 2003. Understanding English grammar, second edition. Malden, MA: Blackwell Publishing.

Stripping (linguistics)

Stripping (= bare argument ellipsis) is an ellipsis mechanism that elides everything from a clause except one constituent.^[1] It occurs exclusively in the non-initial conjuncts of coordinate structures. One prominent analysis of stripping sees it as a particular manifestation of the gapping mechanism, the difference between stripping and gapping lying merely with the number of remnants left behind by ellipsis: gapping leaves two (and sometimes more) constituents behind, whereas stripping leaves just one.^[2] Stripping occurs in many languages and is a frequent occurrence in colloquial conversation. As with many other ellipsis mechanisms, stripping challenges theories of syntax in part because the elided material often fails to qualify as a constituent in a straightforward manner.

Examples

The following examples illustrate standard cases of stripping. The elided material is indicated using smaller font size and subscripts.

Susan works at night, and Bill _{works at night} too.

Why did Sam call, and _{why did} Bill _{call} too?

Should I do it, or _{should} you _{do it}?

Chris said yesterday that he knew it, and _{he said} today _{that he knew it} too.

She asked the kids to stay, and _{she asked} the adults to stay too.

Note the appearance of the additive particle *too* in these examples. Stripping is often marked by *also*, *as well*, or *too*. Notice also the appearance of the coordinator *and* or *or*. The coordinator's appearance marks coordination. Each time, the elided material appears in the non-initial conjunct of the coordinate structure. A trait that stripping shares with gapping is illustrated with the following examples:

Should you call me, or _{should} me _{call} you. - Object pronoun of gapping functioning as subject

You are hungry, and me _{am hungry} too. - Object pronoun of stripping functioning as subject

She did it first, and him _{did it} second. - Object pronoun of gapping functioning as subject

She did it, and him _{did it} too. - Object pronoun of stripping functioning as subject

Like gapping, stripping allows the object form of the pronoun (= disjunctive pronoun) to function as the subject in the stripped clause.^[3] A second trait that stripping shares with gapping is shown with the following examples:

I was helpful this time, and you _{were helpful} last time. - Elided finite verb of gapping does not match antecedent verb.

I was helpful this time, and you _{were helpful this time} too. - Elided finite verb of stripping does not match antecedent verb.

He laughs too much, and you _{laugh} too little. - Elided finite verb of gapping does not match antecedent verb.

He laughs too much, and you _{laugh too much} too. - Elided finite verb of stripping does not match antecedent verb.

Like the gapped verbs, the stripped verbs in these examples do not match their antecedents in the area of verbal inflection.^[4] The fact that gapping and stripping are alike in these respects does indeed suggest that they are one and the same ellipsis mechanism.

Not-stripping

A particularly frequent type of stripping is *not*-stripping. The remnant in the stripped clause is introduced by *not* and the entire sentence functions to correct a mistaken assumption in the preceding context. More often than not, the coordinator is omitted:

- Sam solved the problem, not Bill _{solved the problem}. - *not*-stripping
- She smiled at me first, _{she smiled} not at you _{first}. - *not*-stripping
- Susan gave me some advice, _{Susan gave} not you _{advice}. - *not*-stripping
- He gave it to Smeagol for his birthday, _{he gave it} not to Deagol _{for his birthday}. - *not*-stripping

A noteworthy aspect of *not*-stripping is the position of *not*. In the full versions of these sentences (i.e. without stripping), *not* cannot appear in the positions shown. When stripping occurs, the *not* must immediately precede the one remnant. Given this observation, one might conclude that stripping does not really involve ellipsis at all, but rather something else is going on. This conclusion is undermined by further facts. One of these facts is that the behavior of *not* is the same in cases of *not*-gapping:^[5]

- She asked him out, not him _{asked her} _{out}. - *not*-gapping
- Sam should read Susan's paper, not Susan _{should read} Sam's. -*not*-gapping

These examples of *not*-gapping suggest two things: that *not*-stripping, and thus stripping in general, is indeed a particular manifestation of the gapping mechanism and that *not*-stripping is also indeed ellipsis, since the ellipsis analysis of *not*-gapping is the only plausible analysis. The aspect of *not*-stripping that remains mysterious concerns the obligatory position of *not* before the (first) remnant. One can note in this area that the gapping/stripping mechanism treats the negation in a special way in general. A negation cannot be included in the gapped/stripped material:^[6]

- *Fred did not ask Susan out, and Susan _{did not ask} Fred _{out}. - Failed attempt to include the negation *not* in the gapped material
- *Fred did not ask Susan out, and Bill _{did not ask Susan out} too. - Failed attempt to include the negation *not* in the stripped material

Stripping or not?

Like with gapping, delimiting instances of stripping from "normal" instances of coordination, i.e. from instances of coordination that do not involve ellipsis, can be difficult, as the following competing analyses illustrate:

- a. Susan watches [Fox news] and [the weather channel]. - Non-stripping analysis
- b. [Susan watches Fox news], and [_{she watches} the weather channel too]. - Stripping analysis
- a. I like to read [Kafka] and [Schiller]. - Non-stripping analysis
- b. [I like to read Kafka], and [_{I like to read} Schiller as well]. - Stripping analysis
- a. Fred has stopped [complaining] and [obstructing our efforts]. - Non-stripping analysis
- b. [Fred has started complaining], and [_{Fred has started} obstructing our efforts too]. - Stripping analysis

The brackets mark the extent of the coordinate structures. The distinction between the stripping and non-stripping analyses can be slight. Given a single intonation curve, the non-gapping analysis seems better, but if a pause occurs immediately before the coordinator (as marked by the comma) and an additive particle appears (e.g. *too*, *also*, *as well*), then the stripping analysis becomes more plausible.^[7]

The distinction between the two analyses explains the ambiguity in the sentence *Do you want coffee or tea?*:

- a. Do you want [coffee] or [tea]? - Non-stripping analysis; answer: Yes/No.
- b. [Do you want coffee], or [_{do you want} tea]? - Stripping analysis; answer: Coffee/Tea.

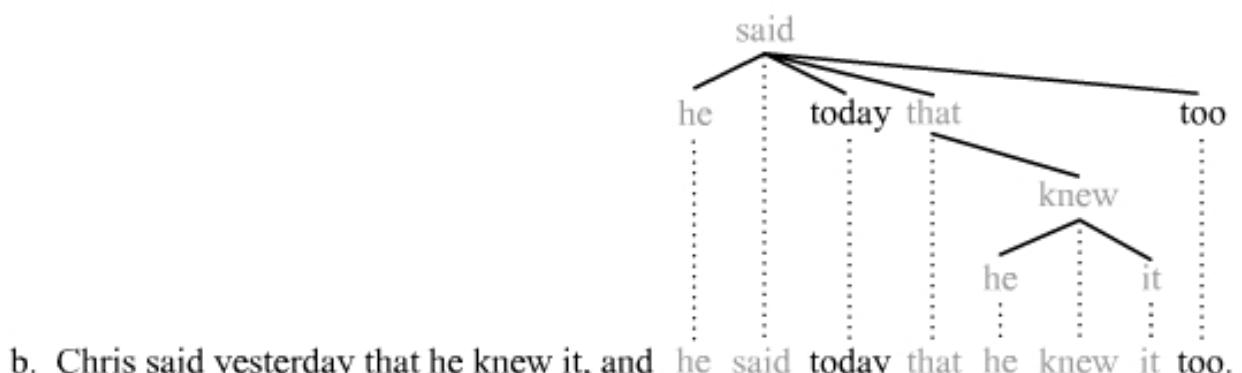
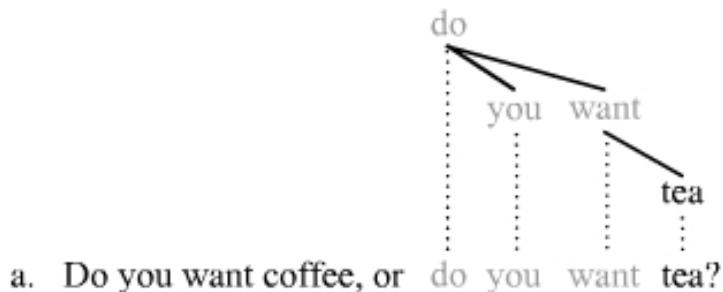
Theoretical analyses

As with most ellipsis mechanisms, theoretical accounts of stripping face significant challenges. The greatest challenge is to come up with a coherent explanation of the stripped material. The insight that the remnant of stripping is always a constituent is straightforward. The difficulties arise when one attempts to discern which individual constituents can and cannot be a remnant. For instance, why are the remnants in the following cases disallowed?:

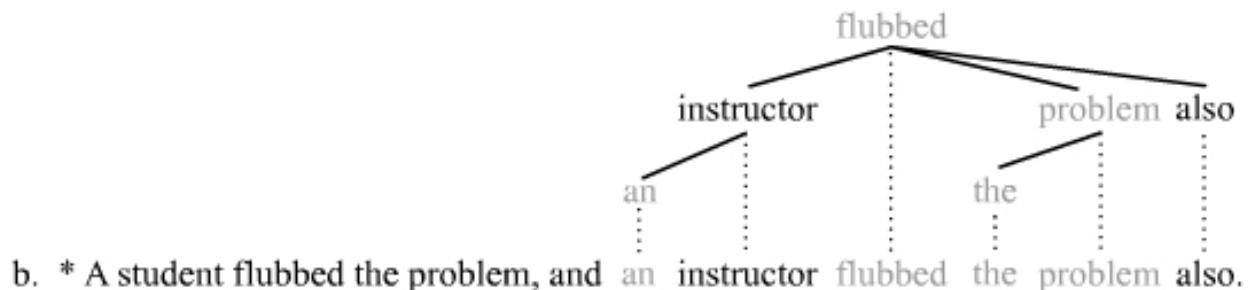
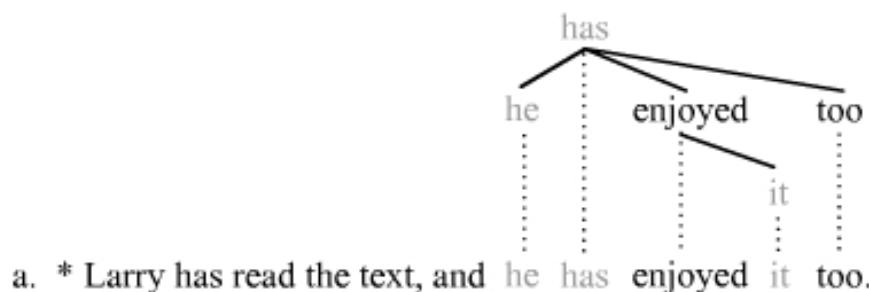
- *Larry has read the text, and _{he has} enjoyed _{it}. - Failed attempt at stripping
- *Susan promised to read the page, and _{she promised to} copy _{it}. - Failed attempt at stripping
- *An instructor flubbed the problem, and _{a student} _{flubbed the problem} too. - Failed attempt at stripping

The remnants in these examples are constituents in constituency grammars (= phrase structure grammars), since every individual word is by definition a constituent in constituency grammars. These words are not, however, constituents in dependency grammars, since they dominate other (elided) material. The constituency vs. dependency distinction is therefore one avenue that one might pursue to locate an explanation of such cases. If one chooses a constituency-based grammar, however, then the explanation might draw attention to the distinction between projection levels (see X-bar theory): the remnant must qualify as a maximal projection (as opposed to an intermediate or minimal projection).

Another avenue to explore for an explanation is to focus on the elided material (as opposed to on the remnant). In most cases, the elided material cannot be characterized as a constituent. It can, however, be characterized as a catena.^[8] The following dependency grammar trees illustrate this explanation in terms of catenae. The elided material is indicated with a lighter font shade:



The elided word combinations form chains (=catenae), that is, the elided words are linked together by dependencies in the vertical dimension. The word combinations *do you want* and *he said...that he knew it* are catenae. These two examples must be compared to the following two:



These sentences are bad, and one can explain their badness by acknowledging the status of the elided words as non-catena; the elided words are not entirely linked together in the vertical dimension. The object pronoun *it* in the a-tree and the indefinite article *an* in the b-tree are not linked directly to the other elided material. This observation may explain why these attempts at stripping fail. The elided material should qualify as a catena.

Notes

- [1] Hankamer and Sag (1976:409) may have introduced the term *stripping*. They write that stripping is "a rule that deletes everything in a clause under identity with corresponding parts of a preceding clause, except for one constituent (and sometimes a clause-initial adverb or negative)".
- [2] See Williams (1977:112 fn. 6) and Lobeck (1995:28) in this regard.
- [3] Concerning object pronouns functioning as subjects, see Hudson (1989:63), Zoerner and Agbayani (2000:550), and Osborne (2006:330f.).
- [4] Concerning this mismatch in verbal inflection, see Hudson (1989:62), Zoerner and Agbayani (2000:551) and Osborne (2006:321ff.).
- [5] See Hudson (1976:545) for similar examples of *not*-gapping.
- [6] See Hudson (1976:545) concerning this trait of gapping and stripping.
- [7] See Zoerner and Agbayani (2000:551f.), Carlson (2002:54ff.), Osborne (2006:332).
- [8] See O'Grady (1998) and Osborne et. al. (2013) for discussions of the catena unit.
- [9] Trees like those produced here can be found in many dependency grammars. See for instance Groß and Osborne (2009).

Literature

- Carlson K. 2002. Parallelism and prosody in the processing of ellipsis sentences. New York: Routledge.
- Groß, T. and T. Osborne 2009. Toward a practical dependency grammar theory of discontinuities. SKY Journal of Linguistics 22, 43-90.
- Hankamer, J. and I. Sag 1976. Deep and surface anaphora. Linguistic Inquiry 7, 391-426.
- Hudson, R. 1976. Conjunction reduction, gapping, and right-node raising. Language 52, 535-562.
- Hudson, R. 1989. Gapping and grammatical relations. Linguistics 25, 57-94.
- Lobeck A. 1995. Ellipsis: Functional heads, licensing, and identification. New York: Oxford University Press.
- O'Grady, W. 1998. The syntax of idioms. Natural Language and Linguistic Theory 16, 79-312.
- Osborne, T. 2006. Gapping vs. non-gapping coordination. Linguistische Berichte 207, 2006.
- Osborne, T., M. Putnam, and T. Groß 2013. Catenae: Introducing a novel unit of syntactic analysis. Syntax 16, in press.
- Williams, E. 1977. Discourse and logical form. Linguistic Inquiry 9, 101-139.
- Zoerner E. and B. Agbayani 2000. Unifying left peripheral deletion, gapping, and pseudogapping. The 36th meeting of the Chicago Linguistics Society, 549-561.

Subcategorization

In linguistics, **subcategorization** denotes the ability/necessity for lexical items (usually verbs) to require/allow the presence and types of the syntactic arguments with which they co-occur.^[1] The notion of subcategorization is similar to the notion of valency,^[2] although the two concepts (subcategorization and valency) stem from different traditions in the study of syntax and grammar.

Examples

The following sentences are employed to illustrate the concept of subcategorization:

Luke worked.

Indiana Jones ate chilled monkey brain.

Tom waited for us.

The verb *worked/work* is intransitive and thus subcategorizes for a single argument (here *Luke*), which is the subject; therefore its subcategorization frame contains just a subject argument. The verb *ate/eat* is transitive, so it subcategorizes for two arguments (here *Indiana Jones* and *chilled monkey brain*), a subject and an object, which means that its subcategorization frame contains two arguments. And the verb *waited/wait* subcategorizes for two arguments as well, although the second of these is a prepositional argument associated with the preposition *for*. In this regard, we see that the subcategorization frame of verbs can contain specific words. Subcategorization frames are sometimes schematized in the following manner:

work [NP __]

eat [NP __ NP]

wait [NP __ *for*]

These examples demonstrate that subcategorization frames are specifications of the number and types of arguments of a word (usually a verb), and they are believed to be listed as lexical information (that is, they are thought of as part of a speaker's knowledge of the word in the vocabulary of the language). Dozens of distinct subcategorization frames are needed to accommodate the full combinatory potential of the verbs of any given language. Finally, subcategorization frames are associated most closely with verbs, although the concept can also be applied to other word categories.

Subcategorization frames are essential parts of a number of phrase structure grammars, e.g. Head-Driven Phrase Structure Grammar, Lexical Functional Grammar, and Minimalism.

The status of subjects

The subcategorization notion is similar to the notion of valency, although subcategorization originates with phrase structure grammars in the Chomskyan tradition,^[3] whereas valency originates with Lucien Tesnière of the dependency grammar tradition.^[4] The primary difference between the two concepts concerns the status of the subject. As it was originally conceived of, subcategorization did not include the subject, that is, a verb subcategorized for its complement(s) (=object and oblique arguments) but not for its subject.^[5] Many modern theories now include the subject in the subcategorization frame, however.^[6] Valency, in contrast, included the subject from the start.^[7] In this regard, subcategorization is moving in the direction of valency, since many phrase structure grammars now see verbs subcategorizing for their subject as well as for their object(s).

Notes

- [1] Chomsky (1965) is a prominent early source on the concept of subcategorization.
- [2] The valency concept in linguistics is originally from Tesnière (1959).
- [3] See Chomsky (1965).
- [4] See Tesnière (1959).
- [5] For examples of theories that exclude the subject from subcategorization frames, see Burton-Roberts (1886:73ff.), Horrocks (1986:34f.), Haegeman (1994:40-42, 45 note 10), Bennet (1995:43ff.), Green and Morgan (1996:68 note 6), Fromkin et al. (2000:230).
- [6] For examples of theories that include the subject in the subcategorization frame, see Kaplan and Bresnan (1982:210-212), Cattell (1984:28ff.), Pollard and Sag (1994:23), Culicover (1997:17), Carnie (2007:50ff.).
- [7] Tesnière (1959/69:109, chapter 51, paragraph 13) emphasized that from a syntactic point of view, the subject is a complement just like the object.

References

- Bennet, P. 1995. A course in Generalized Phrase Structure Grammar. London: UCL Press Limited.
- Burton-Roberts, 1986. Analysing sentences: An introduction to English grammar. London: Longman.
- Cattell, R. 1984. Composite predicates in English. Syntax and Semantics 17. Sydney: Academic Press.
- Chomsky, N. 1965. Aspects of the Theory of Syntax. Cambridge, MA: MIT Press.
- Fromkin, V. et al. 2000. Linguistics: An introduction to linguistic theory. Malden, MA: Blackwell Publishers.
- Green, G. and J. Morgan. 1996. Practical guid to syntactic analysis. Standford, CA: CSLI Publications.
- Haegeman, L. 1994. Introduction to government and binding theory, 2nd edition. Oxford, UK: Blackwell.
- Horrocks, G. 1986. Generative Grammar. Longman:London.
- Kaplan, R. and J. Bresnan. 1982. Lexical Functional Grammar: A formal system of grammatical representation. In J. Bresnan (ed.), *The mental representation of grammatical relations*, 173-281. Cambridge, MA: MIT Press.
- Pollard, C. and I. Sag. 1994. Head-Driven Phrase Structure Grammar. Chicago: The University Press of Chicago.
- Tesnière, L. 1959. *Éléments de syntaxe structurale*. Paris: Klincksieck.
- Tesnière, L. 1969. *Éléments de syntaxe structurale*, 2nd edition. Paris: Klincksieck.

Subject–auxiliary inversion

Subject–auxiliary inversion (also called **subject–operator inversion**) is a frequently occurring type of inversion in English, whereby a finite auxiliary verb – taken here to include finite forms of the copula *be* – appears to "invert" (change places) with the subject.^[1] The word order is therefore Aux-S (auxiliary–subject), which is the opposite of the canonical SV (subject–verb) order of declarative clauses in English. The most frequent use of subject–auxiliary inversion in English is in the formation of questions, although it also has other uses, including the formation of condition clauses, and in the syntax of sentences beginning with negative expressions (negative inversion).

In certain types of English sentences, inversion is also possible with verbs other than auxiliaries; these are described in the article on subject–verb inversion.

Overview

Subject–auxiliary inversion involves placing the subject after a finite auxiliary verb,^[2] rather than before it as is the case in typical declarative sentences (the canonical word order of English being subject–verb–object). The auxiliary verbs which may participate in such inversion (e.g. *is*, *can*, *have*, *will*, etc.) are described at English auxiliaries and contractions. Note that forms of the verb *be* are included regardless of whether or not they function as auxiliaries in the sense of governing another verb form. (For exceptions to this restriction, see Inversion with other types of verb below.)

A typical example of subject–auxiliary inversion is given below.

- a. **Sam has** read the paper. - Statement
- b. **Has Sam** read the paper? - Yes–no question formed using inversion

Here the subject is *Sam*, and the verb *has* is an auxiliary. In the question, these two elements change places (invert). If the sentence does not have an auxiliary verb, this type of simple inversion is not possible. Instead, an auxiliary must be introduced into the sentence in order to allow inversion.^[3]

- a. **Sam enjoys** the paper. - Statement with the non-auxiliary verb *enjoys*
- b. ***Enjoys Sam** the paper? - This is incorrect; simple inversion not possible with this type of verb
- c. **Does Sam** enjoy the paper? - The sentence formulated with the auxiliary *does* now allows inversion

For details of the use of *do*, *did* and *does* for this and similar purposes, see *do*-support. For exceptions to the principle that the inverted verb must be an auxiliary, see Inversion involving non-auxiliary verbs below. It is also possible for the subject to invert with a negative contraction (*can't*, *isn't*, etc.). For example:

- a. **He isn't** nice.
- b. **Isn't he** nice? - The subject *he* inverts with the negated auxiliary contraction *isn't*

Compare this with the uncontracted form *Is he not nice?* (and not: **Is not he nice?*).

Uses of subject–auxiliary inversion

The main uses of subject–auxiliary inversion in English are described in the following sections, although other types can occasionally be found.^[4] It should be noted that most of these uses of inversion are restricted to main clauses; they are not found in subordinate clauses. However other types (such as inversion in condition clauses) are specific to subordinate clauses.

In questions

The most common use of subject–auxiliary inversion in English is in question formation. It appears in yes–no questions:

- a. **Sam has** read the paper. - Statement
- b. **Has Sam** read the paper? - Question

and also in questions introduced by other interrogative words (*wh*-questions):

- a. **Sam is** reading the paper. - Statement
- b. What **is Sam** reading? - Question introduced by interrogative *what*

Inversion does not occur, however, when the interrogative word is the subject or is contained in the subject. In this case the subject remains before the verb (it can be said that *wh*-fronting takes precedence over subject–auxiliary inversion):

- a. **Somebody has** read the paper. - Statement
- b. **Who has** read the paper? - The subject is the interrogative *who*; no inversion
- c. **Which fool has** read the paper? - The subject contains the interrogative *which*; no inversion

Inversion also does not normally occur in indirect questions. For example:

- a. "What **did Sam** eat?", Cathy wonders. - Inversion in a direct question
- b. *Cathy wonders what **did Sam** eat. - Incorrect; inversion should not be used in an indirect question
- c. Cathy wonders what **Sam ate**. - Correct; indirect question formed without inversion

Similarly:

- a. We asked whether **Tom had** left. - Correct; indirect question without inversion
- b. *We asked whether **had Tom** left. - Incorrect

Negative inversion

Another use of subject–auxiliary inversion is in sentences which begin with certain types of expressions which contain a negation or have negative force. For example

- a. **Jessica will** say that at no time.
- b. At no time **will Jessica** say that. - Subject-auxiliary inversion with a fronted negative expression.

This is described in detail at negative inversion.

Inversion in condition clauses

Subject–auxiliary inversion can be used in certain types of subordinate clause expressing a condition:

- a. If **the general had** not ordered the advance,...
- b. **Had the general** not ordered the advance,... - Subject-auxiliary inversion of a counterfactual conditional clause

Note that when the condition is expressed using inversion, the conjunction *if* is omitted. More possibilities are given at English subjunctive: Inversion in condition clauses.

Other cases

Subject–auxiliary inversion is used after the anaphoric particle *so*, mainly in elliptical sentences. The same frequently occurs in elliptical clauses beginning with *as*.

- a. Fred fell asleep, and Jim fell asleep too.
- b. Fred fell asleep, and so **did Jim**.
- c. Fred fell asleep, as **did Jim**.

Inversion also occurs following an expression beginning with *so* or *such*, as in:

- a. We felt so tired (such tiredness) that we fell asleep.
- b. So tired (Such tiredness) **did we feel** that we fell asleep.

Subject–auxiliary inversion may optionally be used in elliptical clauses introduced by the particle of comparison *than*:

- a. Sally knows more languages than **her father does**.
- b. Sally knows more languages than **does her father**. - Optional inversion, with no change in meaning

Inversion with other types of verb

There are certain sentence patterns in English in which subject–verb inversion takes place where the verb is not restricted to an auxiliary verb. Here the subject may invert with certain main verbs, e.g. *After the pleasure comes the pain*, or with a chain of verbs, e.g. *In the box will be a bottle*. These are described in the article on subject–verb inversion. Further, inversion was not limited to auxiliaries in older forms of English. Examples of non-auxiliary verbs being used in typical subject–auxiliary inversion patterns may be found in older texts or in English written in an archaic style:

Know you what it is to be a child? (Francis Thompson)

The verb *have*, when used to denote broadly defined possession (and hence not as an auxiliary), is still sometimes used in this way in modern standard English:

Have you any idea what this would cost?

Inversion as a remnant of V2 word order

In some cases of subject–auxiliary inversion, such as negative inversion, the effect is to put the finite auxiliary verb into second position in the sentence. In these cases, inversion in English results in word order that is like the V2 word order of other Germanic languages (Danish, Dutch, Frisian, Icelandic, German, Norwegian, Swedish, Yiddish, etc.). These instances of inversion are remnants of the V2 pattern that formerly existed in English as it still does in its related languages. Old English followed a consistent V2 word order.

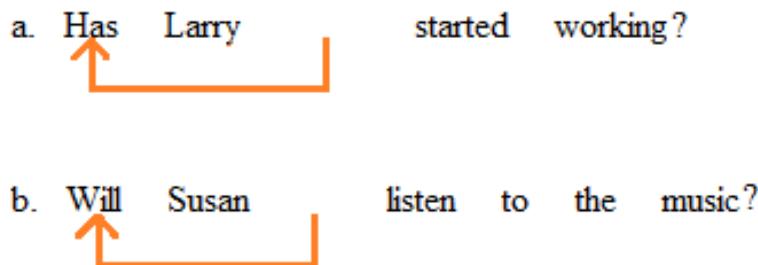
Structural analyses

The structural analysis of subject-auxiliary inversion, and of inversion in general, challenges many theories of sentence structure, in particular, those theories based on phrase structure. The challenge stems from the fact that these theories posit the existence of a finite verb phrase constituent. The standard declarative sentence is divided into two immediate constituents, a subject NP and a predicate VP. When subject-auxiliary inversion occurs, it appears to violate the integrity of the predicate.^[5] The canonical predicate is underlined in the following sentences:

- a. Larry has started working. - Traditional VP predicate is a continuous combination of words.
- b. Has Larry started working? - Traditional VP predicate is no longer continuous.
- a. Susan will listen to the music. - Traditional VP predicate is a continuous combination of words.
- b. Will Susan listen to the music? - Traditional VP predicate is no longer continuous.

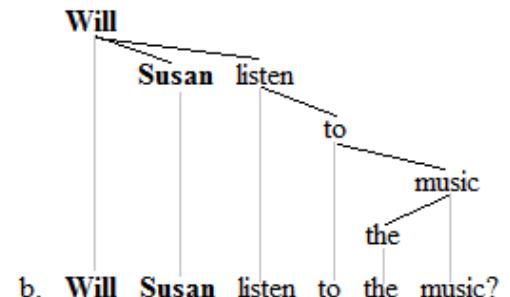
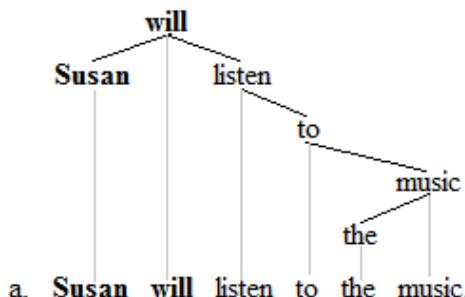
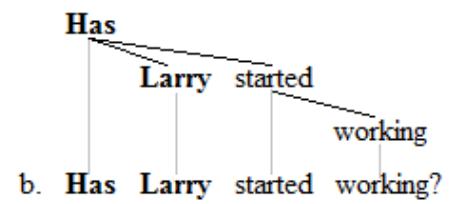
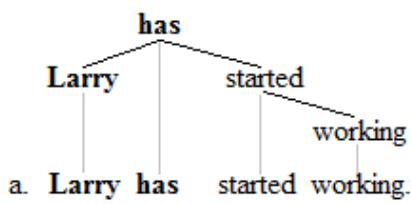
The finite VP predicate is a continuous sequence of words in the a-sentences. In the b-sentences in contrast, subject-auxiliary inversion breaks up the predicate. What this means is that in one sense or another, a discontinuity is present in the structure.

One widespread means of addressing this difficulty is to posit movement. The underlying word order of the b-sentences is deemed to be that shown in the a-sentences. To arrive at the inversion word order in the b-sentences, movement is assumed.^[6] The finite verb moves out of its base position after the subject into a derived position in front of the subject.



By moving out of its base position and into the derived position at the front of the clause, the integrity of the predicate VP constituent can be maintained, since it is present at an underlying level of sentence structure.

An alternative analysis does not acknowledge the binary division of the clause into subject NP and predicate VP, but rather it places the finite verb as the root of the entire sentence and views the subject as switching to the other side of the finite verb. No discontinuity is perceived. Dependency grammars are likely to pursue this sort of analysis.^[7] The following dependency trees illustrate how this alternative account can be understood:



These trees show the finite verb as the root of all sentence structure. The hierarchy of words remains the same across the a- and b-trees. If movement occurs at all, it occurs rightward (not leftward); the subject moves rightward to appear as a post-dependent of its head, which is the finite auxiliary verb.

Notes

- [1] For accounts and discussion of subject-auxiliary inversion, see for instance Quirk and Greenbaum (1979:63), Radford (1988:32f.), Downing and Locke (1992:22f.), Ouhalla (1994:62ff.).
- [2] Concerning the obligatory status of the verb that undergoes inversion as an auxiliary, see Radford (1988:149f.).
- [3] Concerning *do*-support, see for instance Bach (1974:94), Greenbaum and Quirk (1990:232), Ouhalla (1994:62ff.).
- [4] Concerning the environments illustrated here in which subject-auxiliary inversion can or must occur, they are illustrated and discussed in numerous places in the literature, e.g. Bach (1974:93), Quirk et al. (1979:378f.), Greenbaum and Quirk (1990:232, 410f.), Downing and Locke (1992:22f., 230f.).
- [5] Concerning the difficulty that inversion generates for theories of syntax that build on the binary subject-predicate division of the clause, see Lockwood (2002:52).
- [6] For examples of the movement-type analysis of subject-auxiliary inversion, see for instance Ouhalla (1994:62ff.), Culicover (1997:337f.), Adger (2003:294), Radford (1988: 411ff., 2004: 123ff.).
- [7] Concerning the dependency grammar analysis of inversion, see Groß and Osborne (2009: 64-66).

References

- Adger, D. 2003. Core syntax: A minimalist approach. Oxford, UK: Oxford University Press.
- Bach, E. 1974. Syntactic theory. New York: Holt, Rinehart and Winston, Inc.
- Culicover, P. 1997. Principles and parameters: An introduction to syntactic theory. Oxford, UK: Oxford University Press.
- Downing, A. and Locke, P. 1992. English grammar: A university course, second edition. London: Routledge.
- Greenbaum, S. and R. Quirk. 1990. A student's grammar of the English language. Harlow, Essex, England: Longman.
- Groß, T. and T. Osborne 2009. Toward a practical dependency grammar theory of discontinuities. SKY Journal of Linguistics 22, 43-90.
- Lockwood, D. 2002. Syntactic analysis and description: A constructional approach. London: continuum.
- Ouhalla, J. 1994. Transformational grammar: From rules to principles and parameters. London: Edward Arnold.
- Quirk, R. S. Greenbaum, G. Leech, and J. Svartvik. 1979. A grammar of contemporary English. London: Longman.
- Radford, A. 1988. Transformational Grammar: A first course. Cambridge, UK: Cambridge University Press.

- Radford, A. 2004. English syntax: An introduction. Cambridge University Press.

Subject–verb inversion in English

Subject–verb inversion in English is a type of inversion where the subject and verb (or chain of verbs, verb catena) switch their canonical order of appearance, so that the subject follows the verb(s), e.g. *A lamp stands beside the bed* → *Beside the bed stands a lamp*.

A distinction is made here between *subject–verb inversion* and *subject–auxiliary inversion*. In the most frequent cases of inversion in English, such as in question formation, the verb with which the subject inverts is required to be an auxiliary verb (one of a restricted set of verbs including *is*, *can*, *does*, etc.) These cases are dealt with in the article *subject–auxiliary inversion*. What will be dealt with under the present heading is the remaining cases of inversion where the verb is *not* required to be an auxiliary – and if there is an auxiliary present, then the subject inverts with the entire catena of verbs that it introduces.

Like most types of inversion, subject-verb inversion is a phenomenon that challenges theories of sentence structure. In particular, the traditional subject-predicate division of the clause ($S \rightarrow NP\ VP$) is difficult to maintain in light of instances of subject-verb inversion such as *Into the room will come a unicorn*. Such sentences are more consistent with a theory that takes sentence structure to be relatively flat, lacking a finite verb phrase constituent, i.e. lacking the VP of $S \rightarrow NP\ VP$.

Overview

The following sentences illustrate subject-verb inversion. They compare canonical order with the non-standard inversion order, and they also point to the fact that subject-verb inversion is impossible if the subject is a weak (non-stressed) definite pronoun:

- a. **Jim sat** under the tree.
- b. Under the tree **sat Jim**. - Subject-verb inversion
- c. *Under the tree **sat he**. - Subject-verb inversion impossible with weak definite subject pronoun

- a. **The dog came** down the stairs.
- b. Down the stairs **came the dog**. - Subject-verb inversion
- c. *Down the stairs **came it**. - Subject-verb inversion impossible with weak definite subject pronoun

- a. **Somebody's kids** are in big trouble.
- b. In big trouble **are somebody's kids**. - Subject-verb inversion with the copula
- c. *In big trouble **are they**. - Subject-verb inversion impossible with weak definite subject pronoun

- a. **Bill said** "I am hungry".
- b. "I am hungry", **said Bill**. - Subject-verb inversion
- c. "I am hungry", **said he**. - Subject-verb inversion impossible with weak definite subject pronoun

Subject-verb inversion has occurred in the b-sentences to emphasize the post-verb subject. The emphasis may occur, for instance, to establish a contrast of the subject with another entity in the discourse context.

Types of subject-verb inversion

A number of types of subject-verb inversion can be acknowledged based upon the nature of phrase that precedes the verb and the nature of the verb(s) involved. The following subsections enumerate four distinct types of subject-verb inversion: locative inversion, directive inversion, copular inversion, and quotative inversion.

Locative inversion

Locative inversion also occurs in many languages, including Brazilian Portuguese, Mandarin Chinese, Otjiherero, Chichewa, and a number of Germanic and Bantu languages. An adjunct phrase is switched from its default postverbal position to a position preceding the verb, which causes the subject and the finite verb to invert. For example:^[1]

- a. **A lamp lay** in the corner.
- b. In the corner **lay a lamp**. - Locative inversion
- c. *In the corner **lay it**. - Locative inversion impossible with a weak pronoun subject
- a. **Only Larry sleeps** under that tree.
- b. Under that tree **sleeps only Larry**. - Locative inversion
- c. *Under that tree **sleeps he**. - Locative inversion impossible with a weak pronoun subject

The fronted expression that evokes locative inversion is an adjunct of location. Locative inversion in modern English is a vestige of the V2 order associated with earlier stages of the language.

Directive inversion

Directive inversion is closely related to locative inversion insofar as the pre-verb expression denotes a location, the only difference being that the verb is now a verb of movement. Typical verbs that allow directive inversion in English are *come, go, run, etc.*^[2]

- a. **Two students came** into the room.
- b. Into the room **came two students**. - Directive inversion
- c. *Into the room **came they**. - Directive inversion impossible with a weak pronoun subject
- a. **The squirrel fell** out of the tree.
- b. Out of the tree **fell the squirrel**. - Directive inversion
- c. *Out of the tree **fell it**. - Directive inversion impossible with a weak pronoun subject

The fronted expression that evokes directive inversion is a directive expression; it helps express movement toward a destination. The following sentence may also be an instance of directive inversion, although the fronted expression expresses time rather than direction:

- a. **The toasts came** after the speeches.
- b. After the speeches **came the toasts**. - Inversion after a time expression

Like locative inversion, directive inversion is undoubtedly a vestige of the V2 word order associated with earlier stages of the language.

Copular inversion

Copular inversion occurs when a predicative expression switches positions with the subject in a clause where the copula *be* is the finite verb. The result of this inversion is known as an inverse copular construction, e.g.^[3]

- a. **The weather is** worrisome.
- b. **Worrisome is the weather.** - Copular inversion
- c. ***Worrisome is it.** - Copular inversion impossible with weak pronoun subject
- a. **Nothing is** before the game.
- b. **Before the game is nothing.** - Copular inversion
- c. ***Before the game is that.** - Copular inversion impossible with weak pronoun subject

This type of inversion occurs with a finite form of the copula *be*. The predicative expression that comes before the copula is (part of) the predicate, and can be an adjective, a prepositional phrase, noun phrase, etc. If the predicative expression is a noun phrase, there can be confusion concerning the subject:

- a. **Bill is** the plumber.
- b. The plumber **is Bill.** - Copular inversion
- c. *The plumber **is he.** - Copular inversion impossible with weak pronoun subject

Since English predominantly has SV order, it will tend to view whichever noun phrase immediately precedes the finite verb as the subject. Thus in the second sentence here (sentence b), *The plumber* is taken as the subject, and *Bill* as the predicate. But if one acknowledges that copular inversion has occurred, one can argue that *Bill* is the subject, and *The plumber* the predicate. This confusion has led to focused study of these types of copular clauses.^[4] Where there is a difference in number, the verb tends to agree with the noun phrase that precedes it:

- a. **Jack and Jill are** the problem.
- b. The problem **is Jack and Jill.** - On inversion, the verb agrees with the apparent predicate

Quotation inversion

In literature, subject-verb inversion occurs with verbs of speaking. The speech being reported is produced in its direct form, usually with quotation marks:^[5]

- a. "We are going to win", **Bill said.**
- b. "We are going to win", **said Bill.** - Quotation inversion
- c. ?"We are going to win", **said he.** - Quotation inversion less likely with weak subject pronoun
- a. "What was the problem?", **Larry asked.**
- b. "What was the problem?", **asked Larry.** - Quotation inversion
- c. ?"What was the problem?", **asked he.** - Quotation inversion less likely with weak subject pronoun

This sort of inversion is absent from everyday speech. It occurs almost exclusively in literary contexts.

Multiple verbs

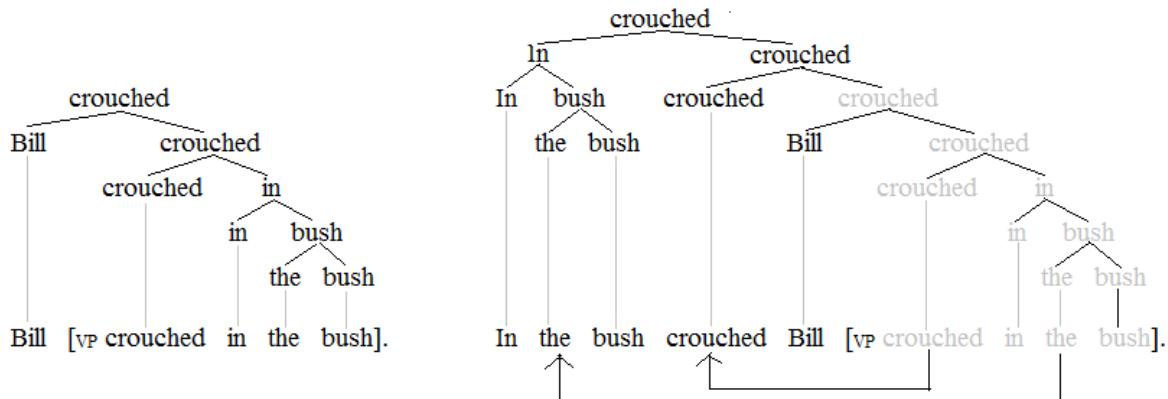
The most intriguing cases of subject-verb inversion are those that involve more than one verb. The subject follows all of the verbs, the finite as well as non-finite ones, e.g.

- a. **Remnants of marijuana consumption have been found** under her bed twice.
- b. Under her bed **have been found remnants of marijuana consumption** twice.
- c. Under her bed **have been found twice remnants of marijuana consumption**.
- d. **Has anything been found** under her bed?

Further, the flexibility across sentence b and sentence c demonstrates that there is some freedom of word order in the post-verb domain. This freedom is consistent with an analysis in terms of shifting, where heavier constituents tend to follow lighter ones.

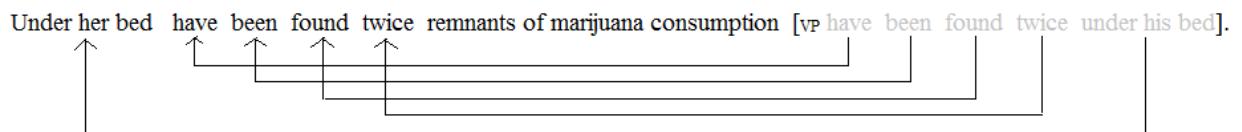
Structural analysis

Subject-verb inversion challenges the traditional binary division of the clause into a subject NP and a predicate VP, regardless of the form that this division takes on. The division can be maintained only at the cost of major stipulation. For instance, one has to assume movement or copying on a massive scale. The basic difficulty is suggested by the following trees representing the phrase structure of the sentences:

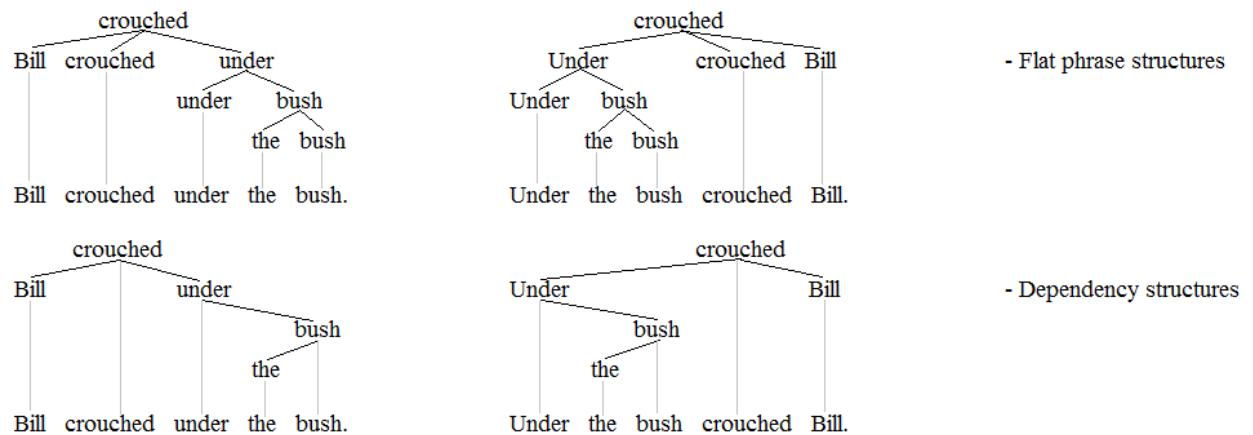


The convention is used here where the words themselves appear as the labels on the nodes in the trees. The tree on the left shows the canonical analysis of the clause, whereby the sentence is divided into two immediate constituents, the subject *Bill* and the finite VP *crouched in the bush*. To maintain the integrity of the finite VP constituent *crouched in the bush*, one can assume a rearranging of the constituents in the second sentence on the right, whereby both *crouched* and *in the bush* move out of the VP and up the structure. The account suggested with the second tree is the sort of analysis that one is likely to find in Government and Binding Theory or the Minimalist Program. It is a phrase structure account that relies on unseen movement/copying mechanisms below the surface.

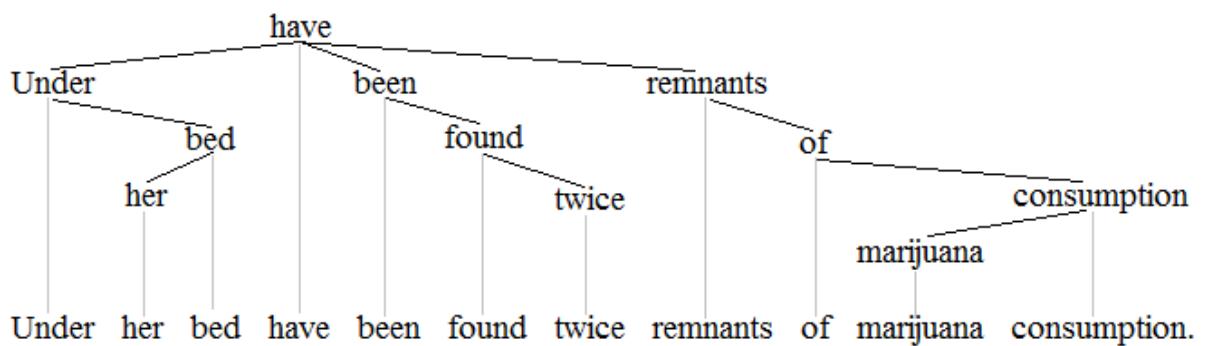
The unseen mechanisms must perform an even greater job for the marijuana-example above. That sentence (sentence c in the previous section) would necessitate at least five instances of movement/copying in order to maintain the presence of an underlying finite VP constituent.



An alternative analysis of subject-verb inversion rejects the existence of the finite VP constituent. Due to the absence of this constituent, the structure is flatter, which simplifies the things considerably. The sentences with inverted order will often not result in a discontinuity, which means the basic hierarchy of constituents (the vertical order) does not change across the canonical and inverted variants. The following trees illustrate this alternative account. The first two trees illustrate the analysis in an unorthodox phrase structure grammar that rejects the presence of the finite VP constituent, and the second two trees illustrate the analysis in a dependency grammar, dependency grammar by its very nature rejecting the presence of a finite VP constituent.^[6]



Because there is no finite VP constituent in these trees, the basic hierarchy of constituents remains consistent. What changes is just the linear order of the constituents. The following trees illustrates the "flat" dependency-based analysis of the marijuana-example.



Due to the lack of a finite VP constituent, the basic hierarchy of constituents is not altered by inversion.

Notes

- [1] For more examples and discussions of locative inversion, see Quirk et al. (1979:478), Culicover (1997:170f.) and Greenbaum and Quirk (1990:409).
- [2] For further examples of directive inversion, see Quirk et al. (1979:478), Greenbaum and Quirk (1990:410), and Downing and Locke (1992:231).
- [3] For further examples and discussion of copular inversion, see Greenbaum and Quirk (1990:409).
- [4] See for instance Moro (1997) and Mikkelsen (2005).
- [5] For more examples of quotation inversion, see for instance Greenbaum and Quirk (1990:410f.) and Downing and Locke (1992:300f.).
- [6] Concerning the dependency grammar rejection of a finite VP constituent, see Tesnière (1959:103–105), Matthews (2007:17ff.), Miller (2011:54ff.), and Osborne et al. (2011:323f.).

Literature

- Culicover, P. 1997. *Principles and parameters: An introduction to syntactic theory*. Oxford, UK: Oxford University Press.
- Downing, A. and Locke, P. 1992. *English grammar: A university course*, second edition. London: Routledge.
- Greenbaum, S. and R. Quirk. 1990. *A student's grammar of the English language*. Harlow, Essex, England: Longman.
- Groß, T. and T. Osborne 2009. Toward a practical dependency grammar theory of discontinuities. *SKY Journal of Linguistics* 22, 43-90.
- Matthews, P. H. (2007). *Syntactic Relations: a critical survey* (1. publ. ed.). Cambridge: Cambridge University Press. ISBN 9780521608299. Retrieved 24 August 2012.
- Mikkelsen, Line 2005. *Copular clauses: Specification, predication, and equation*. *Linguistics Today* 85. Amsterdam: John Benjamins.
- Miller, J. 2011. *A critical introduction to syntax*. London: continuum.
- Moro, A. 1997. *The raising of predicates: Predicative noun phrases and the theory of clause structure*. Cambridge: Cambridge University Press.
- Osborne, T., M. Putnam, and T. Groß 2011. Bare phrase structure, label-less trees, and specifier-less syntax: Is Minimalism becoming a dependency grammar? *The Linguistic Review* 28, 315–364.
- Quirk, R. S. Greenbaum, G. Leech, and J. Svartvik. 1979. *A grammar of contemporary English*. London: Longman.
- Tesnière, L. 1959. *Éléments de syntaxe structurale*. Paris: Klincksieck.
- Tesnière, L. 1969. *Éléments de syntaxe structurale*, 2nd edition. Paris: Klincksieck.

Subject (grammar)

Examples
<p>In the sentences below, the subjects are indicated in boldface.</p> <ol style="list-style-type: none"> 1. The dictionary helps me find words. 2. Ice cream appeared on the table. 3. The man who is sitting over there told me that he just bought a ticket to Tahiti. 4. Nothing else is good enough. 5. That nothing else is good enough shouldn't come as a surprise. 6. To eat six different kinds of vegetables a day is healthy. 7. He sold ten units of sand to us.

The **subject** (abbreviated **SUB** or **SU**) is one of the two main constituents of a clause, according to a tradition that can be tracked back to Aristotle and that is associated with phrase structure grammars; the other constituent is the predicate. According to another tradition, i.e. the one associated with predicate logic and dependency grammars, the subject is the most prominent overt argument of the predicate. Both traditions see the subject in English governing agreement on the verb or auxiliary verb that carries the main tense of the sentence, as exemplified by the difference in verb forms between *he eats* and *they eat*.

The subject has the grammatical function in a sentence of relating its constituent (a noun phrase) by means of the verb to any other elements present in the sentence, i.e. objects, complements and adverbials.

The subject is a phrasal constituent, and should be distinguished from parts of speech, which, roughly, classify words within constituent.

Forms of subject

The subject is a noun phrase in the sentence and can be realised by the following forms

- A determinerless noun phrase, also called a bare noun phrase. In English, this is mostly limited to plural noun phrases and noun phrases headed by a mass noun.

Builders are at work.

- A noun phrase introduced by a determiner. This complex (determiner + noun phrase) is usually called a determiner phrase:

The large car stopped outside our house.

- A gerund. These can be shown to behave as noun phrases in many respects, for example, in being able to form determinerless phrases

'Eating is a pleasure.

His constant hammering was very annoying.

- An infinitive. These can be shown to behave in many respects as embedded clauses, for example in allowing question words like "who."

To read is easier than to write.

Whom to hire is a difficult question.

- A full clause, introduced by the complementizer *that*, itself containing a subject and a predicate.

That he had travelled the world was known by everyone.

- A direct quotation:

I love you is often heard these days.

- The subject can also be implied. In the following command, the subject is the implied "you" that is the recipient of the imperative mood.

Take out the trash!

- An expletive. These are words like *it* or *there* when they don't refer to any thing or place. For example in the following sentence "it" doesn't refer to anything.

It rains.

- A cataphoric *it*. This is the use of *it* when it is co-referent with a subordinate clause that comes after it.

It was known by everyone (that) he had travelled the world.

Definitions of subject

The concept of **subject** is sometimes mixed with that of **actor** or **agent** and other times with that of **carrier of attributes**. When this happens, it is defined as the argument that generally refers to the origin of the action or the undergoer of the state shown by the predicate. This definition takes the **representation** of the sentence into account, but it is problematic for several reasons. While interpreting the **subject** as the **actor** or **agent** of the action, two rather different concepts are overlayed. For instance, in the passive voice the subject is the **goal**, **middle** or **patient/target** of the action; for example:

Anggia was arrested by the police.

The police arrested Anggia.

In the first sentence (which is in the passive voice), the **subject** is *Anggia*, while in the second sentence (active voice) it is *the police*. But when it comes to the representation of the action, the **actor** in both sentences is *the police* and the **goal** of the action is *Anggia*.

Similarly, some verbs can be used both transitively and intransitively. An example of these is the English verb *break*:

Anggia broke the chain.

The chain broke.

In the first sentence, the **subject** is *Anggia*, while in the second one it is *the chain*. But in the representation of the action or event, *the chain* plays the same role in both cases, that being the one to which the process is done or happens. This can be seen by considering the fact that the two sentences can be used to describe the same happening. Whenever the first sentence is true, the second one will be true as well, though in the second one it is pictured to have happened without an **agent**.

Subject in contrastive linguistics

The **subject** was first defined to be the *main argument* of a proposition. Since then, linguistic theories have been developed to describe languages all over the world. Some theories, such as Systemic Functional Theory, claim all clauses must have a subject no matter what language is being described. Other theories claim there is no such category that is consistent for all languages. In English, though, every clause has at least an implied subject.

A subject in English typically matches two types of pattern: agreement and word order. It both agrees with the verb group of its clause and is positioned in certain particular ways. The agreement is one of two different forms of the verb (three in the case of the verb *be*) depending on the number and person of its subject. For instance, if a subject is singular and is a third person, i. e. it is neither the speaker nor the listeners, one chooses the form *has* of the verb *have*; otherwise one chooses *have*. See examples below:

She has left.

They have left.

I have left.

We have left.

You have left.

This pattern of agreement is not an absolute rule, because not all verbs have two different forms. Some have only one and never vary in form. E.g.: *must, can, will, might, may*.

She must leave.

They must leave.

I must leave.

We must leave.

You must leave.

The second pattern of a subject in English is its position in relation to the verb group. When affirming or denying something, one usually places the subject right before the verb group. But when asking a question, one changes the word order by placing the subject after part of the verb group. This means one makes an interrogative clause by changing the declarative word order. Thus an assertion is turned into a question by making a word order change. See the following examples:

You won't call me.

Won't you call me?

Subjects also follow a third pattern. For instance, in English, the pronoun *I* is usually a **subject** while *me* is usually a **complement**. This system of language that allows us to determine the arguments of a proposition by inflection is called declension and each form is a **case** of the declining system. In other languages like German, Russian, Latin and Greek, every noun group assumes a case to represent a specific argument of its proposition. The case assumed by subjects is usually (but not always) the one named **nominative**. Sometimes the subject carries other cases, like the accusative or the dative, depending on the clause structure and the language. Yet other languages, such as Japanese, use a postposition system to determine the arguments of a clause. The classic theorists were very concerned about this language system for both Latin and Greek had declensions, but this is not a concern in modern English grammars any more as English has no distinct inflexion for the subject. Not all languages have a subject–verb agreement in verb forms (person and number), noun forms (case, postpositions) or distinctive word orders. And none of these patterns safely determines the subject.

The case system, for instance, is not a universal system that works the same way in all languages. In some languages, when the ergative model is foregrounded, the transitive/intransitive distinction does not affect the cases of the complements. The **middle** to which some process is done or happens carries the same case no matter if it is the subject or a complement of the verb. In other languages, of which German, Latin and Greek are examples, the subject keeps its case for transitive and intransitive uses of a verb and it is quite safe to consider it case-determined.

In languages that lack verb and noun forms for determining the subject, the subject might be determined in terms of word order. For example, in Mainland Scandinavian (Norwegian, Swedish and Danish) the subject occurs either right in front of the tensed verb of a sentence, or follows the verb but precedes the complements.

Finally, in the Topic theory, which is similar but not equivalent to the Theme theory of the School of Prague, the subject is also the topic of a proposition in the default word order. According to this theory, some languages have no means to determine a topic but by making a complement into a subject. So ascribing a passive voice to the verb group is a way to topicalize the said complement: (See also topic-prominent languages.)

I did it.

It was done.

The duke gave my aunt this teapot.

My aunt was given this teapot by the duke.

Another pattern of the subject is the frequency in which it is ellided (removed/dropped) from the clause. Some languages, like Spanish, Portuguese, Italian, Latin, Greek, Japanese and Mandarin, use this pattern both in assertions and questions. Though most of these languages are rich in verb forms for determining the person and number of the subject, Japanese and Mandarin have no such forms at all. This dropping pattern does not automatically make a language a pro-drop language. In other languages, like English and French, declarative and interrogative clauses must always have a subject, which should be either a noun group or a clause. This is also true when the clause has no element to be represented by it. This is why verbs like *rain* must carry a **subject** such as *it*, even if nothing is actually being represented by it. In this case *it* is an expletive and a dummy pronoun. In imperative clauses, though, most languages elide the subject:

Give it to me.

Dā mihi istud. (Latin)

Me dá isso. (Portuguese in Brazil)

Dá-me isso. (Portuguese in Portugal)

Dámelo. (Spanish)

Dammelo. (Italian)

Subject orientation

The subject of a sentence is often privileged in various ways pertaining to its relation to other expressions in the sentence. One says that these other expressions are "subject-oriented". Examples of subject-oriented expressions include subject-oriented adverbs. Compare the following two sentences:

Clumsily, Al sat down.

Al sat down clumsily.

The first sentence means that it was clumsy of Al to sit down (though the manner in which he did so may have been elegant). The second can also mean that the manner in which Al sat down was clumsy (while it may have been highly appropriate to sit down in the first place).

Reflexive pronouns are sometimes subject-oriented. In the following sentence *herself* is a reflexive pronoun.

Sue assigned the best student to herself.

This sentence can only mean that Sue assigned the best student to *Sue*, not that she assigned the best student to *the best student*.

Subject, predicates, and the copula

It is generally assumed that the Noun Phrase occurring with the Verb Phrase, constituting a sentence, is a subject. Copular sentences challenge this view. In a particular class of copular sentences, called "inverse copular sentences", the noun phrase which occurs with the verb phrase plays the role of predicate, occupying the position which is canonically reserved for subjects, and the subject is embedded in the verb phrase (cf. copula). This can be exemplified by pairs of sentences like *these pictures of the wall are the cause of the riot* (where the preverbal Noun Phrase plays the role of subject and the post-verbal one plays the role of predicate) vs *the cause of the riot is these pictures of the wall* (where the order is inverse). This has far reaching consequences, affecting for example the theory of expletive subjects and unaccusative verbs (cf. Moro 1997 and Hale - Keyser 2003 and references cited there).

References

- Everaert, M.; van Riemsdijk, H.; Goedemans, R. (eds) 2006. *The Blackwell companion to syntax*, Volumes I–V, Blackwell, London.
- Hale, K.; Keyser, J. (2002). "Prolegomena to a theory of argument structure", *Linguistic Inquiry Monograph*, 39, MIT Press, Cambridge, Massachusetts.
- Halliday, M.A.K & Matthiessen, Christian M. I. M (2004). *Subject, actor, theme* in *An introduction to functional grammar*. Hodder Arnold, London, England.
- Huddleston, R.; Pullum, K. (2005). *A student's introduction to English grammar*. Cambridge University Press.
- Moro, A. (1997). *The raising of predicates: predicative noun phrases and the theory of clause structure*, Cambridge Studies in Linguistics, Cambridge University Press, Cambridge, England.
- Włodarczyk André & Hélène (2006) "Subject in the Meta-informative Centering Theory" in Études cognitives / Studia kognitywne 7, SOW, PAN, Warsaw.[1]
- Włodarczyk André & Hélène (2008) "Roles, Anchors and Other Things we Talk About : Associative Semantics and Meta-Informative Centering Theory", ed. Istvan Kecskes, Series: "Mouton Series in Pragmatics", Intercultural Pragmatics, Vol. 5. No. 3., Berlin/New York.

References

[1] <http://www.celta.paris-sorbonne.fr/anasem/asnic-papers/>

Subordination (linguistics)

In linguistics, **subordination** (abbreviated variously **SUBORD**, **SBRD**, **SUBR** or **SR**) 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.^[1]

Subordinate clauses

Subordination as a concept of syntactic organization is associated closely with the distinction between *coordinate* and *subordinate* clauses.^[2] 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.

Heads and dependents

In a broader sense, subordination is a relation existing between two syntactic units, whereby the one unit is subordinate to the other and the latter is superordinate to the former. An adjective that modifies a noun is subordinate to the noun and the noun is superordinate to the adjective; a noun phrase (NP) that is the complement of a preposition is subordinate to the preposition and the preposition is superordinate to the NP; a prepositional phrase (PP) that modifies a verb phrase (VP) is subordinate to the VP and the VP is superordinate to the PP; etc. The subordinate unit is called the *dependent*, and the superordinate unit the *head*. Thus anytime two syntactic units are in a head-dependent relationship, subordination obtains. For example:

black dog
with patience
clean the bathroom

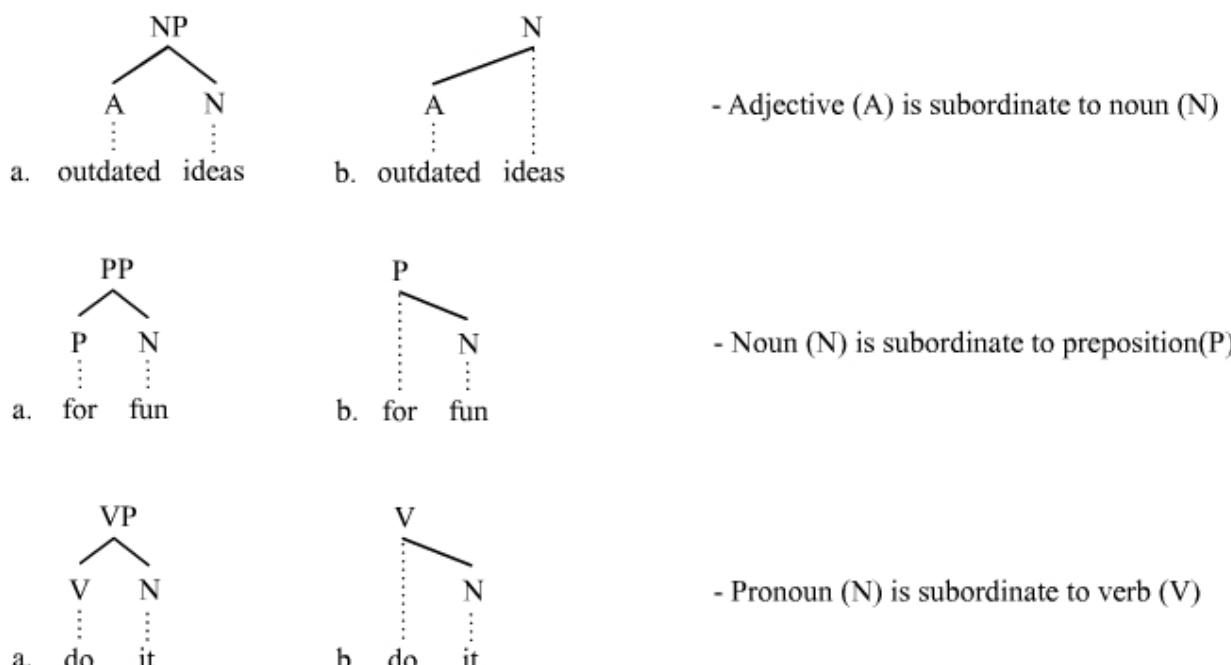
The word in bold in each case is dependent on the other word, which is its head. Subordination in this sense should be compared with coordination. Two units or more are coordinate to each other if there is no hierarchical relation between them and they have equal functional status, e.g.

[**black**] and [**brown**] dog
 with [**love**] and [**patience**]
 clean [**the bathroom**] and [**the kitchen**]

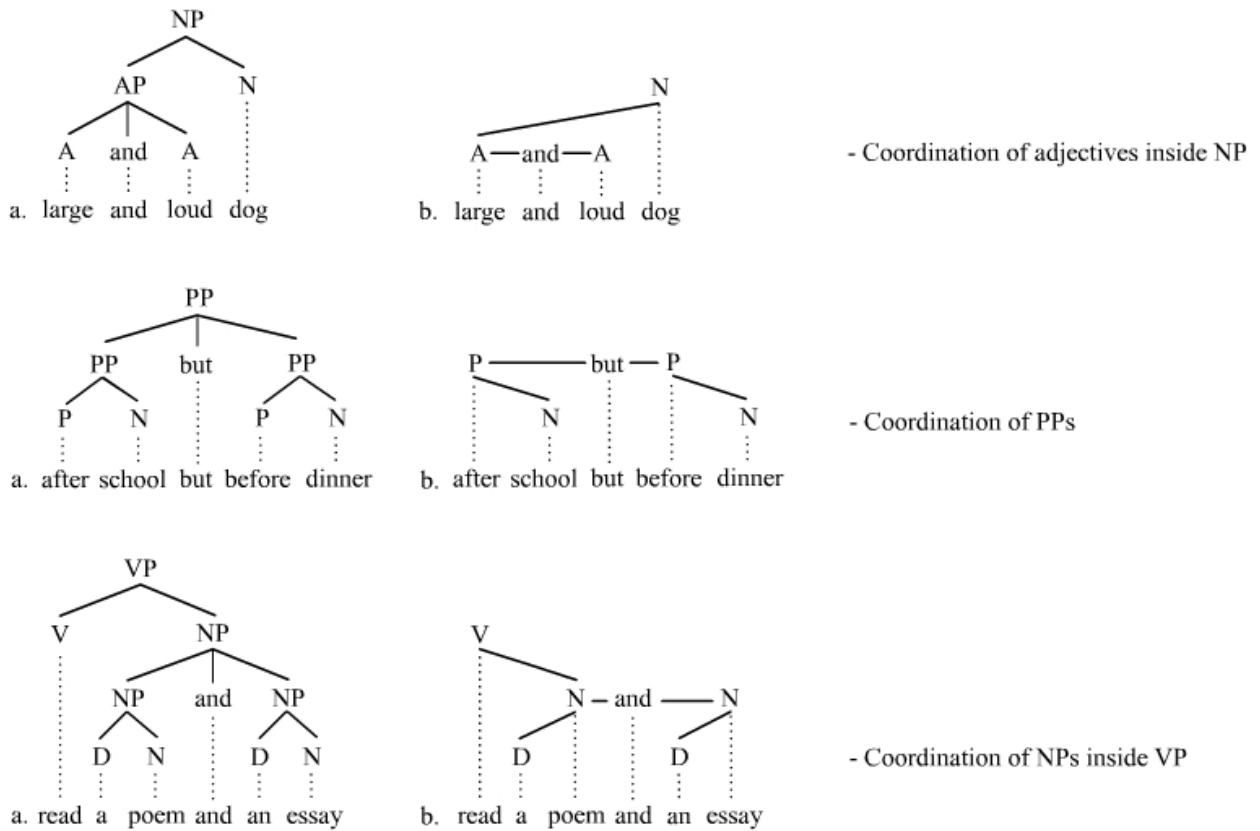
The words in brackets are coordinate to each other, and both coordinates are subordinate to the word that is not enclosed in brackets. Note that while the coordinated units are not organized hierarchically, they are organized linearly, the one preceding the other.

Representing subordination and coordination

Most theories of syntax represent subordination (and coordination) in terms of tree structures. A head is positioned above its dependents in the tree, so that it immediately *dominates* them. One of two competing principles is employed to construct the trees: either the constituency relation of phrase structure grammars or the dependency relation of dependency grammars. Both principles are illustrated here with the following trees.^[3] The a-trees on the left illustrate constituency, and the b-trees on the right dependency:



Constituency shows subordination by way of projections. One of the two words projects its category status up to the root node of the entire structure and is therefore the head of the structure. Dependency also shows subordination, but it does so with fewer nodes in the tree. The head directly dominates its dependent. These trees illustrating subordination can be compared with trees illustrating coordination. There are various proposals concerning the tree representations of coordinate structures. The following trees are just suggestive in this regard. The constituency relation is again shown in the a-trees on the left, and the dependency relation in the b-trees on the right:



The constituency trees show that both parts of the coordinate structure project up to the root node of the entire tree, and the dependency trees illustrate that each word again projects just a single node. Both representation formats illustrate the equal status of the coordinated units insofar as they are placed on the same level; they are equi-level. From an organizational point of view, subordination is grouping words together in such a manner that includes hierarchical and linear order, whereas coordination is grouping words together just in terms of linear order.

Notes

- [1] Subordination as a principle for ordering syntactic units is generally taken for granted; it is the default principle of organization. Coordination, in contrast, is NOT considered a default principle and has therefore been studied in great detail. See for instance Sag et al. (1985), Hudson (1988, 1989), and Osborne (2006).
- [2] Concerning subordination as a principle of organization among clauses, see for instance Chisholm (1981:136f.).
- [3] The constituency-based trees here are consistent with early Transformational Grammar, and the dependency-based trees can be found in, for instance, the massive collection of essays on dependency and valency grammar in Ágel et al. (2006).

References

- Ágel, V., Ludwig Eichinger, Hans-Werner Eroms, Peter Hellwig, Hans Heringer, and Hennig Lobin (eds.) 2003/6. *Dependency and Valency: An International Handbook of Contemporary Research*. Berlin: Walter de Gruyter.
- Chisholm, W. 1981. *Elements of English linguistics*. New York: Longman.
- Hudson, R. 1988. Coordination and grammatical relations. *Journal of Linguistics* 24,303–342.

- Hudson, R. 1989. Gapping and grammatical relations. *Linguistics* 25, 57–94.
- Osborne, T. 2006. Parallel conjuncts. *Studia Linguistica* 60, 1, 64–96.
- Sag, I., G. Gazdar, T. Wasow, and S. Weisler 1985. Coordination and how to distinguish categories. *Natural Language and Linguistic Theory* 3, 117–171.

Superlative

In grammar, the **superlative** is the form of an adjective (or adverb) that indicates that the person or thing (or action) modified has the quality of the adjective (or adverb) to a degree greater than that of anything it is being compared to in a given context. English superlatives are typically formed with the suffix *-est* (e.g. *healthiest, weakest*) or the word *most* (*most recent, most interesting*).

In English

Example of superlative: "she is [the] most beautiful [of all the women here tonight]"

Simply put; the word 'superlative' is defined as

- (a noun) an exaggerated mode of expression (usually of praise): "the critics lavished superlatives on it";
- (an adjective) the greatest: the highest in quality;
- the superlative form of an adjective: "best" is the superlative form of "good", "most" when used together with an adjective or adverb.

Superlatives with absolutes

Some grammarians object to the use of the superlative or comparative with words such as *full, complete, unique, or empty*, which by definition already denote either a totality, an absence, or an absolute.^[1] However, such words are routinely and frequently qualified in contemporary speech and writing. This type of usage conveys more of a figurative than a literal meaning, since in a strictly literal sense, something cannot be more or less unique or empty to a greater or lesser degree. For example, in the phrase "most complete selection of wines in the Midwest," "most complete" doesn't mean "closest to having all elements represented", it merely connotes a well-rounded, relatively extensive selection. Internet searches for "more complete" or "most complete" establish the frequency of this usage with millions of examples. Nonetheless, writers are advised to avoid this usage in formal writing, particularly in the scientific or legal fields.

In other languages

Romance languages

In contrast to English, in the grammars of most romance languages the elative and the superlative are joined into the same degree (the superlative), which can be of two kinds: comparative (e.g. "the most beautiful") and absolute (e.g. "very beautiful").

French: The superlative is created from the comparative by inserting the definitive article (la, le, or les) before "plus" or "moins" and the adjective determining the noun. For instance: *Elle est la plus belle femme* → (she is the most beautiful woman); *Cette ville est la moins chère de France* → (this town is the least expensive in France).

Spanish: The **comparative superlative**, like in French, has the definite article (such as "las" or "el"), or the possessive article (such as "tus", "nuestra", "su"), followed by the comparative ("más" or "menos"), so that "el meñique es el dedo más pequeño" or "el meñique es el más pequeño de los dedos" is "the pinky is the smallest finger". Irregular comparatives are "mejor" for "bueno" and "peor" for "malo", which can be used as comparative

superlatives also by adding the definite article or possessive article, so that "*nuestro peor* error fue casarnos" is "our worst mistake was to get married".

The **absolute superlative** is normally formed by modifying the adjective by adding *-ísimo*, *-ísima*, *-ísimos* or *-ísimas*, depending on the gender or number. Thus, "¡Los chihuahuas son perros pequeñísimos!" is "Chihuahuas are such tiny dogs!" Some irregular superlatives are "máximo" for "grande", "péximo" for "malo", "ínfimo" for "bajo", "óptimo" for "bueno", "acérrimo" for "acre", "paupérrimo" for "pobre", "celebérximo" for "célebre".

There is a difference between comparative superlative and absolute superlative: *Ella es la más bella* → (she is the most beautiful); *Ella es bellísima* → (she is extremely beautiful).

Portuguese and Italian distinguish comparative superlative (*superlativo relativo*) and absolute superlative (*superlativo absoluto/assoluto*). For the comparative superlative they use the words "mais" and "più" between the article and the adjective, like "most" in English. For the absolute superlative they either use "muito"/"molto" and the adjective or modify the adjective by taking away the final vowel and adding *issimo* (singular masculine), *issima* (singular feminine), *íssimos/issimi* (plural masculine), or *íssimas/issime* (plural feminine). For example:

- *Aquele avião é velocíssimo/Quell'aeroplano è velocissimo* → That airplane is very fast

There are some irregular forms for some words ending in "-re" and "-le" (deriving from Latin words ending in "-er" and "-ilis") that have a superlative form similar to the Latin one. In the first case words lose the ending "-re" and they gain the endings *errimo* (singular masculine), *errima* (singular feminine), *érrimos/errimi* (plural masculine), or *érrimas/errime* (plural feminine); in the second case words lose the "-l"/"-le" ending and gain *ílimo/illimo* (singular masculine), *ílima/illima* (singular feminine), *ílimos/illimi* (plural masculine), or *ílimas/illime* (plural feminine), the irregular form for words ending in "-l"/"-le" is somehow rare and, in Italian but nor is Portuguese, it exists only in the archaic or literary language. For example:

- "Acre" (*acer* in Latin) which means acrid, becomes "acérrimo"/"acerrimo" ("acerrimus" in Latin).
- Italian *simile* (*similis* in Latin) which means "similar", becomes (in ancient Italian) "simillimo" ("simillimus" in Latin).
- Portuguese *difícil* ("hard/difficult") and *fácil* (facile).

Celtic languages

Scottish Gaelic: When comparing one entity to another in the present or the future tense, the adjective is changed by adding an *e* to the end and *i* before the final consonant(s) if the final vowel is broad. Then, the adjective is preceded by *nas* to say "more," and *as* to say "most." (The word *na* is used to mean *than*.) Adjectives that begin with *f* are lenited. *Nas* and *as* use different syntax constructions. For example:

- *Tha mi nas àirde na mo pheathraichean.* → I am taller than my sisters.
- *Is mi as àirde.* → I am the tallest.

As in English, some forms are irregular, i.e. *nas fheàrr* (better), *nas miosa* (worse), etc.

In other tenses, *nas* is replaced by *na bu* and *as* by *a bu*, both of which lenite the adjective if possible. If the adjective begins with a vowel or an *f* followed by a vowel, the word *bu* is reduced to *b'*. For example:

- *Bha mi na b' àirde na mo pheathraichean.* → I was taller than my sisters.
- *B' e mi a b' àirde.* → I was the tallest.

Welsh is similar to English in many respects. The ending *-af* is added onto regular adjectives in a similar manner to the English *-est*, and with (most) long words *mwyaf* precedes it, as in the English *most*. Also, many of the most common adjectives are irregular. Unlike English, however, when comparing just two things, the superlative *must* be used, e.g. of two people - *John ydy'r talaf* (John is the tallest).

Akkadian

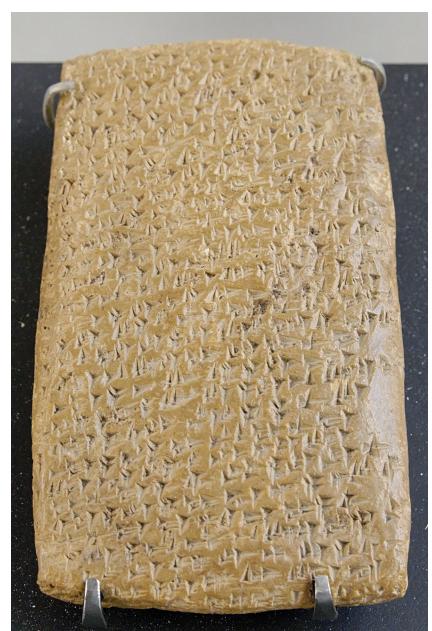
In Akkadian cuneiform, (on a 12 paragraph clay tablet), from the time period of the 1350 BC Amarna letters, (about a 20 year body of letters), two striking examples of the superlative, extend the common grammatical use. The first is the numeral "10", as well as "7 and 7". The second is a verb-spacement adjustment.

The term "7 and 7" means 'over and over'. The phrase itself is a superlative, but an addition to some of the Amarna letters adds "more" at the end of the phrase (EA 283, *Oh to see the King-(pharaoh)*): "... *I fall at the feet of the king, my lord. I fall at the feet of the king, my lord, 7 and 7 times more,*"^[2] The word 'more' is Akkadian *mila*, and by Moran is 'more' or 'overflowing'. The meaning in its letter context is "...over and over again, overflowing", (as 'gushingly', or 'obsequiously', as an underling of the king).

The numeral 10 is used for *ten times greater* in EA 19, *Love and Gold*, one of King Tushratta's eleven letters to the Pharaoh-(Amenhotep IV-Akhenaten). The following quote using 10, also closes out the small paragraph by the second example of the superlative, where the verb that ends the last sentence is spread across the letter in s-p-a-c-i-n-g, to accentuate the last sentence, and the verb itself (i.e. the relational kingly topic of the paragraph):

".... Now, in keeping with our constant and mutual love, you have made it **10** times greater than the love shown my father. May the gods grant it, and may Teššup, my lord, and Aman make flourish for evermore, just as it is now, this mutual love of ours."^[3]

The actual last paragraph line contains three words: 'may it be', 'flourish', and 'us'. The verb flourish (from *napāhu?*, *to light up, to rise*), uses: -e-le-ne-ep-pi-, and the spaces. The other two words on the line, are made from two characters, and then one: "...may it be, flourish-our (*relations*)."



An example of the Amarna letters in cuneiform.

Estonian

In Estonian superlative form can usually made up in two ways. One is constructed with words "kõige" + comparative form. It can be made with all adjectives. For example: "sinine" (blue) comparative form is "sinisem" and therefore superlative form is "kõige sinisem". The short superlative form is made up by adding "-m" to the end of plural partitive case. Plural partitive from the word "sinine" (blue) is "siniseid" and therefore "siniseim" is short superlative. Short superlative cannot be made up with all adjectives and in difference of the "kõige"-form, it has a lot of exceptions.

References

[1] Quirk, et al. (1985:404, 593)

[2] Moran (1992:323–324)

[3] Moran (1992:42–46)

Bibliography

- Moran, William L. (1987, 1992), *The Amarna Letters* (<http://www.amazon.com/> Amarna-Letters-William-L-Moran/dp/0801867150#reader_0801867150) (2nd ed.), Baltimore: Johns Hopkins University Press, ISBN 0-8018-6716-0

- Quirk, Randolph; Greenbaum, Sidney; Leech, Geoffrey; Svartvik, Jan (1985), *A Comprehensive Grammar of the English Language*, London: Longman

Grammatical tense

In grammar, **tense** is a category that locates a situation in time, to indicate when the situation takes place.^{[1][2]} Tense is the grammaticalisation of time reference, and in general is understood to have the three delimitations of "before now", i.e. the past; "now", i.e. the present; and "after now", i.e. the future. The "unmarked" reference for tense is the temporal distance from the time of utterance, the "here-and-now", this being absolute-tense. Relative-tense indicates temporal distance from a point of time established in the discourse that is not the present, i.e. reference to a point in the past or future, such as the *future-in-future*, or the *future of the future* (at some time in the future after the reference point, which is in the future) and *future-in-past* or *future of the past* (at some time after a point in the past, with the reference point being a point in the past).

Not all languages grammaticalise tense, and those that do differ in their grammaticalisation thereof. Not all grammaticalise the three-way system of past–present–future. For example, two-tense languages such as English and Japanese express past and non-past, this latter covering both present and future in one verb form. Four-tense languages make finer distinctions either in the past (e.g. remote vs recent past), or the future (e.g. near vs remote future). The six-tense language Kalaw Lagaw Ya of Australia has the remote past, the recent past, the today past, the present, the today/near future and the remote future. The differences between such finer distinctions are the distance on the timeline between the temporal reference points from the present.

Etymology

Tense comes from Old French *tens* "time" (now spelled *temps* through deliberate archaisation), from Latin *tempus* "time".^[3] The adjective "tense" is unrelated, being a Latin loan from *tensus*, the perfect passive participle of *tendere* "stretch".^[4]

Tense marking

Tense is normally indicated by a verb form, either on the main verb or on an auxiliary verb. The tense markers are normally affixes, but also stem modification such as ablaut or reduplication can express tense reference, and in some languages tense can be shown by clitics. Often combinations of these can interact, such as in Irish, where there is a proclitic past tense marker *do* (various surface forms) used in conjunction with the affixed or ablaut-modified past tense form of the verb. Languages that do not have grammatical tense, such as Chinese, express time reference through adverbials, time phrases, and so on.

Other uses of the term "Tense" : Tense, aspect, and mood

In many language descriptions, particularly those of traditional European linguistics, the term *tense* is erroneously used to refer to categories that do not have time reference as their prototypical use, but rather are grammaticalisations of mood/modality (e.g. uncertainty, possibility, evidentiality) or aspect (e.g. frequency, completion, duration). *Tense* differs from *aspect* in showing the time reference, while *aspect* shows how the action/state is "envisioned" or "seen" as happening/occurring. The most common aspectual distinction in languages of the world is that between *perfective* (complete, permanent, simple, etc.) and *imperfective* (incomplete, temporary, continuous, etc.).

The term *tense* is therefore at times used in language descriptions to represent any combination of tense proper, aspect, and mood, as many languages include more than one such reference in portmanteau TAM (tense–aspect–mood) affixes or verb forms. Conversely, languages that grammaticalise aspect can have tense as a

secondary use of an aspect. In many languages, such as the Latin, Celtic and Slavic languages, a verb may be inflected for both tense and aspect together, as in the *passé composé/passé simple (historique)* and *imparfait* of French. Verbs can also be marked for both mood and tense together, such as the present subjunctive (*So be it*) and the past subjunctive (*Were it so*), or all three, such as the past perfect subjunctive (*Had it been so*).

Tense in languages of the world

Latin and Ancient Greek

The word *tempus* was used in the grammar of Latin to describe the six "tenses" of Latin. Four are absolute tenses, of which two are combined tense–aspect categories, marking aspect in the past, while two are relative tenses, in showing time reference to another point of time:

- Praesens (= present)
- Praeteritum imperfectum (= imperfective past, i.e. a combined tense–aspect)
- Praeteritum perfectum (= perfective past, i.e. a combined tense–aspect)
- Futurus (= future)
- Plus quam perfectum (= relative past, i.e. a past that refers to the past of a reference in the past)
- Anterior Futurus (= relative future, i.e. a past that refers to the past of a future point)

The tenses of Ancient Greek are similar, though having a three-way aspect contrast in the past, the aorist, the perfect and the imperfect. The aorist was the *simple past* which contrasted with the *imperfective* (uncompleted action in the past) and the *perfect*, the past form that had relevance to the present.

The study of modern languages has been greatly influenced by the grammar of these languages, seeing that the early grammarians, often monks, had no other reference point to describe their language. Latin terminology is often used to describe modern languages, at times erroneously, as in the application of the term "pluperfect" to the English "past perfect", the application of "perfect" to what in English more often than not is not "perfective", or where the German simple and perfect pasts are called respectively "Imperfektum" and "Perfektum", despite the fact that neither has any real relationship to the aspects implied by the use of the Latin terms.

English

English, like the other Germanic languages, Japanese, Persian, and so on, has only two morphological tenses, past and non-past (alt. *present–future*). These are distinguished by verb form, by either ablaut or suffix (sings ~ sang, walks ~ walked). The non-past may be used to reference the future ("The bus leaves **tomorrow**").

Tense and aspect in English

Tense	Simple	Perfect	Continuous/Progressive
nonpast past	-Ø/-s -ed, -t, ablaut, etc.	has/have -en, -ed, ablaut, etc. had -en, -ed, ablaut, etc.	am/is/are -ing was/were -ing
nonpast past	<i>go, goes</i> <i>went</i>	<i>have/has gone</i> <i>had gone</i>	<i>am/is/are going</i> <i>was/were going</i>

Other languages

In general Indo-European languages have either two-tense systems like English (e.g. the German languages, Persian, etc.) or three-tense systems of past–present–future (e.g. the Latin and Celtic languages), with finer categorisations made by the use of "compound tenses" using auxiliary verbs, as with English *be going to*, French *venir de*, and so on. Such compound tenses often have a combined aspectual or modal meaning, as in *be going to*, which focuses on the modality of *intended/obvious future based on present evidence*.

Other tensed languages of the world are similar, or mark tense in a variety of ways, often with TAM affixes where tense, aspect and mood are expressed by portmanteau affixes - as is often the case also in Indo-European languages.

Many languages, such as Irish, also mark person and number as part of the TAM suffix, such as the first, second and third person singular marking of Munster Irish. Examples of tense systems in languages of the world are the following:

Germanic Languages:

German: Past – Non-Past : In many dialects the former perfect form has replaced the preterite as the marker of the past tense, except for "fossilised forms".

Dutch: Past – Non-Past

Danish: Past – Non-Past

Celtic Languages:

Irish: Past – Present – Future

The past contrasts perfective and imperfective aspect, and some verbs retain a perfective-imperfective contrast in the present. In Classical Irish/Gaelic, a three-way aspectual contrast of simple-perfective-imperfective in the past and present existed.

Latin Languages:

Italian: Past – Present – Future

The present covers definite non-past, while the Future covers the probable non-past.

Indo-Iranian Languages:

Persian: imperfective vs perfective past - non-past

Some verbs retain the imperfective-perfective contrast in the non-past.

Slavic Languages:

Bulgarian: perfective vs imperfective past – perfective vs imperfective present – future

Macedonian: perfective vs imperfective past – present – future

Uralic Languages:

Finnish: past – non-past

Hungarian: past – present – future

Korean Languages:

Korean: past – present – future

Japanese Languages:

Japanese: past – non-past

Turkic Languages:

Turkish: pluperfect – perfective vs imperfective past – present – future

Papuan Languages:

Meriam Mir: remote past – recent past – present – near future – remote future

All tenses contrast imperfective and perfective aspect.

Pama-Nyungan Languages:

Kalaw Lagaw Ya: remote past – recent past – today past – present – near future – remote future; one dialect also has

a "last night" tense

All tenses contrast imperfective and perfective aspect.

Grammaticalisation of tenses

Many languages do not grammaticalize all three categories. For instance, English has past and non-past ("present"); other languages may have future and non-future. In some languages, there is not a single past or future tense, but finer divisions of time, such as proximal vs. distant future, experienced vs. ancestral past, or past and present today vs. before and after today.

Some attested tenses:

- Future tenses.
 - Immediate future: right now
 - Near future: soon
 - Hodiernal future: later today
 - Vespertine future: this evening
 - Post-hodiernal: after today
 - Crastinal: tomorrow
 - Remote future, distant future
 - Posterior tense (relative future tense)
- Nonfuture tense: refers to either the present or the past, but does not clearly specify which. Contrasts with future.
- Present tense
 - Still tense: indicates a situation held to be the case, at or immediately before the utterance
- Nonpast tense: refers to either the present or the future, but does not clearly specify which. Contrasts with past.
- Past tenses. Some languages have different past tenses to indicate how far into the past we are talking about.
 - Immediate past: very recent past, just now
 - Recent past: in the last few days/weeks/months (conception varies)
 - Nonrecent past: contrasts with recent past
 - Hodiernal past: earlier today
 - Matutinal past: this morning
 - Prehodiernal: before today
 - Hesternal: yesterday or early, but not remote
 - Prehesternal: before yesterday
 - Remote past: more than a few days/weeks/months ago (conception varies)
 - Nonremote past: contrasts with remote past
 - Historical Past: shows that the action/state was part of an event in the past
 - Ancestral past, legendary past
 - General past: the entire past conceived as a whole
 - Anterior tense (relative past tense)

Notes

- [1] Fabricius-Hansen, "Tense", in the *Encyclopedia of Language and Linguistics*, 2nd ed., 2006
- [2] Bernard Comrie, *Aspect*, 1976:6:
the semantic concept of time reference (absolute or relative), ... may be grammaticalised in a language, i.e. a language may have a grammatical category that expresses time reference, in which case we say that the language has tenses. Some languages lack tense, i.e. do not have grammatical time reference, though probably all languages can lexicalise time reference, i.e. have temporal adverbials that locate situations in time
- [3] tempus (<http://www.perseus.tufts.edu/hopper/text?doc=Perseus:text:1999.04.0059:entry=tempus>). Charlton T. Lewis and Charles Short.
A Latin Dictionary on Perseus Project.
- [4] Harper, Douglas. "tense" (<http://www.etymonline.com/index.php?term=tense>). *Online Etymology Dictionary*. .

References

Bibliography

- Bybee, Joan L., Revere Perkins, and William Pagliuca (1994) *The Evolution of Grammar: Tense, Aspect, and Modality in the Languages of the World*. University of Chicago Press.
- Comrie, Bernard (1985) *Tense*. Cambridge University Press. [ISBN 0-521-28138-5]
- Guillaume, Gustave (1929) *Temps et verbe*. Paris: Champion.
- Hopper, Paul J., ed. (1982) *Tense–Aspect: Between Semantics and Pragmatics*. Amsterdam: Benjamins.
- Smith, Carlota (1997). The Parameter of Aspect. Dordrecht: Kluwer.
- Tedeschi, Philip, and Anne Zaenen, eds. (1981) *Tense and Aspect*. (Syntax and Semantics 14). New York: Academic Press.

External links

- Tense Explained (with diagrams) (<http://calleteach.wordpress.com/2010/02/03/tense/>)
- English Aspectual forms in Various Tenses (<http://www.EnglishTensesWithCartoons.com>)
- Combinations of Tense, Aspect, and Mood in Greek (<http://www.bcbser.com/greek/gtense.html>)
- English Grammar Overview - Tenses with Exercises (<http://www.english-tenses.com>)

Topicalization

Topicalization is a mechanism of syntax that establishes an expression as the sentence or clause topic by having it appear at the front of the sentence or clause (as opposed to in a canonical position further to the right). Topicalization often results in a discontinuity and is thus one of a number of established discontinuity types (the other three being *wh*-fronting, scrambling, and extraposition). Topicalization is also used as a constituency test; an expression that can be topicalized is deemed a constituent.^[1] The topicalization of arguments in English is rare, whereas circumstantial adjuncts are often topicalized. Most languages allow topicalization, and in some languages, topicalization occurs much more frequently than in English.

Examples

Typical cases of topicalization are illustrated with the following examples:

- a. The boys roll rocks **for entertainment**.
- b. **For entertainment**, the boys roll rocks. -Topicalization of the adjunct *for entertainment*
- a. Everyone refused to answer **because the pressure was too great**.
- b. **Because the pressure was too great**, everyone refused to answer. - Topicalization of the adjunct *because the pressure was too great*
- a. I won't eat **that pizza**.
- b. **That pizza**, I won't eat. - Topicalization of the object argument *that pizza*
- a. I am terrified of **those dogs**.
- b. **Those dogs**, I am terrified of. - Topicalization of the object argument *those dogs*

Assuming that the a-sentences represent canonical word order, the b-sentences contain instances of topicalization. The constituent in bold is fronted in order to establish it as topic. The two former examples with a topicalized adjunct are typical, whereas the two latter examples with a topicalized object argument are comparatively rare. The appearance of the demonstrative determiners *that* and *those* is important, since without them, topicalization of an argument seems less acceptable, e.g. ?*A pizza I won't eat*.

Topicalization can occur across long distances, e.g.

- a. I thought you said Tom believes the explanation needs **such examples**.
- b. **Such examples** I thought you said that Tom believes the explanation needs. - Topicalization of the object argument *such examples* over a long distance

Further examples

Topicalization is similar to *wh*-movement insofar as the constituents that can be *wh*-fronted can also be topicalized, e.g.

- a. Bill is living in **that one house on the hill**.
- b. **Which house** is Bill living in? - *Wh*-fronting of NP resulting in preposition stranding
- c. **That one house on the hill** Bill is living in. - Topicalization of NP resulting in preposition stranding
- a. Shelly has indeed uncovered part of **our plan**.
- b. **What** has Shelly indeed uncovered part of? - *Wh*-fronting out of object NP resulting in preposition stranding
- c. **Our plan** Shelly has indeed uncovered part of. - Topicalization out of object NP resulting in preposition stranding

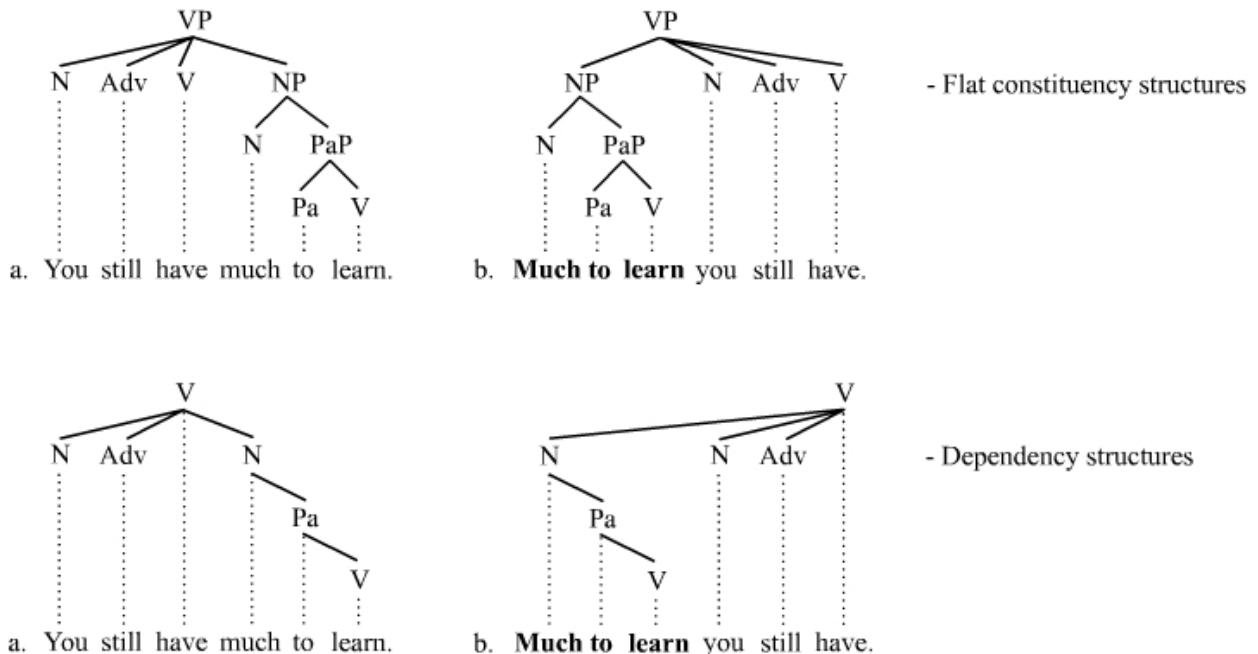
And topicalization is similar to *wh*-fronting insofar as the islands and barriers to *wh*-fronting are also islands and barriers to topicalization, e.g.

- a. The description of **his aunt** was really funny.
- b. ***Whose aunt** was the description of really funny? - *Wh*-fronting impossible out of a subject in English
- c. ***His aunt** the description of was really funny. - Topicalization impossible out of a subject in English
- a. He relaxes after he's played **Starcraft**.
- b. ***What** does he relax after he's played? - *Wh*-fronting impossible out of adjunct clause
- c. ***Starcraft** he relaxes after he's played. - Topicalization impossible out of adjunct clause
- a. She approves of the suggestion to make **pasta**.
- b. ***What** does she approve of the suggestion to make? - *Wh*-fronting impossible out of complex NP
- c. ***Pasta** she approves of the suggestion to make. - Topicalization impossible out of complex NP

These examples illustrate the similar behavior of topicalization and *wh*-fronting. Further data, which will not be produced here, could show, however, that topicalization is unlike the other two major discontinuity types, i.e. scrambling and extraposition.

Theoretical analyses

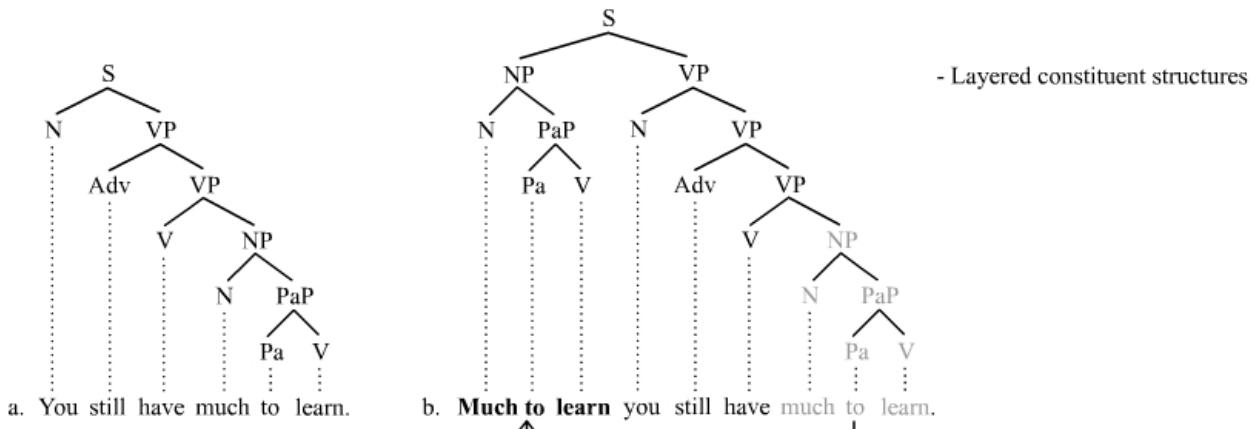
The theoretical analysis of topicalization can vary greatly depending in part on the theory of sentence structure that one adopts. If one assumes the layered structures associated with many phrase structure grammars, all instances of topicalization will involve a discontinuity. If, in contrast, less layered structures are assumed as for example in dependency grammar, then many instances of topicalization do not involve a discontinuity, but rather just inversion.^[2] This point is illustrated here first using flatter structures that lack a finite VP-constituent. Both constituency- and dependency-based analyses are given. The example itself is a piece of Yoda wisdom (as he speaks to Anakin), and is certainly of questionable acceptability in this regard. It is, however, perfectly understandable:



The upper two trees show the analysis using flat constituency-based structures that lack a finite VP constituent, and the lower two trees are dependency-based,^[3] whereby dependency inherently rejects the existence of finite VP-constituents.^[4] The noteworthy aspect of these examples is that topicalization does not result in a discontinuity, since there are no crossing lines in the trees. What this means is that such cases can be analyzed purely in terms of inversion. The topicalized expression simply "inverts" to the other side of its head.^[5]

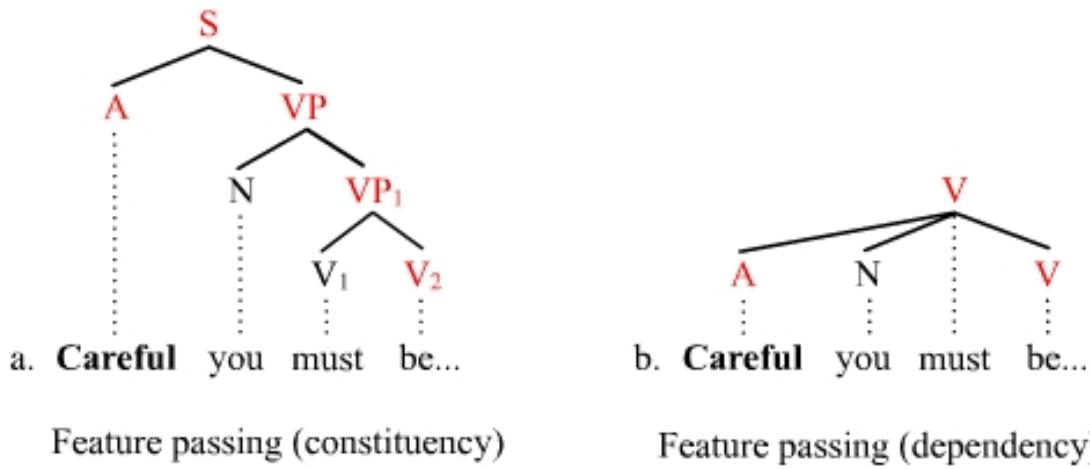
In instead of the flat trees just examined, most constituency grammars posit more layered structures that include a finite VP constituent. These more layered structures are likely to address topicalization in terms of movement or

copying, as illustrated with the following two trees:^[6]

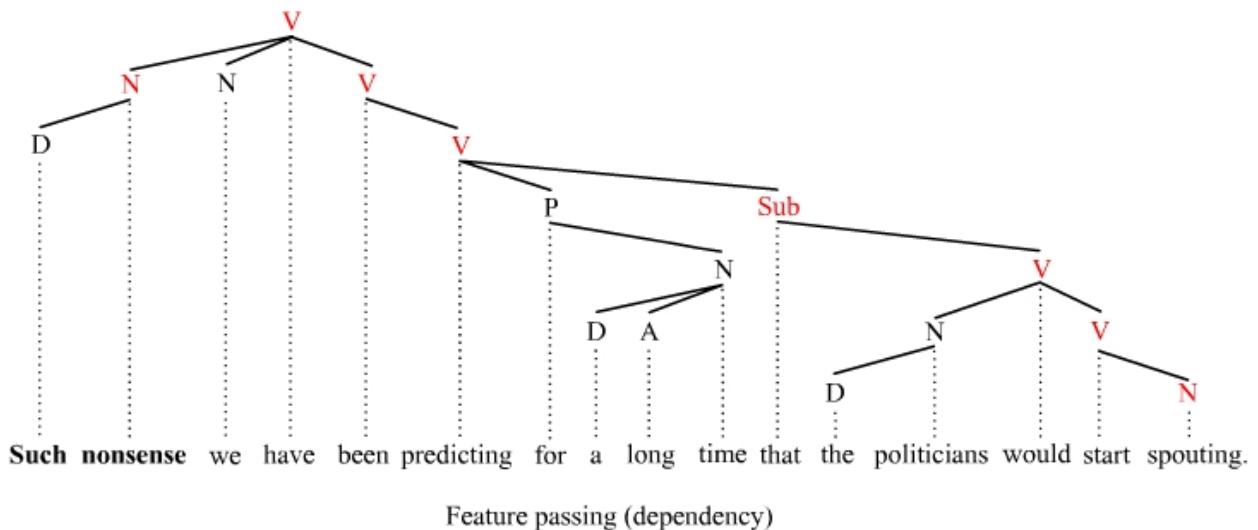


Tree a. shows the canonical word order again, and tree b. illustrates what is known as the movement or copying analysis. The topicalized expression is first generated in its canonical position but is then copied to the front of the sentence, the original then being deleted.

The movement analysis of discontinuities is one possible way to address those instances of topicalization that cannot be explained in terms of inversion. An alternative explanation is feature passing. One assumes that the topicalized expression is not moved or copied to the clause-initial position, but rather it is "base" generated there. Instead of movement, there is feature passing, however.^[7] A link of a sort is established between the topicalized expression and its governor. The link is the path along which information about the topicalized expression is passed to the governor of that expression. A piece of Yoda wisdom is again used for illustration, the full sentence being *Careful you must be when sensing the future, Anakin:*



The nodes in red mark the path of feature passing. Features (=information) about the topicalized expression are passed rightward through (and down) the tree structure to the governor of that expression. This path is present in both analyses, i.e. in the constituency-based a-analysis on the left and in the dependency-based b-analysis on the right. Since topicalization can occur over long distances, feature passing must also occur over long distances. The final example shows a dependency-based analysis of a sentence where the feature passing path is quite long:



Information about the topicalized *such nonsense* is passed along the path marked in red down to the governor of the topicalized expression *spouting*. The words corresponding to the nodes in red form a catena (Latin for 'chain', plural *catenae*).^[8] A theory of topicalization is then built up in part by examining the nature of these catenae for feature passing.

Notes

- [1] For examples of topicalization used as a constituency test, see for instance Allerton (1979:114), Borsley (1991:24), Napoli (1993:422), Burton-Roberts (1997:17), Poole (2002:32), Radford (2004:72), Haegeman (2006:790).
- [2] Two prominent sources on dependency grammar are Tesnière (1959) and Ágel (2003/6).
- [3] See Mel'čuk (2003: 221) and Starosta (2003: 278) for dependency grammar analyses of topicalization similar to the ones shown here.
- [4] Concerning the rejection of a finite VP constituent in dependency grammar, see Tesnière (1959:16ff.).
- [5] See Groß and Osborne (2009:64-66) for such an analysis.
- [6] See for instance Grewendorf (1988:66ff.), Ouhalla (1998: 136f.), Radford (2004: 123ff).
- [7] See for instance the account of functional uncertainty in Lexical Functional Grammar (Bresnan 2001:64-69).
- [8] See Osborne et al. (2013) concerning catenae.

References

- Ágel, V., L. Eichinger, H.-W. Eroms, P. Hellwig, H. Heringer, and H. Lobin (eds.) 2003/6. Dependency and valency: An international handbook of contemporary research. Berlin: Walter de Gruyter.
- Allerton, D. 1979. Essentials of grammatical theory: A consensus view of syntax and morphology. London: Routledge and Kegan Paul.
- Borsley, R. 1991. Syntactic theory: A unified approach. London: Edward Arnold.
- Grewendorf, G. 1988 Aspekte der deutschen Syntax: Eine Rektions-Bindungs-Analyse. Tübingen: Gunter Narr Verlag.
- Groß, T. and T. Osborne 2009. Toward a practical dependency grammar theory of discontinuities. SKY Journal of Linguistics 22, 43-90.
- Haegeman, L. 2006. Thinking syntactically: A guide to argumentation and analysis. Malden, MA: Blackwell.
- Mel'čuk, I. 2003. Levels of dependency description: Concepts and problems. In Ágel et al. (eds.), Dependency and valency: An international handbook of contemporary research, vol.1, 188-229.
- Napoli, D. 1993. Syntax: Theory and problems. New York: Oxford University Press.
- Osborne, T., M. Putnam, and T. Groß 2013. Catenae: Introducing a novel unit of syntactic analysis. Syntax 16, in press.
- Ouhalla, J 1999. Introducing Transformational Grammar: From Principles and Parameters to Minimalism, second edition. London: Arnold.

- Poole, G. 2002. Syntactic theory. New York: Palgrave.
- Radford, A. 2005. English syntax: An introduction. Cambridge University Press.
- Starosta, S. 2003. Lexicase grammar. In Ágel et al. (eds.), Dependency and valency: An international handbook of contemporary research, vol.1, 270-281.
- Tesnière, Lucien 1959. Éléments de syntaxe structurale. Paris: Klincksieck.

Uninflected word

In the context of linguistic morphology, an **uninflected word** is a word that has no morphological markers (inflection) such as affixes, ablaut, consonant gradation, etc., indicating declension or conjugation. If a word has an uninflected form, this is usually the form used as the lemma for the word.^[1]

In English and many other languages, uninflected words include prepositions, interjections, and conjunctions, often called **invariable words**. These cannot be inflected under any circumstances (unless they are used as different parts of speech, as in "ifs and buts").

Only words that cannot be inflected at all are called "invariable". In the strict sense of the term "uninflected", only invariable words are uninflected, but in broader linguistic usage, these terms are extended to be inflectable words that appear in their basic form. For example, English nouns are said to be uninflected in the singular, while they show inflection in the plural (represented by the affix *-s/-es*). The term "uninflected" can also refer to uninfectability with respect to one or more, but not all, morphological features; for example, one can say that Japanese verbs are uninflected for person and number, but they do inflect for tense, politeness, and several moods and aspects.

In the strict sense, among English nouns only mass nouns (such as *sand*, *information*, or *equipment*) are truly uninflected, since they have only one form that does not change; count nouns are always inflected for number, even if the singular inflection is shown by an "invisible" affix (the null morpheme). In the same way, English verbs are inflected for person and tense even if the morphology showing those categories is realized as null morphemes. In contrast, other analytic languages like Mandarin Chinese have true uninflected nouns and verbs, where the notions of number and tense are completely absent.

In many inflected languages, such as Greek and Russian, some nouns and adjectives of foreign origin are left uninflected in contexts where native words would be inflected; for instance, the name *Abraam* in Greek (from Hebrew), the Modern Greek word μπλε *ble* (from French *bleu*), the Italian word *computer*, and the Russian words кенгуру, *kenguru* (kangaroo) and пальто, *pal'to* (coat, from French *paleto*).

In German, all modal particles are uninflected.^[2]



Paletots by "Révillon Frères" at the Exposition Universelle (1900).

References

- [1] Glasgow.com (http://www.glasgow.com/e2/un/Uninflected_word.html)
[2] Germanstudies.org.uk (http://www.germanstudies.org.uk/NHG_Grammar/nhggr_modalparticle.htm)

V2 word order

In syntax, **verb-second (V2) word order** is the most distinctive principle of word order in Germanic languages. The only exception here is English, which has predominantly SVO instead of V2 order, although certain vestiges of the V2 phenomenon can also be found in English. The V2 principle requires that the finite verb (= inflected verb) appear in second position of a declarative main clause, whereby the first position is occupied by a single major constituent that functions as the clause topic.^[1] Germanic languages differ with respect to word order in embedded clauses. German and Dutch, for instance, abandon the V2 principle in embedded clauses and replace it with VF (verb final) order, whereas other Germanic languages, e.g. Yiddish and Icelandic, maintain V2 in all clauses, main and embedded.

Examples

The following examples from German illustrate the V2 principle:

- a. Die Kinder spielen Fussball vor der Schule im Park.
the kids play soccer before school in the park
- .
- b. Fussball spielen die Kinder vor der Schule im Park. 'Soccer the kids play before school in the park.'
- c. Vor der Schule spielen die Kinder Fussball im Park. 'Before school, the kids play soccer in the park.'
- d. Im Park spielen die Kinder Fussball vor der Schule. 'In the park, the kids play soccer before school.'
- .
- e. *Vor der Schule Fussball spielen die Kinder im Park. 'Before school soccer, the kids play in the park.'
- f. *Fussball die Kinder spielen vor der Schule im Park. 'Soccer the kids play before school in the park.'

(The star * is the standard means employed in linguistics to indicate that the example is grammatically unacceptable.) The sentences a-d, which are all perfectly acceptable, have the finite verb *spielen* in second position, whereby the major constituent that appears in the first position varies. Note that in the English translations on the right, the subject *the kids* remains in the position immediately before the finite verb *play*. The e and f sentences are bad because the finite verb no longer appears in second position there, but rather it has been pushed to the third position. The V2 principle allows any major constituent to occupy the first position as long as the second position is occupied by the finite verb.

The following examples from Dutch illustrate the V2 principle further:

- a. Ik **las** dit boek gisteren.
 I read this book yesterday
- b. Dit boek **las** ik gisteren 'This book I read yesterday.'
- c. Gisteren **las** ik dit boek. 'Yesterday I read this book.'
- d. *Dit boek ik **las** gisteren. 'This book I read yesterday.'
- e. *Gisteren ik **las** dit boek. 'Yesterday I read this book.'

We again see in sentence a-c that as long as the finite verb (here *las*) is in second position, the major constituent in first position can vary. When two (or more) major constituents appear before the finite verb as in sentences d and e, the V2 principle is violated and the sentence is bad. Data similar to these examples from German and Dutch could easily be produced for the other Germanic languages.

Non-finite verbs and embedded clauses

Non-finite verbs

The V2 principle regulates the position of finite verbs only; its influence on non-finite verbs (infinitives, participles, etc.) is thus indirect. Non-finite verbs in V2 languages appear in varying positions depending on the language at hand. In German and Dutch, for instance, non-finite verbs appear after the object (if one is present) in clause final position in main clauses, which means OV (object-verb) order is present in a sense. Swedish and Icelandic, in contrast, position non-finite verbs after the finite verb but before the object (if one is present), which means VO (verb-object) order is present. In this regard, it is important to understand that the V2 principle focuses on the finite verb only.

Embedded clauses

The V2 principle may or may not be in force in embedded clauses depending on the (Germanic) language at hand. German and Dutch, for instance, have VF (verb final) order in all subordinate clauses that are introduced by a subordinator (= subordinate conjunction), whereas other Germanic languages, e.g. Icelandic and Yiddish, maintain V2 order in embedded clauses, as the following examples from Icelandic demonstrate:^[2]

- a. Þú veist að ég **las** bókina í dag.
 You know that I read the book today.
- b. Þú veist að í dag **las** ég bókina.
 You know that today read I the book.

Sentence a. contains normal word order, whereas in sentence b the adverbial *í dag* 'today' has been fronted for emphasis within the embedded object clause. The V2 phenomenon is apparent in sentence b., where the adverbial precedes the finite verb *las* at the same time that the subject follows the finite verb.

V2 in English

While modern English is broadly SV (not V2), an earlier stage of English was V2, and some vestiges of the former V2 structure surface in a number of varying constructions.^[3] Many instances of subject-auxiliary inversion, for instance, can be analyzed as V2 structures. Some examples of V2 constructions in English are given next:

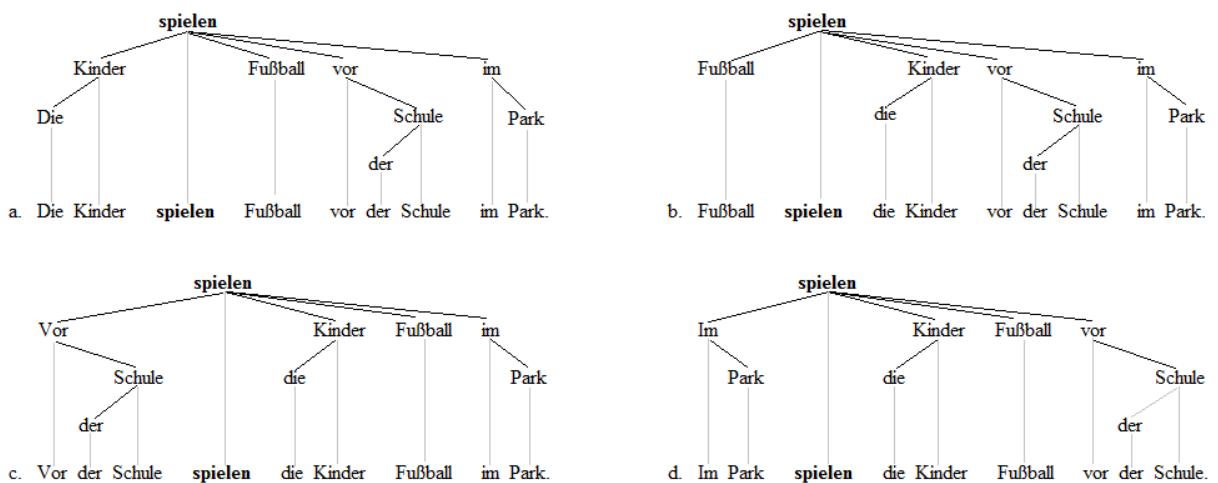
- a. Sam **is** watching the cup games.
- b. Which games **is** Sam watching? - V2 order with the subject-auxiliary inversion of a constituent question
- a. He **will** drink schnapps at no point.
- b. At no point **will** he drink schnapps. -V2 order with negative inversion
- a. Many photographers **sat** behind the goal.
- b. Behind the goal **sat** many photographers. - V2 order with locative inversion
- a. No aspect of the game **was** unexpected.
- b. Unexpected **was** no aspect of the game. - V2 order with copular inversion

Since the finite verb is preceded by a single non-subject major constituent in each of these sentences, these constructions can be interpreted as obeying the V2 principle.

Structural analysis

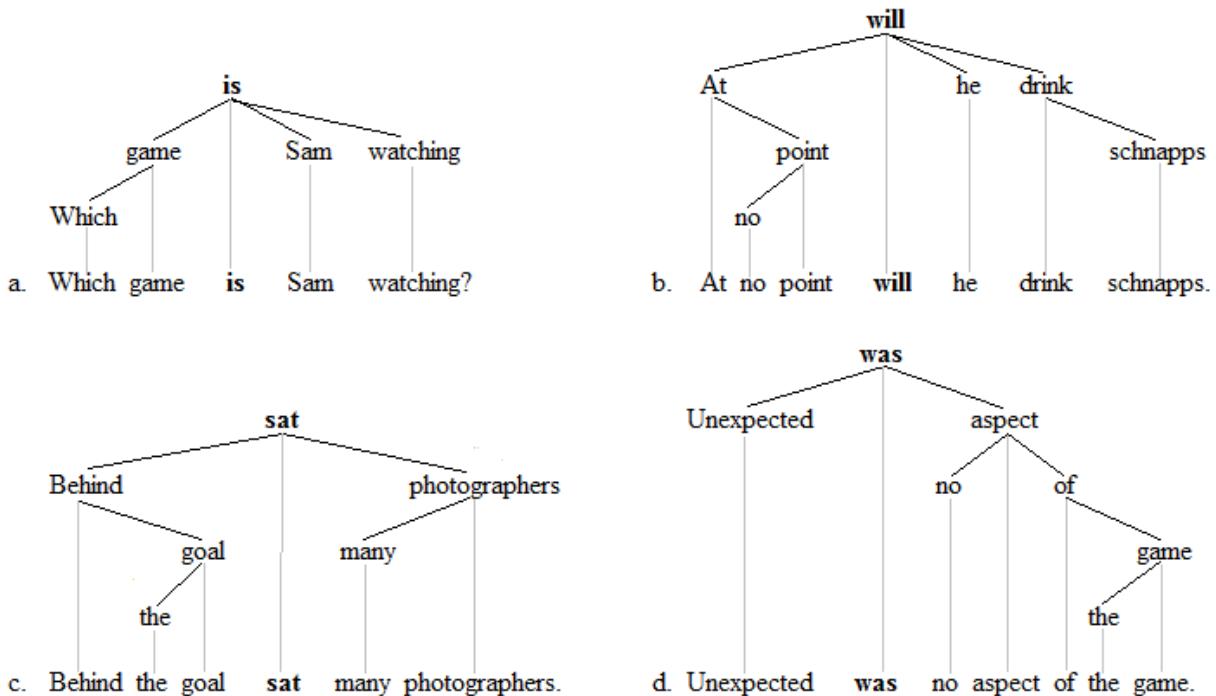
V2 behavior poses a problem for many theories of syntax. In particular, the set V2 position of the finite verb is difficult to accommodate if the theory acknowledges a finite verb phrase constituent. Chomskyan phrase structure grammars seek to overcome this difficulty by stipulating various movement procedures. For instance, if the theory assumes that all sentence structure is derived from SVO or SOV order, then one must posit two distinct instances of movement. The finite verb must first move in front of the subject, to be followed then by a second instance of movement that places the topic in front of the finite verb.^[4]

The V2 phenomenon is less problematic if a finite verb phrase is absent. In this respect, dependency grammar (DG), since it acknowledges no finite VP constituent, can accommodate the V2 phenomenon.^[5] DG stipulates that one and only one constituent can be a predependent of the finite verb (i.e. a dependent that precedes its head) in declarative (matrix) clauses.^[6] On this account, the V2 principle is violated if the finite verb has more than one predependent or no predependent at all. The following DG structures of the first four German sentences above illustrate the analysis (the sentence means 'The kids play soccer in the park before school'):



The finite verb *spielen* is the root of all clause structure. The V2 principle requires that this root have a single predependent, which it does in each of the four sentences.

The four English sentences above involving the V2 phenomenon receive the following analyses:



Kashmiri

V2 word order occurs outside of Germanic, for instance in Kashmiri. Declarative main clauses as well as embedded object clauses in Kashmiri have V2 word order, but relative clauses have the VF order, e.g.

- Basic sentence

mye per yi kyitaab az.
I read this book today.

- With fronted adverb

az per mye yi kyitaab.
Today read I this book.

- Subordinate clause

mye von zyi mye per yi kyitaab az.
I said that I read this book today.

- Subordinate clause with fronted adverb

mye von zyi az per mye yi kyitaab.
I said that today read I this book.

- Relative clause

yi chi swa kyitaab ywas mye az per.
This is the book which I today read.

- Relative clause with embedded subordinate clause

yi chi swa kyitaab ywas mye veny zyi mye per az.
This is the book which I said that I read today.

Kashmiri differs from the V2 languages of Europe in that in all clause types Kashmiri exhibits the characteristics of SOV languages. It has postpositions (not prepositions), objects before the main verb (not after - unless the main verb itself is in position 2), and auxiliaries after main verbs (unless the auxiliary itself is in position 2) [example from

'saaykal' by Ratan Lal Shant]:

khaar oos rinyoomut Tyuub lemy-lemy Tayr-i manz-i nyebar keD-yith tshun-aan.
 mechanic was worn.out tube pull-pull tire-Abl inside-Abl out take.out-Ger THROW-ing
 'The mechanic was pulling the worn-out tube out of the tire.'

Notes

- [1] For discussions of the V2 principle, see Borsley (1996:220f.), Ouhalla (1994:284ff.), Fromkin et al. (2000:341ff.), Adger (2003:329ff.), Carnie (2007:281f.).
- [2] Concerning V2 order in embedded clauses in Yiddish, see Ouhalla (1994:287).
- [3] Concerning vestiges of V2 in English, see Ouhalla (1994:289).
- [4] For movement-type analyses of the V2 phenomenon, see for instance Emonds (1976:25), van Riemsdijk and Williams (1986:52), Ouhalla (1994:109ff.), Carnie (2007:281f.).
- [5] That DG denies the existence of a finite VP constituent is apparent with most any DG representation of sentence structure; finite VP is never shown as a complete subtree (=constituent). See for instance the trees in the essays on DG in Ágel et al. (2003/2006) in this regard. Concerning the strict denial of a finite VP constituent, see especially Tesnière (1959:103-105).
- [6] For an example of a DG analysis of the V2 principle, see Osborne (2005:260).

Literature

- Adger, D. 2003. Core syntax: A minimalist approach. Oxford, UK: Oxford University Press.
- Ágel, V., L. Eichinger, H.-W. Ermons, P. Hellwig, H. Heringer, and H. Lobin (eds.) 2003/6. Dependency and valency: An international handbook of contemporary research. Berlin: Walter de Gruyter.
- Borsley, R. 1996. Modern phrase structure grammar. Cambridge, MA: Blackwell Publishers.
- Carnie, A. 2007. Syntax: A generative introduction, 2nd edition. Malden, MA: Blackwell Publishing.
- Emonds, J. 1976. A transformational approach to English syntax: Root, structure-preserving, and local transformations. New York: Academic Press.
- Fromkin, V. et al. 2000. Linguistics: An introduction to linguistic theory. Malden, MA: Blackwell Publishers.
- Osborne T. 2005. Coherence: A dependency grammar analysis. SKY Journal of Linguistics 18, 223-286.
- Ouhalla, J. 1994. Transformational grammar: From rules to principles and parameters. London: Edward Arnold.
- van Riemsdijk, H. and E. Williams. 1986. Introduction to the theory of grammar. Cambridge, MA: The MIT Press.
- Tesnière, L. 1959. Éléments de syntaxe structurale. Paris: Klincksieck.

Valency (linguistics)

In linguistics, **verb 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).^[1]

Types of valency

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. *He¹ sleeps*.
- a transitive verb takes two, e.g. *He¹ kicked the ball²*.
- a ditransitive verb takes three, e.g. *He¹ gave her² a flower³*.
- There are a few verbs that take four arguments. Sometimes *bet* is considered to have four arguments in English like in the example, *The fool¹ bet him² five quid³ on "The Daily Arabian"⁴ to win*.

The term **valence** also refers to the syntactic category of these elements. Verbs show considerable variety in this respect. In the examples above, the arguments are noun phrases (NPs). But arguments can in many cases be other categories, e.g.

Winning the prize made our training worthwhile. - Subject is a non-finite verb phrase

That he came late did not surprise us. - Subject is a clause

Sam persuaded us to contribute to the cause. - Object is a non-finite verb phrase

The president mentioned that she would veto this bill. - Object is a clause

Many of these patterns can appear in a form rather different from the ones just shown above. For example, they can also be expressed using the passive voice:

Our training was made worthwhile (by winning the prize).

We were not surprised (by the fact that he came late).

We were persuaded to contribute (by Sam).

That she would veto this bill was mentioned (by the president).

The above examples show some of the most common valence patterns in English, but do not begin to exhaust them. Other linguists have examined the patterns of more than three thousand verbs and place them in one or more of several dozen groups.^[2]

The verb requires all of its arguments in a well-formed sentence, although they can sometimes undergo valency reduction or expansion. For instance, *to eat* is naturally divalent, as in *he eats an apple*, but may be reduced to monovalency in *he eats*. This is called *valency reduction*. In the southeastern United States, an emphatic trivalent form of *eat* is in use, as in *I'll eat myself some supper*. Verbs that are usually monovalent, like *sleep*, cannot take a direct object. However, there are cases where the valency of such verbs can be expanded, for instance in *He sleeps the sleep of death*. This is called *valency expansion*. Verb valence can also be described in terms of syntactic versus

semantic criteria. The syntactic valency of a verb refers to the number of dependent arguments that the verb can have, while semantic valence describes the thematic relations associated with a verb.

Valency vs. subcategorization

Tesnière 1959^[3] expresses the idea of valence as follows (translation from French):

"One can therefore compare the verb to a sort of atom with hooks, susceptible to exercising attraction on a greater or lesser number of actants. For these actants, the verb has a greater or lesser number of hooks that maintain the actants as dependents. The number of hooks that a verb has constitutes what we will call the **valence** of the verb."

Tesnière used the word *actants* to mean what are now widely called arguments (and sometimes complements). An important aspect of Tesnière's understanding of valency was that the subject is an actant (=argument, complement) of the verb in the same manner that the object is.^[4] The concept of subcategorization, which is related to valency but associated more with phrase structure grammars than with the dependency grammar that Tesnière developed, did not originally view the subject as part of the subcategorization frame,^[5] although the more modern understanding of subcategorization seems to be almost synonymous with valency.

Valency in syntactic theory

Valence plays an important role in a number of the syntactic frameworks that have been developed in the last few decades. In Generalized Phrase Structure Grammar (GPSG),^[6] many of the phrase structure rules generate the class of verbs with a particular valence. For example, the following rule generates the class of transitive verbs:

$$\text{VP} \rightarrow \text{H NP [love]}$$

H stands for the head of the VP, that is the part which shares the same category as the VP, in this case, the verb. Some linguists objected that there would be one such rule for every valence pattern. Such a list would miss the fact that all such rules have certain properties in common. Work in Government and Binding (GB)^[7] takes the approach of generating all such structures with a single schema, called the X-bar schema^[8]:

$$\text{X}' \rightarrow \text{X}, \text{Y}'' \dots$$

X and Y can stand for a number of different lexical categories, and each instance of the symbol ' stands for a bar. So A', for instance, would be a kind of AP (adjective phrase). Two bars, used here for the complements, is thought by some linguists to be a maximal projection of a lexical category. Such a schema is meant to be combined with specific lexical rules and the *projection principle* to distinguish the various patterns of specific verbs.

Head-Driven Phrase Structure Grammar (HPSG)^[9] introduces a handful of such schemata which aim to subsume all such valence related rules as well as other rules not related to valence. A network is developed for information related to specific lexical items. The network and one of the schemata aims to subsume the large number of specific rules defining the valence of particular lexical items.

Notice that the rule ($\text{VP} \rightarrow \text{H NP [love]}$) and the schema ($\text{X}' \rightarrow \text{X}, \text{Y}'' \dots$) deal only with non-subject complements. This is because all of the above syntactic frameworks use a totally separate rule (or schema) to introduce the subject. This is a major difference between them and Tesnière's original understanding of valency, which included the subject, as mentioned above.

One of the most widely known versions of Construction Grammar (CxG)^[10] also treats the subject like other complements, but this may be because the emphasis is more on semantic roles and compatibility with work in cognitive science than on syntax.

Notes

- [1] For a discussion of valency from the traditional perspective of dependency grammar, see Fischer and Ágel (2010).
- [2] Concerning the valency patterns, see Levin (1993).
- [3] The quotation is from Tesnière (1959/69:238).
- [4] Tesnière (1959/69:109) emphasizes that the subject is a complement just like the object in chapter 51, paragraph 109.
- [5] Concerning an early and prominent account of subcategorization, see Chomsky (1965).
- [6] Concerning GPSG, see Gazdar et al. (1985).
- [7] The classical work in GB is Chomsky (1981).
- [8] A classic work establishing the X-bar schema is Jackendoff (1977).
- [9] The classic work of HPSG is Pollard and Sag (1994).
- [10] A seminal work for the development of CxG is Goldberg (1993).

References

- Chomsky, N. 1965. Aspects of the theory of syntax. Cambridge, MA: MIT Press.
- Chomsky, N. 1981. Lectures on Government and Binding. Dordrecht: Foris.
- Fischer, K. and V. Ágel. 2010. Dependency grammar and valency theory. In: The Oxford handbook of linguistic analysis, 223–255. Oxford: Oxford University Press.
- Gazdar, G., E. Klein, G. Pullum, and I. Sag. 1984. Generalized Phrase Structure Grammar. Oxford: Basil Blackwell.
- Goldberg, A.. 1995. A Construction Grammar approach to argument structure. Chicago: University of Chicago Press.
- Jackendoff, R. 1977. X-bar syntax: A study of phrase structure. Cambridge, MA: MIT Press.
- Levin, B. 1993. English verb classes and alternations: A preliminary investigation. Chicago: University of Chicago Press.
- Pollard, C. and I. Sag. 1994. Head-Driven Phrase Structure Grammar. Chicago: University of Chicago Press.
- Tesnière, L. 1959. Éléments de syntaxe structurale. Paris: Klincksieck.
- Tesnière, L. 1969. Éléments de syntaxe structurale, 2nd edition. Paris: Klincksieck.

External links

- English Valency Structures - A first sketch (<http://webdoc.gwdg.de/edoc/ia/eese/artic99/herbst/main1.html>)
- The difference between lexical and grammatical valency (http://www.inst.at/trans/15Nr/04_09/fesenko_alina15.htm)
- What is valency? (<http://www.sil.org/linguistics/GlossaryOfLinguisticTerms/WhatIsValency.htm>)
- Erlangen Valency Patternbank (<http://www.patternbank.uni-erlangen.de/cgi-bin/patternbank.cgi>)

Verb

Examples
<ul style="list-style-type: none">• I washed the car yesterday.• The dog ate my homework.• John studies English and French.

A **verb**, from the Latin *verbum* meaning *word*, is a word (part of speech) that in syntax conveys an action (*bring, read, walk, run, learn*), an occurrence (*happen, become*), or a state of being (*be, exist, stand*). In the usual description of English, the basic form, with or without the particle *to*, is the infinitive. In many languages, verbs are inflected (modified in form) to encode tense, aspect, mood and voice. A verb may also agree with the person, gender, and/or number of some of its arguments, such as its subject, or object. In many languages, verbs have a present tense, to indicate that an action is being carried out; a past tense, to indicate that an action has been done; and a future tense, to indicate that an action will be done.

Agreement

In languages where the verb is inflected, it often agrees with its primary argument (the subject) in person, number and/or gender. With the exception of the verb *to be*, English shows distinctive agreement only in the third person singular, present tense form of verbs, which are marked by adding "-s" (*walks*) or "-es" (*fishes*). The rest of the persons are not distinguished in the verb (*I walk, you walk, they walk*, etc.).

Latin and the Romance languages inflect verbs for tense-aspect-mood and they agree in person and number (but not in gender, as for example in Polish) with the subject. Japanese, like many languages with SOV word order, inflects verbs for tense/mood/aspect as well as other categories such as negation, but shows absolutely no agreement with the subject - it is a strictly dependent-marking language. On the other hand, Basque, Georgian, and some other languages, have *poly personal agreement*: the verb agrees with the subject, the direct object and even the secondary object if present, a greater degree of head-marking than is found in most European languages.

Verb Types

Verbs vary by type, and each type is determined by the kinds of words that follow it and the relationship those words have with the verb itself. There are six types: intransitive, transitive, infinitives, to-be verbs, and two-place transitive (Vg- verb give), and two-place transitive (Vc- verb consider). ^[1]

Intransitive Verbs

An intransitive verb is one that is not directly followed by a noun or adjective. Most often, intransitive verbs are followed by an adverb (a word that addresses how, where, when, and how often) or end a sentence. For example: "The woman *spoke* softly." "The athlete *ran* faster than the official." "The boy *wept*."

Linking Verbs

A linking verb cannot be followed by an adverb or end a sentence but instead must be followed by a noun or adjective, whether in a single word or phrase. Common linking verbs include *seem*, *become*, *appear*, *look*, and *remain*. For example: "His mother *looked* worried." "Josh *remained* a reliable friend." Therefore, linking verbs 'link' the adverb to the subject.

Adjectives that come after linking verbs are predicate adjectives, and nouns that come after linking verbs are predicate nouns.^[2]

Transitive Verbs

A transitive verb is followed by a noun or noun phrase. These noun phrases are not called predicate nouns but are instead called direct objects because they refer to the object that is being acted upon. For example: "My friend *read* the newspaper." "The teenager *earned* a speeding ticket."

A way to identify a transitive verb is to invert the sentence, making it passive. For example: "The newspaper *was read* by my friend." "A speeding ticket *was earned* by the teenager."

Two-Place Transitive: Vg Verbs

Vg verbs (named after the verb *give*) precede either two noun phrases or a noun phrase and then a prepositional phrase often led by *to* or *for*. For example: "The players *gave* their teammates high fives." "The players *gave* high fives to their teammates."

When two noun phrases follow a transitive verb, the first is an indirect object, that which is receiving something, and the second is a direct object, that being acted upon. Indirect objects can be noun phrases or prepositional phrases.^[3]

Two-Place Transitive: Vc Verbs

Vc verbs (named after the verb *consider*) are followed by a noun phrase that serves as a direct object and then a second noun phrase, adjective, or infinitive phrase. The second element (noun phrase, adjective, or infinitive) is called a complement, which completes a clause that would not otherwise have the same meaning. For example: "The young couple *considers* the neighbors wealthy people." "Some students *perceive* adults quite inaccurately." "Sarah *deemed* her project to be the hardest she has ever completed."

To-Be Verbs

The verb *be* is manifested in eight forms: *be*, *is*, *am*, *are*, *was*, *were*, *been*, and *being*. These verbs precede nouns or adjectives in a sentence, which become predicate nouns and predicate adjectives similar to those that function with a linking verb. They can also be followed by an adverb of place, which is sometimes referred to as a predicate adverb. For example: "Her daughter *was* a writing tutor." "The singers *were* very nervous." "My house *is* down the street."

Valency

The number of arguments that a verb takes is called its *valency* or *valence*. Verbs can be classified according to their valency:

- **Aivalent** (valency = 0): the verb has neither a subject nor an object. Zero valency does not occur in English; in some languages such as Mandarin Chinese, weather verbs like *snow(s)* take no subject or object.
- **Intransitive** (valency = 1, monovalent): the verb only has a subject. For example: "he runs", "it falls".
- **Transitive** (valency = 2, divalent): the verb has a subject and a direct object. For example: "she eats fish", "we hunt nothing".
- **Ditransitive** (valency = 3, trivalent): the verb has a subject, a direct object, and an indirect object. For example: "He gives her a flower" or "She gave the watch to John".

A few English verbs, particularly those concerned with financial transactions, take four arguments, as in "Pat₁ sold Chris₂ a lawnmower₃ for \$20₄" or "Chris₁ paid Pat₂ \$20₃ for a lawnmower₄".^[4]

Weather verbs are often impersonal (subjectless, or aivalent) in null-subject languages like Spanish, where the verb *llueve* means "It rains". In English, they require a dummy pronoun, and therefore formally have a valency of 1.

Intransitive and transitive verbs are the most common, but the impersonal and **objective verbs** are somewhat different from the norm. In the objective the verb takes an object but no subject; the nonreferent subject in some uses may be marked in the verb by an incorporated dummy pronoun similar to that used with the English weather verbs. Impersonal verbs in null subject languages take neither subject nor object, as is true of other verbs, but again the verb may show incorporated dummy pronouns despite the lack of subject and object phrases.

English verbs are often flexible with regard to valency. A transitive verb can often drop its object and become intransitive; or an intransitive verb can take an object and become transitive. For example, the verb *move* has no grammatical object in *he moves* (though in this case, the subject itself may be an implied object, also expressible explicitly as in *he moves himself*); but in *he moves the car*, the subject and object are distinct and the verb has a different valency.

In many languages other than English, such valency changes are not possible; the verb must instead be inflected in order to change the valency.

Tense, aspect, and modality

Depending on the language, verbs may express *grammatical tense, aspect, or modality*. Grammatical tense^{[5][6][7]} is the use of auxiliary verbs or inflections to convey whether the action or state is before, simultaneous with, or after some reference point. The reference point could be the time of utterance, in which case the verb expresses absolute tense, or it could be a past, present, or future time of reference previously established in the sentence, in which case the verb expresses relative tense.

Aspect^{[6][8]} expresses how the action or state occurs through time. Important examples include:

- perfective aspect, in which the action is viewed in its entirety through completion (as in "I saw the car")
- imperfective aspect, in which the action is viewed as ongoing; in some languages a verb could express imperfective aspect more narrowly as:
 - habitual aspect, in which the action occurs repeatedly (as in "I used to go there every day"), or
 - continuous aspect, in which the action occurs without pause; continuous aspect can be further subdivided into
 - stative aspect, in which the situation is a fixed, unevolving state (as in "I know French"), and
 - progressive aspect, in which the situation continuously evolves (as in "I am running")
- perfect, which combines elements of both aspect and tense, and in which both a prior event and the state resulting from it are expressed (as in "I have studied well")

A single-word verb in Spanish contains information about time (past, present, future), person and number. The process of grammatically modifying a verb to express this information is called conjugation.

Aspect can either be lexical, in which case the aspect is embedded in the verb's meaning (as in "the sun shines", where "shines" is lexically stative); or it can be grammatically expressed, as in "I am running".

Modality^[9] expresses the speaker's attitude toward the action or state given by the verb, especially with regard to degree of necessity, obligation, or permission ("You must go", "You should go", "You may go"), determination or willingness ("I will do this no matter what"), degree of probability ("It must be raining by now", "It may be raining", "It might be raining"), or ability ("I can speak French"). All languages can express modality with adverbs, but some also use verbal forms as in the given examples. If the verbal expression of modality involves the use of an auxiliary verb, that auxiliary is called a modal verb. If the verbal expression of modality involves inflection, we have the special case of mood; moods include the indicative (as in "I am there"), the subjunctive (as in "I wish I *were* there"), and the imperative ("Be there!").

Voice

The voice^[10] of a verb expresses whether the subject of the verb is performing the action of the verb or whether the action is being performed on the subject. The two most common voices are the active voice (as in "I saw the car") and the passive voice (as in "The car was seen by me" or simply "The car was seen").

Most languages have a number of verbal nouns that describe the action of the verb.

In the Indo-European languages, verbal adjectives are generally called participles. English has an active participle, also called a present participle; and a passive participle, also called a past participle. The active participle of *break* is *breaking*, and the passive participle is *broken*. Other languages have attributive verb forms with tense and aspect. This is especially common among verb-final languages, where attributive verb phrases act as relative clauses.

References

- [1] Morenberg, M. *Doing Grammar*, Oxford University Press, 1997, pp. 6-14.
 - [2] Morenberg, M. *Doing Grammar*, Oxford University Press, 1997, p. 7.
 - [3] Morenberg, M. *Doing Grammar*, Oxford University Press, 1997, pp. 9-10.
 - [4] Jackendoff, R. *Foundations of Language*, Oxford University Press, 2002, p. 135.
 - [5] Comrie, Bernard, *Tense*, Cambridge Univ. Press, 1985.
 - [6] Östen Dahl, *Tense and Aspect Systems*, Blackwell, 1985.
 - [7] Fleischman, Suzanne, *The Future in Thought and Action*, Cambridge Univ. Press, 1982.
 - [8] Comrie, Bernard, *Aspect*, Cambridge Univ. Press, 1976.
 - [9] Palmer, F. R., *Mood and Modality*, Cambridge Univ. Press, 2001.
 - [10] Klaiman, M. H., *Grammatical Voice (Cambridge Studies in Linguistics)*, Cambridge Univ. Press, 1991.
- Gideon Goldenberg, "On Verbal Structure and the Hebrew Verb", in: idem, *Studies in Semitic Linguistics*, Jerusalem: Magnes Press 1998, pp. 148–196 [English translation; originally published in Hebrew in 1985].

External links

- www.verbix.com (<http://www.verbix.com>) Verbs and verb conjugation in many languages.
- [conjugation.com](http://www.conjugation.com) (<http://www.conjugation.com>) English Verb Conjugation.
- Italian Verbs Conjugator and Analyzer (http://www.archivium.biz/index_EN.php) Conjugation and Analysis of Regular and Irregular Verbs, and also of Neologisms, like *googlare* for *to google*.
- [El verbo en español](http://www.molinodeideas.es/descargas/el_verbo_espaniol.pdf) (http://www.molinodeideas.es/descargas/el_verbo_espaniol.pdf) Downloadable handbook to learn the Spanish verb paradigm in an easy ruled-based method. It also supplies the guidelines to know whenever a Spanish verb is regular or irregular

Verb phrase

In linguistics, a **verb phrase** or **VP** is a syntactic unit composed of at least one verb and the dependents of that verb. One can distinguish between two main types of VPs, finite VPs (the verb is a finite verb) and non-finite VPs (the verb is a non-finite verb). While phrase structure grammars acknowledge both, dependency grammars reject the existence of a finite VP constituent. In this regard, the understanding of verb phrases can be theory-driven.

VPs in phrase structure grammars

In phrase structure grammars such as generative grammar, the VP is a phrase that is headed by a verb. A verb phrase may be constructed from a single verb; often, however, the verb phrase will consist of various combinations of the main verb and any auxiliary verbs, plus optional specifiers, complements, and adjuncts. For example:

Yankee batters **hit the ball to win their first World Series since 2000**.

Mary **saw the man through the window**.

David **gave Mary a book**.

The first example contains the verb phrase *hit the ball to win their first World Series since 2000*. The second example contains the main verb *saw*, the noun phrase (NP) complement *the man*, and the prepositional phrase (PP) adjunct *through the window*, which together form the verb phrase. Additionally, the third example contains the main verb *gave*, and two noun phrases *Mary* and *a book*, both selected by the verb in this case. All three together form the verb phrase. Note that according to this definition, the verb phrase corresponds to the predicate of traditional grammar.

Up to the mid/late 1980s, some work in phrase structure grammars thought that some languages lacked a verb phrase. These included languages with extremely free word order (so-called non-configurational languages, such as Japanese, Hungarian, or Australian aboriginal languages), and languages with a default VSO order (several Celtic and Oceanic languages). The current view in some varieties of generative grammar (such as Principles and Parameters) is that all languages have a verb phrase, while others (such as Lexical Functional Grammar) take the view that at least some of these languages do lack a verb phrase constituent.

Finally, phrase structure grammars do not draw the key distinction between finite verb phrases and non-finite verb phrases, since they view both as constituent phrases. Dependency grammars are much different in this regard!

VPs in dependency grammars

While phrase structure grammars (= constituency grammars) acknowledge both finite and non-finite VPs as constituents (= complete subtrees), dependency grammars reject the former. That is, dependency grammars acknowledge only non-finite VPs as constituents; finite VPs do not qualify as constituents in dependency grammars. For example:

John **has finished the work**. - Finite VP in bold

John has **finished the work**. - Non-finite VP in bold

Since *has finished the work* contains the finite verb *has*, it is a finite VP, and since *finished the work* contains the non-finite verb *finished* but lacks a finite verb, it is a non-finite VP. Similar examples:

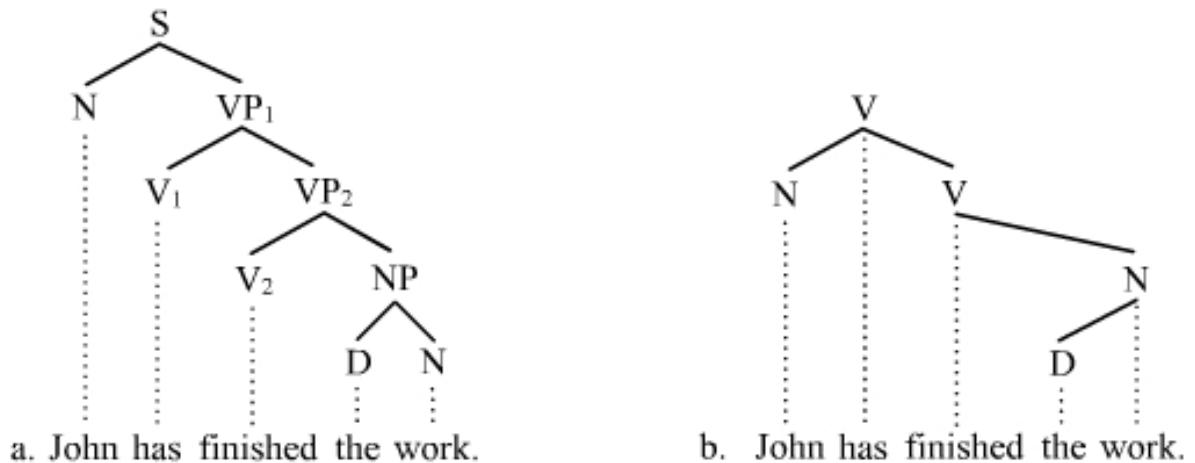
They **do not want to try that**. - Finite VP in bold

They do not **want to try that**. - One non-finite VP in bold

They do not want to **try that**. - Another non-finite VP in bold

These examples illustrate well that many clauses can contain more than one non-finite VP, but they generally contain only one finite VP. Starting with Lucien Tesnière 1959,^[1] dependency grammars challenge the validity of the initial

binary division of the clause into subject (NP) and predicate (VP), which means they reject the notion that the second half of this binary division, i.e. the finite VP, is a constituent. They do, however, readily acknowledge the existence of non-finite VPs as constituents. The two competing views of verb phrases are visible in the following trees:



Constituency structure

Dependency structure

The constituency tree on the left shows the finite VP *has finished the work* as a constituent, since it corresponds to a complete subtree. The dependency tree on the right, in contrast, does not acknowledge a finite VP constituent, since there is no complete subtree there that corresponds to *has finished the work*. Note that the analyses agree concerning the non-finite VP *finished the work*; both see it as a constituent (= complete subtree).

Dependency grammars point to the results of many standard constituency tests to back up their stance.^[2] For instance, topicalization, pseudoclefting, and answer ellipsis suggest that non-finite VP does, but finite VP does not, exist as a constituent:

*...and **has finished the work**, John. - Topicalization

*What John has done is **has finished the work**. - Pseudoclefting

What has John done? - ***Has finished the work**. - Answer ellipsis

The * indicates that the sentence is bad. These data must be compared to the results for non-finite VP:

...and **finished the work**, John (certainly) has. - Topicalization

What John has done is **finished the work**. - Pseudoclefting

What has John done? - **Finished the work**. - Answer ellipsis

The strings in bold are the ones in focus. Attempts to in some sense isolate the finite VP fail, but the same attempts with the non-finite VP succeed.^[3]

VPs narrowly defined

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.^[4] 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 **shall not kill**.

This more narrow definition is often applied in functionalist frameworks and traditional European reference grammars. It is incompatible with the phrase structure understanding of the verb phrase, since the strings in bold are not constituents under standard analyses. It is, however, compatible with those grammars, in particular dependency grammars, that view the catena as the fundamental unit of syntactic structure as opposed to the constituent. Furthermore, the verbal elements in bold are syntactic units consistent with the understanding of predicates in the tradition of predicate calculus.

Notes

- [1] Concerning Tesnière's rejection of a finite VP constituent, see Tesnière (1959:103-105).
- [2] For a discussion of the evidence for and against a finite VP constituent, see Matthews (2007:17ff.), Miller (2011:54ff.), and Osborne et al. (2011:323f.).
- [3] Attempts to motivate the existence of a finite VP constituent tend to confuse the distinction between finite and non-finite VPs. They mistakenly take evidence for a non-finite VP constituent as support for the existence a finite VP constituent. See for instance Akmajian and Heny (1980:29f., 257ff.), Finch (2000:112), van Valin (2001:111ff.), Kroeger (2004:32ff.), Sabin (2011:30ff.).
- [4] Klammer and Schulz (1996:157ff.), for instance, pursue this narrow understanding of verb phrases.

References

- Akmajian, A. and F. Heny. 1980. An introduction to the principle of transformational syntax. Cambridge, MA: The MIT Press.
- Finch, G. 2000. Linguistic terms and concepts. New York: St. Martin's Press.
- Klammer, T. and M. Schulz. 1996. Analyzing English grammar. Boston: Allyn and Bacon.
- Kroeger, P. 2004. Analyzing syntax: A lexical-functional approach. Cambridge, UK: Cambridge University Press.
- Matthews, P. 2007. Syntactic relations: A critical survey. Cambridge, UK: Cambridge University Press.
- Miller, J. 2011. A critical introduction to syntax. London: continuum.
- Osborne, T., M. Putnam, and T. Groß 2011. Bare phrase structure, label-less structures, and specifier-less syntax: Is Minimalism becoming a dependency grammar? *The Linguistic Review* 28: 315-364.
- Sabin, N. 2011. Syntactic analysis: The basics. Malden, MA: Wiley-Blackwell.
- Tesnière, Lucien 1959. *Éléments de syntaxe structurale*. Paris: Klincksieck.
- van Valin, R. 2001. An introduction to syntax. Cambridge, UK: Cambridge University Press.

Verb phrase ellipsis

In linguistics, **verb phrase ellipsis** (**VP-ellipsis** or **VPE**) is an elliptical construction in which a non-finite verb phrase has been left out (elided), e.g. *She will vote for Romney, and he will _{vote for Romney} too.* VP-ellipsis is a well studied kind of ellipsis,^[1] particularly with regard to its occurrence in English, although certain types can be found in other languages as well.^[2]

Features of verb phrase ellipsis in English

In the types of VP-ellipsis considered here, which are features of English grammar, the elided VP must be a non-finite VP; it cannot be a finite VP. Further, the ellipsis must be introduced by an auxiliary verb (*be, can, do, don't, could, have, may, might, shall, should, will, won't, would*, etc.) or by the infinitive particle *to*.^[3] In the examples below, the elided material of VP-ellipsis is indicated using subscripts and a smaller font and the antecedent to the ellipsis is bolded:

You might **do it**, but I won't _{do it}.

She won't **laugh**, but he will _{laugh}.

Susan has **been cheating**, and Fred has _{been cheating} too.

Larry is not **telling the truth**, neither is Jim _{telling the truth}.

Attempts at VP-ellipsis that lack an auxiliary verb fail, unless the infinitive particle *to* is retained:

a. *Sam wants **to eat**, and Fred wants _{to eat} as well. (* indicates that the sentence is ungrammatical)

b. Sam wants **to eat**, and Fred wants _{eat} as well.

a. *Josh likes **to sleep late**, and Hillary likes _{to sleep late} as well.

b. Josh likes **to sleep late**, and Hillary likes _{sleep late} as well.

Apparent exceptions to this restriction on VP-ellipsis may be instances of null complement anaphora, e.g. *?Bill tried to leave, and Jim tried _{to leave} too.*

A particularly frequent construction in which VP-ellipsis (obligatorily) occurs is the tag question:

Jeremy **likes beer**, doesn't he _{like beer}? - Tag question involves VP-ellipsis

Susan will **write the paper**, won't she _{write the paper}? - Tag question involves VP-ellipsis

The direction of ellipsis

VP-ellipsis can be said to operate either *forwards* or *backwards*: it operates forwards when the antecedent to the ellipsis precedes the ellipsis (as in the above examples), and backwards when the antecedent follows the ellipsis. It can also be said to operate either *upwards* or *downwards* (or neither). It operates upwards when the antecedent appears in a clause that is subordinate to the clause containing the ellipsis, and downwards when the ellipsis appears in a clause subordinate to the clause containing the antecedent. In the above examples, the two clauses are coordinated, so neither is subordinate to the other, and hence the operation of the ellipsis is neither upward nor downward.

Combinations of these directions of operation of ellipsis are illustrated with the following examples:

The people who say they will **help** never do _{help}. - Forwards and upwards

The people who say they will _{help} never do **help**. - Backwards and downwards

The people never do **help**, who say they will _{help}. - Forwards and downwards

*The people never do _{help}, who say they will **help**. - Backwards and upwards

Three of the four combinations are acceptable. However, as the fourth example shows, VP-ellipsis is impossible when it operates both backwards and upwards.

Antecedent-contained ellipsis

An aspect of VP-ellipsis that has been the subject of much theoretical analysis occurs when the ellipsis appears to be contained inside its antecedent. The phenomenon is called **antecedent-contained ellipsis** or **antecedent-contained deletion**. Canonical cases of antecedent-contained ellipsis occur when the ellipsis appears inside a quantified object NP, e.g.

They **said everything that we did** *say*.

He is **thinking the same thing I am** *thinking*.

If it is assumed that the antecedent to the ellipsis is to be a complete verb phrase, then the only possible antecedent appears to be the VP in bold. This VP, however, contains the ellipsis itself. This analysis would imply an infinite regress, which is an impossibility, since it would mean that the ellipsis could never acquire full semantic content.

One means of addressing antecedent-contained ellipsis that is pursued in some phrase structure grammars is to assume quantifier raising (QR).^[4] Quantifier raising raises the quantified NP to a position where it is no longer contained inside its antecedent VP. An alternative explanation, pursued in dependency grammars, is to assume that the basic unit of syntax is not the constituent, but rather the catena.^[5] On this analysis, the antecedent to the ellipsis does not need to be a complete constituent (an entire verb phrase), but can be merely a catena (the verbs *say* and *thinking* in the above examples), which need not contain the ellipsis.

Argument contained ellipsis

As noted above, VP-ellipsis is generally impossible if it would operate both backwards and upwards. There are also certain other restrictions on the possibility of ellipsis, although a complete theoretical analysis may be lacking. Two examples of environments in which ellipsis fails are now given:^[6]

*A proof that God **exists** does *exist*. - Failed upward ellipsis

*A proof that God does *exist* **exists**. - Failed argument-contained ellipsis

The inability of VP-ellipsis to occur in these cases has been explored in terms of so-called *argument contained ellipsis*.^[7] The ellipsis appears inside an argument of the predicate represented by the antecedent to the ellipsis. A satisfactory account of the inability of VP-ellipsis to occur in these sentences is lacking.

Notes

[1] Prominent explorations of VP-ellipsis are, for instance, those of Hankamer and Sag (1976), Hardt (1993), and Johnson (2001).

[2] See Goldberg (2005) for a sustained argument that verb phrase ellipsis is also found in certain verb-raising languages.

[3] See Kroeger (2004:35) concerning the necessity that an auxiliary verb be "left behind" in order to license VP-ellipsis.

[4] For accounts of antecedent contained deletion in terms of quantifier raising, see for instance Kennedy (1997) and Wilder (2003).

[5] Concerning the status of the catena as the basic unit of syntactic analysis, see Osborne and Groß 2012.

[6] The two examples illustrating argument contained ellipsis were originally from Wasow 1972.

[7] Argument contained ellipsis is explored in detail by Kennedy (1994).

References

- Goldberg, L. 2005. Verb-stranding VP ellipsis: A cross-linguistic study. Doctoral Dissertation, McGill University, Montreal.
- Hankamer, J. and I. Sag 1976. Deep and surface anaphora. *Linguistic Inquiry* 7, 391–428.
- Hardt, D. 1993. Verb phrase ellipsis: Form, meaning and processing. Doctoral Dissertation, University of Pennsylvania.
- Johnson, K. 2001. What VP ellipsis can do, and what it can't, but not why. In *The handbook of contemporary syntactic theory*, ed. Mark Baltin, M. and C. Collins, 439–479. Oxford: Blackwell Publishers.
- Kennedy, C. 1994. Argument contained ellipsis. Linguistics Research Center Report LRC-94-03. University of California, Santa Cruz.
- Kennedy, C. 1997. Antecedent-contained deletion and the syntax of quantification. *Linguistic Inquiry* 28/4, 662–688.
- Kroeger, P. 2004. *Analyzing syntax: A lexical-functional approach*. Cambridge, UK: Cambridge University Press.
- Osborne, T. and T. Groß 2012. Constructions are catenae: Construction Grammar meets Dependency Grammar. *Cognitive Linguistics* 23, 1, 163–214.
- Wasow, T. 1972. Anaphoric relations in English. Doctoral dissertation, MIT, Cambridge, Mass.
- Wilder, C. 2003. Antecedent containment and ellipsis. In *The interfaces: Deriving and interpreting omitted structures*, ed. by K. Schwabe and S. Winkler, 79–119. Amsterdam: John Benjamins.

Voice (grammar)

In grammar, the **voice** (also called **diathesis**) of a verb describes the relationship between the action (or state) that the verb expresses and the participants identified by its arguments (subject, object, etc.). When the subject is the agent or doer of the action, the verb is in the **active voice**. When the subject is the patient, target or undergoer of the action, the verb is said to be in the **passive voice**.

For example, in the sentence:

The cat ate the mouse.

the verb "ate" is in the active voice, but in the sentence:

The mouse was eaten by the cat.

the verbal phrase "was eaten" is passive.

In

The hunter killed the bear.

the verb "killed" is in the active voice, and the doer of the action is the "hunter". To make this passive:

The bear was killed by the hunter.

the verbal phrase "was killed" is followed by the word "by" and then by the doer "hunter".

In a transformation from an active-voice clause to an equivalent passive-voice construction, the subject and the direct object switch grammatical roles. The direct object gets *promoted* to subject, and the subject *demoted* to an (optional) complement. In the examples above, *the mouse* serves as the direct object in the active-voice version, but becomes the subject in the passive version. The subject of the active-voice version, *the cat*, becomes part of a prepositional phrase in the passive version of the sentence, and could be left out entirely.

Active

The active voice is the most commonly used in many languages and represents the "normal" case, in which the subject of the verb is the agent.

Passive

The passive voice is employed in a clause whose subject expresses the theme or patient of the verb. That is, it undergoes an action or has its state changed.^[1]

The Spanish language and the English language use a *periphrastic* passive voice; that is, it is not a single word form, but rather a construction making use of other word forms. Specifically, it is made up of a form of the auxiliary verb *to be* and a past participle of the main verb. In other languages, such as Latin, the passive voice is simply marked on the verb by inflection: *librum legit* "He reads the book"; *liber legitur* "The book is read".

Middle

Some languages (such as Albanian, Bengali, Tamil, Sanskrit, Icelandic, Swedish and Ancient Greek) have a **middle voice**. This is a set of inflections or constructions which is to some extent different from both the active and passive voices. The middle voice is said to be in the middle between the active and the passive voices because the subject often cannot be categorized as either agent or patient but may have elements of both. For example it may express what would be an intransitive verb in English. For example, in *The casserole cooked in the oven*, *cooked* is syntactically active but semantically passive. In Classical Greek, the middle voice often has a reflexive sense: the subject acts on or for itself, such as "The boy washes himself", or "The boy washes". It can be transitive or intransitive. It can occasionally be used in a causative sense, such as "The father causes his son to be set free", or "The father ransoms his son".

In English there is no longer a verb form for the middle voice, though some uses may be classified as middle voice, often resolved via a reflexive pronoun, as in "Fred shaved", which may be expanded to "Fred shaved himself" – contrast with active "Fred shaved John" or passive "John was shaved by Fred". This need not be reflexive, as in "my clothes soaked in detergent overnight". English used to have a distinct form, called the passival, which was displaced over the early 19th century by the passive progressive (progressive passive), and is no longer used in English.^{[2][3]} In the passival, one would say "the house is building", which is today instead "the house is being built"; likewise "the meal is eating", which is now "the meal is being eaten". Note that the similar "Fred is shaving" and "the clothes are soaking" remain grammatical. It is suggested that the progressive passive was popularized by the Romantic poets, and is connected with Bristol usage.^{[2][4]}

Many deponent verbs in Latin are survivals of the Proto-Indo-European middle voice.

Others

Some languages have even more grammatical voices. For example, Classical Mongolian features five voices: active, passive, causative, reciprocal, and cooperative.

The antipassive voice deletes or demotes the object of transitive verbs, and promotes the actor to an intransitive subject. This voice is very common among ergative–absolutive languages (which may feature passive voices as well), but also occurs among nominative–accusative languages.

There are also constructions in some languages that appear to change the valence of a verb, but in fact do not. So called hierarchical or inversion languages are of this sort. Their agreement system will be sensitive to an external person or animacy hierarchy (or a combination of both): 1 > 2 > 3 or Anim > Inan and so forth. E.g., in Meskwaki (an Algonquian language), verbs inflect for both subject and object, but agreement markers do not have inherent values for these. Rather, a third marker, the direct or inverse marker, indicates the proper interpretation:

ne-wa:pam-e:-w-a [1-look.at-DIR-3-3Sg] "I am looking at him", but *ne-wa:pam-ekw-w-a* [1-look.at-INV-3-3Sg] "He is looking at me". Some scholars (notably Rhodes) have analyzed this as a kind of obligatory passivization dependent on animacy, while others have claimed it is not a voice at all, but rather see inversion as another type of alignment, parallel to nominative–accusative, ergative–absolutive, split-S, and fluid-S alignments.

Passive in topic-prominent languages

Topic-prominent languages like Mandarin tend not to employ the passive voice as frequently. Mandarin-speakers construct the passive voice by using the coverb 被 (*bèi*) and rearranging the usual word order.^[5] For example, this sentence using active voice:

Note: the first line is in Traditional Chinese while the second is Simplified Chinese.

狗	咬了	這個	男人。
狗	咬了	这个	男人。
<i>Gǒu</i>	<i>yǎo-le</i>	<i>zhège</i>	<i>nánrén.</i>
dog	bite-PERFECT	this	man
"A dog has bitten this man."			

corresponds to the following sentence using passive voice. Note that the agent phrase is optional.

這個	男人	被	(狗)	咬了。
这个	男人	被	(狗)	咬了。
<i>Zhège</i>	<i>nánrén</i>	<i>bèi</i>	<i>(gǒu)</i>	<i>yǎo-le.</i>
This	man	BEI	dog	bite-PERFECT.
"This man was bitten (by a dog)."				

In addition, through the addition of the auxiliary verb "to be" (*shì*) the passive voice is frequently used to emphasise the identity of the actor. This example places emphasis on the *dog*, presumably as opposed to some other animal:

這個	男人	是	被	狗	咬了。
这个	男人	是	被	狗	咬了。
<i>Zhège</i>	<i>nánrén</i>	<i>shì</i>	<i>bèi</i>	<i>gǒu</i>	<i>yǎo-le.</i>
This	man	to be	BEI	dog	bite-PERFECT.
"This man was bitten by a <i>dog</i> ."					

Although a topic-prominent language, Japanese employs the passive voice quite frequently, and has two types of passive voice, one that corresponds to that in English and an indirect passive not found in English. This indirect passive is used when something undesirable happens to the speaker.

彼 は 泥棒 に 財布 を 盗まれた。
 Kare wa dorobō ni saifu o nusumareta.
 He TOPIC thief AGENT wallet OBJECT steal-PASSIVE-PAST
 "His wallet was stolen by a thief."

僕 は 彼女 に 嘘 を つかれた。
 Boku wa kanojo ni uso o tsukareta.
 I TOPIC her AGENT lie OBJECT tell-PASSIVE-PAST.
 "I was lied to by her." (or "She lied to me.")

Fourth person in Finnic languages

Some languages do not contrast voices, but have other interesting constructions similar to this. For example, Finnic languages such as Finnish and Estonian have a "passive", expressed by conjugating the verb in a never-mentioned "common person". Although it is generally referred to as the passive ("*passiivi*") in Finnish grammars, it may more appropriately be referred to as the fourth-person form of a verb.

The function of the fourth person is simply to leave out the agent. The agent is almost always human and never mentioned. The grammatical role of the object remains unaltered, and thus transitivity may also be used. For example, the fourth-person construction *Ikkuna hajotettiin*, with a transitive verb, means "Someone broke the window", while the third-person construction *Ikkuna hajosi* uses the anticausative and means "The window broke".

Impersonal in Celtic languages

Celtic languages possess an inflection commonly called the "impersonal" or "autonomous" form,^[6] of similar origin to the Latin "passive-impersonal". This is similar to a passive construction in that the agent of the verb is not specified. However its syntax is different from prototypical passives, in that the object of the action remains in the accusative.^[7]

It is similar to the use of the pronoun "*on*" in French. It increasingly corresponds to the passive in modern English, in which there is a trend towards avoiding the use of the passive unless it is specifically required to omit the subject. It also appears to be similar to the "fourth person" mentioned in the preceding paragraph.

The construction has equal validity in transitive and intransitive clauses, and the best translation into English is normally by using the "dummy" subjects "they", "one", or impersonal "you". For example, the common sign against tobacco consumption has its closest direct translation in English as "No smoking":

Ná caitear tabac
 Don't use-impersonal tobacco.

An example of its use as an intransitive is:

Téithear go dtí an sráidbháile go minic Dé Sathairn
 Go-impersonal to the village often Saturday

"People often go to the village of a Saturday."

The difference between the autonomous and a true passive is that while the autonomous focuses on the action and overtly avoids mentioning the actor, there is nonetheless an anonymous agent who may be referred to in the sentence. For instance^[8]

Théití	ag ithe	béile	le chéile
go [PAST-HABIT-AUT]	eat [PROG]	meal	with each other
People used to go	eating	a meal	together

In English, the formation of the passive allows the optional inclusion of an agent in a prepositional phrase, "by the man", etc. Where English would leave out the noun phrase, Irish uses the autonomous; where English includes the noun phrase, Irish uses its periphrastic passive - which can also leave out the noun phrase:

The tobacco was smoked	(by the man)
Bhí an tabac caite	(ag an bhfear)
Was the tobacco consumed	(by the man)

The impersonal endings have been re-analysed as a passive voice in Modern Welsh and the agent can be included after the preposition *gan* (*by*):

Cenir y gân gan y côr.

The song is sung by the choir.

Dynamic and static passive

Some languages draw a distinction between static (or stative) passive voice, and dynamic (or eventive) passive voice. Examples include English, German, Swedish, Spanish and Italian. "Static" means that an action was done to the subject at a certain point in time resulting in a state in the time focussed upon, whereas "dynamic" means that an action takes place.

German

Static passive auxiliary verb: **sein**

Dynamic passive auxiliary verb: **werden**

Der Rasen ist gemäht ("The lawn is mown", static)

Der Rasen wird gemäht ("The lawn is being mown", literally "The lawn becomes mown", dynamic)

English

Static passive auxiliary verb: **be** (the "be-passive")

Dynamic passive auxiliary verb: **get** (the "get-passive")

Note that for some speakers of English this is not accepted and is considered colloquial or sub-standard.

The grass is cut (static)

The grass gets cut (dynamic)

Swedish

Static passive auxiliary verb: **vara** (är, var, varit)

Dynamic passive auxiliary verb: **bli** (blir, blev, blivit) Dynamic passive in Swedish is also frequently expressed with the s-ending.

Dörren är öppnad. "The door has been opened."

Dörren blir öppnad. "The door is being opened."

The **vara** passive is often synonymous with, and sometimes preferable to, simply using the corresponding adjective:

Dörren är öppen. "The door is open."

The **bli** passive is often synonymous with, and sometimes preferable to, the s-passive:

Dörren öppnas. "The door is opening."

Spanish

Spanish has two verbs corresponding to English *to be*: *ser* and *estar*. *Ser* is used to form the ordinary (dynamic) passive voice:

La puerta es abierta. "The door is [being] opened [by someone]."

La puerta es cerrada. "The door is [being] closed [by someone]."

(Note that this construction is very unidiomatic in this case. The usual phrasing would be *La puerta se cierra*.) *Estar* is used to form what might be termed a static passive voice (not regarded as a passive voice in traditional Spanish grammar):

La puerta está abierta. "The door is open," i.e. it has been opened.

La puerta está cerrada. "The door is closed," i.e. it has been closed.

In both cases, the verb's participle is used as the complement (as is sometimes the case in English).

Italian

Italian uses two verbs (*essere* and *venire*) to translate the static and the dynamic passive:

Dynamic passive auxiliary verb: **essere** and **venire** (**to be** and **to come**)

La porta è aperta. or *La porta viene aperta.* "The door is opened [by someone]" or "The door **comes** open [by someone]".

La porta è chiusa. or *La porta viene chiusa.* "The door is closed [by someone]" or "The door **comes** closed [by someone]".

Static passive auxiliary verb: **essere** (**to be**)

La porta è aperta. "The door is open," i.e. it has been opened.

La porta è chiusa. "The door is closed," i.e. it has been closed.

Venetian

In Venetian (Vèneto) the difference between dynamic (true) passive and stative (adjectival) passive is more clear cut, using **èser** (to be) only for the static passives and **vegner** (to become, to come) only for the dynamic passive:

La porta la vien verta. "The door is opened", dynamic

La porta la xè / l'è verta. "The door is open", static

Static forms represents much more a property or general condition, whereas the dynamic form is a real passive action entailing "by someone":

èser proteto. "To be protected = to be in a safe condition", static

vegner proteto. "To be protected = to be defended (by so)", dynamic

èser considarà. "To be considered = to have a (good) reputation", static

vegner considarà. "To be taken into consideration (by people, by so)", dynamic

èser raprexentà (a l'ONU). "To be represented (at the UN) = to have a representation", static

vegner raprexentà a l'ONU (da un delegà). "To be represented at the UN (by a delegate)", dynamic

List

Voces found in various languages include:

- Active voice
- Adjutative voice
- Antipassive voice
- Applicative voice
- Causative voice
- Circumstantial voice
- Impersonal passive voice
- Mediopassive voice
- Middle voice
- Passive voice
- Pseudo-passive
- Reciprocal voice (subject and object perform the verbal action to each other, e. g. *She and I cut each other's hair*)
- Reflexive voice (the subject and the object of the verb are the same, as in *I cut my hair*)

Notes

- [1] O'Grady, William, John Archibald, Mark Aronoff, and Janie Rees-Miller (eds.) (2001). *Contemporary Linguistics: An Introduction* Fourth edition. Boston: Bedord/St. Martin's. ISBN 0-312-24738-9
- [2] "The House is Building"? Why you never learned the passival tense, even though it used to be proper English grammar. (http://www.slate.com/articles/podcasts/lexicon_valley/2012/05/lexicon_valley_when_the_progressive_passive_replaced_the_passival_in_english_grammar_.html), by Mike Vuolo, *Slate*, May 29, 2012
- [3] A peeve for the ages (<http://languagelog.ldc.upenn.edu/nll/?p=2903>), January 13, 2011
- [4] Platt and Denison (<http://www.manchester.ac.uk/research/David.denison>), " The language of the Southey-Coleridge Circle (<http://www.llc.manchester.ac.uk/subjects/lcl/staff/david-denison/papers/thefile,100129,en.pdf>)", Language Sciences 2000
- [5] Li & Thompson (1981)
- [6] Martin John Ball, James Fife (1992). *The Celtic Languages*. New York: Routledge. pp. 14–15. ISBN 0-415-01035-7.
- [7] Na Bráithre Críostaí (1960). *GRAIMÉAR GAEILGE na mBRÁITHRE CRÍOSTAÍ*. M.H. Mac an Ghoill agus a Mhaic Teo..
- [8] McCloskey, Jim (January 2007). "the Grammar of Autonomy In Irish". *Hypothesis A/Hypothesis B: Linguistic Explorations in Honor of David M. Perlmutter*.

References

- Li, Charles N.; Thompson, Sandra A. (1981). *Mandarin Chinese: A Functional Reference Grammar*. Berkeley: University of California Press. ISBN 0-520-06610-3.

Wh-movement

Wh-movement (or **wh-fronting** or **wh-extraction** or **long-distance dependency**) is a mechanism of syntax that helps express a question (or form a relative clause). Sentences or clauses containing a *wh-word* show a special word order that has the *wh-word* (or phrase containing the *wh-word*) appearing at the front of the sentence or clause, e.g. *Who do you think about?*, instead of in a more canonical position further to the right, e.g. *I think about you*. The term *wh-movement* is used because most English interrogative words start with *wh-*, for example, *who(m)*, *whose*, *what*, *which*, etc. Wh-movement often results in a discontinuity, and in this regard, it is one of (at least) four widely acknowledged discontinuity types, the other three being topicalization, scrambling, and extraposition. Wh-movement is found in many languages around the world, and of these various discontinuity types, wh-movement has been studied the most.^[1]

The actual term *wh-movement* itself stems from early Generative Grammar (1960s and 1970s) and was a reference to the transformational analysis of that day, whereby the *wh-expression* appeared in its canonical position at deep structure and then moved leftward out of that position to land in its derived position at the front of the sentence/clause at surface structure.^[2] Many modern theories of syntax do not acknowledge movement in the traditional sense, however. Despite this fact, the term *wh-movement* (or *wh-fronting* or *wh-extraction*) survives and is widely used to denote the underlying phenomenon even by those theories that do not acknowledge movement.

Basic examples

The following sentence pairs illustrate wh-movement. Each a-sentence has the canonical word order of a declarative sentence in English, and each b-sentence has experienced wh-movement, whereby the *wh-word* has been fronted in order to form a question. The relevant words are bolded:

- a. Tom has been reading **Tesnière**.
- b. **Who** has Tom been reading? - The direct object corresponding to *Tesnière* has been wh-fronted as the *wh-word* *who*.
- a. She should stop talking about **syntax**.
- b. **What** should she stop talking about? - The object of the preposition corresponding to *syntax* has been wh-fronted as the *wh-word* *what*.
- a. They want to visit us **tomorrow**.
- b. **When** do they want to visit us? - The adjunct corresponding to *tomorrow* has been wh-fronted as the *wh-word* *when*.
- a. She is **happy**.
- b. **What** is she? - The predicative adjective corresponding to *happy* has been fronted as the *wh-word* *what*.

These examples illustrate that wh-fronting occurs when a constituent is questioned that appears to the right of the finite verb in the corresponding declarative sentence. Consider in this regard that when the subject is questioned, there is no obvious reason to assume that wh-fronting has occurred because the default position of the subject is clause-initial:

- a. **Fred** is working hard.
- b. **Who** is working hard? - The subject corresponding to *Fred* already appears at the front of the sentence, so there is no reason to assume that *who* has been fronted.

Despite the fact that such data provide no obvious reason to assume movement, some theories of syntax maintain a movement analysis in the interest of remaining consistent. They assume that the wh-subject has in fact moved up the syntactic hierarchy, although this movement is not apparent from the actual linear order of the words.

Wh-expressions without wh-movement

Wh-movement typically occurs to form questions in English. There are, however, at least three circumstances in which wh-movement does not occur in questions (aside from when the question word serves as the subject and so is already fronted): 1) echo questions (to confirm what you thought you heard), 2) quiz questions, and 3) multiple questions, when there is already one wh-word at the front:

You bought **what**!? - Echo question

George Orwell was born in **which** country? - Quiz question

Who bought **what**? - Multiple wh-expressions

While wh-movement is the rule (and these three cases are the exceptions to the rule) in English, other languages may leave wh-expressions *in situ* (in base position) more often.^[3] In French for instance, wh-movement is often optional (as opposed to obligatory) in certain matrix clauses.^[4]

Wh-movement in subordinate clauses

The examples in the previous section have wh-movement occurring in main clauses (in order to form a question). Wh-movement is not restricted to occurring in main clauses, however. It frequently appears in subordinate clauses, although its behavior in subordinate clauses differs in a key respect. The following two subsections consider wh-movement in indirect questions and relative clauses.

Wh-movement in indirect questions

Wh-movement occurs to form a question in both main and subordinate clauses. When the question is expressed with a main clause, it is a direct question. When the question is expressed with a subordinate clause, however, it is an indirect question. While wh-fronting occurs in both direct and indirect questions, there is a key word order difference that distinguishes between the two.^[5] This difference is illustrated with the following data:

- a. Fred will ask **Jill** to leave.
- b. **Who**₁ will₂ Fred ask to leave? - Direct question
- c. I wonder **who**₁ Fred₂ will₃ ask to leave. - Indirect question
- a. Sam likes to get news about **hurricanes**.
- b. **What**₁ does₂ Sam like to get news about? - Direct question; do-support introduced
- c. They asked **what**₁ Sam₂ likes₃ to get news about. - Indirect question
- a. Larry stayed home **due to the weather**.
- b. **Why**₁ did₂ Larry stay home? - Direct question; do-support introduced
- c. Nobody knows **why**₁ Larry₂ stayed₃ home. - Indirect question

The subscripts indicate a central word order difference across direct and indirect questions. Wh-fronting in main clauses typically results in V2 word order in English, meaning the finite verb appears in second position, as marked by the 2-subscript in the b-sentences. In indirect questions, however, V3 word order typically obtains, as marked by the 3-subscript in the c-sentences. Despite this systematic word order difference across direct and indirect questions, wh-fronting within the clause is occurring in both cases. Note as well that do-support is often needed in order to enable wh-fronting. Wh-fronting in main clauses is often reliant on subject-auxiliary inversion.

Wh-movement in relative clauses

The examples above all involve interrogative clauses (questions). Wh-movement also occurs in relative clauses, however, which cannot be interpreted as questions.^[6] Many relative pronouns in English have the same form as the corresponding interrogative words (*which*, *who*, *where*, etc.). Relative clauses are subordinate clauses, so the characteristic V3 word order seen in indirect questions occurs:

- a. I read Fred's paper.
- b. Fred's paper, **which**₁ I₂ read₃ - Wh-fronting in relative clause
- c. *Fred's paper, **which**₁ did₂ I read - Wh-fronting impossible with V2 word order in subordinate clause
- a. John likes the governor.
- b. the governor **who**₁ John₂ likes₃ - Wh-fronting in relative clause
- c. *the governor **who**₁ does₂ John like - Wh-fronting impossible with V2 word order in subordinate clause
- a. Fred reads the paper in the coffee shop.
- b. the coffee shop **where**₁ Fred₂ reads₃ the paper - Wh-fronting in relative clause
- c. *the coffee shop **where**₁ does₂ Fred read the paper - Wh-fronting impossible in subordinate clause with V2 word order

The relative pronouns have fronted in the subordinate clauses of the b-examples, just like they are fronted in the indirect questions in the previous sections. The characteristic V3 word order is obligatory. If the V2 word of main clauses occurs, the sentence is bad, as the c-examples demonstrate.

Pied-piping

Many instances of wh-fronting involve pied-piping. Pied-piping occurs when a fronted wh-word (or otherwise focused word) pulls an entire encompassing phrase to the front of the clause with it, i.e. it "pied-pipes" the other words of the phrase with it to the front of the clause (see the the Pied Piper of Hamelin).^[7] The following two subsections consider both obligatory and optional pied-piping.

Obligatory pied-piping

Pied-piping is sometimes obligatory. That is, in order for a wh-expression to be fronted, an entire encompassing phrase must be fronted with it. The relevant phrase of pied-piping is underlined in the following examples:

- a. Susan is reading Fred's novel.
- b. Whose novel is Susan reading? - Pied-piping of *novel*
- c. *Whose is Susan reading novel? - Sentence is bad because pied-piping has not occurred.
- a. The music is very loud.
- b. How loud is the music? - Pied-piping of *loud*
- c. *How is the music loud? - Sentence is bad because pied-piping has not occurred.
- a. I like your picture of Sandy.
- b. Sandy, your picture of whom I like - Pied-piping of *your picture of*
- c. ?Sandy, who I like your picture of - Sentence is marginal because pied-piping has not occurred.

These examples illustrate that pied-piping is often necessary when the wh-word is inside a noun phrase (NP) or adjective phrase (AP). They also show that pied-piping occurs in both main and subordinate clauses. Pied-piping is motivated by the barriers and islands to extraction (see below). When the wh-word appears underneath a blocking category or in an island, the entire encompassing phrase must be fronted. Pied-piping was first identified by John R. Ross in his 1967 dissertation.

Optional pied-piping

There are cases where pied-piping can be optional. In English, this occurs most notably with prepositional phrases (PPs). The wh-word is the object of a preposition. A formal register will pied-pipe the preposition, whereas more colloquial English prefers to leave the preposition in situ, e.g.

- a. She revealed her secret to Tom.
- b. To whom did she reveal her secret? - Pied-piping of preposition associated with a formal register
- c. Who did she reveal her secret to? - Pied-piping absent in colloquial, everyday English
- a. He is hiding behind the red door.
- b. Behind which door is he hiding? - Pied-piping of preposition associated with a formal register.
- c. Which door is he hiding behind? - Pied-piping absent in colloquial, everyday English

The c-examples are cases of preposition stranding, which is possible in English, but not allowed in many languages that are related to English.^[8] For instance, preposition stranding is largely absent from many of the other Germanic languages and it may be completely absent from the Romance languages. Prescriptive grammars often claim that preposition stranding should be avoided in English as well; however, in certain contexts pied-piping of prepositions in English may make a sentence feel artificial or stilted.

Extraction islands

In many cases, a wh-expression can occur at the front of a sentence regardless of how far away its canonical location is, e.g.

- a. **Who** does Mary like __?
- b. **Who** does Bob know that Mary likes __?
- c. **Who** does Carl believe that Bob knows that Mary likes __?

The wh-word word *who* is the direct object of the verb *likes* in each of these sentences. There appears to be no limits on the distance that can separate the fronted expression from its canonical position. In more technical terms, we can say that the dependency relation between the *gap* (the canonical, empty position) and its *filler* (the wh-expression) is unbounded in the sense that there is no upper bound on how deeply embedded within the given sentence the gap may appear.

However, there are cases in which this is not possible. Certain kinds of phrases do not seem to allow a gap. The phrases from which a wh-word cannot be extracted are referred to as *extraction islands* or simply *islands*. The following subsections briefly consider seven types of islands: 1) adjunct islands, 2) wh-islands, 3) subject islands, 4) left branch islands, 5) coordinate structure islands, 6) complex NP islands, and 7) non-bridge islands. These islands types were all originally identified in Ross' seminal dissertation.^[9] The islands in the examples that follow are underlined in the a-sentences.

Adjunct islands

An *adjunct island* is a type of island formed from an adjunct clause. Wh-movement is not possible out of an adjunct clause. Adjunct clauses include clauses introduced by *because*, *if*, and *when*, as well as relative clauses. Some examples include:

- a. You went home because you needed to do that?
- b. ***What** did you go home because you needed to do __? - The attempt to extract out of an adjunct clause fails.
- a. Alex likes the woman who wears tight sweaters?
- b. ***What** does Alex like the woman who wears __? - The attempt to extract out of an adjunct clause fails.

Wh-movement fails in the b-sentences because the gap appears in an adjunct clause.

Wh-islands

A **wh-island** is created by an embedded sentence which is introduced by a wh-word. Wh-islands are weaker than adjunct islands since extraction is often quite awkward, but they are not necessarily considered to be ungrammatical by all speakers.^[10]

- a. John wonders where Eric went to buy a gift?
- b. ??**What** does John wonder where Eric went to buy __? - The attempt to extract out of a wh-island is at best strongly marginal.
- a. Susan asked why Sam was waiting for Fred.
- b. ***Who** did Susan ask why Sam was waiting for __? - The attempt to extract out of a wh-island fails.

The b-sentences are strongly marginal/unacceptable because one has attempted to extract an expression out off a wh-island.

Subject islands

Wh-movement is not (or hardly) possible out of subjects, at least not in English. This is particularly true for subject clauses, and to a somewhat lesser extent out of subject phrases, e.g.^[11]

- a. That John went home is likely.
- b. ***Who** is that __ went home likely? - Wh-extraction out of a subject clause fails.
- a. The story about Susan was funny.
- b. ??**Who** was the story about __ funny? - Wh-extraction out of subject phrase is strongly marginal.

The important insight here is that wh-extraction out of object clauses and phrases is quite possible. There is therefore an asymmetry across subjects and objects with respect to wh-movement.

Left branch islands

Modifiers that would appear on a left branch under a noun (i.e. they precede the noun that they modify) cannot be extracted. The relevant constraint is known as the the *Left Branch Condition*, and Ross (1967) is again credited with having discovered it.^[12] The left branch constraint captures the fact that possessive determiners and attributive adjectives in English and many related languages necessarily pied-pipe the entire noun phrase when they are fronted, e.g.

- a. Susan likes Fred's account.
- b. ***Whose** does Susan like account __? - Attempt to extract from a left branch under a noun fails.
- c. Whose account does Susan like __? - Extraction succeeds if the entire NP is pied piped.
- a. He bought an expensive boat.
- b. ***How expensive** did he buy a __ boat? - Attempt to extract from a left branch under a noun fails.
- c. How expensive a boat did he buy? - Extraction succeeds if the entire NP is pied piped.

Extraction fails in the b-sentences because the extracted expression corresponds to a left-branch modifier of a noun. Left branch islands are cross-linguistically variable. While they exist in English, they are absent from many other languages, most notably, from the Slavic languages.^[13]

Coordinate structure islands

In coordination, extraction out of a conjunct of a coordinate structure is possible only if this extraction affects all the conjuncts of the coordinate structure equally. The relevant constraint is known as the *coordinate structure constraint*.^[14] Extraction must extract the same syntactic expression out of each of the conjuncts simultaneously. This sort off extraction is said to occur across the board (ATB-extraction),^[15] e.g.

- a. Sam eat [beans] and [**broccoli**].
- b. ***What** did Sam eat [beans] and [__]? - Extraction fails because it affects just one conjunct.
- a. Sam ate [**beans**] and [broccoli].
- b. ***What** did Sam eat [__] and [broccoli]? - Extraction fails because it affects just one conjunct.
- a. Sam [gave **a guitar** to me] and [loaned **a trumpet** to you].
- b. **What** did Sam [give __ to me] and [loan __ to you]? - Extraction succeeds because it occurs equally out of both conjuncts (ATB-extraction).
- a. He is [waiting for **you**] and [trying to call **you**].
- b. **Who** is he [waiting for __] and [trying to call __]? - Extraction succeeds because it occurs equally out off both conjuncts (ATB-extraction).

Wh-extraction out of a conjunct of a coordinate structure is only possible if it can be interpreted as occurring equally out all the conjuncts simultaneously, that is, if it occurs across the board.

Complex noun phrase islands

Extraction can hardly occur out of a clause that is embedded under a noun. The relevant constraint is known as the *complex NP constraint*, e.g.^[16]

- a. You heard the claim that Fred solved the second problem.
- b. ??**What** did you hear the claim that Fred solved __? - Attempt to extract out of a complex NP fails.
- a. She likes the possibility that she might get a new phone for X-mas.
- b. ??**What** does she like the possibility that she might get __ for X-mas? - Attempt to extract out of a complex NP fails.

The attempt to extract out the clauses embedded under the object nouns is hardly possible. In contrast, extraction out of object clauses is easily possible (if those clauses are not embedded under nouns).

Non-bridge-verb islands

Extraction out of object *that*-clauses serving as complements to verbs may show island-like behavior if the matrix verb is not a so-called *bridge verb*, a verb that permits movement across it, hence the name (coined in Erteschik-Shir 1973). Non-bridge verbs include manner-of-speaking verbs, such as *whisper* or *shout*, e.g.

- a. She thinks that he died **in his sleep**.
- b. **How** does she think that he died __? - Extraction out of object clause easily possible with matrix bridge verb.
- a. She whispered that he had died **in his sleep**?
- b. ***How** did she whisper that he had died __? - Extraction across a non-bridge verb is impossible.

Wh-movement in other languages

Wh-movement is also found in many other languages around the world. Most European languages also place wh-words at the beginning of a clause. Furthermore, many of the facts illustrated above are also valid for other languages. The systematic difference in word order across main wh-clauses and subordinate wh-clauses shows up in other languages in varying forms. The islands to wh-extraction are also present in other languages, although there will be some variation. The following example illustrates wh-movement of an object in Spanish:

a.	Juan	compró	carne.	
	Juan	bought	meat.	'Juan bought meat.'

b.	<i>¿Qué</i>	compró	Juan?	
	what	bought	Juan	'What did Juan buy?'

The following examples illustrates wh-movement of an object in German:

a.	Er	liest	Tesnière	jeden	Abend.	
	He	reads	Tesnière	every	evening.	'He reads Tesnière every evening.'

b.	Wen	liest	er	jeden	Abend?	
	who	reads	he	every	evening	'Who does he read every evening?'

And the following examples illustrates wh-movement an object in French:

a.	Ils	ont	vu	Pierre	
	they	have	seen	Pierre	'They saw Pierre.'

b.	Qui	est-ce	qu'ils	ont	vu	
	Who	is it	that they	have	seen	'Who did they see?'

These examples from Spanish, German, and French are closely similar to the English examples. They demonstrate that wh-movement is a general phenomenon in numerous languages. As stated however, the behavior of wh-movement can vary depending on the particular language at hand.

Theoretical approaches to wh-movement

Wh-movement typically results in a discontinuity: the "moved" constituent ends up in a position that is separated from its canonical position by material that syntactically dominates the canonical position, which means there seems to be a *discontinuous constituent* and a *long distance dependency* present. Such discontinuities challenge any theory of syntax, and any theory of syntax is going to have a component that can address these discontinuities. In this regard, theories of syntax tend to explain discontinuities in one of two ways, either via *movement* or via *feature passing*.

Theories that posit movement have a long and established tradition that reaches back to early Generative Grammar (1960s and 1970s). They assume that the displaced constituent (e.g. the wh-expression) is first generated in its canonical position at some level or point in the structure generating process below the surface. This expression is then moved or copied out of this base position and placed in its surface position where it actually appears in speech.^[17] Movement is indicated in tree structures using one of a variety of means (e.g. a trace *t*, movement arrows, strikeouts, lighter font shade, etc.). The following two trees illustrate a movement-type analysis. Both a

constituency-based tree of a phrase structure grammar (on the left) and a dependency-based tree of a dependency grammar (on the right) are employed:

(Trees under construction)

The alternative to the movement approach to wh-movement and discontinuities in general is feature passing. This approach rejects the notion that movement in any sense has occurred. The wh-expression is base generated in its surface position, and instead of movement, information passing (i.e. feature passing) occurs up or down the syntactic hierarchy to and from the position of the gap. The feature passing approach is illustrated using two trees, again, the one on the left being the constituency-based tree and the one on the right being the dependency-based tree:

(Trees under construction)

Notes

- [1] Accounts of wh-fronting appear in many textbooks on syntax and grammar, e.g. Stockwell (1977:35ff.), Baker (1978:119ff.), Riemsdijk and Williams (1986:19ff.), Borsley (1988:188ff.), Radford (1997:267ff.), Roberts (1999:35ff.), Tallerman (2005:217ff.), Carnie (2013:357ff.).
- [2] For early accounts of question formation and wh-movement, see for instance Ross (1967/86:18ff.), Bach (1974:129), Culicover (1976:73f.), Stockwell (1977:172f.), Baker (1978:121f.).
- [3] Concerning wh-in-situ questions, see Radford (1997:267f.)
- [4] Concerning wh-movement in French, see Bošković (2002).
- [5] Concerning the key word order difference across direct and indirect questions, see for instance Roberts (1997:37) and Groß and Osborne (2009:74ff.), and Carnie (2013:367).
- [6] See Carnie (2013:369ff.) for an analysis of relative clauses in terms of wh-movement.
- [7] See Ross' (1967/86:121ff.) original account of pied-piping. For further analyses of pied-piping, see for instance Riemsdijk and Williams (1986:28ff.) and Radford (1997:276ff.).
- [8] Concerning preposition stranding in wh-questions in English, see Roberts (1997:212f) and Radford (1999:278ff.).
- [9] For general accounts of island phenomena, see for instance Riemsdijk and Williams (1986:23ff.), Roberts (1997:186ff.), Borsley (1999:205ff.), and Carnie (2013:374ff.).
- [10] For accounts of wh-islands, see Roberts (1997:195f.), O'Grady (2005:118ff.).
- [11] Concerning subject islands, see Ross (1967/86:148f.), Culicover (1976:282ff.), Borsley (1999:206), Radford (1997:281).
- [12] Ross (1967/86) gives his left branch condition on page 127: "No NP which is the leftmost constituent of a larger NP can be reordered out of this NP by a transformational rule".
- [13] Concerning the lack of left branch islands in Slavic languages, see Ross (1967/86:145), Grosu (1973), Roberts (1997:189).
- [14] Concerning the coordinate structure constraint, see Ross (1967/86:97ff.), Bach (1974:210), Culicover (1976:281ff.), Roberts (1997:188).
- [15] The term *across the board* is from Williams (1978). See also Roberts (1997:188), Borsley (1999:207).
- [16] Concerning the complex NP constraint, see for instance Ross (1967/86:272ff.), Culicover (1976:280f.), Baker (1978:200ff.), Borsley (1999:206f.).
- [17] For an example of the movement/copying approach, see Radford (2004:153ff.).

References

- Bach, E. 1974. Syntactic theory. New York: Holt, Rinehart and Winston, Inc.
- Baker, C. 1978. Introduction to generative-transformational syntax. Englewood Cliffs, NJ: Prentice-Hall.
- Borsley, R. 1999. Syntactic theory: A unified approach. London: Arnold.
- Bošković 2002. On multiple wh-fronting. *Linguistic Inquiry* 33, 351-384.
- Carnie, A. Syntax: A generative introduction. Malden, MA: Wiley-Blackwell.
- Chomsky, N. 1977. On wh-movement. In Culicover, P. W., Wasow, Thomas, and Akmajian, Adrian (eds), *Formal Syntax*, New York.
- Culicover, P. 1976. Syntax. New York: Academic Press.
- Crystal, D. 1997. A dictionary of linguistics and phonetics. Oxford, UK: Oxford Publishers.
- Erteschik-Shir, N. 1973. On the nature of island constraints. Ph. D. thesis, Massachusetts Institute of Technology, Cambridge, MA.
- Groß, T. and T. Osborne 2009. Toward a practical dependency grammar theory of discontinuities. *SKY Journal of Linguistics* 22, 43-90.

- Jurafsky, D. and J. Martin. 2008. Speech and language processing: An introduction to natural language processing, computational linguistics, and speech recognition. Delhi, India: Pearson Education.
- Grosu, A. 1973. On the Left Branch Condition. *Linguistic Inquiry*.
- O'Grady, W. 2005. Syntactic carpentry: An emergentist approach. Mahwah, NJ: Lawrence Erlbaum Associates, Publishers.
- Radford, A. 2004. English syntax: An introduction. Cambridge, UK: Cambridge University Press.
- Riemsdijk, H. van and E. Williams. 1986. Introduction to the theory of grammar. Cambridge, MA: The MIT Press.
- Roberts, I. 1997. Comparative syntax. London: Arnold.
- Ross, J. 1967. Constraints on variables in syntax. Doctoral dissertation, Massachusetts Institute of Technology.
- Ross, J. 1986. Infinite syntax. (Originally presented as the author's thesis from 1967). Norwood, NJ: Infinite syntax!
- Stockwell, R. 1977. Foundations of syntactic theory. Englewood Cliffs, NJ: Prentice-Hall, Inc.
- Tallerman, M. 2005. Understanding syntax. 2nd edition. Malta: Hodder Arnold.
- Williams, E. 1978. Across the board rule application. *Linguistic Inquiry* 9, 31-43.

External links

- Lexicon of Linguistics: Wh-movement (<http://www2.let.uu.nl/UiL-OTS/Lexicon/zoek.pl?lemma=Wh-movement>)
- Lexicon of Linguistics: Pied piping (<http://www2.let.uu.nl/UiL-OTS/Lexicon/zoek.pl?lemma=Pied+piping>)
- Lexicon of Linguistics: Island (<http://www2.let.uu.nl/UiL-OTS/Lexicon/zoek.pl?lemma=Island>)
- Lexicon of Linguistics: Wh-island (<http://www2.let.uu.nl/UiL-OTS/Lexicon/zoek.pl?lemma=Wh-island>)
- Lexicon of Linguistics: Left Branch Condition (<http://www2.let.uu.nl/UiL-OTS/Lexicon/zoek.pl?lemma=Left+Branch+Condition>)
- Lexicon of Linguistics: Wh-in-situ (<http://www2.let.uu.nl/UiL-OTS/Lexicon/zoek.pl?lemma=wh-in-situ>)

Word order

In linguistics, **word order typology** refers to the study of the order of the syntactic constituents of a language, and how different languages can employ different orders. Correlations between orders found in different syntactic subdomains are also of interest. The primary word orders that are of interest are the *constituent order* of a clause – the relative order of subject, object, and verb; the order of modifiers (adjectives, numerals, demonstratives, possessives, and adjuncts) in a noun phrase; and the order of adverbials.

Some languages have relatively restrictive word orders, often relying on the order of constituents to convey important grammatical information. Others, often those that convey grammatical information through inflection, allow more flexibility which can be used to encode pragmatic information such as topicalisation or focus. Most languages however have some preferred word order which is used most frequently.^[1]

For most nominative–accusative languages which have a major word class of nouns and clauses which include subject and object, constituent word order is commonly defined in terms of the finite verb (V) and its arguments, the subject (S) and object (O).^{[2][3][4][5]}

There are six theoretically possible basic word orders for the transitive sentence: subject–verb–object (SVO), subject–object–verb (SOV), verb–subject–object (VSO), verb–object–subject (VOS), object–subject–verb (OSV) and object–verb–subject (OVS). The overwhelming majority of the world's languages are either SVO or SOV, with a much smaller but still significant portion using VSO word order. The remaining three arrangements are exceptionally rare, with VOS being slightly more common than OSV, and OVS being significantly more rare than the two preceding orders.^[6]

Finding the basic constituent order

It is not always easy to find the basic word order of S, O and V. First, not all languages make use of the categories of subject and object. In others, the subject and object may not form a clause with the verb. If subject and object can be identified within a clause, the problem can arise that different orders prevail in different contexts. For instance, French has SVO for nouns, but SOV when the object is a pronoun and VSO for questions; German has verb-medial order in main clauses, but verb-final order in subordinate clauses. In other languages the word order of transitive and intransitive clauses may not correspond. In still others, the rules for ordering S, O, and V may exist, but be secondary to (and often overruled by) more fundamental ordering rules – e.g., for considerations such as topic–comment. To have a valid base for comparison, the basic word order is defined as:

- declarative
- main clause
- S and O must both be nominal arguments
- pragmatically neutral, i.e. no element has special emphasis

While the first two of these requirements are relatively easy to respect, the latter two are more difficult. In spoken language, there are hardly ever two full nouns in a clause; the norm is for the clause to have at most one noun, the other arguments being pronouns. In written language, this is somewhat different, but that is of no help when investigating oral languages. Finally, the notion of "pragmatically neutral" is difficult to test. While the English sentence "*The king, they killed.*" has a heavy emphasis on *king*, in other languages, that order (OSV) might not carry a significantly higher emphasis than another order.

If all the requirements above are met, it still sometimes turns out that languages do not seem to prefer any particular word order. The last resort is text counts, but even then, some languages must be analyzed as having two (or even more) word orders.

Constituent word orders

Word order	English equivalent	Proportion of languages	Example languages
SOV	"He her loves."	45%	Japanese, Latin, Tamil
SVO	"He loves her."	42%	English, Mandarin, Russian
VSO	"Loves he her."	9%	Hebrew, Irish, Zapotec
VOS	"Loves her he."	3%	
OVS	"Her loves he."	1%	Apalai?, Hixkaryana?
OSV	"Her he loves."	0%	Waraö

Frequency distribution of word order in languages surveyed by Russell S. Tomlin in 1980s.^{[7][8]}

These are all possible word orders for the subject, verb, and object in the order of most common to rarest (the examples use "I" as the subject, "see" as the verb, and "him" as the object):

- SOV is the order used by the largest number of distinct languages; languages using it include the prototypical Japanese, Mongolian, Basque, Turkish, Korean, the Indo-Aryan languages and the Dravidian languages. Some, like Persian, Latin and Quechua, have SOV normal word order but conform less to the general tendencies of other such languages. A sentence glossing as "I him see" would be grammatically correct in these languages.
- SVO languages include English, the Romance languages, Bulgarian, Macedonian, Serbo-Croatian^[9], Chinese and Swahili, among others. "I see him."
- VSO languages include Classical Arabic, the Insular Celtic languages, and Hawaiian. "See I him" is grammatically correct in these languages.
- VOS languages include Fijian and Malagasy. "See him I."
- OVS languages include Hixkaryana. "Him see I."
- OSV languages include Xavante and Warao. "Him I see."

Sometimes patterns are more complex: German, Dutch and Frisian have SOV in subordinates, but V2 word order in main clauses, SVO word order being the most common. Using the guidelines above, the unmarked word order is then SVO.

Others, such as Latin, Persian, Romanian and Finnish, have no strict word order; rather, the sentence structure is highly flexible and reflects the pragmatics of the utterance. Nonetheless, there is often a preferred order; in Latin, SOV is the most frequent outside of poetry, and in Finnish SVO is both the most frequent and obligatory when case marking fails to disambiguate argument roles. Just as languages may have different word orders in different contexts, so may they have both fixed and free word orders. For example, Russian has a relatively fixed SVO word order in transitive clauses, but a much freer SV / VS order in intransitive clauses. Cases like this can be addressed by encoding transitive and intransitive clauses separately, with the symbol 'S' being restricted to the argument of an intransitive clause, and 'A' for the actor/agent of a transitive clause. ('O' for object may be replaced with 'P' for 'patient' as well.) Thus Russian is fixed AVO but flexible SV/VS. Such an approach allows the description of word order to be more easily extended to languages which do not meet the criteria in the preceding section. For example, the Mayan languages have been described with the rather uncommon VOS word order. However, they are ergative-absolutive languages, and the more specific word order is intransitive VS, transitive VOA, where S and O arguments both trigger the same type of agreement on the verb. Indeed, many languages claimed to have a VOS word order turn out to be ergative like Mayan.

Functions of constituent word order

A fixed or prototypical word order is one out of many ways to ease the processing of sentence semantics and reducing ambiguity. One method of making the speech stream less open to ambiguity (complete removal of ambiguity is probably impossible) is a fixed order of arguments and other sentence constituents. This works because speech is inherently linear. Another method is to label the constituents in some way, for example with case marking, agreement, or another marker. Fixed word order reduces expressiveness but added marking increases information load in the speech stream, and for these reasons strict word order seldom occurs together with strict morphological marking, one counter-example being Persian.^[1]

Observing discourse patterns, it is found that previously given information (topic) tends to precede new information (comment). Furthermore, acting participants (especially humans) are more likely to be talked about (to be topic) than things simply undergoing actions (like oranges being eaten). If acting participants are often topical, and topic tends to be expressed early in the sentence, this entails that acting participants have a tendency to be expressed early in the sentence. This tendency can then grammaticalize to a privileged position in the sentence, the subject.

The mentioned functions of word order can be seen to affect the frequencies of the various word order patterns: An overwhelming majority of languages have an order in which S precedes O and V. Whether V precedes O or O precedes V however, has been shown to be a very telling difference with wide consequences on phrasal word orders.^[10]

Knowledge of word order on the other hand can be applied to identify the thematic relations of the NPs in a clause of an unfamiliar language. If we can identify the verb in a clause, and we know that the language is strict accusative SVO, then we know that *Grob smock Blug* probably means that *Grob* is the *smocker* and *Blug* the entity *smocked*. However, since very strict word order is rare in practice, such applications of word order studies are rarely effective.

Phrase word orders and branching

The order of constituents in a phrase can vary as much as the order of constituents in a clause. Normally, the noun phrase and the adpositional phrase are investigated. Within the noun phrase, one investigates whether the following modifiers occur before or after the head noun.

- adjective (*red house* vs *house red*)
- determiner (*this house* vs *house this*)
- numeral (*two houses* vs *houses two*)
- possessor (*my house* vs *house my*)
- relative clause (*the by me built house* vs *the house built by me*)

Within the adpositional clause, one investigates whether the language makes use of prepositions (*in London*), postpositions (*London in*), or both (normally with different adpositions at both sides).

There are several common correlations between sentence-level word order and phrase-level constituent order. For example, SOV languages generally put modifiers before heads and use postpositions. VSO languages tend to place modifiers after their heads, and use prepositions. For SVO languages, either order is common.

For example, French (SVO) uses prepositions (*dans la voiture*, *à gauche*), and places adjectives after (*une voiture spacieuse*). However, a small class of adjectives generally go before their heads (*une grande voiture*). On the other hand, in English (also SVO) adjectives almost always go before nouns (*a big car*), and adverbs can go either way, but initially is more common (*greatly improved*). (English has a very small number of adjectives that go after their heads, such as "extraordinaire", which kept its position when it was borrowed from French.)

Pragmatic word order

Some languages do not have a fixed word order. In these languages there is often a significant amount of morphological marking to disambiguate the roles of the arguments; however there are also languages in which word order is fixed even though the degree of marking would enable free word order, and languages with free word order, such as some varieties of Datooga, which have free word order combined with a lack of morphological distinction between arguments. Typologically there is a trend that highly animate actors are more likely to be topical than low-animate undergoers, this trend would come through even in free-word-order languages giving a statistical bias for SO order (or OS in the case of ergative systems, however ergative systems do not usually extend to the highest levels of animacy, usually giving way to some form of nominative system at least in the pronominal system).^[11] Most languages with a high degree of morphological marking have rather flexible word orders such as Latin, Portuguese, Romanian, Hungarian, Serbo-Croatian, Russian (in intransitive clauses), and Finnish. In some of those, a canonical order can still be identified, but in others this is not possible.

Hungarian

In Hungarian, the enclitic *-t* marks the direct object. For "Kate ate a piece of cake", the possibilities are:

- "Kati **megevett** egy szelet tortát." (same word order as English) ["Kate **ate** a piece of cake."]
- "**Egy szelet tortát** Kati **evett meg**." (emphasis on agent [Kate]) ["A piece of cake **Kate ate**."]
- "Kati **egy szelet tortát evett meg**." (emphasis on object [cake]) ["Kate **a piece of cake ate**."]
- "**Egy szelet tortát evett meg** Kati." (emphasis on number [a piece, i.e. only one piece]) ["A piece of cake **ate** Kate."]
- "**Megevett** egy szelet tortát Kati." (emphasis on completeness of action) ["**Ate** a piece of cake Kate."]
- "**Megevett** Kati **egy szelet tortát**." (emphasis on completeness of action) ["**Ate** Kate a piece of cake."]

Portuguese

In Portuguese, the clitic pronouns allow many different orders:

- Eu **vou entregar** pra você amanhã. ["I **will deliver** to you tomorrow."] (same word order as English)
- **Entregarei** pra você amanhã. ["**deliver** I will to you tomorrow."]
- Eu **te entregarei** amanhã. ["I to you **will deliver** tomorrow."]
- **Entregar-te-ei** amanhã. ["**Deliver** to you I will tomorrow."] (mesoclisis allowed only in the future tense)
- A ti eu **entregarei** amanhã. ["To you I **will deliver** tomorrow."]
- A ti **entregarei** amanhã. ["To you **deliver** I will tomorrow."]
- Amanhã **entregarei** pra você. ["Tomorrow I **will deliver** to you"]
- Acaso **entregaria** eu a você amanhã? ["could **deliver** I to you tomorrow?"]

Latin

In Latin, the endings of nouns, verbs, adjectives, and pronouns allow for extremely flexible order in most situations. Latin lacks articles.

- Romulus conditerat urbem. ["Romulus had founded the city."] (Same order as English)
- Romulus urbem conditerat. ["Romulus the city had founded."]
- Conditerat Romulus urbem. ["He had founded Romulus city."]
- Conditerat urbem Romulus. ["He had founded city Romulus."]
- Urbem Romulus conditerat. ["The city Romulus he had founded."]
- Urbem conditerat Romulus. ["The city he had founded Romulus."]

Romulus is in the nominative case, so it is the subject of the sentence. Urbem is the accusative case form of the third declension noun, Urbs, so it is the object of the sentence. Conditerat is the third person active indicative pluperfect

form of the verb *Condito*. It tells the relationship between *Romulus* and *Urbem*.

In theory, Latin prose generally follows the word order "Subject Indirect-Object Direct-Object Adverb Verb" (commonly known by the acronym "SIDAV"), but this is more of a guideline than a rule. Adjectives normally go after a noun they modify (either the Subject or the Object), but this is not absolutely required. In practice, there is great flexibility in word order, though the one rule usually upheld is that the Verb will go last in the sentence. Nonetheless, it is technically not incorrect grammar to use a completely different word order. Putting a word earlier in the sentence increases the emphasis on it, but this subtlety would only be particularly obvious to a native Latin speaker. However, even in poetry from the Classical Latin era, lyricists will follow word order very loosely in order to achieve a desired rhyming scheme. "*Romulus urbem conditerat*" (Subject Object Verb) is preferable, but there is nothing explicitly incorrect with "*Conditerat urbem Romulus*" (Verb Object Subject).

Other issues

In many languages, changes in word order occur due to topicalization or in questions. However, most languages are generally assumed to have a basic word order, called the *unmarked* word order; other, *marked* word orders can then be used to emphasize a sentence element, to indicate modality (such as an interrogative modality), or for other purposes.

For example, English is SVO (subject-verb-object), as in "I don't know that", but OSV is also possible: "That I don't know." This process is called topic-fronting (or *topicalization*) and is common. In English, OSV is a *marked word order* because it emphasises the object, and is often accompanied by a change in intonation.

An example of OSV being used for emphasis:

A: *I can't see Alice.* (SVO)

B: *What about Bill?*

A: *Bill I can see.* (OSV, rather than *I can see Bill*, SVO)

Non-standard word orders are also found in poetry in English, particularly archaic or romantic terms – as the wedding phrase "With this ring, I thee wed" (SOV) or "Thee I love" (OSV) – as well as in many other languages.

Translation

Differences in word order complicate translation and language education – in addition to changing the individual words, the order must also be changed. This can be simplified by first translating the individual words, then reordering the sentence, as in interlinear gloss, or by reordering the words prior to translation, as in English-Ordered Japanese. See reordered languages for further examples.

References

- [1] Comrie, 1981
- [2] Hengeveld, Kees (1992). *Non-verbal predication*. Berlin: Mouton de Gruyter.
- [3] Sasse, H.J.(1993) "Das Nomen – eine universelle Kategorie?" in *Sprachtypologie und Universalienforschung* 46 (3))
- [4] Jan Rijkhoff (2007) "Word Classes" *Language and Linguistics Compass* 1 (6) , 709–726 doi:10.1111/j.1749-818X.2007.00030.x
- [5] Rijkhoff, Jan (2004), "The Noun Phrase", Oxford University Press, ISBN 0-19-926964-5
- [6] Russel S.Tomlin;1986;Basic word order: Functional principles;London:Croom Helm
- [7] Introducing English Linguistics International Student Edition by Charles F. Meyer (<http://books.google.co.uk/books?id=MWbryUiYzSkC&pg=PA36>)
- [8] Russell Tomlin, "Basic Word Order: Functional Principles", Croom Helm, London, 1986, page 22
- [9] Kordić, Snježana (2006) [1st pub. 1997]. *Serbo-Croatian*. Languages of the World/Materials ; 148. Munich & Newcastle: Lincom Europa. pp. 45–46. ISBN 3-89586-161-8. OCLC 37959860. OL{{1}}. Contents (<http://www.webcitation.org/6AE3FeWzm>). Summary (<http://linguistlist.org/pubs/books/get-book.cfm?BookID=23011>). [Grammar book].
- [10] Dryer, Matthew S. 1992. 'The Greenbergian Word Order Correlations', *Language* 68: 81-138
- [11] "Language Universals and linguistic typology", Bernard Comrie, 1981

Further reading

- A collection of papers on word order by a leading scholar, some downloadable (<http://linguistics.buffalo.edu/people/faculty/dryer/dryer/wordOrder.htm>)
- Basic word order in English (<http://linguapress.com/grammar/word-order.htm>) clearly illustrated with examples.
- *Language Universals and Linguistic Typology: Syntax and Morphology* – Bernard Comrie (1981) – this is the authoritative introduction to word order and related subjects.
- Order of Subject, Object, and Verb (<http://linguistics.buffalo.edu/people/faculty/dryer/dryer/DryerWalsSOVNoMap.pdf>) (PDF) A basic overview of word order variations across languages.
- Haugan, Jens *Old Norse Word Order and Information Structure*. Norwegian University of Science and Technology. 2001 (http://www.jenshaugan.com/language/oldnorse/dissertation/Jens_Haugan_Old_Norse_Word_Order_and_Information_Structure_TOC.html) ISBN 82-471-5060-3
- Song, Jae Jung (2012) *Word order*. Cambridge: Cambridge University Press. ISBN 978-0-521-87214-0 & ISBN 978-0-521-69312-7

X-bar theory

X-bar theory is a component of linguistic theory which attempts to identify syntactic features presumably common to all those human languages that fit in a presupposed (1965) framework.^[1] It claims that among their phrasal categories, all those languages share certain structural similarities, including one known as the "X-bar", which does not appear in traditional phrase structure rules for English or other natural languages. X-bar theory was first proposed by Noam Chomsky (1970)^[2] and further developed by Ray Jackendoff (1977).^[3] An X-bar theoretic understanding of sentence structure is possible in a constituency-based grammar only; it is not possible in a dependency-based grammar.

The letter X is used to signify an arbitrary lexical category (part of speech); when analyzing a specific utterance, specific categories are assigned. Thus, the X may become an N for noun, a V for verb, an A for adjective, or a P for preposition.

The term *X-bar* is derived from the notation representing this structure. Certain structures are represented by X (an X with a bar over it). Because this is difficult to typeset, this is often written as X', using the prime symbol. In English, however, this is still read as "X bar". The notation XP stands for *X Phrase*, and is equivalent to *X-bar-bar* (X with a double overbar), written X'', usually read aloud as *X double bar*.

Core concepts

There are three "syntax assembly" rules which form the basis of X-bar theory. These rules can be expressed in English, as immediate dominance rules for natural language (useful for example for programmers in the field of NLP—natural language processing), or visually as parse trees. All three representations are presented below.

1. An X Phrase consists of an optional specifier and an X-bar, in any order:

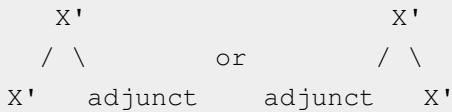
$$XP \rightarrow (\text{specifier}), X'$$

XP	XP
/ \	/ \
spec	X'
X'	spec

2. One kind of X-bar consists of an X-bar and an adjunct, in either order:

$$(X' \rightarrow X', \text{ adjunct})$$

Not all XPs contain X's with adjuncts, so this rewrite rule is "optional".



3. Another kind of X-bar consists of an X (the head of the phrase) and any number of complements (possibly zero), in any order:

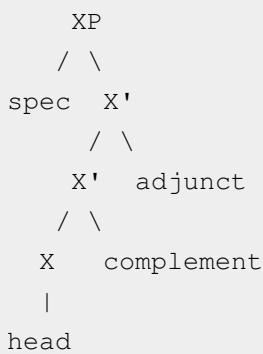
$X' \rightarrow X, (complement\dots)$



(a head-first and a head-final example showing one complement)

How the rules combine

The following diagram illustrates one way the rules might be combined to form a generic XP structure. Because the rules are recursive, there is an infinite number of possible structures that could be generated, including smaller trees that omit optional parts, structures with multiple complements, and additional layers of XPs and X's of various types.

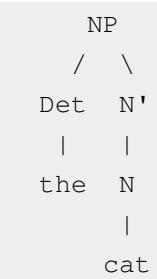


Because all of the rules allow combination in any order, the left-right position of the branches at any point may be reversed from what is shown in the example. However, in any given language, usually only one handedness for each rule is observed. The above example maps naturally onto the left-to-right phrase order used in English.

Note that a complement-containing X' may be distinguished from an adjunct-containing X' by the fact that the complement has an X (head) as a sibling, whereas an adjunct has X-bar as a sibling.

A simple noun phrase

The noun phrase "the cat" might be rendered like this:



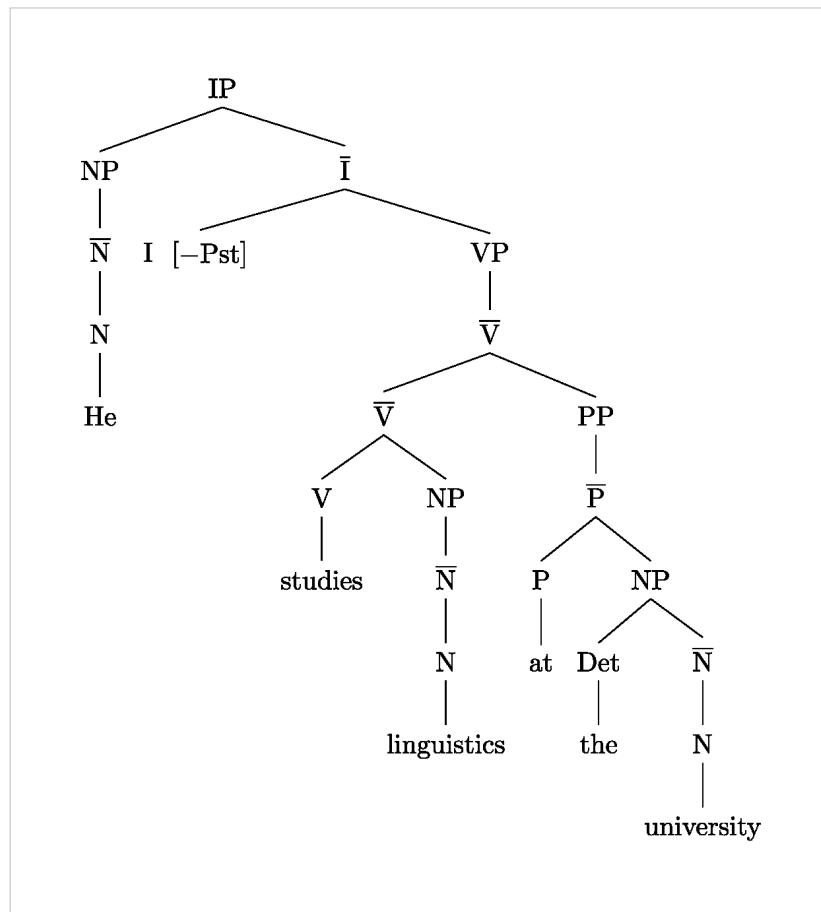
The word *the* is a determiner (specifically an article), which at first was believed to be a type of specifier for nouns. The head is the determiner (D) which projects into a determiner phrase (DP or DetP). The word *cat* is the noun phrase (NP) which acts as the complement of the determiner phrase. More recently, it has been suggested that D is the head of the noun phrase.

Note that branches with empty specifiers, adjuncts, complements, and heads are often omitted, to reduce visual clutter. The DetP and NP above have no adjuncts or complements, so they end up being very linear.

In English, specifiers precede the X-bar that contains the head. Thus, determiners always precede their nouns if they are in the same noun phrase. Other languages use different orders. See word order.

A full sentence

For more complex utterances, different theories of grammar assign X-bar theory elements to phrase types in different ways. Consider the sentence *He studies linguistics at the university*. A transformational grammar theory might parse this sentence as the following diagram shows:



The "IP" is an inflectional phrase. Its specifier is the noun phrase (NP) which acts as the subject of the sentence. The complement of the IP is the predicate of the sentence, a verb phrase (VP). There is no word in the sentence which explicitly acts as the head of the inflectional phrase, but this slot is usually considered to contain the unspoken "present tense" implied by the tense marker on the verb "studies".

A head-driven phrase structure grammar might parse this sentence differently. In this theory, the sentence is modeled as a verb phrase (VP). The noun phrase (NP) that is the subject of the sentence is located in the specifier of the verb phrase. The predicate parses the same way in both theories.

Substitution test

Evidence for the existence of X-bars may be provided by the various possibilities of substitution. For example, to the above sentence *He studies linguistics at the university*, someone may reply *She does, too*. Here the word *does* stands for the entire phrase *studies linguistics at the university*. However, had the reply been *And she does at night-school*, the word *does* would stand for just *studies linguistics*. This implies that significant constituents containing the verb exist at two levels; the constituent at the higher level here is named a verb phrase, and that at the lower level a V-bar (coming above the verb itself, which is *studies*).

Reduction

In 1981, Tim Stowell tried to derive X-bar theory from more general principles in his MIT thesis *Origins of phrase structure*, a pathbreaking but ultimately unsuccessful effort according to Andras Kornai and Geoffrey Pullum.^[4] In the mid 1990s, there were two major attempts to deduce versions of X-bar theory from independent principles. Richard Kayne's theory of Antisymmetry derived X-bar theory from the assumption that there was a tight relation between structure and linear order. Noam Chomsky's paper *Bare Phrase Structure*^[5] attempted to eliminate labelling (i.e. bar-levels) from syntax and deduce their effects from other principles of the grammar.

Quantity of sentence structure

Theories of syntax that build on the X-bar schema tend to posit a large amount of sentence structure. The constituency-based, binary branching structures of the X-bar schema increase the number of nodes in the parse tree to the upper limits of what is possible. The result is highly layered trees (= "tall" trees) that acknowledge as many syntactic constituents as possible. The number of potential discontinuities increases, which increases the role of movement up the tree (in a derivational theory, e.g. Government and Binding Theory) or feature passing up and down the tree (in a representational theory, e.g. Lexical Functional Grammar). The analysis of phenomena such as inversion and shifting becomes more complex because these phenomena will necessarily involve discontinuities and thus necessitate movement or feature passing. Whether the large amount of sentence structure associated with X-bar schemata is necessary or beneficial is a matter of debate.

Endocentric structures only

When the X-bar schema was introduced and generally adopted into generative grammar in the 1970s, it was replacing a view of syntax that allowed for exocentric structures with one that views all sentence structure as endocentric. In other words, all phrasal units necessarily have a head in the X-bar schema, unlike the traditional binary division of the sentence (S) into a subject noun phrase (NP) and a predicate verb phrase (VP) ($S \rightarrow NP + VP$), which was an exocentric division. In this regard, the X-bar schema was taking generative grammar one step toward a dependency-based theory of syntax, since dependency-based structures are incapable of acknowledging exocentric divisions. At the same time, the X-bar schema was taking generative grammar two steps away from a dependency-based understanding of syntactic structure insofar as it was allowing for an explosion in the amount of syntactic structure that the theory can posit. Dependency-based structures, in contrast, necessarily restrict the amount of sentence structure to an absolute minimum.

References

- [1] The framework is described by J. Katz, P. Postal (1964), and Chomsky (1965)
- [2] Chomsky, Noam (1970). Remarks on nominalization. In: R. Jacobs and P. Rosenbaum (eds.) *Reading in English Transformational Grammar*, 184-221. Waltham: Ginn.
- [3] Jackendoff, Ray (1977). *X-bar-Syntax: A Study of Phrase Structure*. Linguistic Inquiry Monograph 2. Cambridge, MA: MIT Press.
- [4] Kornai, Andras and Pullum, Geoffrey (1990) The X-bar theory of phrase structure. *Language* 66 24-50
- [5] Chomsky, Noam (1994). "Bare Phrase Structure". *MIT Occasional Papers in Linguistics* (5).

External links

- <http://www.ucalgary.ca/~mcginnis/301/f04/Xbar.pdf>
- <http://www.ling.upenn.edu/~beatrice/syntax-textbook/index.html>
- <http://kornai.com/Papers/xbarver.pdf>

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