

Regular Lecture 7

Punctuation, Part 2

Prof. Dr. Jasmin Blanchette

Chair of Theoretical Computer Science and
Theorem Proving

Version of May 13, 2026



Commas

Commas

Commas (,) are, together with hyphens, the most troublesome punctuation mark. The rules governing comma placement in English are complex and vary across the Atlantic, and some commas are optional.

A common misconception is that a comma corresponds to a pause in speech. Most commas are required based on **grammatical** and **logical criteria**.

We distinguish between eight correct types and two controversial types of commas. **Other commas are wrong.**

Types of Commas

Correct types:

- ▶ **listing;**
- ▶ **joining;**
- ▶ **serial;**
- ▶ **bracketing;**
- ▶ **introductory;**
- ▶ **separating;**
- ▶ **gapping;**
- ▶ **vocative.**

Controversial types:

- ▶ **splice;**
- ▶ **discretionary.**

Listing Commas

Listing commas are used to separate items in **enumerations** together with *and* or *or*—e.g.:

They have offices in New York, Paris and Tokyo.

The ink cartridge is available in cyan, magenta, yellow or black.

They are also used in “**quick lists**”—e.g.:

Let x, y be real numbers.

Most Polynesian languages have five vowels: a, e, i, o, u.

A radical, comprehensive plan was conceived.

She believed in the one, holy, universal, apostolic church of Haskell.

Nonparallel adjectives require no commas, as in the second example below:

Our method solves complex, third-order, nonlinear differential equations.

Our method solves complex third-order nonlinear differential equations.

Joining Commas

The joining comma (also called the “conjunction comma”) is used between two **independent clauses** connected by *and*, *or*, or *but*.

Such commas are standard in formal writing—e.g.:

Addition is denoted by +, and subtraction is denoted by –.

The data are incomplete, but we can already form a plausible conjecture.

Joining commas should also be used with imperative clauses—e.g.:

Type in your user name, and press the Enter key.

If the connected items are not independent clauses, no joining comma is used—e.g.:

He entered his user name and pressed Enter.

Joining commas can be used together with listing commas—e.g.:

Jane talked, Brian listened, and Alice read her emails.

Serial Commas

The serial comma (also called the “Oxford comma”) is **optionally** used before *and* (or *et*) and *or* in an **enumeration of three or more items**—e.g.:

They have offices in New York, Paris, and Tokyo.

The ink cartridge is available in cyan, magenta, yellow, or black.

We refer to Bartos, Bassalat, et al. for details.

Intuitively, *and*, *or*, and *et* ought to be sufficient.

Serial commas are widespread in American English, especially in formal, nonjournalistic writing. In British English, they are used mostly when they help parsing. Compare:

I admire my parents, Gandhi and Mother Teresa.

I admire my parents, Gandhi, and Mother Teresa.

Bracketing Commas

Bracketing commas (also called “interruptive commas”) set off a **nonrestrictive phrase**—a phrase that could be removed without breaking the sentence.

They mark the phrase as mildly parenthetical—e.g.:

Peter Hitchens's brother, Christopher, wrote a popular but controversial book.

Essential information does not belong within bracketing commas. These are wrong:

The Nobel prize winner, Nadia Murad, was born in Kocho, Iraq.

Isaac Asimov's book, Building Blocks of the Universe, was a popular success.

Remember the closing comma. This is wrong:

The prime minister of Great Britain, Jim Hacker is answerable to Parliament.

Sometimes the opening or the closing comma *is* left out, if it coincides with the start or end of the sentence or with another punctuation mark.

Bracketing Commas

Bracketing commas can be used around **nonrestrictive subordinate clauses**—e.g.:

Her paternal grandmother, who moved to Brazil, was originally Indian.

The invasion of Kyushu was planned for X-Day, which was set for November 1.

They can also be used around **complements** that we want to parenthesize—e.g.:

This is, indeed, not the only possible scenario.

For example, the numbers 49999 and 33333331 are prime.

In conjunctions, bracketing commas can be used around the second term to mark it as a **parenthetical addition** or **afterthought**—e.g.:

General relativity is hard to understand, and even harder to explain.

The integers \mathbb{Z} are an abelian, or commutative, group under addition.

This mode is theoretically more powerful, since it allows user interaction.

Introductory Commas

Introductory commas are used after an adverb, adverbial phrase, or dependent clause placed at the **beginning of a clause**—e.g.:

If R is Noetherian, then R' is Noetherian.

Even before she was elected, the president targeted journalists she disliked.

These commas are more frequent in American English than in British English. But even in British English, they are sometimes necessary for clarity. This is hard to parse:

According to the mine worker standard safety procedures are ineffective.

There is no introductory comma if a sentence is inverted (with the subject after the verb). This is wrong:

Between the Forum and the Campus Martius, is the Capitoline Hill.

Separating Commas

Separating commas stand before or after **direct speech**, together with a verb such as *say* or *write*—e.g.:

Oscar Wilde wrote, “There is no such thing as a moral or an immoral book.”
“There is no such thing as a moral or an immoral book,” he wrote.

Notice the capitalization.

No commas are needed when the quotation is **embedded** in the sentence—e.g.:

Yugoslavia’s motto was “Brotherhood and Unity.”
She claimed that “technology has no value unless it makes people’s lives better.”

Gapping Commas

The gapping comma indicates that some **words are omitted**.

In the following example, the comma stands for *is known*:

Bangalore is known as the city of gardens; Mumbai, as the city of dreams.

The comma helps parsing.

Vocative Commas

The vocative comma is used to **address** or **invoke** someone or something—e.g.:

I know, Kim, I know.

Yes, minister.

Let's eat, grandma!

Such commas hardly ever arise in scientific and technical English.

Splice Commas

The splice comma **separates two clauses**. In Caesar's *I came, I saw, I conquered*, two splice commas separate three clauses. Comma splice is widely considered poor style, but sometimes it is unavoidable—e.g.:

It is peculiar, is it not?

The Queen is dead, long live the King!

Not all tires should be replaced, just the ones that are worn out.

Most splice commas, including those below, should be replaced by **periods** (.) or **semicolons** (;).

Let $a = b$, then $a^k = b^k$.

You must register in time, otherwise you cannot take the examination.

We apologize for the repetition, however we do need your cooperation.

Discretionary Commas

As a rule, there should be no comma between the **subject** and the **verb**.
The last comma below is wrong:

Dodoma, Lusaka, and Nairobi, are African cities.

Similarly, there should be no comma between the **verb** and the **direct object**.
The first comma below is wrong:

I visited, Dodoma, Lusaka, and Nairobi.

There are nevertheless circumstances where a discretionary comma is desirable to **help parsing**—e.g.:

Those who can, do; those who can't, teach.

*Those responsible for sacking the people who have just been sacked,
have been sacked.*

Hyphens

Hyphens

Hyphen (-) usage is difficult. It does not help that writers on either side of the Atlantic disagree about hyphens, as do writers from different decades or centuries.

We distinguish between two main types of hyphens:

- ▶ The **intraword hyphen** joins two parts of a word. One part will usually be a prefix or suffix—e.g., *co-axial*, *un-English*, *mid-1990s*, *tax-free*, *20-fold*.
- ▶ The **interword hyphen** connects two words. The combined words then form a compound adjective (e.g., *well-designed*, *customer-oriented*), noun (e.g., *right-winger*), or verb (e.g., *binge-eat*).

Hyphens

Most hyphens can be avoided by joining the two word components directly (e.g., *coaxial*) or by putting a space (e.g., *well designed*).

- ▶ The American tendency is to avoid intraword hyphens by joining words directly.
- ▶ The British tendency is to avoid interword hyphens by using a space.

Thus, *a nonaddictive second-generation drug* is mainly American, whereas *a non-addictive second generation drug* is mainly British.

Each hyphen plays a small role:

- ▶ In *non-addictive*, the hyphen **cleanly separates the prefix *non-*** from the familiar word *addictive*, making this uncommon combination easier to parse.
- ▶ In *second-generation drug*, the hyphen **prevents the misreading *second generation-drug***.

Intraword Hyphens

Some **prefixes**, such as *ex-* and Greek letters, are always followed by an intraword hyphen—e.g., *ex-servicewoman*, *β-carotene*.

Other combinations that require a hyphen involve the combining forms *all-*, *cross-*, and *self-*—e.g., *all-important*, *cross-examiner*, *self-delusion*.

To a literal mind, a *cross examiner* might conjure the image of a crucifix inspector.

To avoid awkward symbol combinations, use a hyphen when attaching a prefix to a capitalized word or a number, even if the prefix normally does not require a hyphen—e.g., *un-Pythonic*, *pre-1984*.

Hyphens can also help avoid ambiguity.

Distinguish between *re-prove* (“prove again”) and *reprove* (“reprimand”), between *co-op* (“cooperative,” two syllables) and *coop* (“cage,” one syllable).

Intraword Hyphens

Some words are hyphenated because this **avoids unpleasant letter combinations, eases parsing**, or both—e.g., *anti-inflammatory*, *ball-like*, *co-opt*, *co-owner*, and *meta-analysis*.

Optional intraword hyphens are predominant in British English and older varieties of American English but rarely seen in modern American texts. Thus, *anti-clockwise*, *element-wise*, *non-empty*, *pre-war*, and *rat-like* are mainly British, whereas *counterclockwise*, *elementwise*, *nonempty*, *prewar*, and *ratlike* are mainly American.

Prefixes and suffixes are not separate words. These are wrong:
meta language, *non null*, *raccoon like*.

Finally, when splitting a word across two lines, we insert an intraword hyphen between two syllables. To find out where syllables start and end, use a dictionary.

Interword Hyphens

When building compounds, we must often choose between three options:

- ▶ **hyphenated compounds** (e.g., *type-checking*);
- ▶ **closed compounds** (e.g., *typechecking*);
- ▶ **open compounds** (e.g., *type checking*).

There is a **strong tendency in favor of open compounds**, except when a hyphenated or closed form helps parsing or denotes a new concept, distinct from the composition of its constituent parts.

Below, we review some general principles, but they are no substitute for a good dictionary, search engines, word frequency viewers, and sound judgment.

Interword Hyphens

Unreadable phrases such as *variable state independent decaying sum heuristic* abound in technical and scientific writing. Interword hyphens help **readability**: *variable-state-independent decaying-sum heuristic*.

A hyphen can be inserted if it **eases reading** or for **consistency**. It is good style, especially in American English, to write *oil-based paint*, *this so-called nutritionist*, and *a step-by-step method*. In contrast, *a step by step method* would be hard to parse. But in *We proceed step-by-step*, the hyphens are undesirable.

What should you do about *middle school physical science curriculum*? Since the phrases *middle school* and *physical science* are established, they can be left as is. *Middle-school physical-science curriculum* would be distractingly ugly.

Interword Hyphens

English allows the formation of arbitrary **adjectival phrases**, as in *her you-are-charming-but-useless look*. Hyphens are then necessary, unless you use quotes: *her “you are charming but useless” look*. Such expressions inflect the text with informality.

In **Latin expressions** such as *ad hoc*, *de facto*, and *ex post facto*, which are understood as a whole, hyphens are unwelcome.

Unlike *free college plan*, *de facto standard* can be parsed in only one way. Forms such as *de-facto standard* do occur, but they are nonstandard.

A similar case is that of **adverbs modifying adjectives qualifying nouns**. On the model of *free-college plan*, you may be tempted to write *highly-sensitive information* or *ever-stronger union*. But since adverbs cannot modify nouns, these hyphens resolve no ambiguities and are therefore undesirable. *Sensitive information* cannot be *highly*, and a *stronger union* cannot be *ever*.

Interword Hyphens

Hyphens are used to form compounds that seem to **defy the laws of grammar**.

A phrase such as *to stress test* is disallowed because a noun (*stress*) cannot modify a verb (*test*)—this would be the role of an adverb. To solve this, use a hyphen: *to stress-test*, *stress-tested*, etc. The hyphen usually disappears in related forms when it is not needed (e.g., *a stress test*, *stress testers*, *stress testing*).

Besides “noun + verb,” other problematic combinations include “adjective + verb” (e.g., *double-check*, *dry-clean*), “noun + adjective” (e.g., *vendor-specific*), and “noun + adverb” (e.g., *carbon-neutrally*). For some commonly used combinations, dictionaries record closed compounds (e.g., *to copyedit*, *to proofread*, *to spellcheck*).

Interword Hyphens

Besides enhancing readability, interword hyphens can also be used to build a **new concept** whose meaning might not be obvious from the constituent words.

Accordingly, a *bee-eater* is a bird and not just any eater of bees, and a *man-hater* is a person who hates men and not a hater who is a man. A similar convention explains *editor-in-chief*, *parent-in-law*, and *tug-of-war*. However, for some established phrases such as *black box* and *blue ice*, the hyphen is curiously missing.

Hyphenated compounds used to be common. They appeared in *hay-stack*, *Oxford-street*, *tea-pot*, *to-day*, etc. The preference nowadays is for closed and open compounds—e.g., *haystack*, *Oxford Street*, *teapot*, *today*.

Dictionaries can often help, and for compounds that are not recorded in them, **the preferable form is almost always the open compound.**

Interword Hyphens

What should you do when faced with a **specific expression**?

Consider *farm boy*. It could also plausibly be written as *farm-boy* or *farmboy*. But:

- ▶ *Farmboy* is not in the dictionary.
- ▶ There is no awkward letter cluster justifying *farm-boy*.
- ▶ *Farm boy* literally means what it says.

The closed compound is not established, and the hyphenated form offers no benefits. By exclusion, we have *farm boy*, which is indeed about 20 times more frequent in print than either of the other two forms according to **Google Books Ngram Viewer**. (In retrospect, we could have started with that tool and saved ourselves some work.)

Interword Hyphens

There remains a pair of **special cases**.

In coordinations, you can have a trailing hyphen after a prefix or word, as in *pre- and postnatal* (or *pre- and post-natal*) and *water- or oil-based*. Remember the space between the hyphen and the coordinating conjunction.

An analogous but worse construction works in reverse: *Anglo-Welsh, -Scottish, and -Irish* abbreviates *Anglo-Welsh, Anglo-Scottish, and Anglo-Irish*.

When spoken, the phrase is indistinguishable from *Anglo-Welsh, Scottish, and Irish*, which is not what we mean. This alone is enough to discredit it.