

Appendix A

Handbook

Any living language is a growing, flexible instrument with rules that are constantly changing by virtue of the way it is used by its live, independent speakers and writers. Only the rules of a dead language are unalterably fixed.

Nevertheless, at any point in a language's development, certain conventions of usage are in force. Certain constructions are considered to be errors that mark the person who uses them as uneducated. It is with these conventions and errors that this handbook primarily deals. We also include a section on sexist usage.

To make the handbook easy to use as a reference, we have arranged the topics covered in alphabetical order. Each convention and error dealt with has an abbreviated reference tag. The tags are reproduced on the back endpapers, along with some of the more important proofreading symbols. If you are in a college writing course, your instructor may use some combination of these tags and symbols to indicate revisions needed in your reports.

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ab ▶ **ABBREVIATIONS**

Every scientific and professional field generates hundreds of specialized terms, and many of these terms are abbreviated for the sake of conciseness and simplicity. A few principles for the use of abbreviations follow, the first probably being the most important:

- As a general principle, the style manuals that govern the various disciplines, discourage the indiscriminate use of abbreviations. The *Publication Manual of the American Psychological Society* states this principle well:

In general, use an abbreviation only (a) if it's conventional and if the reader is more familiar with the abbreviation than with the complete form or (b) if considerable space can be saved and cumbersome repetition avoided. In short, use only those abbreviations that will help you communicate with your readers. Remember, they have not had the same experience with your abbreviations as you have.¹

- You must decide if your audience is familiar enough with the term to allow you to use it without definition. Second, you must decide if your audience is familiar enough with the abbreviation for you to use it without spelling it out. For example, here is how one writer introduces the term *electric and magnetic fields* to a lay audience:

Electric and magnetic fields (EMFs) are produced by power lines, electrical wiring, and electrical equipment. There are many other sources of EMFs. The focus of this booklet is on EMFs associated with the generation, transmission, and use of electric power. EMFs are invisible lines of force that surround any electrical device. Electric fields are produced by voltage and increase in strength as the voltage increases. The electric field strength is measured in units of volts per meter (V/m). Magnetic fields result from the flow of current through wires or electrical devices and increase in strength as the current increases. Magnetic fields are measured in units of gauss (G) or tesla (T). Most electrical equipment has to be turned on, that is, current must be flowing, for a magnetic field to be produced. Electric fields, on the other hand, are present even when the equipment is switched off, as long as it remains connected to the source of electric power.²

Placing the abbreviation *EMF* in parentheses following the first use of the term allows the use of the abbreviation throughout the rest of the article.

Following the parentheses, the writer provides an extended definition. The amount of provided detail depends as always on purpose and audience. For a more expert audience it would probably be enough to put the abbreviation in parentheses without a definition.

- In some cases the abbreviation is so well known to a technical audience and the term itself is so cumbersome that the abbreviation without the term will suffice. For example, an article for a computer-knowledgeable audience would probably use *ACSII* without providing or defining the term, *American Standard Code for Information Exchange*. A term such as DNA is so well known, even if not thoroughly understood, that it can be used by itself, even in articles for lay people.
- Even when not used in the text, abbreviations are widely used to save space in tables and figures. When the abbreviations are standard abbreviations known to the audience, you don't need to spell them out or explain them. If they are not known, spell them out in the captions to the figure or table or in a note. If necessary, define them.
- Use Latin abbreviations like *cf.* (compare), *i.e.* (that is), and *e.g.* (for example) sparingly. In your text use them only in parenthetical explanations. Use them also in tables and figures where space constraints make their use practical and acceptable. Elsewhere, use the English equivalents.
- Do not begin a sentence with an abbreviation. If practical, spell the abbreviation out. If not, recast the sentence to move the abbreviation.

The formation of standard abbreviations follow a brief set of rules, illustrated by the following set of abbreviations and the rules that follow it.

absolute	abs
acre or acres	acre or acres
atomic weight	at. wt
barometer	bar.
Brinell hardness number	Bhn
British thermal units	Btu
meter	m
square meter	m ²
miwatt or miwatts	mW
miles per hour	mph
National Electric Code	NEC
per	per
revolutions per minute	rpm
rod	rod
ton	ton

1. Use the singular form of abbreviation for both singular and plural terms:
cu ft either cubic foot or cubic feet
cm either centimeter or centimeters

But there are some common exceptions:

no. number
nos. numbers
p. page
pp. pages
ms. manuscript
mss. manuscripts

2. In abbreviating units measurement, use lowercase letters except for letters that stand for proper nouns or proper adjectives:

at. wt *but* Btu or B
mph *but* mW

3. For technical terms, use periods only after abbreviations that spell complete words. For example, *in* is a word that could be confused with the abbreviation for inches. Therefore, use a period:

ft *but* in.
abs *but* bar.
cu ft *but* at. Wt

4. Spell out many short and common words:

acre rod per ton

5. In compound abbreviations, use internal spacing only if the first word is represented by more than its first letter:

rpm *but* cu ft
mph *but* at. wt

6. With few exceptions, form the abbreviations of organization names without periods or spacing:

NEC ASA

7. Abbreviate terms of measurement only if they are preceded by an arabic expression of exact quantity:

55 mph *and* 20-lb anchor

but

We will need an engine of greater horsepower.

The principles and rules we have provided here will cover most general situations. But in preparing a manuscript for a specific discipline, be sure to

consult the applicable style or publication manual.

acro ▶ ACRONYMS

Acronyms are formed in two ways. In one way, the initial letters of each word in some phrase are combined. An example would be WYSIWYG, an acronym for the computer phrase “What you see is what you get.” In a second way, some combination of initial letters or several letters of the words in the phrase are combined. An example would be *radar* for *radio detection and ranging*.

Technical writing uses acronyms freely, as in this example from a description of a computer program that performs statistical analysis:

It has good procedural capabilities, including some time-series-related plots and ARIMA forecasting, but it doesn't have depth in any one area. Although it has commands to create EDA displays, these graphics are static and are printed with characters rather than with lines.³

Use acronyms without explanation only when you are absolutely sure your readers know them. If you have any doubts at all, at least provide the words from which the acronym stems. If you're unsure whether the words are enough, provide a definition of the complete phrase. In the case of the paragraph just quoted, the computer magazine in which it was printed provided a glossary giving both the complete phrases and definitions:

ARIMA (auto-regressive integrated moving-average): a model that characterizes changes in one variable over time. It is used in time-series analysis.

EDA (exploratory data analysis): The use of graphically based tools, particularly in initial states of data analysis, to inspect data properties and to discover relationships among variables.⁴

See also the Entry for Abbreviations. In general follow the same principles for using acronyms as for using abbreviations. Acronyms can be daunting to those unfamiliar with them. Even for an audience that knows their meaning, a too heavy use of acronyms can make your writing seem lumpish and uninviting.

apos ▶ APOSTROPHE

The apostrophe has three chief uses: (1) to form the possessive, (2) to stand for missing letters or numbers, and (3) to form the plural of certain expressions.

Possessives

Add an apostrophe and an *s* to form the possessive of most singular nouns,

including proper nouns, even when they already end in an s or another sibilant such as x:

man's
spectator's
jazz's
Marx's
Charles's

Exceptions to this rule occur when adding an apostrophe plus an s would result in an s or z sound that is difficult to pronounce. In such cases, usually just the apostrophe is added:

Xerxes'
Moses'
conscience'
appearance'

To understand this exception, pronounce *Marx's* and then a word like *Moses's* or *conscience's*.

To form plurals into the possessive case, add an apostrophe plus s to words that do not end in an s or other sibilant and an apostrophe only to those that do:

men's
data's
spectators'
agents'
witnesses'

To show joint possession, add the apostrophe and s to the last member of a compound or group; to show separate possession, add an apostrophe and s to each member:

Gregg and Klymer's experiment astounded the class.
Gregg's and Klymer's experiments were very similar.

Of the several classes of pronouns, only the indefinite pronouns use an apostrophe to form the possessive.

Possessive of Indefinite Pronouns

anyone's
everyone's
everybody's
nobody's

Possessive of Other Pronouns

my (mine)
your (yours)
his, her (hers), its
our (ours)

no one's
other's
neither's

their (theirs)
whose

Missing Letters or Numbers

Use an apostrophe to stand for the missing letters in contractions and to stand for the missing letter or number in any word or set of numbers from which a letter or number is omitted for one reason or another:

can't, don't, o'clock, it's (it is), and similar constructions
We were movin' downriver, listenin' to the birds singin'.
The class of '49 was Colgate's best class in years.

Plural Forms

An apostrophe is sometimes used to form the plural of letters and numbers, but this style is gradually dying, particularly with numbers.

6's and 7's (but more commonly, 6s and 7s)
a's and b's

brackets ▶ BRACKETS

Brackets are chiefly used when a clarifying word or comment is inserted into a quotation:

"The result of this [disregard by the propulsion engineer] has been the neglect of the theoretical and mathematical mastery of the engine inlet problem."

"An ideal outlet require [sic] a frictionless flow."

"Last year [2000] saw a partial solution to the problem."

Sic, by the way, is Latin for *thus*. Inserted in a quotation, it means that the mistake it follows is the original writer's, not yours. Use it with discretion.

cap ▶ CAPITALIZATION

The following are the more important rules of capitalization. For a complete rundown, see your college dictionary.

Proper Nouns

Capitalize all proper nouns and their derivatives:

Places

America American Americanize Americanism

Days of the Week and Months

Monday Tuesday January February

But not the seasons:

winter spring summer fall

Organizations and Their Abbreviations

American Kennel Club (AKC)

United States Air Force (USAF)

Capitalize *geographic areas* when you refer to them as areas:

The Andersons toured the Southwest.

But do not capitalize words that merely indicate direction:

We flew west over the Pacific.

Capitalize the names of *studies* in a curriculum only if the names are already proper nouns or derivatives of proper nouns or if they are part of the official title of a department or course:

Department of Geology

English Literature 25

the study of literature

the study of English literature

Note: Many nouns (and their derivatives) that were originally proper have been so broadened in application and have become so familiar that they are no longer capitalized: *boycott, macadam, italicize, platonic, chinaware, quixotic.*

Literary Titles

Capitalize the first word, the last word, and every important word in literary titles:

But What's a Dictionary For

The Meaning of Ethics

How to Write and Be Read

Rank, Position, Family Relationships

Capitalize the titles of rank, position, and family relationship unless they are preceded by *my, his, their,* or similar possessive pronouns:

Professor J. E. Higgins

I visited Uncle Timothy.
I visited my uncle Timothy.
Dr. Milton Weller, Head, Department of Entomology

Colon ▶ **COLON**

The colon is chiefly used to introduce quotations, lists, or supporting statements. It is also used between clauses when the second clause is an example or amplification of the first and in certain conventional ways with numbers, correspondence, and bibliographical entries.

Introduction

Place a colon before a quotation, a list, or supporting statements and examples that are formally introduced:

Mr. Smith says the following of wave generation:

The wind waves that are generated in the ocean and which later become swells as they pass out of the generating area are products of storms. The low pressure regions that occur during the polar winters of the Arctic and Antarctic produce many of these wave-generating storms.

The various forms of engine that might be used would operate within the following ranges of Mach number:

M-0 to M-1.5	Turbojet with or without precooling
M-1.5 to M-7	Reheated turbojet, possibly with precooling
M-7 to M-10+	Ramjet with supersonic combustion

Engineers are developing three new engines: turbojet, reheated turbojets, and ramjets.

Do not place a colon between a verb and its objects or a linking verb and the predicate nouns.

Objects

The engineers designed turbojets, reheated turbojets, and ramjets.

Predicate Nouns

The three engines the engineers are developing are turbojets, reheated turbojets, and ramjets.

Do not place a colon between a preposition and its objects:

The plane landed at Detroit, Chicago, and Rochester.

Between Clauses

If the second of two clauses is an example or an amplification of the first clause, then the colon may replace the comma, semicolon, or period:

The docking phase involves the actual “soft” contact: the securing of lines, latches, and air locks.

Figure 2 illustrates the difference between these two guidance systems: The paths of the two vehicles are shown to the left and the motion of the ferry as viewed from the target station is shown to the right.

Generally, a complete sentence after a colon begins with a capital letter, whereas a simple list begins lowercase.

Styling Conventions

Place a colon after a formal salutation in a letter, between numerals representing hours and minutes, between a title and a subtitle, and between chapter and verse of the Bible:

Dear Ms. Jones:
at 7:15 P.M.
Working Women: A Chartbook
I Samuel 7:14–18

c ▶ COMMA

The most used—and misused—mark of punctuation is the comma. Writers use commas to separate words, phrases, and clauses. Generally, commas correspond to the pauses we use in our speech to separate ideas and to avoid ambiguity. You will use the comma often: About two out of every three marks of punctuation you use will be commas. Sometimes your use of the comma will be essential for clarity; at other times you will be honoring grammatical conventions. (See also the entry for Run-On Sentences.)

Main Clauses

Place a comma before a coordinating conjunction (*and, but, or, nor, for, yet*) that joins two main (independent) clauses:

During the first few weeks we felt a great deal of confusion, but as time passed we gradually fell into a routine.
We could not be sure that the plumbing would escape frost damage, nor were we at all confident that the house could withstand the winds of almost hurricane force.

If the clauses are short, have little or no internal punctuation, or are closely related in meaning, then you may omit the comma before the coordinating conjunction:

The wave becomes steeper but it does not tumble yet.

In much published writing there is a growing tendency to place two very short and closely related independent clauses (called contact clauses) side by side with only a comma between:

The wind starts to blow, the waves begin to develop.

Sentences consisting of *three* or more equal main clauses should be punctuated uniformly:

We explained how urgent the problem was, we outlined preliminary plans, and we arranged a time for discussion.

In general, identical marks are used to separate equal main clauses. If the equal clauses are short and uncomplicated, commas usually suffice. If the equal clauses are long or internally punctuated, or if their separateness is to be emphasized, semicolons are preferable and sometimes essential.

Clarification

Place a comma after an introductory word, phrase, or clause that might be over-read or that abnormally delays the main clause:

As soon as you have finished polishing, the car should be moved into the garage. (Comma to prevent over-reading)

Soon after, the winds began to moderate somewhat, and we were permitted to return to our rooms. (First comma to prevent over-reading)

If the polar ice caps should someday mount in thickness and weight to the point that their combined weight exceeded the equatorial bulge, the earth might suddenly flop ninety degrees. (Introductory clause abnormally long)

After a short introductory element (word, phrase, or clause) where there is no possibility for ambiguity, the use of the comma is optional. Generally, let the emphasis you desire guide you. A short introductory element set off by a comma will be more emphatic than one that is not.

Nonrestrictive Modifiers

Enclose or set off from the rest of the sentence every nonrestrictive modifier, whether a word, a phrase, or a clause. How can you tell a nonrestrictive modifier from a restrictive one? Look at these two examples:

Restrictive

A runway that is not oriented with the prevailing wind endangers the aircraft using it.

Nonrestrictive

The safety of any aircraft, whether heavy or light, is put in jeopardy when it is forced to take off or land in a crosswind.

The restrictive modifier is necessary to the meaning of the sentence. Not just any runway but “a runway that is not oriented with the prevailing wind” endangers aircraft. The writer has *restricted* the many kinds of runway he or she could talk about to one particular kind. In the nonrestrictive example, the modifier merely adds descriptive details. The writer doesn’t restrict *aircraft* with the modifier but simply makes the meaning a little clearer.

Restrictive modifiers cannot be left out of the sentence if it is to have the meaning the writer intends; nonrestrictive modifiers can be left out.

Nonrestrictive Appositives

Set off or enclose every nonrestrictive appositive. As used here, the term *appositive* means any element (word, phrase, or clause) that parallels and repeats the thought of a preceding element. According to this view, a verb may be coupled appositively with another verb, an adjective with another adjective, and so on. An appositive is usually more specific or more vivid than the element for which it is an appositive; an appositive makes explicit and precise something that has not been clearly implied.

Some appositives are restrictive and, therefore, are not set off or enclosed.

Nonrestrictive

A crosswind, a wind perpendicular to the runway, causes the pilot to make potentially dangerous corrections just before landing.

Restrictive

In some ways, Mr. Bush the president has to behave differently from Mr. Bush the governor.

In the nonrestrictive example, the appositive merely adds a clarifying definition. The sentence makes sense without it. The appositives in the restrictive example are essential to the meaning. Without them we would have, “In some ways, Mr.

Bush has to behave differently from Mr. Bush.”

Series

Use commas to separate members of a coordinate series of words, phrases, or clauses if *all* the elements are not joined by coordinating conjunctions:

Instructions on the label state clearly how to prepare the surfaces, how to apply the contents, and how to clean and polish the mended article.
To mold these lead figures you will need a hot flame, a two-pound block of lead, the molds themselves, a file or a rasp, and an awl.
Under the microscope the sensitive, filigree-like mold appeared luminous and transparent and faintly green.

Other Conventional Uses

Date

On August 24, A.D. 79, Mount Vesuvius erupted, covering Pompeii with 50 feet of ash and pumice.

Note: When you write the month and the year without the day, it is common practice to omit the comma between them—as in June 1993.

Geographical Expression

During World War II, Middletown, Pennsylvania, was the site of a huge military airport and supply depot.

Title after Proper Name

A card in yesterday’s mail informed us that Penny Hutchinson, M.D., would soon open an office in Hinsdale.

Noun of Direct Address

Lewis, do you suppose that we can find our way back to the cabin before nightfall?

Informal Salutation

Dear Jane,

dm ▶ **DANGLING MODIFIER**

Many curious sentences result from the failure to provide a modifier with something to modify:

Having finished the job, the tarpaulins were removed.

In this example it seems as though the tarpaulins have finished the job. As is so

often the case, a passive voice construction has caused the problem (see pages 92–93, 198). If we recast the sentence in active voice, we remove the problem:

Having finished the job, the workers removed the tarpaulins.

dash ▶ **DASH**

In technical writing, you will use the dash almost exclusively to set off parenthetical statements. You may, of course, use commas or parentheses for the same function, but the dash is the most emphatic separator of the three. You may also use the dash to indicate a sharp transition.

The target must emit or reflect light the pilot can see—but how bright must this light be?

d ▶ **DICTION**

For good diction, choose words that are accurate, effective, and appropriate to the situation. Many different kinds of linguistic sins can cause faulty diction. Poor diction can involve a choice of words that are too heavy or pretentious: *utilize* for *use*, *finalize* for *finish*, *at this point in time* for *now*, and so forth. Tired old clichés are poor diction: *with respect to*, *with your permission*, *with reference to*, and many others. We talk about such language in Chapter 5, particularly in the section on pomposity (pages 96–98).

Sometimes the words chosen are simply too vague to be accurate: *inclement weather* for *rain*, *too hot* for *600°C*. See the section on specific words in Chapter 5 (pages 94–96) for more on this subject.

Poor diction can mean an overly casual use of language when some degree of formality is expected. One of the many synonyms for *intoxicated*, such as *bombed*, *stoned*, or *smashed*, might be appropriate in casual conversation but totally wrong in a police or laboratory report.

Poor diction can reflect a lack of sensitivity to language—to the way one group of words relates to another group. Someone who writes that “The airlines are beginning a crash program to solve their financial difficulties” is not paying attention to relationships. The person who writes that the “Steel-workers’ Union representatives are getting down to brass tacks in the strike negotiations” has a tin ear, to say the least. Make your language work for you, and make it appropriate to the situation.

ell ▶ **ELLIPSIS**

Use three spaced periods to indicate words omitted within a quoted sentence; use four spaced periods if the omission occurs at the end of the sentence:

“As depth decreases, the circular orbits become elliptical and the orbital velocity . . . increases as the wave height increases.”

“As the ground swells move across the ocean, they are subject to headwinds or crosswinds. . . .”

You need not show an ellipsis if the context of the quotation makes it clear that it is not complete:

Wright said the accident had to be considered a “freak of nature.”

exc ▶ **EXCLAMATION POINT**

Place an exclamation point at the end of a startling or exclamatory sentence.

According to the Centers for Disease Control and Prevention, every cigarette smoked shortens the smoker’s life by seven minutes!

With the emphasis in technical writing on objectivity, you will seldom use the exclamation point.

frag ▶ **FRAGMENTARY SENTENCE**

Most fragmentary sentences are either verbal phrases or subordinate clauses that the writer mistakes for a complete sentence.

A verbal phrase has a participle, a gerund, or an infinitive in the predicate position, none of which functions as a complete verb:

Norton, depicting the electromagnetic heart. (participle)

The timing of this announcement about Triptycene, (gerund)

Braun, in order to understand tumor cell growth. (infinitive)

When your fragment is a verbal phrase, either change the participle, gerund, or infinitive to a complete verb or repunctuate so that the phrase becomes part of a complete sentence.

Fragment

Norton, depicting the electromagnetic heart. She made a mockup of it.

Rewritten

Norton depicted the electromagnetic heart. She made a mockup of it.

Norton, depicting the electromagnetic heart, made a mockup of it.

Subordinate clauses are distinguishable from phrases in that they have complete subjects and complete verbs (rather than verbals) and are introduced

by relative pronouns (*who, which, that*) or by subordinating conjunctions (*because, although, since, after, while*).

The presence of the relative pronoun or the subordinating conjunction is a signal that the clause is not independent but is part of a more complex sentence unit. Any independent clause can become a subordinate clause with the addition of a relative pronoun or subordinating conjunction.

Independent Clause

Women's unemployment rates were higher than men's.

Subordinate Clause

Although women's unemployment rates were higher than men's.

Repunctuate a subordinate clause so that it is joined to the complex sentence of which it is a part.

Fragment

Although women's unemployment rates were higher than men's. Now the rates are similar.

Rewritten

Although women's unemployment rates were higher than men's, now the rates are similar.

Various kinds of elliptical sentence without a subject or a verb do exist in English, for example, "No!" "Oh?" "Good shot." "Ouch!" "Well, now." These constructions may occasionally be used for stylistic reasons, particularly to represent conversation, but they are seldom needed in technical writing. If you do use such constructions, use them sparingly. Remember that major deviations from normal sentence patterns will probably jar your readers and break their concentration on your report, the last thing that any writer wants.

hyphen ▶ HYPHEN

Hyphens are used to form various compound words and in breaking up a word that must be carried over to the next line.

Compound Numbers

See Numbers.

Common Compound Words

Observe dictionary usage in using or omitting the hyphen in compound words.

governor-elect	court-martial
ex-treasurer	Croesus-like
Russo-Japanese	drill-like
pro-American	self-interest

But:

neophyte	sweet corn
newspaper	weather map
radioactive	radio beam
bloodless	blood pressure

Compound Words as Modifiers

Use the hyphen between words joined together to modify other words:

a half-empty fuel tank
an eight-cylinder engine
their too-little-and-too-late methods

Be particularly careful to hyphenate when omitting the hyphen may cause ambiguity:

two-hundred-gallon drums
two hundred-gallon drums
a pink-skinned hamster

Sometimes you have to carry a modifier over to a later word, creating what is called a *suspended hyphen*:

GM cars come with a choice of four-, six-, or eight-cylinder engines.

ital ▶ ITALICIZATION

Italic print is a distinctive typeface, like this sample: *Scientific American*. When you use a word processor, you can use an italic typeface or represent italics by underlining, like this:

Scientific American

Foreign Words

Italicize foreign words that have not yet become a part of the English language:

We suspected him always of holding some *arrière pensée*.
Karl's everlasting *Weltschmerz* makes him a depressing companion.

Also italicize Latin words for genus and species.

Cichorium endivia (endive)
Percopsis omiscomaycus (trout-perch)

But do not italicize Latin abbreviations or foreign words that have become a part of the English language:

etc. bourgeois
vs. status quo

A good collegiate dictionary should indicate which foreign words are still italicized and which are not.

Words, Letters, and Numbers Used as Such

The words *entrance* and *admission* are not perfectly interchangeable.
Don't forget the *k* in *picnicking*.
His 9s and 7s descended below the line of writing.

Titles

In general, italicize most titles, including the titles of books, plays, pamphlets, periodicals, movies, radio and television programs, operas, ballets, and record albums. Also italicize the names of works of art such as sculptures and paintings and the names of ships, airplanes, and spacecraft. Some examples follow:

<i>The Chicago Manual of Style</i>	<i>Sesame Street</i>
<i>Othello</i>	<i>Swan Lake</i>
<i>Scientific American</i>	<i>Mona Lisa</i>
<i>Star Wars</i>	<i>Sputnik II</i>

mm ▶ MISPLACED MODIFIER

As in the case of dangling modifiers, curious sentences result from a modifier's not being placed next to the element modified:

An engine may crack when cold water is poured in unless it is running.

Probably, with a little effort, no one will misread this example, but, undeniably, it says that the engine will crack unless the water is running. Move the modifier to make the sentence clear:

Unless it is running, an engine may crack when cold water is poured in.

It should be apparent from the preceding examples that a modifier can be in the wrong position to convey one meaning but in the perfect position to convey a different meaning. In the next example, the placement of *for three years* is either right or wrong. It is in the right position to modify *to work* but in the wrong position to modify *have been trying*.

I have been trying to place him under contract to work here for three years. (three-year contract)

As the examples suggest, correct placement of modifiers sometimes amounts to more than mere nicety of expression. It can mean the difference between stating falsehood and truth, between saying what you mean and saying something else.

num ▶ NUMBERS

There is a good deal of inconsistency in the rules for handling numbers. Often the question is whether you should write the number as a word or as a figure. We will give you the general rules. Your instructor or your organization may give you others. As in all matters of format, you must satisfy whomever you are working for at the moment. Do, however, be internally consistent within your reports. Do not handle numbers differently from page to page of a report.

Numbers as Words

Generally, in technical and scientific writing, you write out all numbers from zero to nine and rounded-off large numbers, as words:

six generators
about a million dollars

However, when you are writing a series of numbers, do not mix up figures and words. Let the larger numbers determine the form used:

five boys and six girls
But:

It took us 6 months and 25 days to complete the experiment.

Numbers as Sentence Openers

Do not begin a sentence with a figure. If you can, write the number as a word. If this would be cumbersome, recast the sentence to get the figure out of the beginning position:

Fifteen months ago, we saw the new wheat for the first time.

We found 350 deficient steering systems.

Compound Number Adjectives

When you write two numbers together in a compound number adjective, spell out the first one or the shorter one to avoid confusing the reader:

Twenty 10-inch trout
100 twelve-volt batteries

Hyphens

Two-word numbers are hyphenated on the rare occasions when they are written out:

Eighty-five boxes

or:

Eighty-five should be enough.

Numbers as Figures

The general rule for technical and scientific writing is to write all exact numbers over nine as figures. However, as we noted, rounded-off numbers are commonly written as words. The precise figure could give the reader an impression of exactness that might not be called for.

Certain conventional uses call for figures at all times.

Dates, Exact Sums of Money, Time, Address

1 January or January 1, 2002
\$3,422.67 but about three thousand dollars
1:57 P.M. but two o'clock
660 Fuller Road

Technical Units of Measurement

6 cu ft
4,000 rpm

Cross-References

See page 22.
Refer to Figure 2.

Fractions

When a fraction stands alone, write it as an unhyphenated compound:

two thirds
fifteen thousandths

When a fraction is used as an adjective, you may write it as a hyphenated compound. But if either the numerator or the denominator is hyphenated, do not hyphenate the compound. More commonly, fractions used as adjectives are written as figures.

two-thirds engine speed
twenty-five thousandths
3/4 rpm

para ▶ **PARALLELISM**

When you link elements in a series, they must all be in the same grammatical form. Link an adjective with an adjective, a noun with a noun, a clause with a clause, and so forth. Look at the boldface portion of the sentence below:

A good test would **use small amounts of plant material, require little time, simple to run, and accurate.**

The series begins with the verbs *use* and *require* and then abruptly switches to the adjectives *simple* and *accurate*. All four elements must be based on the same part of speech. In this case, it's easy to change the last two elements:

A good test would use small amounts of plant material, require little time, **be simple to run, and be accurate.**

Always be careful when you are listing to keep all the elements of the list parallel. In the following example, the third item in the list is not parallel to the first two:

The process has three stages: (1) the specimen is dried, (2) all potential pollutants are removed, and (3) atomization.

The error is easily corrected:

The process has three stages: (1) the specimen is dried, (2) all potential pollutants are removed, and (3) the specimen is atomized.

When you start a series, keep track of what you are doing, and finish the series the same way you started it. Nonparallel sentences are at best awkward and off-key. At worst, they can lead to serious misunderstandings.

paren ▶ PARENTHESES

Parentheses are used to enclose supplementary details inserted into a sentence. Commas and dashes may also be used for this purpose, but with some restrictions. You may enclose a complete sentence or several complete sentences within parentheses. But such an extensive enclosure would confuse the reader if only commas or dashes were used to enclose it.

The violence of these storms can scarcely be exaggerated. (Typhoons and hurricanes generate winds over 75 miles an hour and waves 50 feet high.) The study

Lists

Parentheses are also used to enclose numbers or letters used in listing:

This general analysis consists of sections on (1) wave generation, (2) wave propagation, (3) wave action near a shoreline, and (4) wave energy.

Punctuation of Parentheses in Sentences

Within a sentence, place no mark of punctuation before the opening parenthesis. Place any marks needed in the sentence after the closing parenthesis:

A runway that is regularly exposed to crosswinds of over 10 knots (11.6 mph) is considered to be unsafe.

Do not use any punctuation around parentheses when they come between sentences. Give the statement *inside* the parentheses any punctuation it needs.

per ▶ PERIOD

Periods have several conventional uses.

End Stop

Place a period at the end of any sentence that is not a question or an exclamation:

Find maximum average daily temperature and maximum pressure altitude.

Abbreviations

Place a period after certain abbreviations:

M.D. etc.

Ph.D. Jr.

See also the entry for Abbreviations.

Decimal Point

Use the period with decimal fractions and as a decimal point between dollars and cents:

0.4	\$5.60
0.05%	\$450.23

p/ag ▶ PRONOUN–ANTECEDENT AGREEMENT

Pronoun–antecedent agreement is closely related to verb–subject agreement. For example, the problem area concerning the use of collective nouns explained under Verb–Subject Agreement is closely related to the proper use of pronouns. When a collective noun is considered singular, it takes a singular pronoun as well as a singular verb. Also, such antecedents as *each*, *everyone*, *either*, *neither*, *anybody*, *somebody*, *everybody*, and *no one* take singular pronouns as well as singular verbs:

Everyone had his assignment ready.

However, our sensitivity about using male pronouns exclusively when the reference may be to both men and women makes the choice of a suitable pronoun in this construction difficult. Many people object to the use of *his* as the pronoun in the preceding example. Do not choose to solve the problem by introducing a grammatical error, as in this example of incorrect usage:

Everyone had their assignment ready.

The use of male and female pronouns together is grammatically correct, if a bit awkward at times:

Everyone had his or her assignment ready.

Perhaps the best solution, one that is often applicable, is to use a plural antecedent that allows the use of a neutral plural pronoun, as in this example:

All the students had their assignments ready.

The same problem presents itself when we use such nouns as *student* or *human being* in their generic sense; that is, when we use them to stand for all students or all human beings. If used in the singular, such nouns must be followed by singular pronouns:

The student seeking a loan must have his or her application in by 3 September.

Again, the best solution is to use a plural antecedent:

Students seeking loans must have their applications in by 3 September.

See also the entry for Sexist Usage.

pron ▶ **PRONOUN FORM**

Almost every adult can remember being constantly corrected by parents and elementary school teachers in regard to pronoun form. The common sequence is for the child to say, "Me and Johnny are going swimming," and for the teacher or parent to say patiently, "No, dear, 'Johnny and I are going swimming.'" As a result of this conditioning, many adults automatically regard all objective forms with suspicion, and the most common pronoun error is for the speaker or writer to use a subjective case pronoun such as *I*, *he*, or *she* when an objective case pronoun such as *me*, *him*, or *her* is called for.

Whenever a pronoun is the object of a verb or the object of a preposition, it must be in the objective case:

It occurred to my colleagues and me to check the velocity data on the earthquake waves.

Just between you and me, the news shook Mary and him.

However, use a subjective case pronoun in the predicate nominative position. This rule slightly complicates the use of pronouns after the verb. Normally, the pronoun position after the verb is thought of as objective pronoun territory, but when the verb is a linking verb (chiefly the verb *to be*), the pronoun is called a *predicate noun* rather than an object and is in the subjective case.

It is she.

It was he who discovered the mutated fruit fly.

ques ▶ **QUESTION MARK**

Place a question mark at the end of every sentence that asks a direct question:

What is the purpose of this report?

A request that you politely phrase as a question may be followed by either a period or a question mark:

Will you be sure to return the experimental results as soon as possible.
Will you be sure to return the experimental results as soon as possible?

When you have a question mark within quotation marks, you need no other mark of punctuation:

“Where am I?” he asked.

quot ▶ QUOTATION MARKS

Use quotation marks to set off short quotations and certain titles.

Short Quotations

Use quotation marks to enclose quotations that are short enough to work into your own text (normally, fewer than three lines):

According to Dr. Stockdale, “Ants, wonderful as they are, have many enemies.”

Quotations longer than three lines should be set off by single spacing and indenting. See the entry for Colon for an example of this style. Do not use quotation marks when quotations are set off and indented.

Titles

Place quotation marks around titles of articles from journals and periodicals:

Nihei’s article “The Color of the Future” appeared in *PC World*.

Single Quotes

When you must use quotation marks within other quotation marks, use single marks (the apostrophe on your keyboard):

“Do you have the same trouble with the distinction between ‘venal’ and ‘venial’ that I do?” asked the copy editor.

Punctuation Conventions

The following are the conventions in the United States for using punctuation with quotation marks:

Commas and Periods Always place commas and periods inside the quotation marks. There are no exceptions to this rule:

G. D. Brewer wrote “Manned Hypersonic Vehicles.”

Semicolons and Colons Always place semicolons and colons outside the quotation marks. There are no exceptions to this rule:

As Dr. Damron points out, “New technology has made photographs easy to fake”; therefore, they are no longer reliable as courtroom evidence.

Question Marks, Exclamation Points, and Dashes Place question marks, exclamation points, and dashes inside the quotation marks when they apply *to the quote only or to the quote and the entire sentence at the same time*. Place them outside the quotation marks when they apply to the entire sentence only.

Inside

When are we going to find the answer to the question, “What causes clear air turbulence?”

Outside

Did you read Minna Levine’s “Business Statistics”?

run-on ▶ RUN-ON SENTENCE

A run-on sentence is two independent clauses (that is, two complete sentences) put together with only a comma or no punctuation at all between them. Punctuate two independent clauses placed together with a period, a semicolon, or a comma and a coordinating conjunction (*and, but, for, nor, or yet*). Infrequently, the colon or dash is used also. (There are some exceptions to these rules. See the entry for Comma.) The following three examples are punctuated correctly, the first with a period, the second with a semicolon, the third with a comma and a coordinating conjunction:

Check the hydraulic pressure. If it reads below normal, do not turn on the aileron boost.

We will describe the new technology in greater detail; however, first we will say a few words about the principal devices found in electronic circuits.

Ground contact with wood is particularly likely to cause decay, but wood buried far below the ground line will not decay because of a lack of sufficient oxygen.

If the example sentences had only commas or no punctuation at all between the independent clauses, they would be run-on sentences.

Writers most frequently write run-on sentences when they mistake

conjunctive adverbs for coordinating conjunctions. The most common conjunctive adverbs are *also*, *anyhow*, *besides*, *consequently*, *furthermore*, *hence*, *however*, *moreover*, *nevertheless*, *therefore*, and *too*.

When a conjunctive adverb is used to join two independent clauses, the mark of punctuation most often used is a semicolon (a period is used infrequently), as in this correctly punctuated sentence:

Ice fish are nearly invisible; however, they do have a few dark spots on their bodies.

Often the sentence will be more effective if it is rewritten completely, making one of the independent clauses a subordinate clause or a phrase.

Run-On Sentence

The students at the university are mostly young Californians, most of them are between the ages of 18 and 24.

Rewritten

The students at the university are mostly young Californians between the ages of 18 and 24.

semi ▶ SEMICOLON

The semicolon lies between the comma and the period in force. Its use is quite restricted. (See also the entry for Run-On Sentences.)

Independent Clauses

Place a semicolon between two closely connected independent clauses that are not joined by a coordinating conjunction (*and*, *but*, *or*, *nor*, *for*, or *yet*):

The expanding gases formed during burning drive the turbine; the gases are then exhausted through the nozzle.

When independent clauses joined by a coordinating conjunction have internal punctuation, then the comma before the coordinating conjunction may be changed to a semicolon:

The front lawn has been planted with a Chinese Beauty Tree, a Bechtel Flowering Crab, a Mountain Ash, and assorted small shrubbery, including barberry and cameo roses; but so far nothing has been done to the rear beyond clearing and rough grading.

Series

When a series contains commas as internal punctuation within the parts, use semicolons between the parts:

Included in the experiment were Peter Moody, a freshman; Jesse Gatlin, a sophomore; Burrel Gambel, a junior; and Ralph Leone, a senior.

sexist ▶ **SEXIST USAGE**

Conventional usages often discriminate against both men and women, but particularly against women. For example, a problem often arises when someone is talking about some group in general but refers to members of the group in the singular, as in the following passage:

The modern secretary has to be an expert with electronic equipment. She has to be able to use a computer and fix a fax machine. On the other hand, her boss still doodles letters on yellow pads. He has yet to come to grips with all the electronic gadgetry in today's office.

This paragraph makes two groundless assumptions: that all secretaries are female and all executives are male. Neither assumption, of course, is valid.

Similarly, in the past, letters began with "Dear Sir" or "Gentlemen." People who delivered mail were "mailmen" and those who protected our streets were "policemen." History books discussed "man's progress" and described how "man has conquered space."

Now we recognize the unfairness of such discriminatory usages. Most organizations make a real effort to avoid sexist usages in their documents. How can you avoid such usages once you understand the problem?

Titles of various kinds are fairly easy to deal with. *Mailmen* have become *mail carriers*; *policemen*, *police officers*; *chairmen*, *chairpersons* or simply *chairs*; and so forth. We no longer speak of "man's progress" but of "human progress."

The selection of pronouns when dealing with groups in general sometimes presents more of a problem. One way to deal with it is to move from the singular to the plural. You can speak of *secretaries/they* and *bosses/they*, avoiding the choice of either a male or a female pronoun.

You can also write around the problem. You can convert a sentence like the following one from a sexist to a nonsexist statement by replacing the *he* clause with a verbal phrase such as an infinitive or a participle:

The diver must close the mouthpiece shut-off valve before he runs the test.

The diver must close the mouthpiece shut-off valve before running the

test.

If you write instructions in a combination of the second person (you) and the imperative mood, you avoid the problem altogether:

You must close the mouthpiece shut-off valve before you run the test.
Close the mouthpiece shut-off valve before running the test.

At times, using plural forms or second person or writing around the problem simply won't work. In an insurance contract, for example, you might have to refer to the policyholder. It would be unclear to use a plural form because that might indicate two policyholders when only one is intended. When such is the case, writers have little recourse except to use such phrases as *he or she* or *he/she*. Both are a bit awkward, but they have the advantage of being both precise and nonsexist.

You can use the search function in your word processing program to find sexist language in your own work. Search for male and female pronouns and *man* and *men*. When you find them, check to see if you have used them in a sexist or a nonsexist way. If you have used them in a sexist way, correct the problem, but be sure not to introduce inaccuracy or imprecision in doing so.

See also the entry for Pronoun–Antecedent Agreement.

sp ▶ **SPELLING ERROR**

The condition of English spelling is chaotic and likely to remain so. George Bernard Shaw once illustrated this chaos by spelling *fish* as *ghoti*—using the *gh* from *rough*, the *o* from *women*, and the *ti* from *condition*. If you have a spelling checker in your word processing program, it will help you avoid many spelling errors and typographical errors. Do remember, though, that a spelling checker will not catch the wrong word correctly spelled. That is, it won't warn you when you used *to* for *too*. You can obtain help from the spelling section in a collegiate dictionary, where the common rules of spelling are explained. You can also buy rather inexpensive books that explain the various spelling rules and provide exercises to fix the rules in your mind.

To assist you here, we provide a list of common words that sound alike, each used correctly in a sentence.

I **accept** your gift.
Everyone went **except** Jerry.

His attorney gave him good **advice**.
His attorney **advised** him well.

Her cold **affected** her voice.
The **effect** was rather froglike.

He was **already** home by 9 P.M.
When her bag was packed, she was **all ready** to go.

The senators stood **all together** on the issue.
Jim was **altogether** pleased with the result of the test.

He gave him **an** aardvark.
The aardvark **and** the anteater look somewhat alike.

The river **breached** the levee, letting the water through.
He loaded the cannon at the **breech**.

Springfield is the **capital** of Illinois.
Tourists were taking pictures of the **capitol** building.

Always **cite** your sources in a paper.
After the sun rose, we **sighted** the missing children.
She chose land near the river as the **site** for her house.

Burlap is a **coarse** cloth.
She was disappointed, of **course**.

His blue tie **complemented** his gray shirt.
I **complimented** him on his choice of ties.

Most cities have a governing body called a **council**.
The attorney's **counsel** was to remain quiet.

Being quiet, she said, was the **discreet** thing to do.
Each slice in a loaf of bread is **discrete** from the other slices.

"We must move **forward**," the president said.
Many books have **forewords**.

Am I speaking so that you can **hear** me?
He was **here** just a minute ago.

It's obvious why he was here.
The sousaphone and **its** sound are both big and round.

Lead (Pb) has a melting point of 327.5°C.
Joan of Arc **led** the French troops to victory.

Our **principal** goal is to cut the deficit.
Hold to high ethical **principles**.

A thing at rest is **stationary**.
Choose white paper for your **stationery**.

A **straight** line is the shortest distance between two points.
The **Strait** of Gibraltar separates Europe from Africa.

I wonder when **they're** coming.
Are they bringing **their** luggage with them?
Put your luggage **there**, in the corner.

He made a careful, **thorough** inspection.
He worked as **though** his life depended on it.
She **thought** until her head ached.

He **threw** the report on her desk.
His report cut **through** all the red tape.

Laurie moved **to** Trumansburg.
Gary moved to Trumansburg, **too**.
After one comes **two**.

We had two days of hot, sunny **weather**.
Whether he goes or not, I'm going.

Where **were** you on Monday?
The important thing is **we're** here today.
Where are you going tomorrow?

Whose house will you stay at?
Who's coming on the trip with us?

Is that **your** car you're driving?
You're right; it's my car.

vb ▶ **VERB FORM**

Improper verb form includes a wide variety of linguistic errors, ranging from such nonstandard usages as "He seen the show" for "He saw the show" to such esoteric errors as "He was hung by the neck until dead" for "He was hanged by the neck until dead." Normally, spending a few minutes with any collegiate dictionary will show you the correct verb form. College level dictionaries list the principal parts of the verb after the verb entry.

v/ag ▶ VERB–SUBJECT AGREEMENT

Most of the time, verb–subject agreement presents no difficulty to the writer. For example, to convey the thought “He speaks for us all,” only a child or a foreigner learning English might say. “He speak for us all.” However, various constructions exist in English that do present agreement problems, even for the adult, educated, native speaker of English. These troublesome constructions are examined in the following sections.

Words That Take Singular Verbs

The following words take singular verbs: *each, everyone, either, neither, anybody, somebody*. Writers rarely have trouble with a sentence such as “No one is going to the game.” Problems arise when, as is often the case, a prepositional phrase with a plural object is interposed between the simple subject and the verb, as in this sentence: “Each *of these disposal systems* is a possible contaminant.” In this sentence some writers are tempted to let the object of the preposition, *systems*, govern the verb and wrongly write, “Each of these disposal systems *are* a possible contaminant.”

Compound Subject Joined by *Or* or *Nor*

When a compound subject is joined by *or* or *nor*, the verb agrees with the closer noun or pronoun:

Either the designer or the builders are in error.
Either the builders or the designer is in error.

In informal and general usage, one might commonly hear, or see, the second sentence as “Either the builders or the designer are in error.” In writing you should hold to the more formal usage of the example.

Parenthetical Expressions

Parenthetical expressions introduced by such words as *accompanied by, with, together with, and as well as* do not govern the verb:

Mr. Roberts, as well as his two assistants, is working on the experiment.

Two or More Subjects Joined by *And*

Two or more subjects joined by *and* take a plural verb. Inverted word order does not affect this rule:

Close to the academy are Cathedral Rock and the Rampart Range.

Collective Nouns

Collective nouns such as *team*, *group*, *class*, *committee*, and many others take either plural or singular verbs, depending on the meaning of the sentence. The writer must be sure that any subsequent pronouns agree with the subject and verb:

The team is going to receive its championship trophy tonight.

The team are going to receive their football letters tonight.

Note well: When the team was considered singular in the first example, the subsequent pronoun was *its*. In the second example the pronoun was *their*.