COSC 91/191, Spring 2019
Lecture 9
April 12, 2019

Scribe: Devina Kumar

1 Announcements

Put your name on assignments you submit.

2 Usage

Tom spent class discussing certain words/punctuation and their appropriate usages. Note that most of these rules are available on the class website under the link titled "Cormen's Rules of Usage." Examples of usage are italicized.

2.1 Possessives

To form a possessive singular of a noun, add *s* to the noun, even if the noun ends in *s.*

The processor's disk
Charles's student

There are two exceptions to this rule. The first exception occurs when forming a possessive singular of the word *it.* The possessive form of *it* is *its.* Adding an apostrophe makes the word a contraction: *it's* indicates *it is.*

It's a valuable disk that protects its own surface.

The second exception occurs when forming a possessive singular of the name *Jesus.* The possessive singular of Jesus is *Jesus'.*

2.2 Using serial commas

In a list of three or more items, use serial commas. Writing *Aho, Hopcroft, and Ullman* provides more clarity than writing *Aho, Hopcroft and Ullman.* And if you're not going to use serial commas, then at least be consistent. Don't use the serial comma for the first half of your paper and then omit the serial comma for the second.

If the elements of your sentence are sequences themselves, use semicolons to separate the sequences and commas to separate items within the sequences. Note that the serial comma rule still applies.

Some of my favorite books were written by Aho, Hopcroft, and Ullman; Stein, Drysdale, and Bogart; and Graham, Knuth, and Patashnik.

2.3 Dealing with parenthetical expressions

There are three ways to deal with parenthetical expressions:

1. Commas,
2. Parentheses, and
3. Em-dashes.

As Tom notes in his rules of usage document, "commas are the least parenthetical, whereas parentheses and em-dashes are more parenthetical." A guideline for deciding when to use dashes versus parentheses is to determine whether you would lower your voice when saying the parenthetical expression in the sentence. If you would, use parentheses; otherwise, use em-dashes.

Linearity of expectation (which I use frequently) is a key technique in probabilistic analysis.

Linearity of expectation—a property that holds even when random variables are dependent—is a key technique in probabilistic analysis.

Use commas when you want to amplify a part of a sentence.

My two most recent senior thesis students, Jessica and Devina, worked on Gray codes.

2.4 Commas in compound sentences

In a compound sentence, separate the two subjects by a comma followed by an *and.*

She was the best programmer I have ever seen, and she could also skate really well.

If there are two verbs but one subject, you don't have a compound sentence; don't separate the verbs with a comma.

She was the best programmer I have ever seen and could also skate really well.

Note that you can use commas with the word *but* even if the second part of the sentence isn't a clause.

She was the best programmer I have ever seen, but couldn't prove a theorem to save her life.

2.5 Parallelism

If you have a sequence of items in a sentence, ensure that each item has the same grammatical structure. Writing *she likes swimming, running, and eating* exhibits parallel structure whereas *she likes swimming, running, and to eat* is not.

2.6 Comma splices

If each part of a sentence is an independent clause, don't separate them with a comma. The following would be incorrect:

I am right, you are wrong.

Separate independent clauses with a period or semicolon.

I am right. You are wrong.
I am right; you are wrong.

2.7 Colon use

If you can remove the colon, and the resulting sentence is grammatically correct and means the same thing, then remove the colon. There are four cases in which you use a colon:[1]

1. List of particulars:

   To be a good programmer requires the following: patience, memory, and love of pizza.

2. Appositive:

   I wrote the program in my favorite language: APL.

3. Amplification:

   Always check the denominator: dividing by zero will make your computer explode.

4. Quotation:

   And then I heard those dreadful words: the blue screen of death.

2.8 Participial phrases at the beginnings of sentences

Participial phrases at beginnings of sentences refer to the first noun that follows them. The following statement is unclear:

Having crashed, I rebooted the computer.

This sentence suggests that *I*, not *the computer*, was the item that crashed. You can clarify the sentence by writing

I rebooted the computer, because it had crashed.

2.9 Positive statements

When possible, put statements in a positive form. For example, write *bubble sort is slow* instead of *bubble sort is not efficient.*

2.10 Needless words

Omit needless words. You can often change *the reason why* to *the cause* and *the fact that* to either *because* or *since.*

2.11 Colloquialisms

Don't use colloquialisms. And if you decide to use them, don't put them in quotation marks.

2.12 Exclamation marks

Use exclamation marks to indicate factorials. Other than indicating factorials, exclamation marks usually aren't necessary. Use them sparingly.

[1] And this is one of them.

2.13 Nesting parentheses

As Tom notes in his usage document, "a parenthetical passage is either part of a sentence or it is one or more whole sentences." Sentences and parentheses should nest. If the passage is part of the sentence, put the period after the right parenthesis.

I went home (by way of the bar).

If the passage is one or more sentences, put the period inside of the right parenthesis.

I went home. (But first, I stopped at the bar.)

2.14 Compound adjectives

Hyphenate compound adjectives. If one adjective modifies the following adjective, hyphenate the adjectives. If both adjectives modify the noun, don't hyphenate the adjectives. For example, writing *best-known algorithm* refers to the algorithm that is most famous (*best* modifies *known*), whereas writing *best known algorithm* refers to the best algorithm out of the set of known algorithms (*best* modifies *algorithm*).

If the first word is an adverb, it cannot be construed as modifying the noun, so you don't need to add the hyphen. For example, writing *well studied problem* would be correct because *well* is an adverb and cannot possibly modify the noun *problem.*

In the case that two adjectives follow a noun, and the first adjective clearly modifies the second, you don't need to add a hyphen.

This element is the second largest.

2.15 Alright vs. all right

Use *all right.*

2.16 Alternate vs. alternative

These two words are often confused. *Alternate* means every other one in a series or a substitute. *Alternative* indicates one of two possibilities or choices.

A walk in a graph has no alternative but to take alternate vertices and edges.

2.17 Among vs. between

Use *between* when referring to two items and *among* when referring to three or more.

The system switches between two states.
The records are distributed among four disks.

2.18 Anybody and anyone

Use *anybody* instead of *any body* unless you are specifying something general about bodies. The same logic applies for *anyone* and *any one.*

2.19 Eliminating *as to*

You can usually write *whether* instead of *as to whether.* You can also usually write *yet* instead of *as yet.*

2.20 Can vs. may

Can indicates being able to do something; *may* indicates having permission to do something.

I can tell you that you may leave at 3:15.

There's also a slight distinction between *may* and *might. Might* indicates whether there is some doubt that an event will happen.

If you're crossing the street, you might get hit by a car.

2.21 Compare with vs. compare to

Compare with is for showing how two similar things differ. *Compare to* is for showing how two dissimilar things are alike.

Reagan was compared to Teflon.
Compared with Carter, Reagan was more decisive.

2.22 Comprise

You shouldn't use comprise in the passive voice. The following usage would be incorrect:

This class is comprised of grad students.

A guideline for how to use comprise is as follows: the whole comprises the parts.

This class comprises graduate students.

2.23 Data

Data is plural, and *datum* is singular.

2.24 Different from vs. different than

Different than doesn't exist. Use *different from.*

2.25 Effect vs. affect (as verbs)

Effect means to cause to happen, whereas *affect* means to influence.

The Curriculum Committee effected reforms in the graduate curriculum that affected all the new graduate students.

2.26 Using *etc.*

As Tom notes in his usage document, "The abbreviation etc. stands for the Latin phrase *et cetera*, and it means 'and others.' "

When you begin a phrase with *such as* or *for example*, you imply that what follows is a proper subset of what you just described. Using etc. after these phrases is unnecessary, because you've already indicated that you're not providing a complete list of all possible options. Therefore, writing a sentence like the following would be redundant:

We talked about primitive types such as int, double, char, etc.

2.27 Latin phrases

When you use specific Latin phrases, typeset them in Roman. Avoid using these phrases at the beginnings of sentences.

1. i.e.: an abbreviation for *id est* and indicates *that is.*

   We are at the northernmost Ivy, i.e., Dartmouth.

2. e.g.: an abbreviation for *examplia gratia* and indicates that you're giving the reader a "free" example.

   Consider some Ivy, e.g., Dartmouth.

3. et al.: an abbreviation for *et alia* and indicates *and others.* You generally use this abbreviation to refer to people.

   The book on design patterns was written by Gamma et al.