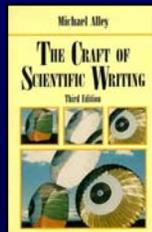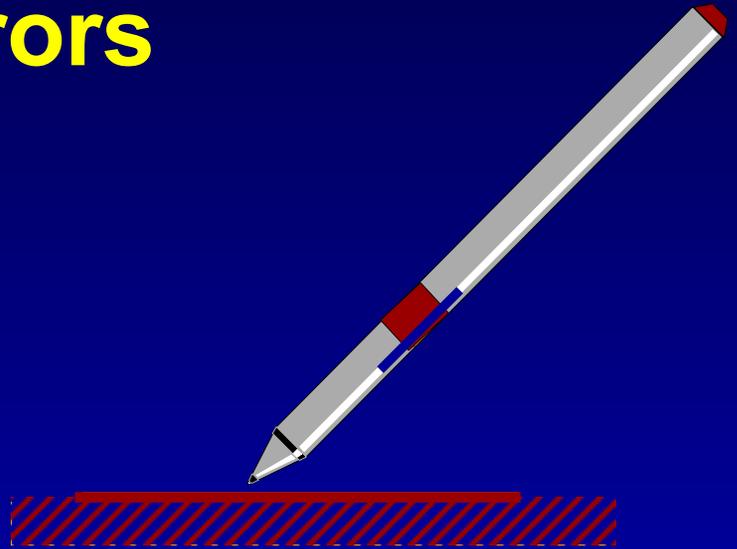# Avoiding Common Errors of Grammar, Punctuation, and Usage

These slides, which are used in graduate and undergraduate engineering courses at Virginia Tech, come from Appendices A and B in *The Craft of Scientific Writing* (3rd ed., Springer-Verlag) and from Chapter 3 and the Appendix in *The Craft of Editing*.
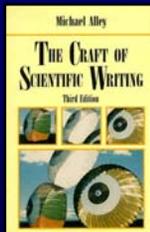
Avoiding Common Errors of Grammar

One of the most important skills a writer can have is the ability to compose clear, complete sentences. The sentence is the basic unit of communication in all forms of English.

Funk, McMahan, and Day
Elements of Grammar

Not all mechanical errors bother readers in the same way

Errors that disturb

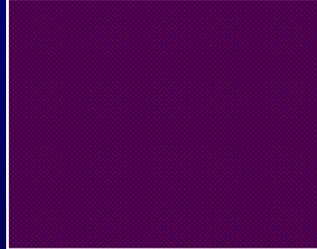**Errors that distract**

Errors that few even notice
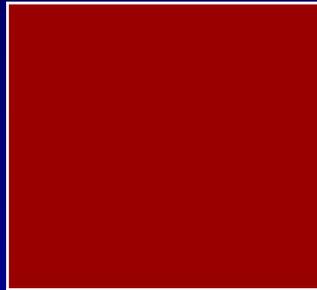
run-on sentence
its/it's
spell checker ignored

missing intro comma
faulty parallelism
unclear pronoun ref

different from/than
**contraction**
split infinitive
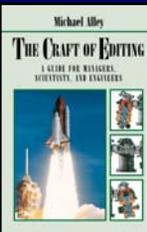
The most important aspect of grammar is understanding what a sentence is

Sentence: A sentence is group of words with a subject and a verb that expresses a complete thought.

Fragment: A fragment being a group of words that either is missing a subject or a verb or does not express a complete thought.

Run-on: A run-on is two or more independent clauses that are not joined properly, for instance, a common mistake is to have a comma between the clauses.
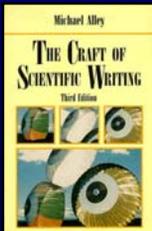
Which are sentences (S), fragments (F), or run-ons (RO)?

1   Rubidium has no major uses, however, it is more common in the earth than zinc, copper, or nickel.   **RO**

2   Although carbon dioxide occurs naturally, man has dramatically increased its concentration this past century.   **S**

3   Several systems can detect plastic explosives. For example, thermal neutron activation systems, nitrogen sniffer systems, and enhanced x-ray systems.   **S / F**

THE CRAFT OF SCIENTIFIC WRITING
Michael Alley
Third Edition
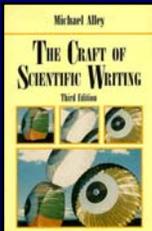
Which are sentences, fragments, or run-ons?

Although rubidium has no major uses, **it is** more common in the earth than zinc, copper, or nickel.

Although carbon dioxide occurs naturally, man has dramatically increased its concentration this past century.

Several systems can detect plastic explosives. **Examples include** thermal neutron activation systems, nitrogen sniffer systems, and enhanced x-ray systems.
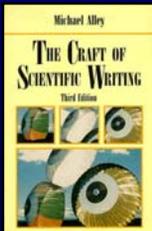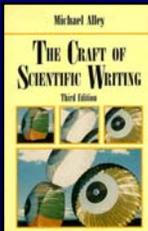
Note that there are several ways to correct each of these mistakes

Rubidium has no major **uses; however**, it is more common in the earth than zinc, copper, or nickel.

Rubidium has no major **uses, but** it is more common in the earth than zinc, copper, or nickel.

Rubidium has no major **uses. This metal, however**, is more common in the earth than zinc, copper, or nickel.
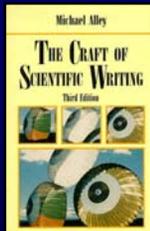
Making lists parallel is another important aspect of grammar

Printed circuit board relays are limited to small coil voltages, contact ratings, and lack multi-pole configurations.

Printed circuit board relays are limited to small coil **voltages and contact ratings, and lack** multi-pole configurations.
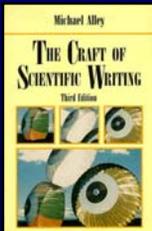
Making lists parallel is another important aspect of grammar

Animals that come in contact with oil can develop rashes, sores, and may leave the area.

Animals that come in contact with oil can develop rashes, sores, **and wandering tendencies.**

Animals that come in contact with oil can develop **rashes and sores, and may leave the area.**

Placing a modifier in its appropriate place is also important in grammar

These proteins indicate to the body what hormones should be given off among other things.

These proteins indicate, among other things, to the body what hormones should be given off.

In meeting the staff of the Parks Department, the greatest problem was that of water leakage.

From the staff of the Parks Department, we learned that the greatest problem was that of water leakage.
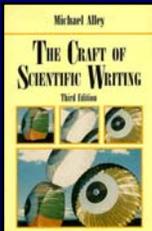
Unclear pronoun references cause ambiguities

Because the receiver presented the radiometer with a high flux environment, it was mounted in a silver-plated stainless steel container.

it???

If you receive an e-mail titled "Win A Holiday," do *not* open it. It will erase everything on your hard drive. Forward this e-mail out to as many people as you can. This is a very malicious virus and not many people know about it.

this???
This???
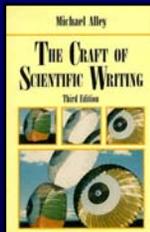
Avoiding Common Errors of Punctuation

Punctuation marks are the traffic signs and signals placed along the reader's road. They tell him when to slow down and when to stop, and sometimes they warn him of the nature of the road ahead. Traffic engineers do not always agree on what signs should be used and where they should be placed, and neither do writers or editors.

Theodore M. Bernstein
The Careful Writer
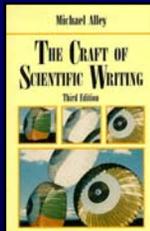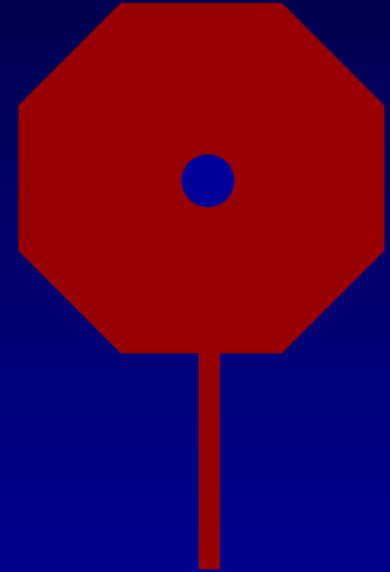
Punctuation rules are designed to have sentences be read one way

Colon: a colon introduces a formal list, long quotation, equation, or definition.

Semi-Colon: a semi-colon either joins two independent clauses (closely linked in thought) or separates complex items in a list.

Dash: a dash acts as a parenthesis to separate items that cannot be separated by commas.

**Comma:** a comma separates details in a sentence.
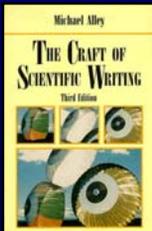
A colon introduces a formal list, long quotation, equation, or definition

We studied five types of marsupials: opossums, bandicoots, koalas, wombats, and kangaroos.

The laboratory growth of this crystal made possible a new astronomical tool: a gamma-ray detector with high-energy resolution.

In formal writing, what is on the left side of the colon should stand alone as a separate sentence.
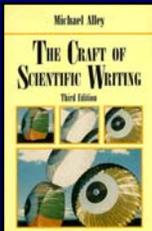
Once the list ends, the sentence ends.
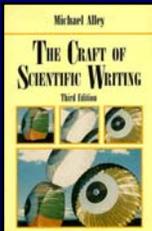
Although equations are separated by white space, they should be treated as part of the sentence

To calculate the strain, ε, we used equation 1:

$$\varepsilon \; = \; \frac{\sigma}{E} \;, \qquad\qquad (1)$$

where σ is the stress estimated by FEPC and E is the modulus of elasticity of aluminum.

Em-dashes act as parentheses to separate items that commas cannot

Because two isotopes of hydrogen—deuterium and tritium—are lightweight, can be produced easily, and require little energy, they are prime candidates to begin the fusion process.

After one year, we measured mirror reflectivity at 96 percent—a high percentage, but not as high as originally expected.

Because two isotopes of hydrogen (deuterium and tritium) are lightweight, can be produced easily, and require little energy, they are prime candidates to begin the fusion process.

After one year, we measured mirror reflectivity at 96 percent (a high percentage, but not as high as originally expected).
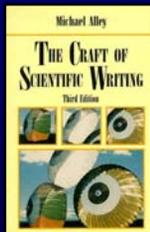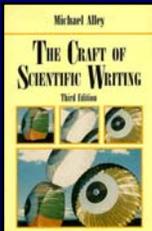
Commas separate introductory phrases and clauses

After cooling the exhaust gases continue to expand.

After **cooling, the** exhaust gases continue to expand.
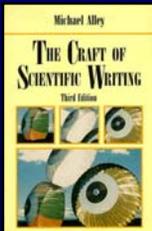
Commas separate parenthetical details

X-ray backscatter systems, which are relatively inexpensive require the operator's attention.

⬇

X-ray backscatter systems, which are relatively **inexpensive, require** the operator's attention.

Commas separate items in a list

Discharges of these hazardous substances occurred through spills when loading vehicles, spills and over-spills when filling the tanks, leaks from supply pipes and corroded welds, rust holes and cracks in the seams of the tanks themselves.

Discharges of these hazardous substances occurred through **the following:** spills when loading **vehicles;** spills and over-spills when filling the **tanks;** leaks from supply **pipes;** and corroded welds, rust **holes,** and cracks in the seams of the tanks themselves.
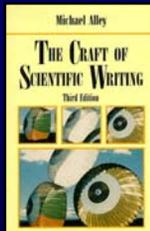
Avoiding Common Errors of Usage

Choose the right word, not its second cousin. The difference between the right word and the almost right word is the difference between "lightning" and "lightning-bug."

Mark Twain

word

word

word

right word

word

word

word

word
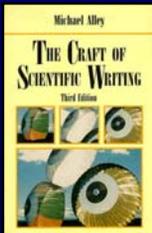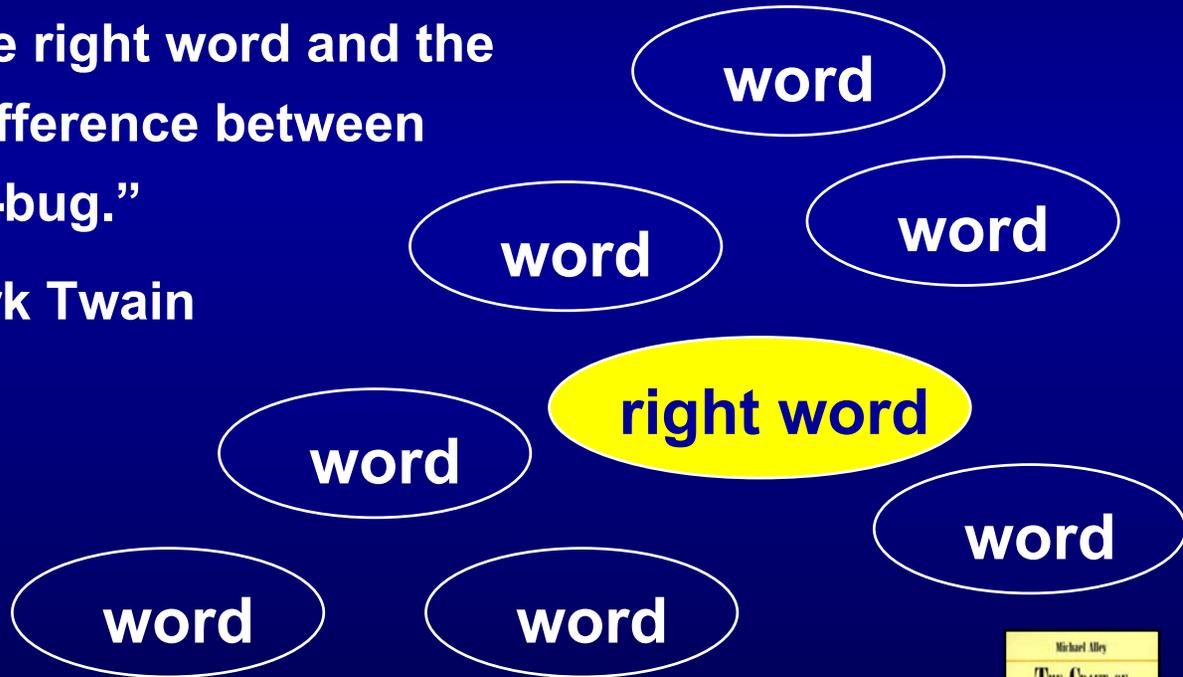
Not all usage rules are constant with respect to time

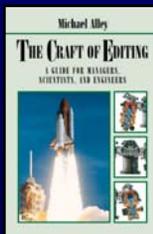|	
1700s:	"an historical..."
1900s:	"a historical..."
1900:	X rays
1950:	X-rays
1995:	x-rays
C & E News (1985):	the 1980's (plural)
C & E News (1995):	the 1980s (plural)

# Not all usage rules are constant with respect to position

William Strunk and E. B. White,*The Elements of Style:*

Data: A plural, like *phenomena* and *strata*.

Merriam-Webster Dictionary of English Usage:

In its current use, *data* occurs in two constructions: as a plural noun (like *earnings*) taking a plural verb…and as an abstract mass noun (like *information*) taking a singular verb…
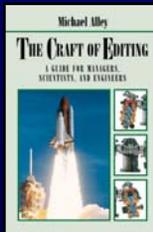
Not all usage errors bother readers in the same way
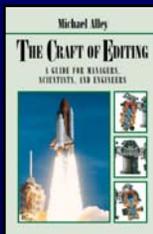
Errors that disturb

Errors that distract

Errors that few even notice

affect/effect
its/it's

verb disagreement
verb tense
comprise/compose
possessive

different from/than
compare with/to

Two common usage errors are possessives and subject-verb disagreements

The criteria for assessing the environmental effects of acid rain (are / is) given in the next section.

are

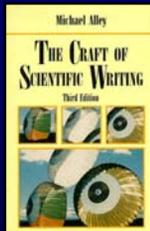So far, the daily number of engineers applying (has / have) remained constant.

has

The goggles protect a (persons / person's) eyes from any damaging effects that a laser could cause.

person's

In accordance with my (boss' / boss's) schedule, the first series of computers was replaced.

boss's

To decide upon the verb tense in a document, you first plant a reference flag for t=0

Past Tense:
Events that have
already occurred

Present Tense:
Timeless details or
details at time of reading

Future Tense:
Events that will occur
after project
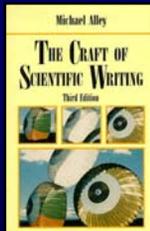

$t = 0$

t

The pressure was...
For the experiment, we
assumed…
As was shown back in
Figure 1...

Air is 79 percent nitrogen.
Figure 1 shows…
The computer code in
Appendix B includes...

Future work will
focus on....

Michael Alley
THE CRAFT OF
SCIENTIFIC WRITING
Third Edition

The verb tenses of sentences related to the document depend upon their position

Introduction

    This report *presents* a design for connecting light emitting diodes to the HC11 microcontroller.

Results and Discussion

...Figure 1 *shows* the circuit that connects the light emitting diodes to the HC11 microcontroller.

Conclusions

    This report *has presented* a design for connecting light emitting diodes to the HC11 microcontroller. As **was shown** in Figure 1, the circuit...
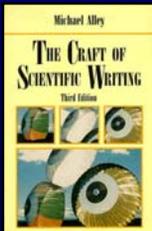
Use numerals when referring to measurements

When to use numerals

Specific measurements	**3 volts, 2 seconds, 1 m/s**
Percentages	**15 percent**
Monetary figures	**$3000**
Large numerals	**5 million**

When to write out numbers

Counting (one or two words)	**twenty-three gages**
Informal measurements	**two hours**
First word of sentence	**Thirty-three...**
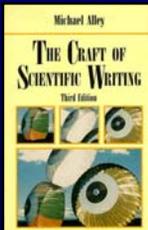
Certain words are commonly misused

We produced a small (amount, number) of autos
this year, even (fewer, less) than last year.

number
fewer

A company's success depends on (its / it's)
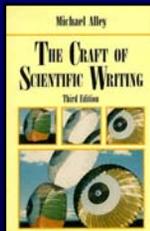employees.

its

The new material is (composed / comprised) of
plastic and iodine.

composed

It appears (as if, like) the Department of Energy will
choose the third option.

as if

Certain words are commonly misused

Reduced weight was the (principal / principle) reason for choosing aluminum.

principal

The talk centered (around / on) the (principal / principle) of virtual work.

on
principle

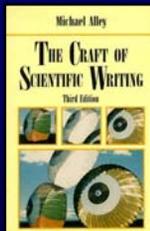(Regrettably / Regretfully), the launch was delayed because of thunderstorms.

Regrettably

You need not proceed any (farther / further) on your test.

further

The serum had serious side (affects / effects).

effects

Non-words and nonsensical groupings of words also cause problems

Whichever design you choose is (alright / all right) with me.

all right

(Irregardless / Regardless) of the shipping delay, the work will stop because of the strike.

Regardless

Applying that set of constraints is a (most unique / unique / very unique) way to approach the problem.

unique

The serum had (alot / a lot) of side effects.

a lot

Michael Alley
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