Written Communications Skills Workshop

Sponsored by the Office of Intramural Training and Education
Friday, October 17, 2008

Instructor: Maggie Meitzler

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Syllabus

1:00–2:30 p.m.

- **How To Use a Grammar Book**
- **Grammar:** Focusing on the most frequently made errors: subject/verb agreement, parallelism, wordiness, active versus passive voice, split infinitive
- **Punctuation:** Commas, semicolons, colons, and more
- **Word Usage:** Use and misuse of the language

2:30–2:40 p.m. Break

2:40–4:00 p.m.

- **E-mail (A solitary sport):** Writing the perfect e-mail:

    - Spelling: Is it important?
    - Tone: Who is your audience?
    - Organization: Logical flow of ideas
    - Rereading: Reread incoming e-mails for additional details
    - Editing and re-editing: The "cooling off period"

- **Short document:** Organizing and writing an abstract for a scientific paper

"If asked to name varieties of mental torture, most scientists would place writing at the top of the list."

Nobel Laureate Arthur Kornberg
Stanford Medicine

How to Use a Grammar Book

Review: Familiarize yourself with the book. What does it have to offer? Be curious.

Reading and learning one book on microbiology is much more difficult than doing the same with a grammar book. (See page 2 of *Writing: Grammar, Usage, and Style.*)

- Pocket guide
- Table of contents
- Glossary (for the definition)
- Appendix
- Index

How to Use a Grammar Book

Define the problem: If you suspect a specific problem, e.g., editors or coauthors have corrected the same thing repeatedly in your papers or reports, for instance, the use of prepositions (e.g., on, in, to), read that short section in your book.

Start with what you know, then track it down. Read the definition first (See Glossary).

Index: prepositions, pages 49–52 (list of prepositions, p. 50), 189 (definition)

How to Use a Grammar Book

Neighbor: After reading a specific section (e.g., prepositions), read the sections before or after. They will give background (and the rule), give an understanding of the problem, and put the problem and its answer in the context of other like problems.

Read the section "Chapter Checkout" (p. 53) at the end of the chapter or its equivalent in another grammar book. Test your newly learned knowledge.

Although you've read only two or three pages, you now know everything there is to know.

Develop a Passion for Learning To Write Well

- Make it your goal to educate yourself.

- Take writing courses. Any kind, even poetry.

- Study books on writing (see Suggested Reading in the handout): Identify and resolve your weaknesses.

- Learn from published works: journal articles, grant proposals, grammar/writing web sites.

- Compile a personal grammar/writing notebook or file that contains examples of solved problems to which you can refer.

- Relax!

Grammar

The most frequent errors in writing

- Subject/verb disagreement
- Parallelism
- Wordiness
- Active versus passive voice
- Split infinitive

Subject/Verb Agreement

Rule: The number of the subject determines the number of the verb (singular subject = singular verb [datum is], plural subject = plural verb [data are]). Words that intervene between subject and verb do not affect the number of the verb. (See pages 72–75 of *Writing: Grammar, Usage, and Style.*)

Ex: The sections on pathology, signs and symptoms, and diagnosis **contain**/contains most of the useful information in this book.

Exercise 1

Subject/Verb Agreement

1. Important questions concerning tumor biology, treatment timing, dose intensity, consequences on quality of life, and the cost or benefit of therapies **are** posed.

2. In both treatment arms, either doxorubicin or dactinomycin **was** given every 6 weeks.

3. Data from our latest study **indicate** that neither the length of storage nor multiple freeze-thaw cycles **alter** the ability to detect antibody.

4. Characterization of enzyme activity **indicates** that hyaluronidase may be produced by the tumor itself.

Subject/Verb Agreement

5. In summary, our analysis of treatment regimens for osteogenic sarcoma and Ewing's sarcoma patients **suggests** that increase of doxorubicin dose intensity **is** associated with favorable clinical response.

6. Ten micrograms of DNA **was** digested with the restriction enzyme.

7. A number of patients **were** at the Center after treatment.

8. The number of patients **was** 360 at the Center after treatment.

Subject/Verb Agreement

Rule: Little-known rules.

- When the word "number" is preceded by "a," "number" is plural and takes a plural verb.

  A number of patients **were** at the Center after treatment.

- When "number" is preceded by "the," "number" is singular and takes the singular verb.

  The number of patients **was** 360 at the Center after treatment.

Parallel Construction

Rule: When coordinating two or more elements in a sentence, be sure to use parallel construction of items, i.e., that all the components have the same grammatical form. They should match. (See pages 78–83 of *Writing: Grammar, Usage, and Style.*)

Ex: 111In-labeled antibody is approximately 15–20% of the injected dose used in normal livers from animal or patients.

Number: animals or patients
Parallel construction: animals or humans

Parallel Construction

Ex: Patients were asked to take long walks, running, and eating lightly.

Patients were asked to take long walks, run, and eat light meals. (implied infinitive "to")

OR

Patients were asked to take long walks, to run, and to eat light meals.

Ex: Glasses should be prescribed to correct blurry vision, dizziness, or optic nerve.

Glasses should be prescribed to correct blurry vision, dizziness, or nerve spasms.

Exercise 2

Parallel Construction

1. Cells were dissolved in solution, stirred until blended, and filtered.

2. The students learned writing, editing, and reading.

OR

The students learned to write, (to) edit, and (to) read.

3. Individual slices were transferred to an upright microscope, visualized with infrared differential interference contrast microscopy, and perfused (2 ml/min) with extracellular solution.

Parallelism in a List (Resume)

Career Profile

- Developed and delivered a new method of measurement of cells in PCR, saving the department $400,000 per annum.

- Directed all projects in Department of Animal Acquisitions, NIMH, from 1999 to 2008.

- Balanced department budget from 1999 to 2008.

- Established training programs for technical staff.

Exercise 3

Parallelism in a List

The OITE encourages all trainees to

1. Take part in orientation sessions when you arrive at the NIH.

2. Subscribe to one or more electronic mailing lists so that you are aware of ongoing activities and job opportunities.

3. Visit the OITE web site regularly to check for new opportunities.

4. Participate in career and professional development workshops.

5. Make use of the OITE Virtual Career Center and Career Library.

6. Register for free courses, such as Writing about Science, Speaking about Science, Interviewing, and Improving Spoken English.

7. Attend the many scientific seminars, lectures, and lecture series offered at the NIH.

Wordiness and Redundancies

Rule: Wordiness is using more words than necessary to say something, and redundancies are stating the same thing twice. Wordiness and redundancies happen in first drafts of most written works. This problem can be resolved during editing and rewriting. (See Chapter 12 and the list on pages 128–132, *Writing: Grammar, Usage, and Style.*)

      Ex: ~~In order~~ to determine the molecular structure . . .
          To determine the molecular structure . . .

      Ex: However, ~~until now~~ there is no ~~evidence or studies on research~~ defining the role of...
          However, there are no studies defining the role of . . .

Exercise 4

Wordiness and Redundancies

1. in order to   to
2. due to the fact that   because
3. consensus of opinion   consensus
4. during that time   while
5. small in size   small
6. have an effect/impact on   affect
7. a small number of   few
8. considerable amount of   much
9. has the ability to   can
10. in the event that   if

Passive versus Active Voice

Rule: The active voice refers to the form of the verb indicating whether the **subject performs** the action **(active)** or **receives** the action **(passive).** The active voice is more direct than the passive voice. Most journals request that you use the active voice when possible, but it is a good practice in most documents. (See page 12 of *Writing: Grammar, Usage, and Style*.)

Examples:

  Passive: It is recommended by the authors of the current study that . . .
  Active: We recommend that . . .

  Passive: The data obtained by DeVita et al. (17) were indicative of . . .
  Active: Data by DeVita et al. (17) indicate that . . .

Exercise 5

Passive versus Active Voice

1. Passive: It was discovered that a sustained coordinated effort will be required to . . .
   Active: We need a sustained coordinated effort to . . .

2. Passive: Data were collected from 5000 patients by physicians.
   Active: Physicians collected data from 5000 patients.

3. Passive: The definition of *mapping* used in the survey was taken from previous studies.
   Active: We used the definition of *mapping* as in previous studies (12–15).

4. Passive: Infection was caused by *Staphylococcus aureus*
   Active: *Staphylococcus aureus* causes infection.

5. Passive: The lab tech was bitten by the rat.
   Active: The rat bit the lab tech.

Split Infinitive

Rule: In English, a split infinitive occurs when an <u>adverb</u> (a word that modifies an adjective or an adverb) is placed between ***to*** and a verb in its <u>infinitive</u> form. The infinitive is the base form of a verb with **to.** The most famous split infinitive is from the television show <u>*Star Trek*</u>:

> "*. . . to boldly go* where no one has gone before."

The infinitive verb form of "go" is "to go," and the adverb "boldly" has been inserted within, creating the split. (See pages 14, 58, 59 and 187 of *Writing: Grammar, Usage, and Style.*)

"Why? Who cares? Linguistic folklore or rule to obey?" (MM)

Split Infinitive

This rule comes from the British by way of Latin usage, where the infinitive is one word. After much controversy on this rule, there seems **to** *finally* **be** a consensus: If the meaning is changed with the removal of the offending adverb or when it is just too awkward, then by all means leave it as is.

Ex: The scientists planned **to enthusiastically promote** the use of split infinitives.

The scientists planned **to promote** the use of split infinitives **enthusiastically**.

Ex: We were asked **to completely analyze** the data.

We were asked **to analyze** the data **completely**.

Split Infinitive

Ex: **To directly test** the neurotoxic capacity of the immune response, proliferating T cells or supernatants from stimulated immunized mice were assessed in live assays.

To test the neurotoxic capacity of the immune response **directly,** proliferating T cells or supernatants from stimulated immunized mice were assessed in live assays.

Ex: It is therefore of interest **to particularly understand** the mechanisms that regulate the location and timing of expression of this gene.

It is therefore of **particular** interest **to understand** the mechanisms that regulate the location and timing of expression of this gene.

Punctuation

Rule: The purpose of punctuation is to clarify the context. "It helps the reader make sense of what you write." (See Chapters 8–10 in *Writing: Grammar, Usage, and Style.*)

What would the following sentence be without proper punctuation?

Ex: Eats, shoots, and leaves. (describes a sandwich-eating killer)

Eats shoots and leaves. (describes the Panda's diet)

Actually, this is the name of a best-selling book on punctuation: *Eats, Shoots & Leaves* by Lynne Truss (Gotham Press).

Punctuation

The rules of punctuation are not an arbitrary system of notation. Correct use of punctuation helps to communicate meaning, avoid ambiguity, and direct the reader on how to read your sentence.

Punctuation was invented by ancient Greek playwrights to indicate to the actors the *breathing points* in the dialog, lest they run out of air before they finished a moving soliloquy. This is termed the **"reader-aloud"** method of punctuation. Because most of us are not actors, we use the **"clarification of syntax"** method of punctuation in our writing.

You will know if you have a problem with punctuation if you describe your method of punctuation thus:

"I punctuate the way I speak."

Punctuation

For our purposes, we will discuss five types of necessary punctuation:

- Apostrophe
- Comma
- Colon
- Semicolon
- Hyphen

We won't bother with the period . . . period.

Apostrophe

Rule: The apostrophe is used to show possession or a contraction (e.g., rat's tail, don't move). (See pages 6 and 201 of *Writing: Grammar, Usage, and Style.*)

We were all taught the rules for possessives and contractions, but the rule for possessives does not apply to *it's*. *It's* is a contraction **only** (also in *that's, they'd, we've*). The error in using *it's* as a possessive is an educated error that is made most often in e-mails because we are typing faster than we are applying rules. So, please make note on the proper use of the apostrophe in *it's*.

Note: Do not use contractions in formal writing (e.g., journal articles).

Apostrophe

It's = it is, it has

It's (It is) a mouse model.
It's (It has) been a pleasure meeting you.

Its

Its tail was broken.

Comma

Rule: Commas are used to clarify grammatical structures by setting off introductory material, by separating certain elements of a sentence or expressions, or by bracketing material. (See pages 96–98 of *Writing: Grammar, Usage, and Style.*)

- Transitional words
- Prepositional phrases
- Parenthetical phrases
- Series
- Independent clauses
- Appositives separated from the noun it defines

Commas with a Transitional Word

Transitional word: Use a comma to set off a transitional word (e.g., conjunctive adverbs). (See page 68 *Writing: Grammar, Usage, and Style* for a list of transitional words.)

> **Ex: However,** adoptive transfer of SPC from B10.BR mice, regardless of immunization protocol, was associated with a persistent microglial response.

> **Ex: Currently,** the role of these mechanisms is unknown.

> **Ex: Moreover,** we found this to be consistent throughout our study.

Commas with a Prepositional Phrase

Rule: Prepositions show direction: about, above, across, after, against, along, among, around, at, before, behind, below, beneath, beside, within, etc. Prepositional phrases are phrases that begin with a preposition. (**For a list of prepositions,** see page 50 in *Writing: Grammar, Usage, and Style.* For more on prepositional phrases, see pages 94-96.)

Ex: In all studies to date, the results suggest that these findings are generalizable to treatment in all patients with this syndrome.

Ex: Before the committee meeting, refreshments were served.

Necessary Punctuation?

Optional:

In this study we demonstrated...

During the current study the systemic...

In this study a single-cell carcinoma...

In nearly all cases of abdominal migraine there is...

Necessary Punctuation?

Necessary:

In this study cells were used...
In addition studies on its use in postoperative...
To investigate this possibility visual fields were...

In this study, cells were used...
In addition, studies on its use in postoperative...
To investigate this possibility, visual fields were...

Commas with Parenthetical Phrases

Rule: Commas used parenthetically set off "supplemental" information in a sentence. If the use of commas is to set off information in the middle of the sentence, remember to use a pair of commas.

Ex: The real test, after all, was how to fund the study.

Ex: The use of standard scores, e.g., *z* scores, had no effect on the comparisons.

Ex: Rats were treated, every other day, with the antibiotic.

Commas Used in a Series

Rule: Commas used in a series can include one before the word "and" and the final word in a series (e.g., terminal comma). However, there are two schools of thought regarding serial punctuation: to use the final comma or not to use it. Therefore, choose one method and be consistent. (See pages 99 and 100 of *Writing: Grammar, Usage, and Style.*)

Ex: It was an inexpensive, effective, and readily available treatment.

Ex: It was an inexpensive, effective and readily available treatment.

Commas Used To Separate Independent Clauses

Rule: A comma is used to separate independent clauses (a complete statement that can stand alone, e.g., has both a subject and verb) joined by a coordinating conjunction (and, but, neither, nor, or). (See pages 59 and 60 of *Writing: Grammar, Usage, and Style.*)

Ex: The survey was completed in May, and the results were published in July.

Ex: The survey was completed in May, but the results were not published until July.

Commas To Set Off an Appositive

Rule: An appositive is a word(s) that follows and restates or identifies a noun or pronoun. When appositives are non-restrictive (naming the only possibility), they are enclosed with commas. (See pages 98 and 99 of *Writing: Grammar, Usage, and Style.*)

Ex: My sister Emily was at the center. (I have more than one sister = restrictive)

Ex: My brother, George, is in Beijing. (I have only one brother = non-restrictive).

Restrictive = restricts, limits, or defines the subjects (essential)

Non-restrictive = does not restrict, but adds information (non-essential)

Exercise 6

Use of Appositives in Acknowledgments

Acknowledgments

Thanks are due to my editor, Maggie Meitzler, at St. Mary's Press for her attentiveness and patience; to my agent, Charles Kane, for suggesting the idea for this book; to my copyeditor, Penny Smyth, for her many helpful corrections; and to my summer interns, Mary and Tom Jones, for additional comments on the historical background.

Colon

Rule: The proper use of a colon is between two independent clauses, to introduce a formal statement or quote, or to explain or restate the first clause. The colon clearly "points" the reader to the material to follow. (See pages 104–107 of *Writing: Grammar, Usage, and Style.*)

Of course, there are other uses of colons: ratios (10:10), references (2008 [42:1]), figure captions (Fig. 2:), etc.

Colon

Caution: Avoid inserting a colon between the verb and its object without introducing the object.

   Ex: Thermal decomposition was investigated with: gas chromatography, BET surface areas, and x-ray powder diffraction.

   Thermal decomposition was investigated (verb) with the following (introduction of object): gas chromatography, BET surface areas, and x-ray powder diffraction (object).

Colon

The colon separates independent clauses (works much like a semicolon but it always renames or defines the subject):

Colon: We had second thoughts about the results of the first test: the data needed precision.

Semicolon: We had second thoughts about the results of the first test; the data needed precision.

Colon: We report a similar finding: no chemical shift changes were detected in the concentration ranges from 0.1 to 1.0 M. (ACS, p. 120)

Semicolon: We report a similar finding; no chemical shift changes were detected in the concentration ranges from 0.1 to 1.0 M.

Colon

Introducing a list:

    Ex: No chemical shifts were detected in the following ranges: 0.1–1.0, 0.3–1.7, 0.4–2.0 M.

Again, avoid inserting a colon between the verb and its object without introducing the object.

    Ex: The rate of drug delivery was: 3, 6, and 9%.
        The rate of drug delivery was as follows: 3, 6, and 9%.

Semicolon

Rule: Semicolons are used to separate independent clauses that are **not** joined by conjunctions; between items in a series that contain words, phrases, or elements that contain commas; between independent clauses joined by conjunctive adverbs or transitional phrases. (See pages, 68, 113, 102–104, 175, and 190, of *Writing: Grammar, Usage, and Style.*)

- To separate independent clauses **not** joined by conjunctions
- In a series with other punctuation
- Between independent clauses joined by conjunctive adverbs or transitional phrases

Semicolon

Rule: Semicolons separate independent clauses **not** joined by conjunctions.

    Ex: All solvents were distilled from a drying agent; tetrahydofuran and diethyl ether were also pretreated with activity I alumina.

    Ex: The conditions of 51% of the patients improved greatly; 4% of the patients withdrew from the study.

Semicolon

Rule: In a complex series with other punctuation, the semicolon is used to clarify elements.

Ex: Semicolons are used to separate independent clauses that are not joined by conjunctions; to separate items in a series that contain words, phrases, or elements that contain commas; to separate independent clauses joined by conjunctive adverbs or transitional phrases.

Semicolon

Rule: The semicolon is used between independent clauses joined by conjunctive adverbs or transitional phrases.

Ex: The patient was first treated in the emergency department; however, she was transferred to intensive care.

Ex: The rate at which bleaching occurred was dependent on cluster size; therefore, the degradation of the mononuclear cluster was about five times faster than that of the tetranuclear cluster.

Exercise 7

Apostrophes, Commas, Colons, and Semicolons

1. It's obvious that the centrifuge was faulty.

2. Therefore, our data show that Balb/c mice are happier mice.

3. Within this framework, we designed our model.

4. At the horizon of a black hole, light freezes.

5. The cells, which had been sent to us by a rival lab, were infected.

6. If the infection recurs within 2 weeks, an additional course of treatment will be administered.

Apostrophes, Commas, Colons, and Semicolons

7. In the control group the infection recurred within 2 weeks, whereas in the study group the infection recurred within 10 weeks.

8. There were four groups of patients: (1) tall, (2) short, (3) red, and (4) green.

 9. The compounds were methyl ethyl ketone; sodium benzoate; and acetic, benzoic, and cinnamic acids.

 10. We are grateful to our statistician, Ted Smith, for help with the illustrations and to our editorial assistant, Kate Jones, for her secretarial expertise. (Show that the appositives are non-restrictive.)

Quotation Marks

Punctuation with quotations marks: Inside or outside?

Rule: If the punctuation is part of the quote, then it goes inside the quotation mark—if not, then outside the quotation mark. For aesthetic reasons, publishers place end-of-sentence punctuation inside the quotes. (See pages 112–114 and 190 of *Writing: Grammar, Usage, and Style.*)

McMann and Smith (26) stated that "Hubs have been subdivided into 'party' and 'date' subtypes," but these divisions of biomolecules no longer apply to "classes."

The director specifically stated that "We will fund no project before its time."

Punctuation outside quotes:
Author Query, Have the edits changed your meaning of the word "risk factor"?

Hyphens

Rule: Hyphens are used to avoid ambiguity or a "weird-looking" word (e.g., nonoocytes). Although the rules may change (e.g., from journal style to journal style), choose one method in any document and use it consistently. (See pages 127–129 in *Writing: Grammar, Usage, and Style.*)

Hyphens with Prefixes

Rule: The standard rule is to insert a hyphen between a prefix and another word if the prefix ends and the word begins with the same letter (e.g., re-expression). However, styles vary. **Bottom line:** Choose a specific style of hyphenation, and use it consistently throughout a document. (See pages 128–129 in *Writing: Grammar, Usage, and Style.*)

Prefixes: ante, anti, bi, co, contra, counter, de, extra, infra, inter, intra, micro, mid, non, over, pre, post, pro, pseudo, re, semi, sub, super, supra, trans, tri, ultra, un, under, etc. (see Webster's dictionary for guidance).

Hyphens with Prefixes

Exceptions: The exceptions to the rule are if the prefix begins with a proper noun, a number, an abbreviation, or if it would change the meaning (e.g., non-Hodgkin, mid-1960s, pre-RBC trials, re-treat vs retreat or re-create vs recreate or re-formation vs reformation). But, pre- and postoperative.

Pre-Darwinian, pre-Cambrian period
Pre-HIV testing, post-CPR training
Anti-inflammatory, pre-existing
Pre-1960 data, mid-1980s

Hyphens with Compound Words

Pollen-bearing hairs, three-pronged structure

Twenty-one patients

A four-to-four ratio

Three-quarters, one-half, one-quarter

The first-, second-, and third-born offspring

NEVER USE A HYPHEN with adverbs (*ly* words): clearly stated purpose, biologically mediated therapy, highly developed species, previously published recommendations, clinically derived data, clinically relevant variables.

Exercise 8

Hyphens

1. 20-minute interval
2. thirty-five PCR cycles
3. 96-well plates
4. 24-h incubation period
5. 6-cm vials
6. 2-dimensional gel electrophoresis
7. between-subject variables
8. pre-PCR preparation
9. post-operative period
10. mid-1990s

Italics

Rule: Use italics with the names of books, journals, movies, record albums; with a word that you are defining at first use; with foreign words (e.g., Latin names).

Principles and Practice of Clinical Oncology
Journal of the National Cancer Institute
The Lord of the Rings
Rolling Stones Best Hits

This rescue, usually called *selection,* is possible only after puberty.

Giardia, Vairimorpha, a priori

Correct and Preferred Usage

Rule: Correct usage of a word is important because misuse can change your meaning. (See pages 192–206 of *Writing: Grammar, Usage, and Style* for more examples.) Every grammar book, style manual, or book on writing includes a list of correct usage.

Correct Usage

Use of count nouns: a, an, the

A **count noun** is the name of anything that can be counted individually: one rat, two experiments, three researchers.

A **non-count** noun is the name of something that cannot be counted individually (quantity or quality): serum, mass, advice.

Correct Usage

Use "a" or "an" with a singular noun when you mean one of many, any, or in general.

Ex: Dave is **a** researcher at NIH (one of many researchers at NIH).

Ex: He prefers **an** open laboratory (one of many laboratories).

Correct Usage

Use "a" or "an" the first time you mention a noun in a paragraph or section of a document.

Ex: We noticed **a** trend.

Ex: We noticed **an** anomaly.

Correct Usage

Use of "the"

Use "the" with any noun when the meaning is specific, i.e., when the noun names only one or one of a kind.

Ex: McDermott was the first student (the only 'first student') in class.

Ex: Have you read the report (the specific 'report').

Incorrect Usage

When not to use "a," "an," or "the"

Do not use "a," "an," or "the" with a non-count noun when you mean "any" or "in general."

    Ex: Mark offered guidance (not specific).

    Ex: We support success (in general).

Incorrect Usage

Do not to use "a," "an," or "the" with a plural count noun when you mean "some of many things," "any," or "in general."

    Ex: Trends can be misleading (some trends or trends in general).

    Ex: Data are misleading (in general).

Correct and Preferred Usage

Affect versus effect: "Affect" is usually used as a verb (which can be replaced by "impact"). "Effect" is a noun that means the "result" of some action or to "bring about." (See page 193 of *Writing: Grammar, Usage, and Style*.)

Ex: The funding did not **affect**/effect our lab's research practices.

Ex: The affect/**effect** was complete in all cases.

"Use of Because"

Because: The idea that you should not begin a sentence with the subordinating conjunction "because" is a myth. If a clause introduced by "because" is properly subordinated (a causal relationship), there is absolutely nothing wrong with using it. (See page 60 [bottom], *Writing: Grammar, Usage, and Style.*)

Incorrect: Because we learned a rule in fourth grade.

Correct: Because we learned a rule in the fourth grade, we never forgot it.

Because (cont.)

As/since/because: To avoid confusion, "as" and "since" are used temporally. "Because" is used causally.

Time:

As we were about to complete the analysis of the data, our computer crashed.
Since then, we back up our data every 30 seconds.

Causal:

Because of our problem, we published our paper later than expected.

Correct and Preferred Usage

Rule: Compared to/compared with: "Compared to" compares two unlike things (literary device) to note similarities. **"Compared with"** compares two like things (scientific) to note differences. (See page 196 of *Writing: Grammar, Usage, and Style*.)

Caution: The use of compared to/with is evolving in scientific writing. The accepted, but erroneous, use in scientific writing is usually "compared to," even though scientists do not compare unlike things (in different classes) **"to"** each other because it is unscientific.

Correct and Preferred Usage

"Shall I **compare** thee **to**/with a summer's day? Thou art more lovely and more temperate . . ."

Researchers **compared** results of their study on rats to/**with** results in other studies on rats.

Compared to/**Compared with** compound 3, compound 4 shows an NMR spectrum with corresponding peaks.

Correct and Preferred Usage

Comprise/composed of: "Comprise" means to be made up of, to include (the whole comprises the parts). "Compose" is to make up, to form the substance of something (the parts compose the whole). If you find yourself writing "comprised of," replace it with "composed of." "Comprised of" is never correct. (See page 196 of *Writing: Grammar, Usage, and Style*.)

Ex: The adenohypophysis and the neurohypophysis **comprise** the pituitary gland.

Ex: The pituitary gland is **composed of** the adenohypophysis and the neurohypophysis.

Correct and Preferred Usage

Rule: Fewer/less: "Fewer" is used when the emphasis is on individual items/people. "Less" is used with quantity. (See page 199 of *Writing: Grammar, Usage, and Style*.)

Ex: There were **fewer**/**less** than 20 participants in the study.
Ex: The yield was **fewer**/**less** than 20 mg.

For decades, grocery stores had check-out aisles marked "15 items or less." This was incorrect. Because enough vigilant grammarians complained, stores changed their signs.

Incorrect

Express Checkout

15 Items or Less

Correct

Express Checkout

15 Items or Fewer

Compromise

Express Checkout
15 Item Limit

Correct and Preferred Usage

Rule: Adverbs like *only, almost,* and *even* are placed next to the structures they modify to avoid any confusion. **Proper placement tells all.**

The author **only** added one reference to her paper.
(Meaning: and no other additions)

The author added **only** one reference to her paper.
(Meaning: added one reference)

The author added one reference **only** to her paper.
(Meaning: and not to any other publication)

Correct and Preferred Usage

Only the largest group was injected with the test compound.
(Meaning: and no other group)

The largest group was **only** injected with the test compound.
(Meaning: and not given the compound in any other way)

The largest group was injected with **only** the test compound.
(Meaning: and no other compounds)

The largest group was injected with the **only** test compound.
(Meaning: there were no other test compounds)

Correct and Preferred Usage

Rule: The use of **"since"** is time dependent. The use of **"because"** is causal.

Ex: Since/Because 1999, we have been studying the effects on this model.

Ex: Since/Because PAT proteins have different degrees of affinity for the LSD surface, we hypothesized that the binding affinity . . .

Ex: This course has been offered **since/because** 2003.

Ex: This measurement has become important **since/because** cell density at the time of …

Correct and Preferred Usage

Use of that/which clarified

Rule: "That" introduces a *restrictive clause,* one that is essential to the meaning of the noun **it describes.** The word **"which"** introduces a *non-restrictive clause,* one that adds more information but is not essential to the meaning. Clauses that begin with "which" are usually preceded by a comma. (For more on restrictive versus non-restrictive elements, see pages 97 and 98 of *Writing: Grammar, Usage, and Style.*)

Restrictive = restricts, limits, or defines the subject (<u>essential</u>)

Non-restrictive = does not restrict, but adds information (<u>non-essential</u>)

Correct and Preferred Usage

That:

The issue of JAMA **that** contained the article on the impact of depression on U.S. labor costs was the 2003 depression theme issue. (**Restrictive:** there are thousands of issues of *JAMA*.)

Which:

A study on the impact of depression on U.S. labor costs was published in the 2003 *JAMA* theme issue on depression, **which** contains articles on a range of similar topics. (**Nonrestrictive:** there was only one theme issue on depression in 2003.)

Correct and Preferred Usage

Rule: "Utilized" means that something is being used for a purpose other than for which it was designed. "Utilize" is not the formal of **"use."**

Ex: We **used/utilized** a drinking straw as a trocar.

Ex: We **used/utilized** a dose of 40 mg.

Verb Usage (tenses)
Something to ponder.

Tenses in verb use: In English, verbs are conjugated to include time: go, going, gone, went, will go, etc. However, there are languages that do not have verb tenses.

Ex: I go to the store yesterday.
I go to the store today.
I go to the store tomorrow.

Correct and Preferred Usage

Rule: "While" is used when there is a time relationship. **"Whereas"** is used when there is a contrast that needs emphasis (and where you could substitute "but" or "on the other hand").

Ex: Young patients are highly susceptible to relapse, **while/whereas** older patients are immune.

Ex: Younger patients often develop respiratory disease **while/whereas** in grade school.

Ex: The researchers were at a communications seminar **while/whereas** their lab partners had an impromptu party.

Ex: The media was changed at 3-day intervals, **while/whereas** the cultures were maintained for 14 days.

Correct and Preferred Usage

Rule: The use of **"while"** is time dependent, whereas **"although"** shows a conditional.

Ex: While/Although some studies show promise of new methods of prevention and treatment of non-Hodgkin lymphoma, others did not.

Ex: While/Although the rats were fed a fat-free diet, they continued to gain weight.

Ex: While/Although this form of conditioning has long contributed to the understanding of the etiology and maintenance of anxiety disorders, other forms of conditioning need to be studied.

Ex: While/Although the rats were fed, the mice waited in their cages.

Language Evolves
through Use and Misuse

Use of **"he"** for nouns embracing gender has become he/she.

Compare to/compare with: Formally, *compare to* was only acceptable when comparing two unlike things (usually metaphorically); *compare with* when comparing two like things to show differences (properly used in science). However, contemporary scientific usage is now either, as long as the usage within one work is consistent.

Firstly, secondly, thirdly, finally or lastly: There are no such words as 'firstly,' 'secondly,' 'thirdly.' Use 'first,' 'second,' 'third.' However, because there is a 'finally' and a 'lastly,' and a need for parallelism in the universe, usage seems to be moving toward acceptance of these mistakes.

Data as singular(?): There is speculation that the use of the word 'data' may become both singular or plural. *Data are* or *data is* (See p. 106, *ACS Style Guide*).

Writing the Perfect E-mail

Spelling: Is it that important?
Tone: Who is your audience?
Organization: What goes first?

And more:
- The run-on e-mail
- Punctuation
- Editing and re-editing
- Subject line: Definitive, brief, and consistent (in e-mail strings: makes searches easier)

Is Spelling Important?

"Aoccdrnig to a rscheearch at Cmabrigde Uinervtisy, it deosn't mttaer in waht oredr the ltteers in a wrod are, the olny iprmoetnt tihng is taht the frist and lsat ltteer be at the rghit pclae. The rset can be a toatl mses and you can sitll raed it wouthit porbelm. Tihs is bcuseae the huamn mnid deos not raed ervey lteter by istlef, but the wrod as a wlohe."

"Raeding Wrods With Jubmled Lettres. There Is a Cost"
Rayner, White, Johnson, and Liversedge
Psychological Science
March 2006

Spelling is Important

Most recipients of e-mails are very forgiving when it comes to misspellings in e-mails. We all know that the intent of an e-mail is "quick communication." However, it is better to avoid spelling errors by spending an extra minute or two rereading the e-mail before sending it.

How many misspellings are acceptable? One or two? Did you spell the director's name wrong?

The most frequently misspelled words seem to be short words and plurals, which are easily corrected at the editing stage, but all words are fair game.

Your proofs are ready

Send Chat Attach Address Fonts Colors Save As Draft
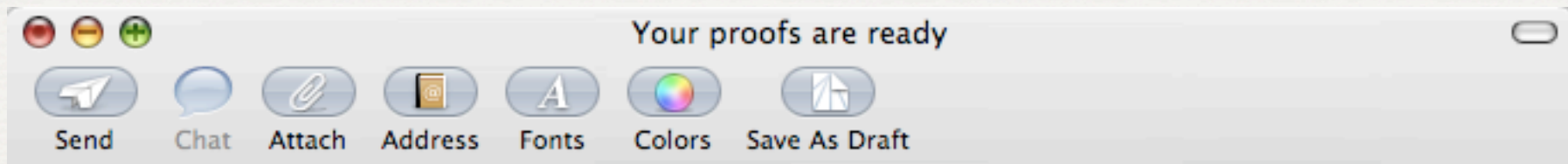
To: Maggie to Editor-in-Chief

Cc:

Bcc:

Subject: Your proofs are ready

Account: Marguerite Meitzler <sciencewriting@mac.com>

Ken,

In answer to your question, the page proof for the July issue is ready. I will arrive by FedEx tomorrow.

Maggie

The Editor-in-Chief's reply:

I'll have scones and coffee ready at 10:00 a.m. Would you bring the page proofs with you?

Ken

Is Punctuation Important?

Accuracy in punctuation is probably more important than spelling because your meaning can be misconstrued. Do not risk changing your meaning. Edit and re-edit.

After the lengthy editing of an important medical book, the copyeditor thanked the author for completing the process on schedule. The author e-mailed the following reply. (Luckily, the copyeditor was an editor first . . . and therefore did not take offense.)

Project completed on schedule

Send   Chat   Attach   Address   Fonts   Colors   Save As Draft

To: Copyeditor of medical book

Cc:

Bcc:

Subject: Project completed on schedule

Account: Marguerite Meitzler <sciencewriting@mac.com>

Copyeditor,

No thanks to you!

Author

****

The author should have written the following:

No, thanks to you!

Tone: Who Is Your Audience?

Formal, informal? Large group (general overview or specific information) versus members of your laboratory (general information and specific information). Who is your audience? Don't be too chummy unless writing to a friend.

Bottom line: Remember that all formal e-mails are "records" of a sort, therefore try to be accurate in everything you write.

Going to Paris!

Send Chat Attach Address Fonts Colors Save As Draft

To: Maggie's friend

Cc:

Bcc:

Subject: Going to Paris!

Account: Marguerite Meitzler <sciencewriting@mac.com>

Shirley,

I'm finally going to Paris! I leave next week for 10 days.

I'm so excited.

I'm going to brush up on my high school French.

Is there anything that you'd like me to bring back for you?

Maggie

Send   Chat   Attach   Address   Fonts   Colors   Save As Draft

To: Maggie's Mom

Cc:

Bcc:

Subject: I'm going to Paris

Account: Marguerite Meitzler <sciencewriting@mac.com>

Mom,

How are you? How are the cats? Did you manage to get the carpeting on the staircase repaired?

Next week I am going to Paris for ten days. I am very excited.

I am going with a group of middle-aged women on a tour, so you needn't worry. And, no, I won't talk to strangers.

I'll bring back some nice French perfume for you.

Love, Maggie

Maggie on leave for 10 days

Send | Chat | Attach | Address | Fonts | Colors | Save As Draft

To: Fred, Larry, George, Mary

Cc: All lab staff

Bcc:

Subject: Maggie on leave for 10 days

Account: Marguerite Meitzler <sciencewriting@mac.com>

Fred, Larry, George, and Mary,

I will be out of the lab for 10 days beginning June 10th, returning June 20th.

Attached is a file containing the details of current experiments and a schedule of dosage changes.

If you need to contact me, I will be checking my e-mail and voice mail daily. I can be reached at the following telephone numbers: 301-496-8000 and 202-319-7706.

Maggie

Experiments...ule (19.3 KB)

93

Organization

Organization of the contents of an e-mail, letter, or short document is all important to flow, comprehension, and response.

You are the "expert" on the contents of your e-mail, therefore you should consider which point to mention first: the most general . . . then more specific, and then what you want the recipient to do . . .

However, always include a "signal" that you will include a "to do" in the e-mail. The subject line . . .

Also, one e-mail = one topic

Exercise 9

To NIH Campus:
Subject: Healthier Lifestyles Event: Free Food!

3 = 1. Join the Physical Therapy staff in supporting healthier life styles throughout the lifespan by participating in the celebration of National Physical Therapy Month, "Join the Fight Against Fast Food," Wednesday, July 9, 2008 11:00─1:00 PM in the CRC Hatfield Building 10, second floor cafeteria.

5 = 2. Healthy lifestyle materials on nutrition, physical activity, proper shoe wear, and bike fit will be provided to the NIH community for persons interested in making choices of physical activity during busy work schedules! Many prizes will be raffled off.

1 = 3. This endeavor also serves to support the Surgeon General's Initiative, the "Healthier Feds Program," and the Office of Healthy Foods programs to increase awareness of physical activity in all populations.

4 = 4. For further information please contact:
 Fred Jones, Events Coordinator
 Phone: 301-496-4700
 E-mail: fredjones@nih.gov

2 = 5. Individuals with disabilities who need sign language interpreters and/or reasonable accommodation to participate in this event should contact the Office of Communications at 301-496-2500 and/or the Federal Relay at 1-800-877-8000. Requests should be made at least 5 days in advance of the event. Thank you.

The Run-on E-mail

When organizing an e-mail, the most "timely" message may need to be in the first sentence or in the subject line.

If you need something immediately, make sure that you let the reader know. Signal the reader by including it in the subject line or place the "timely" information early in the e-mail. Do not "bury it" and take the chance of it being missed.

To: All staff

Cc:

Bcc:

Subject: The run-on e-mail

Account: Marguerite Meitzler <sciencewriting@mac.com>

All staff,

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Curabitur tristique odio nec lacus. Pellentesque tincidunt lacus ac lorem. Vivamus id nulla ut metus suscipit scelerisque. Sed rutrum blandit ligula. Sed sollicitudin purus ac neque. Sed mattis ornare diam. Phasellus scelerisque elementum diam. Nam rutrum nulla at dolor. Duis sed mi. Nunc a eros. Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae; Morbi orci. Aliquam tincidunt vehicula tellus.

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| Send | Chat | Attach | Address | Fonts | Colors | Save As Draft |

To: All staff

Cc:

Bcc:

Subject: The run-on e-mail

Account: Marguerite Meitzler <sciencewriting@mac.com>

Fusce lectus odio, mattis quis, consectetuer nec, volutpat in, neque. In justo. Quisque faucibus, neque non vehicula tristique, mauris lacus hendrerit quam, vitae porta ante erat quis arcu. Ut laoreet. Suspendisse tempor pretium pede. Fusce luctus. Fusce vulputate cursus nulla. Nam consequat, lorem consequat posuere molestie, quam justo dictum nisl, at facilisis est nibh eget tellus. Morbi nunc augue, malesuada eget, venenatis sed, iaculis at, libero. Vestibulum tortor pede, dignissim pulvinar, vulputate id, lacinia ut, felis. Cras pretium. Sed et nibh ac tellus laoreet sodales. Donec mattis congue odio. Duis mi lorem, feugiat sit amet, accumsan ac, convallis vel, urna. Donec suscipit. In pharetra, velit at semper scelerisque, turpis augue semper mauris, sit amet congue ipsum orci sit amet leo. Maecenas condimentum ligula vel neque. Pellentesque sed dolor. Ut vel pede. In magna velit, rutrum vel, semper placerat, pellentesque vitae, pede.

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Send Chat Attach Address Fonts Colors Save As Draft

To: All staff

Cc:

Bcc:

Subject: The run-on e-mail

Account: Marguerite Meitzler <sciencewriting@mac.com>

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There will be a farewell luncheon in the conference room at noontime for Doug, whose last day is today. Come attend the festivities and wish him well in his new endeavors.

See you there.

Harry

Farewell luncheon/Summary of meeting minutes

Send | Chat | **Attach** | **Address** | **Fonts** | **Colors** | **Save As Draft**

To: All staff

Cc:

Bcc:

Subject: Farewell luncheon/Summary of meeting minutes

Account: Marguerite Meitzler <sciencewriting@mac.com>

All staff,

Farewell luncheon:

There will be a farewell luncheon in the conference room at noontime for Doug, whose last day is today. Come attend the festivities and wish him well in his new endeavors.

Meeting minutes:

- Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Curabitur tristique odio nec lacus. Pellentesque tincidunt lacus ac lorem. Vivamus id nulla ut metus suscipit scelerisque. Sed rutrum blandit ligula. Sed sollicitudin purus ac neque. Sed mattis ornare diam. Phasellus scelerisque elementum diam. Nam rutrum nulla at dolor. Duis sed mi. Nunc a eros. Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae; Morbi orci. Aliquam tincidunt vehicula tellus.

- Curabitur vulputate. Pellentesque posuere tellus ut tellus. Cras sit amet lectus. Mauris dolor quam, accumsan dignissim, pharetra eget, lacinia a, felis. Aliquam erat volutpat. Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae; Nulla quam. Vivamus mattis. Sed a libero. Maecenas in eros ac nibh vulputate semper. Nunc molestie ultricies ligula. Nulla dictum turpis et sapien. Fusce consequat fermentum tortor. Nulla quis mi vel dolor lacinia auctor. Cras risus lacus, congue quis, dignissim ut, egestas eget, turpis. Cras bibendum. Morbi pede nibh, lacinia sit amet, volutpat nec, tincidunt non, nulla. Cras placerat vestibulum nulla. Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae.

Writing the Perfect E-mail

Editing and re-editing: Do not underestimate the value of editing an e-mail.

After writing an "important" e-mail, give yourself a few minutes before hitting **SEND.**

Answer other e-mails, then reread the e-mail. If you find errors, give yourself a few more minutes and give the e-mail another editing before you finally send it.

There is nothing worse than having to write a second e-mail clarifying or correcting the first e-mail.

Writing the Perfect E-mail

Subject line: Definitive, brief, and consistent (in e-mail strings it makes searches easier).

Ex: Will you review the poster?

       Versus

  Conference Poster ready for your review

Ex: Don't forget the meeting.

       Versus

  Gottesman Meeting at 3:00 p.m. today

Writing Hint

Questions to ask yourself: Before beginning any writing assignment, ask yourself the following questions:

- Who is my audience?
- What is my assignment?
- Has anyone ever done this before?
- Where can I get a copy?

Organizing and Writing Your Abstract

The abstract provides an overview of your paper. It should state clearly the problem or question you addressed with your research, what you did to solve the problem or answer the question, how you did it, what happened, and what your results mean. It should be well organized.

If you are writing an informal paragraph-type abstract, note the four-part structure.

> Introduction: To determine . . .
> Materials and Methods: we . . .
> Results: we found . . .
> Discussion: These findings demonstrate/suggest that . . .

Exercise 10

Abstract

To determine

we

We found that

These findings demonstrate/suggest that

Suggested Reading

Your handout contains a "Suggested Reading" list of books in the following categories:

- Grammar books
- Fun books on grammar and on punctuation
- Style guides
- Books on scientific writing
- E-mail
- Web sites for grammar/writing help

Things to remember: "How to Write Good" (see handout)

Happy
Writing!