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A few grammar tips

A few grammar tips

- Using the right tense
- Which/that
- Data
- Compared to/with
- Use of punctuation
- Parallelism

Using the right tense

Use verb tenses (past, present, and future) exactly as you would in ordinary writing.

- **Past** tense to report what happened in the past: what you did, what someone reported, what happened in an experiment, and so on.
- **Present** tense to express general truths, such as conclusions (drawn by you or by others) and atemporal facts (including information about what the paper does or covers).
- **Future** tense for perspectives: what you will do in the coming months or years.

Typically, most of your sentences will be in the past tense, some will be in the present tense, and very few, if any, will be in the future tense.

Using the right tense

Past :

Work done	We collected samples from . . . Sakai et al. determined the growth rate of . . . Consequently, astronomers decided to rename . . .
Work reported	Paldor reported a similar growth rate . . . Marshall et al. (2009) published an alternative method Bower et al. (1994) observed the opposite behavior ...
Observations	The floats in Group A moved, on average, twice faster. . . The number of events increased sharply . . . The conversion rate was close to 95% . . .

Using the right tense

Present :

General truths	The Reynolds number provides a measure of . . . The Navier-Stokes 3D equations are ... In an inviscid non-stratified medium, the angular momentum is conserved...
Atemporal facts	This paper presents the results of . . . Section 3.1 explains the difference between . . . Behbood's 1969 paper provides a framework for . . .

Using the right tense

Future :

Perspectives	In a follow-up experiment, we will study the role of . . . The influence of temperature will be the object of future research . . .
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Using the right tense

Past + present combined:

In 1905, Albert Einstein postulated that the speed of light is constant .

Which/that ?

The main term acting to balance beta V in western boundary currents is the bottom pressure torque **[which/that]** is also the term responsible for meridional excursions of the ACC.

The part of beta V **[which/that]** is not explained by Sverdrup balance is plotted in Fig. 4.

Which/that ?

The main term acting to balance βV in western boundary currents is the bottom pressure torque, **which** is also the term responsible for meridional excursions of the ACC.

The part of βV **that** is not explained by Sverdrup balance is plotted in Fig. 4.

Which/that

Rule:

use **that** before a restrictive clause
and **which** before everything else

Which/that

- Restrictive Clause = **That**

A restrictive clause is just part of a sentence that you can't get rid of because it specifically restricts some other part of the sentence:

The pairs of nearest neighbours *that* satisfy the criterion... are pairs of false neighbours.

The words “that satisfy” restrict the kind of pairs you're talking about. Without them, the meaning of the sentence would change as you'd be saying that all pairs are false neighbours.

Which/that

- Nonrestrictive Clause = **Which**

A nonrestrictive clause is something that can be left off without changing the meaning of the sentence:

The model analysis confirms that the main term acting to balance betaV in western boundary currents is the bottom pressure torque, *which* is also the term responsible for the northward of the ACC.

Leaving out the clause starting by “which is also”, doesn’t change the meaning of the sentence.

Which/that

See the differences between the 2:

The vial that contained her RNA was lost

The vial, which contained her RNA, was lost

“Data are” not “data is”

The word DATA is plural

- The data show an unusual trend
- The data support the conclusion
- The data are critical

The singular form is datum *(if you're talking about one data point – rarely used)*

“Compared to” or “compared with”

Compare to = *to point out similarities between different things*

Compare with = *to point out differences between similar things* *[what we usually do in science]*

- Shall I compare thee to a summer's day?
- Brain tumors are relatively rare compared with more common cancers such as those of the lung, breast, and prostate

Use of punctuation

Dash (-), Colon (:), semicolon (;), parenthesis ()

It's hard to vary your sentence structure, if you are limited to just commas and periods. To make your sentence structure creative, and interesting, and complex, you need the dash, the colon, the semi-colon, and the parentheses...

Use of punctuation

Example:

But what really grabbed me about the film is that it shows how humans — through our ingenuity, our commitment to fact and reason, and ultimately our faith in each other — can science the heck out of just about any problem.

<https://www.wired.com/2016/10/president-obama-guest-edits-wired-essay/>

Use of punctuation

Original:

Many types of cells in tissue develop a kind of directionality. Certain events happen toward one end of the cell or tissue or the other. It's a phenomenon called cell polarity.

Use of punctuation

Original:

Many types of cells in tissue develop a kind of directionality. Certain events happen toward one end of the cell or tissue or the other. It's a phenomenon called cell polarity.

Rewrite using a colon:

Many cells and tissues develop a kind of directionality, called cell polarity: certain events happen toward one end of the cell or tissue.

Use of punctuation

Increasing power to separate:

- Comma
- Colon
- Dash
- Parentheses
- Semicolon
- Period



Use of punctuation

Increasing power to separate:

- Comma
- Colon
- Dash
- Parentheses
- Semicolon
- Period



- *Short pause*
- *Bigger pause*
- *More abrupt pause*
- *slip something extra into a sentence*
- *separates two related sentences*
- *Complete stop*

Use of punctuation

Increasing power to separate:

- Comma
- Colon
- Dash
- Parentheses
- Semicolon
- Period



Slightly less formal

Use of punctuation

Semicolon

- The semicolon connects 2 independent clauses (= clauses that can stand alone as complete sentences)
- **Ex:** Kennedy could be a cold and vain man, and he led a life of privilege. But he knew something about the world; he also cared about it.
 - With a comma: But he knew something about the world, and also cared about it. *[lose the emphasis]*
 - With a period: But he knew something about the world. He also cared about it. *[lose the connection between the two ideas]*

Use of punctuation

Semicolon

- The semicolon connects 2 independent clauses (= clauses that can stand alone as complete sentences)
- **Ex:** It was the best of times; it was the worst of times.
 - For this prose to work, those two opposing ideas need to be linked with a semicolon.

Use of punctuation

Semicolon

- The semicolon is also used to separate items in lists that contain internal punctuation.
- **Ex:** It happened because people organized and voted for better prospects; because leaders enacted smart, forward-looking policies; because people's perspectives opened up, and with them, societies did too.

Use of punctuation

Parentheses

- Parentheses are use to insert an afterthought, an explanation, or some additional details in a sentence that is grammatically complete without it.
- *If you remove the material within the parentheses, the main point of the sentence should not change*
- *Parentheses give the reader permission to skip over the material*
- **Ex:** They also have a specialized tail, kind of like a monkey's tail, that allows them to cling to a piece of grass (or a lucky diver's finger). [an article on seahorses in the LA Times]

Use of punctuation

Colon

- Use a colon after an independent clause to introduce a list, a quote, an explanation, a conclusion, or an amplification.
- “the colon has more effect than the comma, less power to separate than the semicolon, and more formality than the dash. ” -- Strunk and White
- **Ex:** The hydrogen bonds are made as follows: purine position 1 to pyrimidine position 1; purine position 6 to pyrimidine position 6. [A structure for DNA, Watson and Crick, 1953]

Use of punctuation

Colon

- **Ex:** That's one reason why I'm so optimistic about the future: the constant churn of scientific progress.

Use of punctuation

Colon

- Use a colon to join two independent clauses if the second amplifies or extends the first.
- **Ex:** Companies use Marsh for the same reason that home sellers use real-estate agents: the agent's knowledge and experience is supposed to help the client get the right deal at the right price.

Use of punctuation

Colon

- Some misuses of colons:
- **Ex:** Two aspects of alcohol use are related to brain injury: as a factor associated with risk of an injury, such as a motor vehicle crash, and as a factor in TBI diagnosis, recovery, or survival after injury.

Use of punctuation

Colon

- Some misuses of colons:
- **Ex:** Two aspects of alcohol use are related to brain injury: as a factor associated with risk of an injury, such as a motor vehicle crash, and as a factor in TBI diagnosis, recovery, or survival after injury.
- **Should be:** Two aspects of alcohol use are related to brain injury: its association with risk of injury, such as motor vehicle crash, and its post-injury influences on TBI diagnosis, recovery, or survival after injury.

Use of punctuation

Dash

- use the dash to add emphasis or to insert an abrupt definition or description anywhere in the sentence.
- *A dash is a mark of separation stronger than a comma, less formal than a colon, and more relaxed than parentheses.* [Strunk and White]
- *Use a dash only when a more common mark of punctuation seems inadequate.* [Strunk and White]
- Use it for the really tough jobs, but don't overuse it!

Use of punctuation

Dash

using the dash to add emphasis:

- **Ex:** The drugs did more than prevent new fat accumulation. They also triggered overweight mice to shed significant amounts of fat — up to half their body weight.

using the dash to add extra information:

- **Ex:** Researchers who study shipworms say these mislabeled animals — they're clams, not worms — are actually a scientific treasure.

Use of punctuation

Dash

What happens with commas?

- **Ex:** The drugs did more than prevent new fat accumulation. They also triggered overweight mice to shed significant amounts of fat, up to half their body weight.
= loss of emphasis
- **Ex:** Researchers who study shipworms say these mislabeled animals, they're clams, not worms, are actually a scientific treasure.
= doesn't work with a full clause

Use of punctuation

Dash

What happens with parentheses?

- **Ex:** The drugs did more than prevent new fat accumulation. They also triggered overweight mice to shed significant amounts of fat (up to half their body weight).
= buries the information
- **Ex:** Researchers who study shipworms say these mislabeled animals (they're clams, not worms) are actually a scientific treasure.
= buries the information

Use of punctuation

Dash

- **Ex:** What makes SMCs dynamically distinct from geostrophic mesoscale currents — a more fundamental distinction than simply their smaller size — is a Rossby number, $Ro = V/f$, and Froude number, $Fr = V/Nh$, that are not asymptotically small.
- **Ex:** To establish that the marrow cells — also called adult stem cells or endothelial precursor cells — can colonize the eye, Friedlander and his colleagues first transplanted stem cells from an adult mouse into the eyes of newborn mice.

Use of punctuation

Dash

- **Ex:** But my fellow Americans, whatever mix of motives led us to create an Electoral College majority for Donald Trump to become President — and overlook his lack of preparation, his record of indecent personal behaviour, his madcap midnight tweeting, his casual lying about issues like “millions” of voters casting illegal votes in this election, the purveying of fake news by his national security advisor, his willingness to appoint climate change deniers without even getting a single briefing from the world's greatest climate scientists in the government he'll soon lead, and his cavalier dismissal of the CIA's concussions about Russian hacking of our election — have no doubt about one thing: We as a country have just done something incredibly reckless. [Thomas Friedman, New York Times]

Use of punctuation

Example:

Evidence-based medicine teaches clinicians the practical application of clinical epidemiology, as needed to address specific problems of specific patients. It guides clinicians on how to find the best evidence relevant to a specific problem, how to assess the quality of that evidence, and perhaps most difficult, how to decide if the evidence applies to a specific patient.

Use of punctuation

Example:

Evidence-based medicine teaches clinicians the practical application of clinical epidemiology: how to find the best evidence relevant to a specific problem, how to assess the quality of that evidence, and how to decide if the evidence applies to a specific patient.

- **Use of colon to join and condense**

Use of punctuation

Example:

Finally, the lessons of clinical epidemiology are not meant to be limited to academic physician-epidemiologists, who sometimes have more interest in analyzing data than caring for patients. Clinical epidemiology holds the promise of providing clinicians with the tools necessary to improve the outcomes of their patients.

Use of punctuation

Example:

Finally, the lessons of clinical epidemiology are not meant to be limited to academic physician-epidemiologists, **who sometimes have more interest in analyzing data than caring for patients**. Clinical epidemiology holds the promise of providing clinicians with the tools necessary to improve the outcomes of their patients.

Finally, clinical epidemiology is not limited to academic physician-epidemiologists — **who are sometimes more interested in analyzing data than caring for patients** — but provides clinicians with the tools to improve their patients' outcomes.

Parallelism

Pairs of ideas that are joined by "and", "or" or "but" should be written in parallel form (= follow the same grammatical structure)

- **Ex:** The velocity decreased by 50 percent, but the pressure decreased by only 10 percent.
- Structure is : SVX but SVX
- **Wrong Ex:** The velocity decreased by 50 percent, but the decreased was 10% for the pressure.

Parallelism

Pairs of ideas that are joined by "and", "or" or "but" should be written in parallel form (= follow the same grammatical structure)

- **Ex:** We aimed to increase the resolution and to improve picture quality.
- Structure: infinitive phrase and infinitive phrase

Parallelism

Lists of ideas should also be written in parallel form

- **Wrong Ex:** Locusts denuded fields in Utah, rural Iowa was washed away by torrents, and in Arizona the cotton was shriveled by the placing heat

Parallelism

Lists of ideas should also be written in parallel form

- **unparallel:** Locusts denuded fields in Utah, rural Iowa was washed away by torrents, and in Arizona the cotton was shriveled by the placing heat
- **parallel:** Locusts denuded fields in Utah, torrents washed away rural Iowa, and blazing heat shrivel Arizona's cotton.

Parallelism

Lists of ideas should also be written in parallel form

- **Ex:** NASA's intrepid Mars rover, Curiosity, has been through a lot in the past year. It flew 354 million miles, blasted through the Mars atmosphere, deployed a supersonic parachute, unfurled a giant sky crane, and touched down gently on the surface of Mars.

Parallelism

Lists of ideas should also be written in parallel form

- **Wrong Ex:** If you want to be a good doctor, you must study hard, critically think about the medical literature, and you should be a good listener.

Parallelism

Lists of ideas should also be written in parallel form

- **unparallel:** If you want to be a good doctor, you must study hard, critically think about the medical literature, and you should be a good listener.
- **parallel:** If you want to be a good doctor, you must study hard, listen well and think critically about the medical literature.
- **parallel:** If you want to be a good doctor, you must be a good student, a good listener and a critical thinker.

Parallelism

- **Ex:** This research follows four distinct phases: (1) establishing measurement instruments; (2) pattern measurement; (3) developing interventions; and (4) the dissemination of successful interventions to other settings and institutions.

Parallelism

- **unparallel:** This research follows four distinct phases: (1) establishing measurement instruments; (2) pattern measurement; (3) developing interventions; and (4) the dissemination of successful interventions to other settings and institutions.
- **parallel:** This research follows four distinct phases: (1) establishing measurement instruments; (2) measuring pattern measurement; (3) developing interventions; and (4) the disseminating successful interventions to other settings and institutions.

Parallelism

- **unparallel:** Bates describes the five principles for the success of decision support systems in clinical settings: speed, real-time delivery, integration into workflow, simplicity and to avoid data entry
- **parallel:** Bates describes the five principles for the success of decision support systems in clinical settings: speed, real time delivery, integration into workflow, simplicity and the avoidance of data entry.