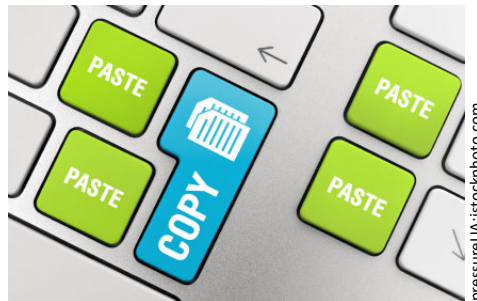


Avoiding Plagiarism



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Plagiarism is something that is unfortunately very widespread these days, especially with the advent of thousands of documents and shadow writers available at your fingertips.

You may think: plagiarism is dishonest and I'm an honest person, so it doesn't apply to me, I can play solitaire during this lecture. But a big part of what we'll talk about is the fact that plagiarism is often unintentional. You may not realize you're doing it. Yet unintentional plagiarism can still have major, career-changing consequences. So we're going to talk about what constitutes plagiarism and how to completely avoid it.

Plagiarism

**Giving the *impression*
that someone else's
words, **ideas**, figures,
etc. belong to you.**

The word impression implies that this can be a sin by omission: not citing something is the same as saying "I wrote this myself"

Note that ideas is highlighted – plagiarism does NOT just apply to things that are written down

Consequences of plagiarism

- Fail assignment
- Fail class
- Loss of job opportunities
- Fired from job
- **Loss of reputation**



Be a great scientist! Don't **steal** ideas or words.

**Don't be
intellectually lazy**



<https://prezi.com/q5pllu8g9fe7/plagiarism-and-copyright/>

Story of theft of blackboard ideas at famous university, guy had hard time getting job or awards

You shouldn't do it because it's the wrong thing to do. But also people are checking – instructors have databases they check work against, even grant agencies cross-check grants for plagiarism. This is not something you can or should get away with.



It should be enough to follow the guidelines we give you. But if you're really in doubt you can even use apps to check your own work.

Avoiding plagiarism 101

Never copy phrases longer than 3-4 words

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Providing a citation to a bibliographic entry
or footnote does not make copying words OK

Includes:

Figure captions

Text from published paper

Text from paper you are working on with advisor

Websites

Even if you wrote a paper, you can't use exact same text for another paper:

-My experience with topology summary – don't look at own writing when writing something new.

What about direct quotes?

Professor Mason said "Never copy phrases longer than 3-4 words."

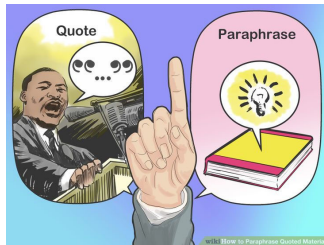
Uncommon in technical writing

You can only quote words that someone said in person, in an email, text message, over the phone, or in a letter to you.

My friend taught at a community college and a student turned in an advertisement for nasal spray as a science report. My friend failed the student, but his only comment was to put quotes around the whole document and add a citation. It wasn't quite plagiarism with quotes, but it also then had no purpose, clearly

Sometimes you need to report someone else's content, so you...

Paraphrase



<https://cdn.brainpop.com/english/writing/paraphrasing>

"...express the meaning of (the writer or speaker or something written or spoken) using different words, especially to achieve greater clarity."

We'll give some examples of this later

Paraphrasing rule #1—Do your job as an author

Deconstruct, interpret, digest, understand, distill, infer, deduce, put into context → think critically

Don't just patch together others' ideas in a hodge-podge of unoriginal thought

Regurgitation is not science, it's sewing



How do you paraphrase? You need to do the work of thinking through the text and coming up with your own way of explaining it

Rules of Citations

Must cite someone else's:

- exact words
- original ideas (concepts, interpretation, opinions, conclusions)
- data
- images (photos, cartoons)
- examples or analogies
- experimental procedures
- descriptions of apparatus or phenomena
- solutions (codes, algorithms)
- digital recordings
- felicitous phrases (“boson birthday paradox”)

Do not cite your own 100% original:

- exact words
- original ideas
- data
- images
- examples or analogies
- experimental procedures
- descriptions of apparatus or phenomena
- solutions
- felicitous phrases

But beware of self-plagiarism!

A theory student working with my group worked with us on a paper, and put the entire experimental section in his thesis verbatim. Is this plagiarism? Complicated, but yes – he didn't write that section.

What is “common knowledge” and do I have to cite it?

“Common knowledge” is what an educated person would know, could easily observe for himself, or could readily find in a textbook or encyclopedia

Common knowledge usually does not have to be cited

BUT—“common knowledge” is context-dependent

**When in doubt,
CITE!**

Think about how general and readily available the knowledge is. For example, “quantum mechanics considers particles and waves on the same footing.”

What about “The world record for quantum entanglement involves a 6-photon qubit”? Factual, but not yet common knowledge – cite!

Myths about plagiarism that can get you into trouble

WWW myth: everything on the Internet is common knowledge, so I can use it without attribution

Converted words myth: because I completely rewrote the source's words, the words and ideas are now my own, and I don't have to cite the original source

Inconsequential theft myth: I copied fewer than 7 words, so I don't have to cite the source

Words-only myth: I just reproduced the figure or the table, but I didn't copy any words, so it's not plagiarism

Named-source myth: I mentioned the author's name or the source of the figure in the text, so I can reproduce words verbatim

Adapted from Robert A. Harris, *Using Sources Effectively*, 2nd ed. (Glendale, CA, Pyczak Publishing, 2005).

Keep out of trouble—label your notes!

Write the full bibliographic citation on each note; include chapter and page numbers for books

Put quotation marks around anything you copy verbatim, and include the citation

Code paraphrases [P] in your notes so you don't confuse them with your own original ideas, and include the citation

Code summaries [S] in your notes so you don't confuse them with your own original ideas, and include the citation

Experiment with different labeling methods to find one that works for you

Adapted from Robert A. Harris, *Using Sources Effectively*, 2nd ed. (Glendale, CA, Pyczak Publishing, 2005).

I got into trouble once in high school because I used to take notes using a mix of my notes and sometimes exact quotes from books. Then I'd rephrase for papers, but once I mistook my notes for author's words in 3 sentences and got in big trouble. A real learning experience

Rules for paraphrasing

The paraphrase must be **entirely in your own words**;* if you reproduce words or phrases exactly, you must put them in quotes

Preserve the original author's meaning; don't take ideas out of context

Use your own vocabulary and sentence structure; don't mechanically "translate" word-for-word from the original

Paraphrase to simplify or clarify the original material

Paraphrase to make your paper's style and tone consistent

CITE THE SOURCE!

*except for technical terms, proper nouns, and ancillary words (articles, conjunctions, prepositions)

Adapted from Robert A. Harris, *Using Sources Effectively*, 2nd ed. (Glendale, CA, Pyczak Publishing, 2005).

Plagiarism: Case Study*

While classical melting in two-dimensional systems is reminiscent of the phase behavior observed as a function of pressure in this material, an important qualification should be made with respect to this comparison. In contrast to the examples described above, the melting process observed in $1T\text{-TiSe}_2$ is quantum mechanical in nature, in that it is driven near $T = 0$ K by pressure tuning the competing interactions in this system. To understand the nature of this competition, note first that the zero-pressure charge density wave (CDW) state in $1T\text{-TiSe}_2$ is unconventional, as it arises from an indirect Jahn-Teller interaction that splits and lowers the unoccupied conduction band. As a result of the electron-hole interaction between the conduction and valence bands, the lowering of the split conduction band “repulses” and flattens the valence band, resulting in a lowering of the system’s energy, and the formation of a small gap CDW state.

From: C.S. Snow et al., Phys. Rev. Lett. 91, 136402 (2003)

*S.L. Cooper, PHYS 496, 2008.

Original:

While classical melting in two-dimensional systems is reminiscent of the phase behavior observed as a function of pressure in this material, an important qualification should be made with respect to this comparison.

In contrast to the examples described above, the melting process observed in $1T\text{-TiSe}_2$ is quantum mechanical in nature, in that it is driven near $T = 0$ K by pressure tuning the competing interactions in this system.

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As a result of the electron-hole interaction between the conduction and valence bands, the lowering of the split conduction band “repulses” and flattens the valence band, resulting in a lowering of the system’s energy, and the formation of a small gap CDW state.

Edited:

The phase behavior observed as a function of pressure in $1T\text{-TiSe}_2$ is similar to classical melting in 2D materials.

However, in contrast to classical melting, the melting process seen in $1T\text{-TiSe}_2$ is governed by quantum mechanics, as it the result of tuning the competing quantum mechanical interactions with pressure near $T = 0$ K.

An examination of the unconventional charge density wave (CDW) in $1T\text{-TiSe}_2$ state helps elucidate this competition—the CDW state in $1T\text{-TiSe}_2$ is caused by an indirect Jahn–Teller interaction that lowers the unoccupied conduction band relative to the filled valence band.

Because there is a strong electron-hole interaction between the conduction and valence bands in this material, this lowering of the conduction band causes a “repulsion” and flattening of the valence band, which results in a lowering of the system’s energy and the formation of a small CDW small gap.

Who think this is plagiarism and why??

Is the edited version plagiarism?

YES IT IS!

Although the words and ordering have been altered, the essential meaning remains the same

Credit has not been given to the original author of these ideas

What is your point to paraphrasing? If your goal is to explain a concept, then think about the order and discussion that will best explain the concept. Not the same as editing entire paragraph.

**Will adding a citation make
this example acceptable?**

Context dependent

And, opinions vary!

In my opinion, only if you are very clear that you are explaining this paper specifically and for a reason, and state that you are paraphrasing the results