Citations and Citation Managers

Sean C. Anderson

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When to cite

Opinions vary widely on when, where, and how often to cite and it's partly an art. With that in mind:

Cite a paper when first introducing a concept.

If you keep writing about a concept then you probably won't cite the same paper every time. If you keep writing about a referenced topic in a paragraph, one approach is to cite at the beginning and end of the paragraph.

Be weary of over-citing. Don't use your citations as crutches.

You should be weaving a narrative around your citations, not leaving a literature dump for your reader. Interpret your citations, critically evaluate your citations, and show how they fit into your story.

Use citations to acknowledge others' work, aid the reader to investigate more, and convince the reader you know what you're talking about. But in the end, remember the paper is about your science, your writing, and your thoughts. So don't cite to show off and don't cite to hide.

Read papers by particularly good writers in your field and think about when, where, and how frequently they cite. Think about what citation styles help you as a reader and which ones hinder.

Cite as specifically as possible. For example:

> Method X has been used with cats (Johnson 2010), dogs (Smith 2010), and mice (Andrews 2011).

But, if this level of specificity is not required, move citations to the end of sentences to make your sentences easier to read. For example:

> Method X has been used with mice, but may not apply to dogs (Andrews 2011).

However, if the citation doesn't apply to everything before it, you'll need to sacrifice readability for correctness:

> Method X has been used with mice (Andrews 2011), but may not apply to dogs.

Who to cite

Don't be afraid to cite foundational (old) papers.

Citing a foundational paper plus a more recent paper is a common approach.

Remember you can't cite everything. Rarely will you be completely comprehensive on a topic.

Cite a paper for its main finding, not (usually) the other things in it (e.g. the introduction). A common exception to this is citing a paper for an idea proposed in the discussion section.

This is a good time to think about what that *one thing* is that someone else is going to cite your paper for. Make sure to hit the reader over the head with that one thing multiple times.

If you cite it you should read it. At least skim it and have a good grasp of the paper yourself. Don't rely on someone else's interpretation. This is a great opportunity to handle some old books in the library.

Plagarism

Obviously, avoid intentional plagiarism.

http://www.lib.sfu.ca/help/writing/plagiarism

Probably a much more likely scenario is unintentionally plagiarizing. This is a serious issue that can happen to anyone.

When you're taking notes, you'll understand and remember the content of papers better if you put the main points into your own words. You'll also be less likely to accidentally use somebody else's phrasing as your own.

But, sometimes it's helpful to copy quotes from papers into your notes. Develop a system so that you always know whether your notes are in your own words or somebody else's. Maybe always put quotation marks around quotes. Or put quotations in italics. If in doubt, assume you copied it (or Google the phrase).

Be especially careful if you're taking notes while reading another paper's introduction, since you are unlikely to cite that paper for the content of the note.

Keeping up with the literature

Use RSS feeds to keep up with papers. If you don't have an RSS reader already, try Feedly or Digg Reader.

You can find RSS feed links on journal websites. Here's my list of ecology-journal RSS feeds, which you should be able to import into any feed reader.

If your feed reader has them, use smart folders to highlight topics you're interested in. E.g. filter for all papers that have some keyword in the title or abstract or filter for all papers by a set of authors you're interested in.

Don't drown in all the papers. Don't feel guilty skimming titles and marking all as read if you need to. You'll stumble on most important papers again later — especially if you follow the other pieces of advice here.

If you really don't want to use RSS, then sign up for email table-of-contents alerts.

Read narrowly and broadly. Read intensely on your specific topic. But, also occasionally read outside your topic. This is important for your development as a scientist. It gives you the tools and awareness to ask interesting questions and solve problems creatively.

One way to read broadly, is to follow some overview-style journals like Trends in Ecology and Evolution and Frontiers in Ecology and the Environment. Many ecology journals now have review articles too.

If you really want to read broadly, try sitting down at the library occasionally and flipping through the latest journal issues. You're much more likely to stumble on something outside your current interests this way.

Use citation alerts. The Google Scholar ones are good. You set up search terms and

get an email whenever new papers come out with those terms. Or, pick three or four key papers on your topic, and get notified whenever someone new cites those papers. This will capture new papers in journals you don't follow in your RSS feeds (or in your email table-of-contents alerts).

Finding stuff

Google Scholar is increasingly becoming the standard. It's a great place to start. Also see the "cited by" link for any given Google Scholar paper. Consider limiting the search results to recent years if you want to check for newer papers. Or limit the search results to older years if you want to find some of the foundational work.

Install this "Scholarfy" bookmarklet:
https://people.cam.cornell.edu/~jugander/scholarfy.html.
Then, when you've done a regular Google search for something, click the bookmarklet and it will transfer the search to Google Scholar.

The Web of Science is probably the best high-quality search engine for science papers. Also see its "cited by" search option. Try sorting by descending citations to get a feeling for some of the main highly-cited papers on a topic. Also try sorting by published date to look for recent papers and find seminal papers on a topic.

Bibliographies of other papers are a great place to find important papers. Especially pay attending to introductions and review papers.

Work your way backwards (cited by) and forwards (bibliography lists) until you get diminishing returns.

Increasingly, Twitter is a useful place to find papers of interest.

Downloading papers off campus

Ezproxy! Use an Ezproxy bookmarklet. This is a bookmark in your browser with some Javascript in front of it to reload the current page through the university's proxy server. This lets you access anything the library has access to from off campus.

Use this website to generate the bookmarklet for you:
http://wolstenhol.me/sites/projects/ezproxy/

Enter `http://proxy.lib.sfu.ca/login?url=` and click `Make bookmarklet!`. Then drag the button called `via EzProxy` to your bookmarks bar.

Now, when you're on a journal page you want to get access to, click the bookmark and enter your password. You'll only have to enter your password occasionally.

Taking notes

There are many different strategies for note taking. What's important is that you do take notes and that you have some sort of system so that you can quickly find them again.

Evernote is a popular option.

Some citation managers will let you store your notes with your citations.

There are at least two common kinds of notes on what you read: (1) notes you want to keep with the literature so you can remember what you thought when you come back to the paper later for some project, and (2) notes on what you want to take away from a paper for a specific project you're working on.

I tend to keep the first kind of notes in my reference manager and the second type in Evernote, a plaintext document, or a spreadsheet.

When you're taking notes, think about what the one or two important takeaway messages are. You might also want to record one or two quotes you want to come back to.

As you read, keep a running list of other papers you see that you want to read. This keeps you from falling down an endless hole of finding new papers and never finishing anything.

Citation managers

Use one! You're nuts in this day and age to spend your time copying, pasting, re-formatting, and checking citations.

Know your citation manager well and curate it. Think of it as your digital brain. As a researcher, this is one of your most important tools.

Which one?

Common and good citation managers are Zotero, Mendeley, Papers, and BibDesk. There's also Endnote if you absolutely have to, or if you're already familiar with it.

Do I need MS Word compatibility? If yes, that rules out BibDesk.

Do I mind fiddly recompiling when I edit citations? If yes, that rules out Papers.

Do I mind Elsevier? If yes, that rules out Mendeley.

Do I want an integrated PDF viewer? If yes, that rules out Zotero.

Do I want an open source citation manager? If yes, that rules out Papers and Endnote.

Otherwise, if you don't already have a favourite citation manager, then try a few and pick which one you like best. Don't forget to try everything you'll be doing with it. That includes making a little test document and editing the citations.

Using your citation manager effectively

You should only rarely be entering citation meta-data by hand (like the authors, title, and journal). Most citation managers can recognize many PDFs and find meta-data for you. In other cases, you can download the citation data and PDF separately from the journal website and associate the two in the citation manager.

Try and weed out garbage as you go (incorrect meta-data) or you're in for a world of hurt later.

On the other hand, you don't have to save everything you read. I save a PDF in my citation manager if I think I might cite it someday (or if I think it's really cool and I might want to re-read it or share it someday).

Most citation managers can deal with journal abbreviations for you. Figure out how to do this — it will save you a lot of time.

Throw papers into broad folders for papers you're writing or potential future papers.

Rely on search in your citation manager as much as possible. Is it in the title? Great, no need to tag it. Is it not in the title but something you might want to search? Tag it, or throw words into a notes field.

Consider a tag/folder strategy. Tags can work well for broad topics (e.g. diversity-stability); folders for short-term projects (thesis chapter 1). Keep in mind that most reference manager folders aren't really folders. I.e. you can have the same paper in multiple folders.

Tags work best when there's a limited number of them and they're used consistently. Develop a set of rules so your keywords are consistent. For example, maybe you always make them lower case and have no spaces.

Smart folders: use them. Smart folders are a custom search you set up and assign to a folder. The folder then stays up to date as the papers change. Use these for broad topics or groups of authors that you frequently want to refer back to. Find yourself frequently making the same search? Make a smart folder for it.