

OVER  
700,000  
COPIES  
SOLD

# The Craft of Research



FOURTH EDITION

WAYNE C. BOOTH

GREGORY G. COLOMB

JOSEPH M. WILLIAMS

JOSEPH BIZUP

WILLIAM T. FITZGERALD

## 6 Engaging Sources

To make your research reliable, you must use your sources fairly and accurately. In this chapter, we explain how to engage your sources productively and how to take notes so that readers can trust you when you rely on or critique a source.

In this chapter, we show you how to get the most out of your sources, especially your secondary sources. We've chosen that focus for a simple reason: it's a topic on which we can offer useful, general advice. The ways that researchers find or create their data, and the kinds of data readers expect as evidence, vary wildly from field to field. Historians and literary critics typically comb primary sources for passages they can use as evidence. Other researchers, however, don't use primary sources at all: depending on their fields, they might analyze soil samples in a lab, or conduct a survey, or build a computer model. But every field has its body of secondary sources, sometimes called its *literature*, that document the field's conversation. And researchers in all fields engage these sources in similar ways.

How you use your secondary sources depends on where you stand in your search for a project. Experienced researchers read secondary sources regularly to keep up with work in their fields, and so they usually begin their projects with a question or problem in mind. But if you are new to a subject or you still have only a topic, you may have to read a lot of sources to find a problem to pursue, and then even more to figure out how to solve it. In this chapter, we show you how to read secondary sources as experienced researchers do: not just for data you can use in your own argument but more importantly for questions, problems, and arguments that spur your own thinking.

## 6.1 RECORDING COMPLETE BIBLIOGRAPHICAL INFORMATION

First things first: once you decide a source is worth reading, record *all* of its bibliographical information. Do this before you do anything else: it only takes a moment, and we promise that no habit will serve you better for the rest of your career.

You need the bibliographic information for your sources not only so that you can recall what you have read, but also so that you can credit your sources when you write. In your own notes, you can record bibliographic data in whatever format you like—so long as your records are complete; when you cite sources in your writing, you should follow the citation style of your field (see 14.5).

For printed books, record

- author(s)
- title (including subtitle)
- editor(s) and translator(s) (if any)
- edition
- volume
- place published (only the first city if more than one is listed)
- publisher
- date published
- page numbers of articles or chapters consulted
- library call number (if any)
- ISBN

For electronic books, record everything you would record for a printed book plus

- URL (if any)
- name of database (if any)
- date of access
- electronic format of the book

For journal articles, record

- author(s)
- title (including subtitle) of article

- title of journal
- volume and issue number
- date
- page numbers of article
- library call number (if any)

For online sources, record as much of the above as applies. Also record

- URL
- name of database (if any)
- date of access
- Webmaster (if identified)

If you access a printed text online, record bibliographical data from the original printing as well as your source of online access.

If you scan or photocopy a passage from a book, also scan or photocopy its title page and the bibliographic information on the reverse side. Then add the library call number if you know it. You won't need to include the call number when you cite the source, but knowing it will allow you to find the source again easily if you need it.

You may think this advice is overly cautious, but it isn't. Nothing is more frustrating than having the perfect quotation or bit of data in your notes and being unable to use it in your writing, because you didn't completely document your source and can't find it again.

---

Williams once had to withhold a publication on Elizabethan social history for more than a year because he failed to document a source fully. Years earlier he had come across some data—a list of renters in London in 1638—he thought he would someday find useful. But he had failed to record complete information on his source, so when that day came, he could not use its data. He searched the library at the University of Chicago for hours, until one night he sat up in bed, realizing that the source was in a different library!

---

## 6.2 ENGAGING SOURCES ACTIVELY

Experienced researchers don't read passively; they engage their sources actively, entering into conversation with them. If you can, read important sources twice. First, read generously. Pay attention to what sparks your interest. Reread passages that puzzle or confuse you. Don't look for disagreements right away, but read in ways that help the source make sense. Otherwise, you'll be tempted to emphasize its weaknesses if it presents an argument that rivals yours. Resist that temptation, at least at first.

Then, if your source seems important or seems to challenge your own position, read it a second time slowly and more critically. When you read a passage, think not only about what it says but about how you would respond. Record those responses in your notes or—if you own the source or are working from a copy—in the margins of the source itself. Test your understanding by summarizing: if you can't sum up a passage in your mind, you don't understand it well enough to disagree.

Don't accept a claim just because an authority asserts it. For decades, researchers cited the “fact” that the Inuit people of the Arctic had many terms for types of snow. But another researcher found that they have just three (or so she claims). And understand that experts frequently disagree. If Expert A says one thing, B will assert the opposite, and C will claim to be an expert but is not. When some students hear experts disagree, they become cynical and dismiss expert knowledge as just opinion. But don't mistake informed and thoughtful debate over legitimately contested issues for mere opinion. In fact, it's the mark of an active field.

If you are an advanced researcher, check the accuracy of everything important to your argument. Researchers whose work has been used by others will tell you, as often as not, that it was reported inaccurately, summarized carelessly, or criticized ignorantly. Writers regularly write to the *New York Review of Books* and the “Book Review” of the *New York Times*, pointing out how reviewers distorted their ideas or made factual errors criticizing them.

---

**Check—and Check Again**

Researchers rarely misrepresent sources deliberately, but they are occasionally careless or intellectually lazy. Colomb heard a prominent researcher confess after her talk that she had never read the work she had just discussed. One of Booth's books was "refuted" by a critic who apparently read only the title of a section, "Novels Must Be Realistic." Failing to read beyond it, he didn't know that Booth himself was attacking the claim in the title, along with other misconceptions about fiction. One reviewer of a book by Williams misquoted him and then, thinking he was disagreeing with him, argued for the point Williams made in the first place!

---

## 6.3 READING FOR A PROBLEM

Once you have a research problem, use it to guide your search for evidence, models, and arguments to respond to. But if you don't yet have one, you won't know which data, models, or arguments might be relevant. So read sources not randomly but deliberately to find a problem. Look for claims that seem puzzling, inaccurate, or simplistic—anything you can disagree with. You're more likely to find a research problem when you disagree with a source, but you can also find one in sources you agree with.

### 6.3.1 Look for Creative Agreement

If you believe what a source claims, try to extend that claim: What new cases might it cover? What new insights can it provide? Is there confirming evidence the source hasn't considered? Here are some ways to find a problem through creative agreement.

1. **Offer additional support.** You can offer new evidence to support a source's claim.

Smith uses anecdotes to show that the Alamo story had mythic status beyond Texas, but editorials in big-city newspapers offer better evidence.

- Source supports a claim with old evidence, but you offer new evidence.
- Source supports a claim with weak evidence, but you offer stronger evidence.

2. **Confirm unsupported claims.** You can prove something that a source only assumes or speculates about.

Smith recommends visualization to improve sports performance, but MRI studies of the mental activities of athletes offer evidence that shows why that is good advice.

- Source speculates \_\_\_\_\_ might be true, but you offer evidence to show that it is.
- Source assumes \_\_\_\_\_ is true, but you can prove it.

3. **Apply a claim more widely.** You can extend a position.

Smith argues that medical students learn physiological processes better when they are explained with many metaphors rather than with just one. The same seems true for engineering and law students.

- Source correctly applies \_\_\_\_\_ to one situation, but you apply it to new ones.
- Source claims that \_\_\_\_\_ is true in a specific situation, but you show it's true in general.

### 6.3.2 Look for Creative Disagreement

If you read actively, you'll inevitably find yourself disagreeing with your sources. Don't brush those disagreements aside, because they often point to new research problems. Look for these types (the list is not exhaustive, and some kinds overlap):

1. **Contradictions of kind.** A source says something is one kind of thing, but it's another.

Smith says that graffiti is merely vandalism, but it is better understood as a form of public art.

- Source claims that \_\_\_\_\_ is a kind of \_\_\_\_\_, but it's not.
- Source claims that \_\_\_\_\_ always has \_\_\_\_\_ as one of its features or qualities, but it doesn't.
- Source claims that \_\_\_\_\_ is normal/good/significant/useful/moral/interesting, but it's not.

You can reverse those claims and the ones that follow to state the opposite:

- Though a source says \_\_\_\_\_ is *not* a kind of \_\_\_\_\_, you can show that it is.

2. **Part-whole contradictions.** You can show that a source mistakes how the parts of something are related.

Smith has argued that coding is irrelevant to a liberal education, but in fact, it is essential.

- Source claims that \_\_\_\_\_ is a part of \_\_\_\_\_, but it's not.
- Source claims that one part of \_\_\_\_\_ relates to another in a certain way, but it doesn't.

- Source claims that every \_\_\_\_\_ has \_\_\_\_\_ as one of its parts, but it doesn't.

**3. Developmental or historical contradictions.** You can show that a source mistakes the origin or development of a topic.

Smith argues that the world population will rise, but it won't.

- Source claims that \_\_\_\_\_ is changing, but it's not.
- Source claims that \_\_\_\_\_ originated in \_\_\_\_\_, but it didn't.
- Source claims that \_\_\_\_\_ develops in a certain way, but it doesn't.

**4. External cause-effect contradictions.** You can show that a source mistakes a causal relationship.

Smith claims that legalizing marijuana will increase its use among teenagers, but evidence shows that it doesn't.

- Source claims that \_\_\_\_\_ causes \_\_\_\_\_, but it doesn't/they are both caused by \_\_\_\_\_.
- Source claims that \_\_\_\_\_ is sufficient to cause \_\_\_\_\_, but it's not.
- Source claims that \_\_\_\_\_ causes only \_\_\_\_\_, but it also causes \_\_\_\_\_.

**5. Contradictions of perspective.** Most contradictions don't change a conceptual framework, but when you contradict a "standard" view of things, you urge others to think in a new way.

Smith assumes that advertising has only an economic function, but it also serves as a laboratory for new art forms.

- Source discusses \_\_\_\_\_ from the point of view of \_\_\_\_\_, but a new context or point of view reveals a new truth [the new or old context can be social, political, philosophical, historical, economic, ethical, gender specific, etc.].
- Source analyzes \_\_\_\_\_ using theory/value system \_\_\_\_\_, but you can analyze it from a new point of view and see it in a new way.

## 6.4 READING FOR ARGUMENTS

### 6.4.1 Read for Arguments to Respond To

No argument is complete until it acknowledges and responds to its readers' predictable questions and disagreements. You can find some of those competing views in secondary sources. What alternatives to your claims do they offer? What evidence do they cite that you must acknowledge? Some new researchers think that they weaken their case if they mention any views opposing their own. The opposite is true. When you acknowledge the views of others, you show that you not only know those views, but have carefully considered and can confidently respond to them (for more on this, see [chapter 10](#)).

Experienced researchers also use those competing views to improve their own. You can't really understand what you think until you understand why a rational person might think differently. So as you look for sources, don't look just for those that support your claims. Be alert for sources that contradict them, because they are sources that your readers are likely to know.

### 6.4.2 Read for Models of Reasoning and Analysis

You can use secondary sources in another way as well: as models of reasoning and analysis. If you have never made an argument like the one you plan to, you might follow the pattern of other arguments that you find in your secondary sources. You can't use specific ideas (that would be plagiarism), but you do not plagiarize a source when you borrow its ways of arguing or of analyzing data. (Don't worry that using a source as a model will make your research seem unoriginal. Research arguments are often unoriginal in their methods and ways of reasoning. Readers will look for originality in your problem, claim, and evidence.)

Suppose you want to argue that the Alamo legend thrived because it served the political interests of those who created it and satisfied the emotional needs of those who repeated it. You will need reasons and evidence unique to your claim, but you can raise the *kinds* of issues that readers see in similar arguments about other legends, real or fictional. If, for example, a source shows how the King Arthur legend helped to shape English society and

politics, you might make a similar argument about the Alamo and the Republic of Texas. You are not obliged to cite your model, but to gain credibility, you might note that it makes an argument similar to yours:

Just as the Arthurian legends helped to forge a definitively English social and political identity (Weiman 1998), so the legend of the Alamo . . .

## **6.5 READING FOR DATA AND SUPPORT**

### **6.5.1 Read for Data to Use as Evidence**

New researchers regularly mine secondary sources for data, but if you can, check the primary source. If an important quotation is available in its original form and context, it is risky and intellectually lazy not to look it up. You don't have to agree with a source to use its data; in fact, its argument does not even have to be relevant to your question, so long as its data are. However, use statistical data only if you can judge for yourself whether they were collected and analyzed appropriately. (You serve yourself well if you take a course or two in statistics and probability, an area where most Americans are shamefully ignorant.)

### **6.5.2 Read for Claims to Use as Support**

Researchers often use the results they find in secondary sources to bolster their own arguments. If you find a useful claim, you can cite it to support your own, especially if it has been well supported and widely accepted. But many claims show nothing more than that another researcher agrees with you. To use such claims as evidence, you have to report not only the conclusion of the source but its reasoning and supporting evidence as well.

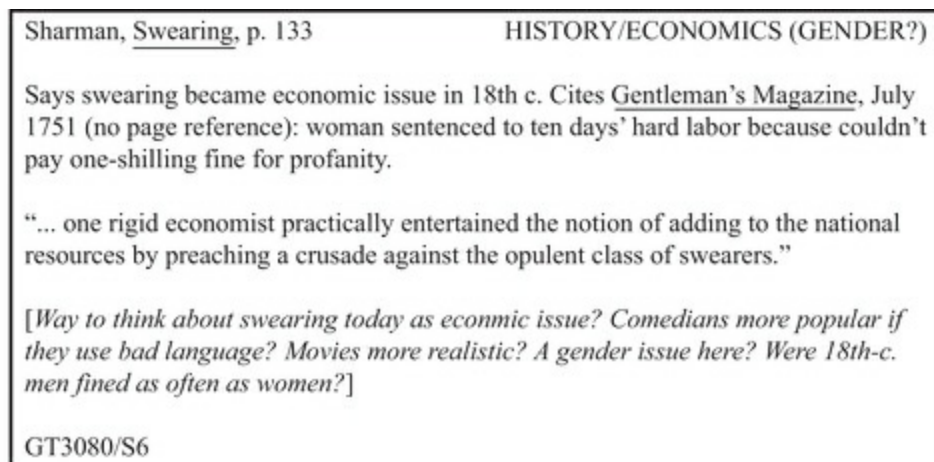
## 6.6 TAKING NOTES

Once you find a source that you think you can use, you must read it purposefully and carefully. But that will do you little good if you can't locate it again or remember it well enough to use. So again, before you do anything else, record the source's full bibliographic information. Then take notes in a way that will help you not only to remember and use what you have read but also to further your own thinking.

You can take notes on index cards or in a notebook, or you can use your computer or handheld device. You can even take notes online, using any number of web-based solutions, from word processors to elaborate reference-management systems. Each of these approaches has its advantages and disadvantages. You need to understand them and pick the approach that will work best for you.

### 6.6.1 Taking Notes on Paper

Years ago, the standard way to take notes on sources was to create a file of index cards:



At the top left is the author, short title, and page number. At the top right are keywords that let the researcher sort and re-sort notes into different categories and orders. The body of the card summarizes the source, records a direct quotation, and includes a comment or thought about further research that is clearly distinguished from the quotation. At bottom left is the call number of

the source.

Although few researchers use this method extensively today, we can still learn important principles from it:

- Record complete bibliographic information for each source so that you can cite it properly and find it again easily.
- Separate notes on different topics: don't jumble together your notes on different topics, even if they come from the same source.
- Make sure your notes are accurate, because you need to be able to rely on them later. (If you want to quote more than a few lines, consider photocopying, scanning, or cutting-and-pasting the passage, or simply saving the whole document.)
- Perhaps most important: clearly distinguish (1) what you quote from a source, (2) what you paraphrase or summarize from a source, and (3) your own thoughts. If you are writing on paper, use headings or brackets or different colors of ink to differentiate these different kinds of note. If you are using a computer or taking notes online, use different fonts or different colors of type. We stress that you must *unambiguously* distinguish your own words from those of your sources because it is so easy to confuse the two.

Compared to computer files, paper notes can be cumbersome to store, back up, index, and access, and they are susceptible to transcription errors: when hand-copying quotations, it is surprisingly easy to alter their wording, even when you think you are being careful. Still, paper notes have their uses. For example, a notebook or pack of index cards is cheap and portable, and paper can sometimes go where technology cannot—some archives still require patrons to take notes with paper and pencil. The main reason some researchers still rely on paper notes is that they help with thinking. Since you can't write out everything, using paper forces you to think about what's most important. Likewise, if your notes are on cards or sheets of paper, you can group them, shuffle them, or lay them out on a desk, a table, or even the floor. And the very act of *writing out* your notes can help you not only remember what's in them but also see connections and develop your own ideas.

Still, few researchers today rely on paper notes alone. Most use their computers.

## 6.6.2 Taking Notes on a Computer

When you take notes using a computer, you have several options:

- Most simply, you can use a word processor. Create a separate file (or at least a separate page) for each source, and be sure to unambiguously distinguish your own words from those of your source. Word processors are easy to use, but they also limit your ability to index, organize, sort, and search your notes. So for long or complex projects especially, you may want to consider other options.
- You can use a dedicated note-taking application to create and organize your notes for a project. Such applications can help you to index, sort, and access your notes, but since they sometimes use proprietary formats, they can make it difficult for you to share your notes or use them with other programs.
- You can use a full reference-management system. Such systems do much more than help you organize and access your notes. They can often pull information directly from online library catalogs and databases, and they can format and update your citations and bibliographies when you write. Some will even store full electronic copies of your sources within the reference management system, helping you build and maintain your personal library of sources. But like note-taking programs, these systems sometimes use proprietary formats, and you have to learn to use them.

All three types of application are also available in web-based versions, meaning that the application and your notes reside not on your own computer but in the “cloud.” This protects your data from inadvertent loss or corruption (you don’t have to worry about your hard drive crashing) and can help you share information and collaborate with other researchers.

But whatever technology you use, you have to consider some basic questions:

- How will you stay organized? For example, if you plan to create a separate word-processing document for each source, you then need a system for naming and storing your files. Without such a system, it is very easy to “lose” your notes on your hard drive.
- How will you use your notes? You may decide to store your notes differently for small projects and large ones, for discrete projects and ongoing ones, for individual projects and collaborative ones.
- What applications are available through your school or library? Many

schools offer note-taking or reference-management systems to faculty and students, sometimes integrating these tools with their catalogs. If your school offers such resources, consider using them.

- Most important: what approach best suits your own ways of writing, thinking, and working? As you grow as a writer and researcher, you will develop ways of working that are particular to you. Others may find them cumbersome or confusing or even incomprehensible. No matter. Remember that your goal is not to create an elaborate set of notes but to research and write capably and intelligently. If a piece of software doesn't help you do that, it isn't useful—to you.

### 6.6.3 Decide Whether to Quote, Paraphrase, or Summarize

If you can photocopy, scan, or download your source, or you know that you can access it online when you write, you can focus less on preserving its exact words than on your own engagement with it. That's a great advantage. Summarize the source, which will also help you understand it, and note passages you may want to quote or paraphrase when you write. Note also your own responses to the source. Where did you find yourself agreeing with it? Disagreeing? Wanting to say, *Yes, but . . .* ?

If you can't preserve your source and you don't know whether you will be able to access it later, you have a tougher choice. It takes too long to transcribe the exact words of every passage that's interesting or potentially useful, but it's a nuisance when you realize later that you want to quote something you only summarized. So when taking notes, you must choose as you go whether to quote, paraphrase, or summarize. In general, researchers in the humanities quote most often; social and natural scientists usually paraphrase and summarize. But every choice depends on how you plan to use your source:

- Summarize when you need only the point of a passage, section, or even whole article or book. Summary is useful for context or views that are related but not specifically relevant. A summary of a source never serves as good evidence.
- Paraphrase when the specific words of a passage are less important than its meaning. Paraphrasing doesn't mean changing just a word or two. You must replace most of the words and phrasing of the original with your own. A paraphrase is never as good evidence as a direct quotation.
- Record exact quotations for these purposes:

—The quoted words are evidence that backs up your reasons. If, for example, you claimed that different regions responded to the Battle of the Alamo differently, you would quote exact words from different newspapers. You would paraphrase them if you needed only their general sentiments.

—The words are from an authority you plan to rely on or challenge.

—The words are strikingly original or so compelling that the quotation can frame the rest of your discussion.

—The source makes a claim that you disagree with, and to be fair you want to state that claim exactly.

*Never* abbreviate a quotation thinking you can accurately reconstruct it later. You can't. And if you misquote, you'll undermine your credibility.

#### 6.6.4 Get the Context Right

You can't record *everything*, but you have to record *enough* to ensure that you accurately capture the source's meaning. As you use material from your sources, record not just what they say but how they use the information.

1. **When you quote, paraphrase, or summarize, be careful about context.** You cannot entirely avoid quoting out of context, because you cannot quote all of an original. So when you draft a paraphrase or summary or copy a quotation, do so within the context that matters most—that of your own grasp of the original. When you record a part of an argument, note the line of reasoning that the author was pursuing:

**NOT:** Bartolli (p. 123): The war was caused by Z.

**NOT:** Bartolli (p. 123): The war was caused by X, Y, and Z.

**BUT:** Bartolli: The war was caused by X, Y, and Z (p. 123). But the most important cause was Z (p. 123), for three reasons: reason 1 (pp. 124–26); reason 2 (p. 126); reason 3 (pp. 127–28).

Sometimes you will care only about the conclusion, but readers usually want to see how a conclusion emerges from the argument supporting it. So when you take notes, record not only conclusions but also the arguments that support them.

2. **When you record a claim, note its role in the original.** Is it a main point? A minor point? A qualification or concession? By noting these distinctions you avoid this kind of mistake:

**ORIGINAL BY JONES:** “Researchers recognize that lung cancer has a number of causes, including genetic predisposition and exposure to environmental factors such as asbestos, radon, and fine particulates. But no one who has studied the data doubts that lung cancer’s leading cause is smoking.”

**MISLEADING REPORT ABOUT JONES:** Smoking is just one cause of lung cancer among many. Jones, for example, claims that “lung cancer has a number of causes, including genetic predisposition and exposure to environmental factors such as asbestos, radon, and fine particulates.”

Jones did not make that point at all. He *conceded* a point to set up the point he wanted to make. Anyone who deliberately misreports in this way violates basic standards of truth. But you can make such a mistake inadvertently if you note only a source’s words and not their role in an argument.

To avoid such mistakes, distinguish statements that are central to an argument from qualifications or concessions that the author acknowledges but downplays. Unless you are reading “against the grain” of the writer’s intention—to expose hidden tendencies, for example—do not report minor aspects of a source as though they were major or, worse, as if they were the source’s whole point.

**3. Record the scope and confidence of a claim.** These are not the same:

Chemicals in french fries cause cancer.

Chemicals in french fries may be a factor in causing cancer.

Some chemicals in french fries correlate with a higher incidence of some cancers.

**4. Don’t mistake a summary of another writer’s views for those of an author summarizing them.** Some writers do not clearly indicate when they summarize another’s argument, so it is easy to quote them as saying what they set out to disprove rather than what they in fact believe.

**5. Note why sources agree and disagree.** Two social scientists might claim that a social problem is caused by personal factors, not by environmental forces, but one might cite evidence from genetic inheritance while the other points to religious beliefs. How and why sources agree is as important as the fact that they do. In the same way, sources might disagree because they interpret the same evidence differently or take

different approaches to the problem.

It is risky to attach yourself to what any one researcher says about an issue. It is not “research” when you uncritically summarize another’s work. Even if your source is universally trusted, be careful. If you rely on at least two sources, you’ll usually find that they do not agree entirely, and that’s where your own research can begin. *Which has the better argument? Which better respects the evidence?* In fact, you have a research problem right there—whom should we believe?

## 6.7 Annotating Your Sources

### 6.7.1 Marginal Annotations

As an alternative to taking notes on paper or a computer, you can directly annotate many sources in print or digital form. Annotation is a technique of marking up a text through comments, questions, and cross-references to other texts. Annotating in the margins is generally more productive than simply highlighting because it brings into relief the relevance of a source to your project.

In annotating, you document the active reading practices discussed in this chapter. You can use annotations to identify a source's claims and keywords or "argue" with a source by questioning (or extending) its reasons, evidence, and warrants (see [part III](#)). As your project develops, you can return to an annotated text to see what you were thinking earlier.

Of course, not every text is equally available for annotation. You can't write in the margins of library books or other texts you do not own. Many texts are accessible only (or most conveniently) in digital form. Fortunately, however, there are digital annotation tools that let you document your reading in digital environments. You can use these tools to annotate a wide range of texts, including images, and to link your readings of various texts to create a searchable database for later retrieval.

---

### The Value of Reading Widely

We have emphasized how important it is to have a good question to focus your research. Don't think, however, that you waste time reading sources that turn out to be irrelevant. In fact, when you read and record more than you use, you build up a base of knowledge crucial to the exercise of good thinking. Good thinking is a skill that you can learn, but you can exercise it only when you have a deep and wide base of knowledge to work on. So read sources not just to answer the question you ask today, but to help you think better about every question you'll ask for the rest of your research career. To that end, everything you read is relevant.

---

## 6.7.2 Annotated Bibliography

One approach to engaging sources is an annotated bibliography—a list of possible sources featuring both a citation and a brief descriptive summary of each source. (For more on citations, see 14.5.) There are multiple types of annotations based on the motive for creating them. For a research project, an annotated bibliography offers a bird’s-eye view of a range of sources and the roles they might play in your paper. Often the assembling of an annotated bibliography is a distinct stage in a research process, one that allows you (and your teacher) to reflect on the sources you have collected. Each annotation is an opportunity to evaluate the credibility of a source, summarize its argument, and explain its relevance to your project.

Compiling an annotated bibliography can serve as a checkpoint to gauge how thoroughly you have conducted your research and how deeply you have engaged the sources you have collected. If you can’t summarize your sources or explain their relevance, you are likely not ready to write your paper.

### Quick Tip: Manage Moments of Normal Anxiety

As you get deeper into your project, you may experience a moment when everything seems to run together into a hopeless muddle. That usually happens when you accumulate notes faster than you can sort them. Such moments can be stressful, but they can also be a sign that you are on the verge of a new insight or discovery.

You can minimize the panic by taking every opportunity to organize and summarize what you have gathered by *writing as you go* and by returning to the central questions: *What question am I asking? What problem am I posing?* Keep rehearsing that formula, *I am working on X to learn more about Y, so that my readers can better understand Z.* Writing regularly about these questions does more than help you stay focused; it also helps you think.

You can also turn to friends, classmates, teachers—anyone who will serve as a sympathetic but critical audience. Explain how what you have learned bears on your question and helps you resolve your problem. Ask them, *Does this make sense? Am I missing anything important? What else would you like to know?* You will profit from their reactions, but even more from the mere act of explaining your ideas to non-specialists.