

7 Making Good Arguments

AN OVERVIEW

In this chapter, we explain what a research argument is and the five questions whose answers constitute one.

In part II, we argued that real research involves more than just amassing information on a topic; we argued that it means developing solutions to problems you and your readers care about. Likewise, sharing the results of your research involves more than just giving your readers a “data dump” that says, *Here are some facts about my topic*; it means explaining your problem and justifying your solution in a *research argument*.

7.1 ARGUMENT AS A CONVERSATION WITH READERS

In a research argument, you make a *claim*, back it with *reasons* supported by *evidence*, *acknowledge* and *respond* to other views, and sometimes explain your *principles* of reasoning. There’s nothing arcane about these things: you do them in every conversation that inquires thoughtfully into an unsettled issue:

ABBY: I hear last semester was a little rocky. How do you think this term will go? [Abby poses a problem that interests her, put in the form of a question.]

BRETT: Better, I hope. [Brett makes a claim that answers the question.]

ABBY: Why is that? [Abby asks for a reason to believe Brett’s claim.]

BRETT: I’ll finally be taking courses in my major. [Brett offers a reason.]

ABBY: Why will that make a difference? [Abby doesn’t see how Brett’s reason is relevant to his claim that he will do better.]

BRETT: When I take courses I’m interested in, I work harder. [Brett offers a general principle that relates his reason to his claim.]

ABBY: What courses? [Abby asks for evidence to back up Brett’s reason.]

BRETT: History of architecture, introduction to design. [Brett offers specific instances on which he based his reason.]

ABBY: But what about that calculus course you have to take again? [Abby offers a point that contradicts Brett’s reason.]

BRETT: I know I had to drop it last time, but I found a really good tutor. [Brett acknowledges Abby’s objection and responds to it.]

ABBY: But won’t you be taking five courses? [Abby raises another reservation.]

BRETT: I know. It won’t be easy. [Brett concedes a point he cannot refute.]

ABBY: Will you pull up your GPA? [Abby asks about the limits of Brett’s claim.]

BRETT: I should. I’m hoping for a 3.0, as long as I don’t have to get a part-time job. [Brett limits the scope of his claim and adds a condition.]

If you can imagine yourself in that conversation, you’ll find nothing strange about assembling a research argument. That’s because the five elements of any argument are just answers to the kinds of questions Abby asks Brett—and that you must ask yourself on your reader’s behalf:

1. **Claim:** What do you want me to believe? What’s your point?
2. **Reasons:** Why do you say that? Why should I agree?
3. **Evidence:** How do you know? Can you back it up?
4. **Acknowledgment and Response:** But what about . . . ?
5. **Warrant:** How does that follow? What’s your logic? Can you explain your reasoning?

In fact, you can think of your research as the process of figuring out answers to these questions.

7.2 SUPPORTING YOUR CLAIM

At the core of every research argument is the answer to your research question, the solution to your problem—your main claim. You have to back up that claim with two kinds of support: reasons and evidence.

7.2.1 Support Claims with Reasons

The first kind of support, a reason, is a statement that leads readers to accept your claim. We often join a reason to a claim with *because*:

Clarifying Some Terms

So far, we've used two terms to name the statement that sums up the results of your research. In the context of questions, we called it your *answer*. In the context of problems, we called it your *solution*. Now in the context of an argument, we'll call it your *claim*.

- A *claim* is an assertion (which can be a single sentence or more) that demands support: *Climate change is threatening coastal cities; Toni Morrison's most important novel is Beloved. Your main claim is the assertion your whole research argument supports. Some call this assertion your thesis.*
- A *reason* is an assertion that supports a claim: [*Because*] *climate change is causing ocean levels to rise; [Because] in Beloved, Morrison's major themes find their fullest development.*
- *Evidence* is data deployed to support a reason. Unlike a claim or a reason, evidence is not always framed as an assertion: a data table documenting rising ocean levels over the past decade or quotations from *Beloved* illustrating Morrison's major themes would be forms of evidence.

These terms can be confusing, because a reason is also a subclaim that can be supported by more reasons and because both reasons and evidence are kinds of support. But if you stick with us, you'll see why these distinctions are important.

Elementary schools should make teaching foreign languages a priority *claim* because we acquire languages best and most easily when we are young. *reason*

You often need more than one reason to support a claim, and in a complex argument, your reasons themselves will usually require further support:

Elementary schools should make teaching foreign languages a priority *claim 1* because we acquire languages best and most easily when we are young. *reason 1 supporting claim 1/claim 2* In fact, those who begin second

languages as adults rarely attain the level of fluency of those who learn them as children. *reason 2 supporting reason 1 and claim 2/claim 3* Teaching foreign languages at the elementary-school level also contributes to children's ethical development. *reason 3 supporting claim 1/claim 4* because it fosters an awareness of cultures and societies beyond their own. *reason 4 supporting reason 3 and claim 4/claim 5.*

7.2.2 Base Reasons on Evidence

The second kind of support is the evidence on which you base your reasons. We've said that reasons can be supported by still more reasons, but these chains don't go on forever. Eventually you have to show some data. That's your evidence. This distinction between reasons and evidence can seem just a matter of semantics, and in some contexts the words do seem interchangeable:

You have to base your claim on good reasons.

You have to base your claim on good evidence.

But they are not synonyms, and distinguishing them is crucial in making sound arguments. Compare these two sentences:

What evidence do you base your reason on?

What reason do you base your evidence on?

That second sentence seems odd: we don't base evidence on reasons; we base reasons on evidence.

There are other differences:

- We use our minds to think up reasons.
- We have to search for evidence "out there" in the world, then make it available for everyone to see.

It makes no sense to ask, *Where do I go to see your reasons?* It does make sense to ask, *Where do I go to see your evidence?*

In casual conversation, we usually support a claim with just a reason:

We should leave. *claim* It looks like rain. *reason*

Few ask, *What's your evidence that it looks like rain?* But when you address serious issues, readers expect you to base each reason on its own foundation of evidence, because careful readers don't accept reasons at face value. They ask for the evidence, the data, the facts on which you base those reasons:

Elementary schools should make teaching foreign languages a priority^{claim 1} because we acquire languages best and most easily when we are young.^{reason 1 supporting claim 1/claim 2} In fact, those who begin second languages as adults rarely attain the level of fluency of those who learn them as children.^{reason 2 supporting reason 1/claim 3} In a study of over one hundred second-language learners, Jones (2013) identified an inverse correlation between second-language proficiency and . . . (see table 1).^{evidence supporting reason 2}

With reasons and evidence, we have the core of a research argument:

CLAIM *because of* REASON *based on* EVIDENCE

But in most cases, this core alone isn't enough: you also have to flesh out your research argument by *acknowledging and responding* to other points of view and, sometimes, by offering *warrants* that show how a reason is *relevant* to a claim.

7.3 ACKNOWLEDGING AND RESPONDING TO ANTICIPATED QUESTIONS AND OBJECTIONS

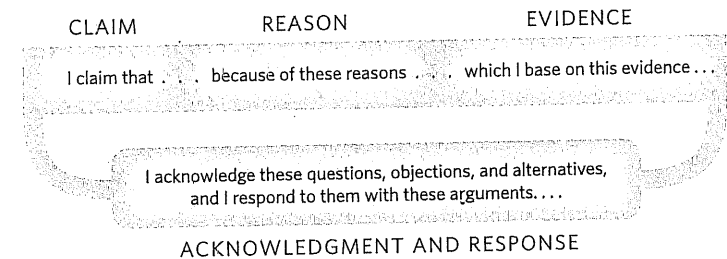
Careful readers will question *every* part of your argument, so you must anticipate as many of their questions as you can, and then acknowledge and respond to the most important ones. For example, when readers consider the claim that schools should make foreign-language instruction a priority, they may wonder if doing that might detract from the teaching of other subjects. If you think readers might ask that question, you would be wise to acknowledge and respond to it:

Elementary schools should make foreign languages a priority^{claim 1} because we acquire languages best and most easily when we are

young.^{reason 1 supporting claim 1/claim 2} . . . Of course, if schools increase the attention they give to foreign languages, quality of instruction in other subjects might decline.^{acknowledgment} But little evidence exists to support that fear and much dispels it. . . ^{response}

The challenge all researchers face, however, is not just responding to readers' questions, alternatives, and objections, but imagining them in the first place. (We'll address that issue in chapter 10.)

Since no research argument is complete without acknowledgments and responses, we add them to our diagram to show how they relate to all the other parts of an argument:



7.4 CONNECTING CLAIMS AND REASONS WITH WARRANTS

Even when your readers agree that a reason is true, they may still object that it's not *relevant* to your claim. Consider this argument:

We are facing significantly higher health care costs in Europe and North America^{claim} because climate change is moving the line of extended hard freezes steadily northward.^{reason}

Readers might accept the *truth* of that reason but question its *relevance* to the claim, asking: *What do higher health costs have to do with hard freezes? I don't see the connection.* To answer, you must offer a *general* principle that justifies relating your *particular* reason to your *particular* claim:

When an area has fewer hard freezes, it must pay more to combat new diseases carried by subtropical insects no longer killed by those freezes.

Like all warrants, this one says that if a general circumstance exists (an area has fewer hard freezes), then we can infer a general consequence (that area will have higher costs to combat new diseases). The logic behind all warrants is that if a generalization is true or reasonable, then so must be specific instances of it.

But for that logic to work, readers must agree with four things. Two are easy to understand:

1. The warrant is true or reasonable: fewer hard freezes in fact mean higher medical costs.
2. The reason is true or reasonable: hard freezes in fact are moving north.

The next two are more difficult:

3. The specific circumstance in the reason qualifies as a *plausible instance* of the general circumstance in the warrant.
4. The specific consequence in the claim qualifies as a *plausible instance* of the general consequence in the warrant.

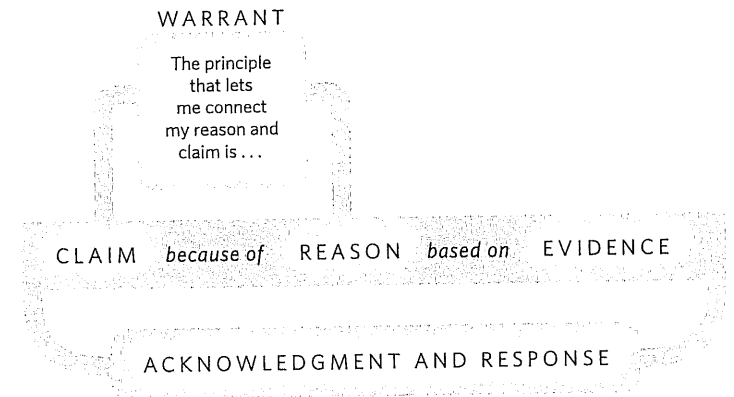
We can illustrate that logic like this:

This General Circumstance	<i>predictably leads to</i>	This General Consequence
When an area has few hard freezes,		it will pay more to combat diseases carried by subtropical insects no longer killed by hard freezes.
This is a good instance of this.		This is a good instance of this.
Global warming is moving the line of extended hard freezes steadily north. <i>reason</i>	so	We are facing significantly higher health care costs. <i>claim</i>
This Specific Circumstance	<i>lets us infer</i>	This Specific Consequence

As we'll see, it's not easy to decide when you even need a warrant. Experienced researchers usually state them on only two occasions: when they think readers in their fields might ask how a reason is relevant to a claim or when they are explaining their fields' ways of reasoning to general readers. If you think your readers might not see the connection between a claim and reason, you must add a warrant to justify it:

When an area has fewer hard freezes, it can expect higher medical costs to cope with diseases carried by subtropical insects that do not survive freezes.*warrant* Europe and North America must thus expect higher health care costs*main claim* because climate change is moving the line of extended hard freezes steadily north.*reason* In the last one hundred years, the line of hard freezes lasting more than two weeks has moved north at the rate of roughly ...*evidence*

We can add warrants to our diagram to show that they connect a claim and its supporting reason:



(We know this matter of warrants is not easy to grasp; we explain it again in more detail in chapter 11.)

7.5 BUILDING A COMPLEX ARGUMENT OUT OF SIMPLE ONES

Those five elements constitute a "basic" argument, but research arguments are more complex.

- We almost always support a claim with two or more reasons, each of which must be supported by its own additional reasons and evidence and perhaps justified by its own warrant.
- Since readers think of many alternatives and objections to any complex argument, careful researchers typically have to respond to a number of them.

Moreover, each reason, warrant, or response to an objection (all of which are statements or assertions) may itself have to be treated

Cognitive Overload: Some Reassuring Words

It's at about this point that many students new to research begin to feel overwhelmed. If so, your anxieties have less to do with your intelligence than with inexperience. One of us was explaining to teachers of legal writing how being a novice makes many first-year law students feel like incompetent writers. At the end of the talk, one woman reported that she had been a professor of anthropology whose published work was praised for the clarity of her writing. Then she switched careers and went to law school. She said that during her first six months, she wrote so incoherently that she feared she was suffering from a degenerative brain disease. Of course, she was not: she was going through the painful transition most of us experience when we try to write about matters we do not entirely understand for an audience we understand even less. She was relieved to find that the better she understood the law, the better she wrote about it.

If you feel overwhelmed, you can take comfort in that story, as did one reader who e-mailed us this:

In *Craft of Research* you write about a woman who switched from anthropology to law and suddenly found herself unable to write clearly. After being an assistant professor of graphic design for five years, I recently switched to anthropology and suddenly found that writing anthropology papers is like pulling teeth. I thought to myself that I might have a degenerative brain disorder! I laughed out loud when I read about the anthropologist who switched to law. It made me feel a bit better.

as a subclaim and supported by its own argument. Only the evidence “stands alone,” but even then you may have to explain where you got it, why you think it's reliable, and how it supports your reason—and that may require yet another argument.

And finally, most arguments also include background, definitions, explanations of issues that readers might not understand, and so on. If, for example, you were making an argument about the relationship between inflation and money supply to readers not familiar with economic theory, you would have to explain how economists understand those concepts. Serious arguments are complex constructions. (Chapters 8–11 explain them in detail.)

7.6 CREATING AN ETHOS BY THICKENING YOUR ARGUMENT

Readers judge your arguments not just by the reasons and evidence you offer but also by how well you anticipate and address their questions and concerns. By “thickening” your argument in this way, you earn the confidence of your readers, building up what is traditionally called your *ethos*: the character you project in your argument. Do you seem to be the sort of person who considers issues from all sides, who supports claims with evidence that readers accept, and who thoughtfully considers other points of view? Or do you seem to be someone who sees only one point of view and dismisses or even ignores the views of others?

When you acknowledge other views and explain your principles of reasoning in warrants, you give readers good reason to work *with* you in developing and testing new ideas. In the long run, the *ethos* you project in individual arguments hardens into your reputation, something every researcher must care about, because your reputation is the tacit sixth element in every argument you write. It answers the unspoken question, *Can I trust you?* That answer must be *Yes*.

QUICK TIP A Common Mistake—Falling Back on What You Know

If you are an inexperienced researcher, you may be tempted to rely too heavily on what feels familiar. For example, you might embrace a claim too early, perhaps even before you have done much research, because you “know” you can prove it. But falling back on that kind of certainty will just keep you from doing your best thinking. Being a researcher means allowing yourself to be surprised by your discoveries and insights. So when you start a project, begin not with a claim you know you can prove but with a problem you want to explore and solve.

Likewise, when you are new to a field, you may be tempted to rely on ways of arguing that are familiar to you from your education or experience. If, for example, you learned in a literature class how to present and analyze quotations, do not assume that you can do the same in fields that emphasize “objective data,” such as biology or experimental psychology. On the other hand, if as a biology or psychology major you learned to gather hard data and perform statistical analyses, do not assume that you can do the same in art history. This does not mean that what you learn in one class is useless in another. All fields share the elements of argument we describe here. But you have to learn what’s distinctive in the way a field handles those elements and be flexible enough to adapt, trusting the skills you’ve learned.

And when you become familiar with your field, you may be tempted to oversimplify in a different way. When some beginning researchers succeed at making one kind of argument, they just keep making it over and over. Their mastery of one kind of complexity blinds them to another: they fail to see that their field, if it is an active one, is marked by competing methodologies, competing solutions, competing goals and objectives. Don’t fall into this trap. If you’ve mastered one type of argument, try others: seek out alternative methods, formulate not only multiple solutions but multiple ways of supporting them, ask whether others would approach your problem differently.

When you are new to a topic or a field, you need ways to manage the complexity of new ideas and new ways of thinking. But guard against uncritically imposing familiar methods on new problems. As you learn more, you’ll recognize that things are neither as blindly complex as you first feared nor as simple as you then hoped.