

Making Good Arguments: An Overview

In this chapter we discuss the nature of a research argument and the five questions whose answers constitute one.

You can't wait to plan an argument supporting the answer to your question until you have every last bit of data. In the first place, you'll never get them all. But more important, you can't know what data you need until you sketch the argument they fit into. Only after you sort your data into the elements of an argument that answers your readers' predictable questions can you see what research you still have to do. But more than that, when you plan your argument early, you grasp your material better and avoid wasted effort, especially return trips to the library.

7.1 ARGUMENT AS A CONVERSATION WITH READERS

In a research report, you make a *claim*, back it with *reasons*, support them with *evidence*, *acknowledge* and *respond* to other views, and sometimes explain your *principles* of reasoning. There's nothing arcane in any of that, because you do it in every conversation that inquires thoughtfully into an unsettled issue:

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

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

A: Why is that? [A asks for a reason to believe B's claim.]

- B: I'll finally be taking courses in my major. [*B offers a reason.*]
- A: Why will that make a difference? [*A doesn't see how B's reason is relevant to his claim that he will do better.*]
- B: When I take courses I'm interested in, I work harder. [*B offers a general principle that relates his reason to his claim.*]
- A: What courses? [*A asks for evidence to back up B's reason.*]
- B: History of architecture, introduction to design. [*B offers specific instances on which he based his reason.*]
- A: But what about that calculus course you have to take again? [*A offers a point that contradicts B's reason.*]
- B: I know I had to drop it last time, but I found a really good tutor. [*B acknowledges A's objection and responds to it.*]
- A: But won't you be taking five courses? [*A raises another reservation.*]
- B: I know. It won't be easy. [*B concedes a point he cannot refute.*]
- A: Will you pull up your GPA? [*A asks about the limits of B's claim.*]
- B: I should. I'm hoping for a 3.0, as long as I don't have to get a part-time job. [*B limits the scope of his claim and adds a condition.*]

If you can imagine yourself in that conversation, as *either* A or B, you'll find nothing strange about assembling the argument of a research report, because every argument, research or not, is built out of the answers to five questions in that conversation, questions that you must ask yourself on your readers' behalf:

1. What is my **claim**?
2. What **reasons** support my claim?
3. What **evidence** supports my reasons?
4. Do I **acknowledge** alternatives/complications/objections, and how do I **respond**?
5. What **principle** makes my reasons *relevant* to my claim? (We call this principle a **warrant**.)

CLARIFYING SOME TERMS

So far, we've used two terms to name the sentence 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 a sentence that asserts something that may be true or false and so needs support: *The world is warming up*.
- The *main claim* of a report is the sentence (or more) that the whole report supports (some call this sentence your *thesis*). If you wrote a report to prove that the world is warming up, the sentence stating that would be your main claim.
- A *reason* is a sentence supporting a claim, main or not.

These terms can be confusing, because a reason is also a (sub)claim that can be supported by more reasons. What we call it depends on its context. For example:

TV can have harmful psychological effects on children_{main claim} because when they are constantly exposed to violent images, they come to think violence is natural._{claim/reason 1 supporting main claim} Those exposed to lots of such visual entertainment tend to adopt the values of what they see._{claim/reason 2 supporting reason 1}

Reasons support main claims, but “lower” reasons can support “higher” reasons.

7.2 SUPPORTING YOUR CLAIM

At the core of every research report 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 Base Claims on Reasons

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

The emancipation of Russian peasants was an empty gesture_{claim} because it did not improve the material quality of their daily lives._{reason}

TV violence can have harmful psychological effects on children^{claim} because their constant exposure to violent images makes them think that violence is natural.^{reason}

You usually need more than one reason to support a contestable claim, and in a detailed argument, each reason will usually be a separate sentence.

7.2.2 Base Reasons on Evidence

The second kind of support is the evidence on which you base your reasons. Now the 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 think up reasons by the action of our mind.
- We have to search for evidence “out there” in the “hard” reality of 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?* For example, we can't see TV naturalizing violence for children, but we could see a child answer the question: *Do you think that fighting on TV is real?* In principle, *evidence* is what you and your readers can see, touch, taste, smell, or hear (or is accepted by everyone as a remembered fact—the sun came up yesterday morning). That

oversimplifies the idea of “evidence from out there,” but it illustrates the difference between evidence and reasons.

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:

TV violence can have harmful psychological effects on children.claim 1
 because those exposed to lots of TV tend to adopt the values of
 what they see.reason 1 supporting claim 1/claim 2 Constant exposure to violent
 images makes them unable to distinguish fantasy from reality.reason 2
supporting reason 1 and claim 2 Smith (1997) found that children ages 5–7 who
 watched more than three hours of violent television a day were 25
 percent more likely to say that what they saw on television was
 “really happening.” evidence supporting reason 2

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

CLAIM *because of* → REASON *based on* → EVIDENCE

To offer a complete argument, however, you must add at least one more element and often a second: you must acknowledge other points of view and offer what we call *warrants*, which show how a reason is *relevant* to a claim.

7.3 ACKNOWLEDGING AND RESPONDING TO ANTICIPATED QUESTIONS AND OBJECTIONS

A responsible researcher supports a claim with reasons based on evidence. But unless your readers think exactly as you do (unlikely, given the fact that you have to make an argument in the first place), they may draw a different conclusion or even think of evidence you haven’t. No thoughtful reader will accept your claim based solely on *your* views: you must also address theirs.



Read just the reasons across the tops of the pages to see if that order makes consecutive sense. If it doesn't, try out different orders until it does. Focus not on details, but on the major reasons; when you test different orders, move around whole reasons pages (and any connected pages). Don't worry if this chart makes your argument feel mechanical. At this point, it outlines only your argument, not your report. When you plan a first draft, you'll reconsider your reasons in light of your readers' understanding (and yours) and maybe plan a new order (for more on ordering parts, see 12.2.3).

9.2 DISTINGUISHING EVIDENCE FROM REASONS

Once you've arranged your reasons in a plausible order, be sure you have sufficient evidence to support each one. Readers will not accept a reason until they see it anchored in what *they* consider to be a bedrock of established fact.

The problem is, you don't get to decide that. Remember that to count as evidence, a statement must report a shared, public fact—what readers agree not to question, at least for the purposes of the argument. But if they do question it, what you think is hard factual evidence is for them only a reason, and you have not yet reached that bedrock of evidence on which your argument must rest.

Consider this little argument:

American higher education should review its “hands-off” policy toward off-campus drinking,^{claim} because dangerous binge drinking has become a common behavior.^{reason} **The injuries and death it causes have increased in frequency and intensity, not only at big “party” schools but among first-year students at small colleges.**^{evidence}

In that last sentence, the writer offers what she believes is a “fact” hard enough to serve as evidence to support her reason.

But a skeptical reader might ask, *That’s just a generalization. What hard numbers do you have to back up “increased in frequency and intensity”?* *How many schools do you have solid data on?* *And what do you mean by “big,” “party,” and “small”?* Such a reader treats that statement not as an unquestioned fact but as a soft reason still in need of hard evidence. The writer would have to add something like this:

In 2001–2006, there was a 19 percent increase in episodes of binge drinking resulting in death or injury by first-year students at a representative sample of small colleges (fewer than two thousand students; see appendix 1 for a list).^{evidence}

Of course a *really* skeptical reader could again ask, *What backs up those numbers?* If so, the writer would have to provide still harder data, the specific numbers for each school. If she did her own research, she could show her raw data and the questionnaires she used to gather them (which themselves might be subject to still more skeptical questioning). If she found her data in a secondary source, she could cite it and reproduce its data tables, but she might then be asked to prove that her source is reliable. Really skeptical readers just never give up.

If you can imagine readers plausibly asking, not once but many times, *How do you know that? What facts make it true?*, you have not yet reached what readers want—a bedrock of uncontested evidence. And at a time when so-called experts are quick to tell us what to do and think based on studies whose data we never see,