

validity than others; usually, it all depends on the size of the sample on which the generalization is based. Take this statement, for example: "American cars are more reliable than European cars." Although this is a broad generalization, a study of the overall reliability of millions of American and European cars might show that it is valid (or invalid). A smaller study would only be able to *suggest* that it might be valid or invalid.

Types of Evidence

Evidence includes textual evidence, anecdotes from personal experience, statistics, expert authority, graphs and other visuals, facts, and comparisons or other analogies. Each type has its hazards as well as its strengths (see Table 5.1), and each may be more or less appropriate depending on the assignment and the context.

Table 5.1 Types of Evidence

Type of evidence	Example	Strengths	Hazards
Textual evidence (including quotations, paraphrases, and summaries)	In the end, however, Gopnik celebrates the hectic New York way of life: "Busyness is our art form, our civic ritual, our way of being us" (p. 392).	Expected if the assignment asks you to analyze or "close read" a text. Introduces evidence directly into your essay, showing the reader exactly how you drew your conclusions.	If used excessively, direct quotations can obscure the argument you are making. They must be fully integrated into the argument with analysis and commentary, as they rarely speak for themselves.
Stories or anecdotes (including personal anecdotes)	See Carr, in "Is Google Making Us Stupid?": "Over the past few years I've had an uncomfortable sense that someone, or something, has been tinkering with my brain" (p. 347).	Usually engaging, and can be moving, dramatic, powerful.	They often appeal to the emotions (<i>pathos</i>) rather than reason (<i>logos</i>). May be logically weak, as they describe particular instances rather than general truths.

Passage, making in Response

Table 5.1 Types of Evidence (continued)

Type of evidence	Example	Strengths	Hazards
Statistics	See Foroohar: "The Pew Charitable Trusts' Economic Mobility Project has found that if you were born in 1970 in the bottom one-fifth of the socioeconomic spectrum in the U.S., you had only about a 17% chance of making it into the upper two-fifths" (p. 363).	An economical way to summarize a wealth of evidence.	Often abused. They often look compelling but on examination fail to tell the whole story (see Darrell Huff, <i>How to Lie with Statistics</i>).
Expert authority	Law professor Michelle Alexander contends that, in many ways, African Americans are doing "no better" today than when Martin Luther King Jr. was assassinated (p. 345).	Reliable sources, especially leading scholars in a particular field writing in peer-reviewed journals, provide strong evidence.	Is the source reliable? No one is beyond question. Some sources, especially Web sites, may seem more authoritative than they really are.
Visuals (including graphics that display statistical data)	See Jane McGonigal's use of a bar graph, "Game Time," in her article "Be a Gamer, Save the World" (p. 397).	Economical yet often rich.	Use only if they truly strengthen the argument, and never for decorative purposes.
Facts	See Foroohar, "Whatever Happened to Upward Mobility?": "Behavioral economics tells us that our sense of well-being is tied not to the past but to how we are doing compared with our peers. Relative mobility matters" (p. 364).	Can be difficult to dispute. At best, they are unambiguous, intelligible, clear.	Facts are often less simple and indisputable than they appear. Cite the source of any fact that is not general knowledge.
Analogies (including comparisons, metaphors, and similes)	Since fraternities have been able to give up hazing traditions, it is likely that the football team will be able to do likewise.	An analogy uses facts or conditions that the reader acknowledges to draw immediate assent to a new idea.	Must be a very close fit, or it will be confusing and ineffectual.

As noted earlier, evidence must be both valid (quotations need to be accurate, facts need to be correct, and so on) and relevant to the claim it supports. Sometimes weaker evidence can be combined with other types of evidence to produce reasonably strong support for a claim.

In college writing, the best kind of evidence is often determined by the nature of the assignment. For an assignment that asks for a close reading of one or more texts, the strongest evidence is typically the words on the page. For a research assignment that asks for a study of a local subculture, the strongest evidence might be your direct observations or the testimony of interviewees. Usually, your assignment will either clearly state or strongly hint at the kind of evidence that you are expected to use. If you are unsure, ask your instructor.

An Argument Matrix

Your notes and informal writing have supplied you with a good deal of raw material to work with. But it *is* raw. You could simply work through all this material and mark or copy out the ideas you plan to use. But the process of working out arguments to support your thesis—including identifying claims and the evidence to support those claims, and working out possible counterarguments—can be made more efficient by using a simple device called an **argument matrix**: a document with three columns, headed “Claims,” “Evidence,” and “Discussion.”

The value of an argument matrix is that you can start in any of the three columns, but at some point you will need to enter notes in all three columns to complete the supporting argument. It reminds you to provide evidence, wherever possible, for your claims and to explain that evidence with discussion (evidence doesn’t speak for itself). For example, in the “Evidence” column, you might list a quotation that you feel supports your argument well. Next, in the “Discussion” column, you might add some sentences that explain why this quotation supports your argument. Finally, after this work has clarified how the quotation works in relation to your argument, you can formulate a claim in the “Claims” column. Or you might begin with a claim that you believe to be true and then locate the evidence (a quotation or a fact) that supports the claim.

This method also helps to prevent inadvertent plagiarism, since quotations (other people’s words) are clearly distinguished from discussion (your words). Be sure to identify quotations in the “Evidence” column with page numbers. Although your “Evidence” column might include many useful quotations, you don’t need to

Guidelines

Making a Three-Column Document

To make a three-column document in Microsoft Word, follow these steps.

- Open a new document and choose “Table” under the “Insert” menu. A dialog box will pop up. (On a Mac, choose “Insert” under the “Table” menu.)
- In the “Number of columns” text box, type “3.”
- In the “Number of rows” text box, type “2.” Click “Okay” and a table will appear in the document.
- In the top row, type “Claims” in the left-hand column, type “Evidence” in the middle column, and type “Discussion” in the right-hand column. If you wish, select each of these words and click on the icon for centered text and the icon for boldface. Your first entry will begin in the second row.
- You can add rows as needed: under the “Table” menu, choose “Insert” and then choose “Rows Below” on the submenu that appears.

include them all, word-for-word, in your final essay. You can write paraphrases and summaries or simply insert page numbers. (See Chapter 10’s “Integrate Sources Effectively,” p. 327.)

Gather material from your notes as well as from the text. Reread the text and your notes with your argument in mind, building support for your thesis.

The following example of an argument matrix is taken from an essay in progress on Nicholas Carr’s “Is Google Making Us Stupid?” (p. 347).

Working thesis: that reading has changed further since e-book readers and tablets like the iPad and the Kindle were introduced.

CLAIMS

Carr was unable to foresee devices that make reading long texts easy and pleasant.

EVIDENCE

Carr’s article appeared in 2008. The Kindle was introduced just a year earlier and hadn’t yet had much impact, as it sold out quickly and was unavailable for several months after that. The iPad wasn’t introduced until 2010.

DISCUSSION

The only e-readers Carr would have known about were pretty primitive by today’s standards and couldn’t offer a reading experience that compared to the reading of books.

(continued)

CLAIMS

Technology has become our means for obtaining and reading books.

EVIDENCE

12.8 million e-readers were purchased in 2010, and as of October 2014, Apple has reportedly sold 170 million iPads (though it's impossible to know how many are used as e-readers).

The Internet may be “remapping the neural circuitry” once again, in ways that Carr would appreciate—thus helping us to be immersed in texts, rather than the opposite.

Carr explains that our brains—“our neural circuitry”—are changed by our activities: we can gain a skill by practicing it, or lose it by not practicing it.

Carr writes as if computers can only really be used for surfing of some kind. But we don't just surf on our computers: we read.

The medium, whether paper or screen, does affect our reading experience, but not necessarily for the worse.

E-readers and tablets are lightweight, can be held at any angle, and can be carried anywhere. They usually have an integrated dictionary, making it easy to look up words. Print size can be adjusted. E-readers like the Kindle often have anti-glare screens that resemble paper. You can easily search for a word or phrase.

DISCUSSION

It's very difficult to find reliable numbers for how many people read whole books on e-readers and tablets.

I think this brain-changing must work both ways: just as our brains adapt to surfing if computers encourage it, they can adapt to reading again if devices encourage that instead. (Maybe discuss the amazing skills of some gamers? See McGonigal.)

Carr writes that, “thanks to the ubiquity of text on the Internet,” we may be reading more, but “it's a different kind of reading, and behind it lies a different kind of thinking—perhaps even a new sense of the self” (p. 349). I'm not sure this is so true any more.

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CLAIMS

Technology keeps changing, and recent developments might alleviate some of Carr's concerns.

EVIDENCE

As Carr himself acknowledges, humans are changed forever by each new technology, whether it's the invention of writing, the printing press, the Internet, or e-readers (p. 355).

DISCUSSION

There's always going to be loss as well as gain. But reading long texts seems to be making a comeback.

Anticipating and Incorporating Counterarguments

The “Claims” column is also the place to list counterarguments and your rebuttals. A counterargument is an argument that opposes your own argument. Why bring counterarguments into your essay? For two reasons: First, an intelligent reader may well be thinking already of objections to your argument, and you can put these opposing ideas to rest by preemptively responding to them. Second, by addressing counterarguments, you show that you have thoroughly considered every aspect of your argument and are hiding nothing. Anticipating and refuting counterarguments makes your own argument stronger.

Counterarguments are often addressed near the end of an essay, after the main argument has been presented, but they may be included almost anywhere. They may be introduced with phrases such as “although some might argue . . .” or “some readers might object to this argument, saying . . .” No argument should ignore potential counterarguments. At the very least, take some time during this phase of the writing process to play the role of a skeptical reader and imagine how such a reader might challenge the argument you are making. Experienced academic writers learn to play this role constantly as they work, continually seeking out the weaknesses and limitations of their own arguments and figuring out reasonable responses as they put together their claims and support.

You may think of a counterargument that you simply cannot rebut. This is no disaster: it might indicate that your thesis needs to be rethought or qualified—and at this early stage in the process, it certainly can be. If you've drafted a working