

Part IV Critical Thinking Skills

An issue, as opposed to a simple, solvable problem, is a dilemma about which intelligent, caring and well informed people disagree, often vehemently. The issue may be based on a moral or ethical question. Similar to most of life's endeavors, arguing well and thinking critically takes practice, and we adopt the skills gradually. When we are children, we accept the rules and guidelines we are given without much dissent. We go on to elementary school and high school, taking in the information that teachers, parents, and community leaders offer us, and in general, we do not argue with authority. However, there comes a time when we need to do more than absorb information. We must ask questions. We must process the information we get and consider its credibility and viability. In college and in the workplace, we need to make critical decisions on issues that seem beyond our control. But we must work with them, and we must synthesize various seemingly disparate concepts and use the information to generate newer concepts and ideas. And questioning authority, far from being rebellious (unless taken on for its own sake) will ensure the continuation of civilized humanity.

The following excerpt from "Prison of Socrates," by Harold J. Morowitz comes from the Introductory Readings section of the University of the Pacific freshman text, Pacific Seminar I What is a Good Society? (2007).

"The world is in need of annoying, troublesome, Socratic-like thinkers who will keep us from intellectual and spiritual slumbers brought on by lethargy, hyperstimulation, self-satisfaction, or simple discouragement over the magnitude and complexity of the challenges that have been set before us. Such philosophers are needed in education, journalism, television, movies, and every other public forum. They will trouble us and cause us sleepless nights, and I suppose that from time to time we shall imprison them or worse. But in the end they are national treasures, and if their graves or the sites of their martyrdom are unmarked, their ideas are the catalysts that enliven life and keep us from stagnation" (p. xv).

Although issues demand our attention, we do not want to settle for the first conclusion or solution that comes along, for a quick fix may be superficial and more damaging than if we did nothing at all. And finally, even after much consideration and debate coming from every side and point of view, there may not be a right or wrong answer. A compromise may be the only alternative.

All too often, we look at debate as a "battle." We think that an argument is all about winning, that it is about persuading the opponents to agree with our claim. We would brook no dissension. We might listen briefly to the arguments of the other side, then sweep them away with a few well-chosen words because we would have pre-conceived notions and an unshakable conviction of the righteousness of our own opinions. However, such one-sided views usually lead to more dissension and even violence.

The philosopher John Stuart Mill would advise us to think carefully as we prepare our arguments and to look at all sides of an issue before we arrive at a conclusion. The following excerpts from "On Liberty" by John Stuart Mill, 1901, explain the importance of thinking critically about the issues we face.

"The only way in which a human being can make some approach to knowing the whole of a subject is by hearing what can be said about it by persons of every variety of opinion and studying all modes in which it can be looked at by every character of mind. No wise man ever acquired his wisdom in any mode but this."

"He who knows only his own side of the case, knows little of that. His reasons may be good, and no one may have been able to refute them. But if he is equally unable to refute the reasons on the opposite side; if he does not so much as know what they are, he has no ground for preferring either opinion.

"Nor is it enough that he should hear the arguments of adversaries from his own teachers, presented as they state them, and accompanied by what they offer as refutations. That is not the way to do justice to the arguments, or bring them into real contact with his own mind. He must be able to hear them from persons who actually believe them; who defend them in earnest, and do their very utmost for them. He must know them in the most plausible and persuasive form; he must feel the whole force of the difficulty which the true view of the subject has to encounter and despose of; else he will never really possess himself of the portion of truth which meets and removes that difficulty."

Thinking Critically

- ✦ Critical thinkers consider all sides of an issue before coming to a conclusion.
- ✦ They try to erase personal bias, and avoid egocentrism or ethnocentrism.
- ✦ Critical thinkers try not to let emotions cloud the issue.
- ✦ They understand and appreciate the views and opinions of the opposition even if they do not agree with them.
- ✦ They know that truth is not a perception or an opinion: truth is what is so about something.
- ✦ They do not leap to conclusions based on insufficient evidence.
- ✦ They are pro-active and anticipate problems before they begin.
- ✦ When forced to be retro-active, they admit their errors and fix the problem.
- ✦ Clear thinkers look for loopholes in their own thinking, correct what may be wrong and emphasize what is right.
- ✦ Critical thinkers can support a claim or view that is not held by the majority.
- ✦ They are willing to consider alternative solutions to a problem.
- ✦ Critical thinkers do not stereotype.



Analyzing and Evaluating an Argument

We can use the following criteria to analyze an argument, in other words, to take it apart and look at the separate segments of the argument. We can also evaluate these segments and judge them for their qualities, good and bad.

1. The Issue:

An issue is based on a controversial situation or proposition. Long standing traditions, ethics, morals, values, biases and emotions may enter into the discussion. There are no clear cut answers to issues, no black and white conclusions. Intelligent and well-meaning people often represent the entire spectrum of agreement, from total approval through a neutral zone to total disagreement.

When analyzing an argument (or a persuasive essay) we first need to identify the issue. But be careful. The issue is not the claim or the main argument. For instance, an issue might be a discussion of whether or not we should abolish the death penalty. That is the issue. (The claim or stand the author takes will be his/her opinion: yes, the death penalty should be abolished, or no, it should not be abolished.)

Here are some strategies you can use to identify the issue:

- * Identify the subject of the entire argument. Perhaps the argument is about adoption. Can you narrow the discussion down to specific problems or moral dilemmas about adoption that the author is addressing?*
- * Sometimes the author will state an issue specifically. He/she may tell you outright in the form of a question. Is it a good idea to lower the drinking age?*
- * You might look for the conclusion first, and then the issue will become more clear. For instance, the conclusion might state that the death penalty should be illegal, so the issue is whether or not the death penalty should be illegal.*
- * A good way to present an issue once you find it is to pose it as a question. If the issue concerns the moral implications of cloning humans, you might be able to form the following question: is it morally right to clone humans?*

Once you identify the issue, you can evaluate it. You might first ask if the dispute is important enough to warrant your attention or is it one that is relatively insignificant and unimportant?

2. The Claim or “conclusion”:

The author’s stand or position might be called a claim or a conclusion, (not to be confused with an ending of a document), a proposition, or a main argument. It is the final stand taken by the author on an issue based on logical, credible and well-supported reasoning. The conclusion may be in the form of a proposal as a solution to a dilemma. It may be stated explicitly or merely implied. The claim might appear as a bold and clearly expressed statement in the first paragraph, or it might appear later on in the argument or even at the end of the discussion.

Here are some strategies you can use to find the claim:

- * *Ask what the author is trying to get us to do or to think about an issue. What belief or value does the author want us to follow? What action might he/she want us to take?*
- * *Find the issue, and then find the author’s stand on the issue.*
- * *Locate key words such as therefore, thus, consequently.*
- * *Look at the introduction. Often the conclusion or claim is stated in the first paragraph.*
- * *Look at the ending. Many times the author will present an issue, discuss a variety of alternative views, and then finally come to his/her conclusion.*
- * *Remember that examples, data, anecdotes, definitions, and background information are not conclusions.*
- * *You might ask whether the argument is deductive or inductive. In other words, does the author make a general statement, provide sources and examples to support that statement, then come to a logical conclusion (claim) as in deductive reasoning? Or does he/she provide many examples and sources, and then, as a result of his/her findings, state his/her position (inductive reasoning)?*
For examples of deductive and inductive reasoning, scroll down to the next page.)
- * *Knowing the author’s positions on other matters often leads to clues as to his/her conclusion.*

Once you identify the claim, you can evaluate it. Is the claim a sensible one, a logical solution to the dilemma? Is it practical and beneficial to as many people as possible? Are there other solutions that might be more suitable?

*Samples of Deductive and Inductive Reasoning

Deductive reasoning takes a general idea, supports that generalization with specific example(s) and then comes to a conclusion/claim.

Inductive reasoning comes to an assumption or a conclusion based on evidence. No general assumption is made until specific examples, data, research and/or anecdotal evidence provide enough proof for a reasonable conclusion.

Is the following paragraph an example of inductive or deductive reasoning?

George looked at his overflowing closet. Suits, sports clothes, shirts, sox and boxes of shoes were stuffed in his closet and ties and scarves were hanging in disarray from old hangars. Tennis rackets, skis and bicycle helmets cluttered the corners of his bedroom. Then he looked at his state of the art computer which was placed precariously on a desk next to his king size bed which in turn was covered with a wrinkled old blue sleeping bag. His bicycle leaned up against his overstuffed bookcase, and a new flat-screen television set sat on his dresser. Any remaining space was taken up by dirty clothes, old beer cans and scruffy plates leftover from last week's dinner. Out in the driveway his silver Accura was parked next to his mother's Mercedes and his father's BMW. George's recent acquisitions, a drum set, a ceiling fan, a barbecue pit, a couch and two armchairs were stored inside the garage. George sighed, thinking about his thirty-first birthday coming up. He had a good job and a steady girlfriend. It was finally time to let go. George needed to move out on his own.

Is the following line of reasoning inductive or deductive?

In spite of extenuating circumstances and acrimonious relationships that are a result of a divorce, couples who are splitting up should make the welfare of their children their main priority. Fred and Martha are getting a divorce. There is a lot of bitterness and contention concerning the issues that they have to deal with. However, they have two children, Toby, four years old and Penney, seven, so Fred and Martha should make the welfare of their children their main priority and not let their personal frustrations and anger dominate their proceedings.

3. Sources, evidence and anecdotes:

A good argument should use reliable sources, data and statistics, and trustworthy opinions from experts in order to back up the claim and establish the author's credibility. Also, an anecdote (a story or a series of short stories) may be another way to illustrate the author's argument.

Here are some strategies you can use to find the sources.

- * *What specific examples does the author use to support his/her claim? Are the examples from articles from reputable newspapers, journals and magazines, or are they based on opinion, folksy anecdotes and personal experiences?*

Here are some questions you can ask to evaluate the sources:

- * What kind of sources are used?
Are there references to articles from scholarly sources (highly scholastic, peer reviewed journals, including bibliography, written by reputable and credible authors and probably not published more than four to six times a year); substantive news (reliable weekly newspapers and magazines); popular (appealing to the general public); or sensational (arousing interest, based more on sensationalism than scholarship)?

Scholarly vs. Popular Sources

Good researchers evaluate the sources they use. In other words, they are discerning about where they get their information. An article written from The Enquirer for instance, would not be as credible as an article from the New York Times. An article from the Journal of Medicine would be more reliable than an article from Better Homes and Gardens.

A scholarly source is evaluated by professionals and scholars before it is published. It covers important topics and uses original research. The authors are experts in the field and well educated, experienced researchers. There are few if any ads and pictures (there may be charts, graphs etc). The text relates to a limited academic audience, and the article will contain references, a works cited page and/or a bibliography. It probably isn't a weekly or monthly publication. Popular sources on the other hand are current, weekly or monthly periodicals, often have no author cited, contain ads and photos, the general public can read and understand the text, and there are no references or works cited pages or bibliography.

**Still unsure whether your internet sources are considered scholarly?
Here are some valuable sites that may help with your evaluations and research:**

- * The Librarian's Index to the Internet <http://lii.rg/>
- * BuBI Catalogue of Internet Resources <http://bubl.ac.uk/link/>
- * The WWW Virtual Library <http://vlib.org/>
- * The Internet Scout Project <http://scout.wisc.edu>
- * "Research Guides" <http://www.library.cornell.edu/olinuris>
link to ("Tutorial and Skills Guides") then click on "Critically Analyzing Information Sources."

4. Refutation or Rebuttal:

A good argument should deal with opposing views. Because an issue is usually very controversial, there will inevitably be well meaning and intelligent opponents who disagree with the author's claim. The author must recognize these criticisms, deal with them and defend his/her position. However, a well-defended argument also is also sensitive to other views. To identify a rebuttal, note the use of key words such as however, but, and on the other hand.

Here is a bit of advice from Brown and Keeley (2007) to keep in mind as you work with people who disagree with you:

"... critical thinkers need to think about what they are giving off when they use their critical thinking. When you use your critical thinking, you are sending some kind of message to others about what critical thinking means to you. This message will be especially effective when it combines the curiosity and excitement of the child with the skeptical nature of our best scientists, all moderated by the humility of a monk. Your critical thinking then is on display as a pathway to better conclusions. You seek those conclusions not to elevate yourself above those who have other conclusions, but to move us all forward toward some better understanding of who we are. And all the while, you will be improving yourself as a thinker" (206).

Browne, M. Neil, and Stuart m. Keeley. Asking the Right Questions, A Guide to
Critical Thinking New Jersey: Prentice Hall, 2007.

Note the use of rebuttals to advance the following argument on the issue of amending the constitution to make burning of an American flag illegal.

I am against amending the constitution to make burning the flag **claim** illegal. It will be a waste of time, money, temper and paper. If people want to burn a flag, they will. We might catch some of them doing it, but not all. A person burning a flag on the street is sending a symbolic message to all of us, I agree. And we do abhor his message. But we can't force him to change his mind about America. If he burns his furniture, trash, a pile of papers, or a flag of any color on the street, he'll probably be arrested anyway. The few people who do such heinous deeds as burn our red white and blue symbol of democracy need not intimidate those of us who uphold the greatest respect our flag. If we are so threatened by some disheartened citizen burning the stars and stripes that we must waste great amounts of taxpayers' money debating the issue in Congress, then we indeed are an insecure country.

My opposition says that millions of World War I and II Veterans, **opponents' views** Vietnam Vets, Civil War Vets, Gulf War Vets died protecting that flag. Burning it is an unconscionable act and should not be tolerated by anybody, ever. It's like spitting on the memories of those brave men who gave up their lives so we could proudly wave our flag.

I agree that it is an unconscionable horrible act. But our vets died for and protected more than a flag. The ability to be a free nation, **rebuttal** to vote, to have equal rights, to be able to worship and believe in our own personal ideologies, and yes, to criticize the American government are concepts that our soldiers died for. We all owe our vets for giving their lives, fortunes and sacred honor. We should never forget. But to get upset over one warped person's vile action, if it doesn't directly harm those near him, is pointless.

Also, my opponents would say that incarceration for burning the **opponents' views** flag would deter others from the same act. I suppose a few might be wary of a stiff jail sentence, but if a really radical die hard wanted to get a message across, a well-publicized jail sentence would just ignite rebuttal the issue further - and all the proponents of free speech would become even more angry, perhaps violent. We don't need more angry mobs than

we have already.

Americans have more pressing problems to deal with, problems such as poverty, plummeting educational standards, and health care issues.

Amending the Constitution to make burning the American flag illegal

Would negate everything we stand for as a Democracy.

conclusion

To evaluate the refutations in an argument, we can look at the way the author deals with the critics' views. Are the rebuttals convincing and intelligent, or does the author weaken his/her argument using diatribes, fallacious reasoning and name calling? Giving in to the merits of the opposing views is a tactful way of creating respect and support. Mercilessly attacking the critics may make opponents even more antagonistic than they were at the start.

5. Emotional appeal or Pathos:

An author may appeal to the feelings and sensitivities of the readers.

If not overdone, emotions such as anger, hate, fear, sympathy and empathy will enhance an argument.

After identifying the emotional appeal, evaluate it. Is the emotional appeal overly sentimental, or is it just the right amount of sensitivity used to help sway the reader to his/her side? For a fine example of emotional appeal, see Martin Luther King's "A Letter From Birmingham Jail," paragraph 14.

6. Satire:

Satire is a form of humor which is meant to right a wrong. It is an attempt to expose the wickedness or folly of a situation or human behaviors. Satire is humor, but it does not simply make fun of its victims. It is a mirror which reflects lapses in logic and weaknesses of a person(s) or an action(s). Good satire can be excessively vitriolic. Also, in place of satire, an author may just use sarcasm or irony. Sometimes if a satirical essay is taken literally, the author's point is lost. ("A Modest Proposal" by Jonathan Swift is an example of a satirical argument. If readers take it literally, they miss Swift's main message.)

To evaluate the author's use of satire, look at the way the author uses it to attack his opponents. Is his method particularly cruel? Does it work for the issue under discussion? Writing a satirical argument is very difficult. There should be a seamless transition between the serious discussion and the point when the reader, horrified, realizes that he/she has been tricked into going along with an incredible solution. Good satire is not simple slapstick humor. It is a true art form.

Here are some of the general characteristics of satire:

- * Exaggeration works well.
- * Evidence and sources may be questionable.
- * Sarcasm and irony may accompany the satire.
- * Emotional appeal may be couched in cruelty.
- * There may be a deliberate use of logical fallacies.
- * Satire evokes shock and anger to force us to fix the evils and wrongdoings of mankind.
- * Satire attempts to fix a problem, but the solution may be disguised in another form.
- * The twist of the knife should hurt the guilty. The innocent may suffer as well.
- * Rebuttals can be vicious.
- * Angry and even outrageous proposals may be veiled in humility and civility.

7. The Conclusion:

A "conclusion," can mean the ending of the argument; the ending may last as long as three paragraphs, or it may sum up the essence of the argument in one sentence. We can also refer to the conclusion as the "claim." Indeed, an inductive argument may wait until the concluding paragraph to state the claim. A conclusion to an argument, as in an essay, might summarize the previous paragraphs, highlighting the main points of the paper. It might also provide more insight on the issue, leave the readers asking even more questions, incite action of some sort, or reinforce the author's claim with a final plea to the reader to join his/her cause. For a classic approach to a plea for change and a strong but conciliatory stand taken by an author, see the final three paragraphs of Martin Luther King's "Letter From Birmingham Jail."

To evaluate the end of the argument, we can ask the following questions:

Is the ending thoughtful, compelling, insightful and creative, or is it dull and repetitive? Does the author make a plea for change? Is the conclusion clear, or does it leave the reader with doubts and reservations?

8. Logical Fallacies

*One more element of an argument to take into consideration when analyzing and evaluating an argument is the use of logic. Lapses in logic and unclear thinking are called **logical fallacies**. They can appear as gaps in reasoning (leaping from one idea to another without any connecting explanations or logic) or by faulty thinking such as judging a book by its cover, or judging an argument by its author's financial status. Here are some of the more common lapses in logical thinking.*

Ad Hominem

Attacking the person instead of the issue at hand is an ad hominem ("to the man") error.

He won't be a good mayor because he has never tasted the bitterness of poverty.

Either/Or Reasoning

Going from one extreme to the other without looking at other possible alternatives is an either/or fallacy.

The drug problem is so out of control that we will either have to legalize drugs or incarcerate every offender at the cost of billions of dollars.

Hasty Generalization

Leaping to a conclusion based on insufficient evidence is called a hasty generalization.

My neighbors must be planning on selling their house. They just had a garage sale and sold their dining room table and chairs.

Post Hoc, Ergo Propter Hoc ("after this, therefore because of this")

Here the argument bases its reasoning on the idea that because one event followed another, the first event caused the second one.

Right after women were allowed to vote, the divorce rate went up; therefore, women should not be allowed to vote.

For a comprehensive look at the various types of logical fallacies, go to the following websites:

The Nizkor Project: Fallacies. <http://www.nizkor.org/features/fallacies/>

The Fallacy Zoo <http://www.goodart.org/fallazoo.htm>

The Fallacy Files <http://www.fallacyfiles.org/>

Stephen's Guide to the Logical Fallacies
<http://www.datanation.com/fallacies/>