1. Introduction

To develop your critical thinking skills you will need to read long--sometimes difficult--articles which contain arguments. We will refer to such articles as *argumentative essays* and to the arguments they contain as *extended arguments*. Analyzing and evaluating extended arguments can help you develop critical thinking skills by stimulating you to think more clearly and deeply about complex topics.

One of the more difficult tasks you will face in evaluating extended arguments will be detecting *unstated premises and unstated conclusions*. Arguers will not always explicitly state all their premises. Some premises may be unstated because they are taken for granted by the arguer; others may seem too obviously true to need stating. A conclusion may be so obviously implied that it is left unstated. For example, if you and some thirsty companions are on a hike and you come upon a waterhole, you might test the water before drinking it. Imagine that you have a water-testing kit that works this way: you put a drop of testing solution in a special container which you fill with the water to be tested; if the water turns red, it is unsafe to drink. You test a sample of the water. It turns red. Now, imagine you say to the others, “It turned red, so we’d better not drink it.” You have made an argument, but you have not stated all your premises or conclusions. A complete version of your reasoning might go like this:

1. [unstated premise] If the sample turns red upon adding a drop of the testing solution, then the water is unsafe to drink.
2. [stated premise] The sample turned red upon adding a drop of the testing solution.
3. [unstated conclusion and unstated premise] The water is unsafe.
4. [unstated premise] If we drink unsafe water, we’ll get sick.
5. [unstated premise] We do not want to get sick.
6. [stated conclusion] We’d better not drink the water.
The argument as stated makes two explicit claims (statements 2 and 6 above). A simple diagram might be drawn to represent the relationship of premise to conclusion (see diagram 1).

That is, statement 2 is offered as a reason for accepting statement 6. (Compare the two sentences, “It turned red” and “the sample turned red upon adding a drop of the testing solution.” Notice that although these sentences are not identical, they make the same claim. That is, they make the same statement. Thus, although sentence no. 2 in the reconstructed argument is not the same as the sentence in the example given, it is the same premise. Technically, the premise is the claim or statement made, not the actual sentence used to make it. Thus, I have labeled no. 2 as a stated premise, although it is not the same sentence as the one in the original example.) A diagram of the completed or filled-out argument is given in diagram 2.

Statements 1, 2 and 3 make up a sub-argument with 3 as the conclusion. Statement 3 is also a premise, along with statements 4 and 5, offered to support the main conclusion, statement 6.

The unstated premises in the above example were left out because they are so obvious. That is, in the given context it would be reasonable to assume that everybody knew how this test worked and that no one would desire to get ill. The context, in other words, will often determine what premises or conclusions will be unstated due to their obviousness.

2. Hidden assumptions

Sometimes, however, an arguer makes assumptions that many people would not take for granted. If these unstated assumptions are presumed to support a conclusion, we might call them hidden assumptions, to distinguish them from mere unstated premises. For example, an arguer might say, “No law should allow murder, so capital punishment should be outlawed.” The arguer is assuming that capital punishment is murder—not an assumption many people take for granted.

Exercise 6-1.

Identify any unstated premises or conclusions in the following arguments. Note any hidden assumptions.

* 1. Either we don't make the car payment or we don't pay the rent. If we don't pay the rent, we'll be kicked out into the streets. So, I guess we'll pay the rent.
2. No one has a right to deprive another person of his right to life. So, abortion is wrong.
3. If everyone thought the way you do, there would be no freedom. Thank God, not everyone thinks like you.
4. Either you are lying or you've made a mistake, and you haven't made a mistake.
* 5. If the Reds came in second, then the Dodgers came in first. So, the Dodgers came in first.
6. Four murder suspects agree among themselves to each make only one statement to the police. They also agree that three of the statements will be false and one statement will be true. Abe says “I didn't kill Dr. Logico.” Babe says “Dave killed Dr. Logico.” Dave says “Abe killed Dr. Logico.” Ewe says “I didn't kill Dr. Logico.” (So, obviously, ________ killed Dr. Logico!)
7. Exxon's management must be out of its corporate mind, since it allowed a man without a valid driver's license due to drunken driving convictions to steer a fully loaded supertanker through the environmentally fragile waters of Prince William Sound.

8. You say you don't understand why the SPCA wants to end the eating of dogs by Southeast Asians, so you must not be aware of the torture methods used by these people. They string the dogs up by their hind legs and then often skin or boil them alive. Tradition is no excuse for barbarism, especially in a society such as ours, which professes to believe in the humane treatment of pets.

9. All drugs should be legalized immediately. The present situation is ridiculous: Organized crime makes billions of dollars; turf wars kill innocent bystanders and terrorize the citizenry; burglary and muggings by drug addicts are a normal aspect of city life; police departments are understaffed and overworked; violent criminals are released because of prison overcrowding; despite billions of dollars spent on drug enforcement there are more illegal drugs available to more people than ever before.

   The current “solution”--strict anti-drug laws--doesn't work at all. The only people who benefit by keeping these laws in place are organized crime, government officials (representatives who depend on hefty contributions from organized crime to fund their re-election campaigns and bureaucrats whose job status depends on the perpetuation of, not the solution to, the drug problem) and pushers of legal drugs (tobacco and alcohol kill 100 times more people annually than all the illegal drugs combined).

   Also, it is nobody's business what drugs anyone takes, so long as each person pays his or her own way in society and does not harm others.

3. Analysis of extended arguments

Before evaluating an extended argument, the argument must be identified. This will involve not only recognizing premises and conclusions, but also separating the argument from the other material presented along with it in the argumentative essay. This other material will include background information, illustrations (graphs, charts, clarifying examples, etc.), and fluff. The background material serves to introduce the topic and often to indicate its significance or to explain why the author is motivated to write about that particular issue. Background material can be useful in clarifying the sense and importance of an argument. Illustrations, too, can help clarify premises. Fluff, on the other hand, refers to material having no argumentative or illuminative purpose. Fluff need not simply be padding--excess verbiage--but may include such things as stories, anecdotes and jokes, which may serve a rhetorical and persuasive function.

An argument evaluation should be of the argument itself, not of the background material, illustrations or fluff. What follows is an outline of a method to follow for analyzing and evaluating extended arguments. This method is, of course, not the only possible method for argument analysis and evaluation, but it is a good one for beginners. After the student becomes more practiced at argument evaluation, she ought to modify the method to serve her needs and purposes best.

3.1 A general method for analyzing and evaluating extended arguments

Each of the steps of the method will be exemplified in detail below.

1. **Read the argument and identify the main point.** Pay attention to the title, if there is one. Try to grasp the main conclusion and the general line of argument. Do not try to analyze or evaluate the argument on the first reading.

2. **Extract the argument from the other material in the essay.** List the reasons and arguments given in support of the main conclusion.

3. **Evaluate the reasons and the reasoning.**
On the second reading of the argument, many students will find it useful, if not essential, to take notes. Restrict your notes to making evaluative comments on the premises or the reasoning in the argument. Your notes should indicate a critical reading, i.e., they should highlight the strengths (warranted, relevant, significant premises) and weaknesses (unclear language, unwarranted or irrelevant premises, omitted evidence, insufficient evidence) of the argument.

Your evaluation of the argument ought to be presented in the form of a short essay that summarizes the main strengths and weaknesses of the argument. An in-depth evaluation might also include counter-arguments, as well as anticipated criticisms of your counter-arguments. A counter-argument is a contrasting, opposing or refuting argument. For example, you might use evidence omitted by an arguer to support a conclusion contrary to the arguer's. Or you might use the same evidence as the arguer, but try to show that it leads to a different conclusion from the one made by the arguer. Finally, you might conclude your evaluation with a statement of your own view on the topic and an indication of what further information you might need in order to judge the issue more clearly and fairly.

3.2 Exemplifying the Method

To illustrate the method, we will go through each of the three steps for the following argumentative essay, “How to Stop the Violence.” Read the article before going on to study the analysis and evaluation. Try to grasp the main conclusion and the gist of argument, but do not try to analyze or evaluate the article during your first reading.

How to Stop the Violence

As everybody knows, there is an epidemic of violence in our country. Every day we read about teenagers shooting other teenagers in their schools. Some people blame the Internet. They say that children can learn how to build bombs and where to buy guns by going online. But people were shooting one another long before the Internet came along.

Others blame guns. They say that only if there were more gun laws, there wouldn’t be all this violence. More gun laws would just mean that when people use guns to commit crimes they would be breaking more laws, but it wouldn’t reduce the number of gun deaths.

Still others think that the depiction of vivid violence in movies and in video games is the cause of the violence. People were violent long before video games and movies came along.

People are putting the blame in the wrong place. The reason there is so much violence today is because we have lost our moral character. If there had been a copy of the Ten Commandments on the walls of the classrooms at Columbine High in Colorado, those boys never would have killed all those people. If there had been required prayer every day from kindergarten on up, violence in America would be almost non-existent.

I know there will be skeptics who will say, “But Stalin was a seminarian and Hitler sang in the church choir.” These claims are true, but Stalin and Hitler are exceptions that prove the rule. Slobodan Milosovic may have been raised in a religious household but that does not disprove my
point. He lost faith in God at some point, as did Stalin and Hitler. Had they kept the faith, they would not have become so evil.

We need to return to the days when we all worshipped the same God on Sunday. Only then will we return to the days of peace and quiet our ancestors used to know. Science will prove me right. There have been studies that have shown that people who pray live longer than people who don’t. Moreover, prayer has been shown to help the sick recover more quickly.

Thus, we must have a constitutional amendment to require prayer in our public and private schools. This notion is supported by former Vice-President Sam Snail and by Senator Leeroy Smart; both start each day with a prayer and have not shot anyone in all their days on Earth. Only when we require every school child to pray, will there be an end to the violence that plagues our nation.

§

First, look at the title of the essay. The title reveals that this essay is going to tell us how to stop the violence and the article itself tells us that the only way we can stop the violence in America is through prayer. The main conclusion of the argument is that we must have a constitutional amendment requiring prayer in school. What premises and sub-arguments does the author give to support this claim?

One line of reasoning assumes that the cause of the violence is either the Internet, lack of gun controls, the mass media (violence films and video games), or lack of moral character. This is a questionable assumption. In fact, it is a false dilemma. There are other alternatives that should be considered, such as the fact that nations often resort to violence against each other when they have a grievance. Not only is this a bad example for children, it indicates that maybe there is something violent in human nature. Also ignored, is the possibility that the violence has several causes.

The arguer also assumes that people with good moral character do not blow up their schools and shoot their classmates. This seems like a safe assumption.

The arguer dismisses the Internet and the mass media as causes of the violence because people were violent before the Internet, movies or video games arrived. This is true, but irrelevant. The Internet may well be a significant contributing factor to the violence by providing easy access to guns by mail order and detailed instructions on how to make bombs. This topic needs to be studied, not dismissed outright. There have been many studies that have found a significant, if small, correlation between exposure to violent media and violent behavior. These studies should be discussed, not ignored.

The arguer assumes that the only way to control guns is by laws. The arguer is probably correct in assuming that if there were more gun control laws, criminals would just be violating more laws when they used guns to commit their crimes. More laws may not have a significant effect on criminal activity. Yet, all laws are not the same. Some laws may make it very difficult for young people to quickly access guns and ingredients for bombs. This issue should be studied further, rather than dismissed. Furthermore, control need not be by law. Education, greater care in securing weapons and ammunition by gun owners, etc. might be effective. The issue should be investigated.

The arguer assumes that if children were required to pray in school and had such things as the Ten Commandments hanging in their schools, they would grow up with good moral character. The evidence that this assumption is false seems overwhelming. The arguer even mentions three of the most evil men in our century, all of whom were raised on the Ten Commandments and in Christian religious environments. Contrary to what the author says, the examples do not prove that being taught to pray from an early age will lead to good moral character. If anything, the examples prove that being religious while young does not necessarily mean you will grow up to be a good person.
Furthermore, many people of faith have killed and tortured others because they would not accept the “true religion” or simply because they belonged to some other religion than the ones doing the violence. Most people do not do violence to others. Thus, it is probably true that most religious people do not do violence to others, but the arguer does not provide any data that shows that a significantly greater number of those who do violence are irreligious.

The author also assumes that once upon a time there was peace in the land and it was because people worshipped on Sundays. The author produces no evidence to support these notions, most likely because there isn’t any. Moreover, the references to studies connecting prayer with health, even if accurate, are irrelevant to the issue of prayer and violence. Also irrelevant are the appeals to Snail and Mart as authorities.

We can summarize the argument as

**We must have a constitutional amendment requiring prayer in school because it will end violence in America. The Internet, availability of guns, and the mass media are not significant factors in the violence in America. People who learn to pray at an early age grow up to be of good moral character and people of good moral character do not commit violent crimes.**

The argument is unsound. It is based upon numerous questionable and false assumptions. It also introduces irrelevant appeals to studies that have nothing to do with the issue of prayer and violence and to political authorities who support the idea.

4. Some Additional Strategies

The only way to become proficient at extended argument analysis and evaluation is to practice. This chapter will conclude with links to Internet sites where you will find several unanalyzed and unevaluated extended arguments. Apply the method outlined and exemplified above to these arguments for practice.

In addition to what we have already said, here are a few additional strategies to employ when critically evaluating extended arguments.

1. **Language.** Look for highly emotive, biased or slanted language. Some arguments are persuasive mainly because of the persuasive language used, not because of the logic of the reasoning.

2. **Either/or arguments.** Look out for those arguments which propose two alternative positions, attack one of the positions, and then, even though little or no positive evidence has been given to support the other position, lead the reader to believe that the unsathed position is warranted. This is a not-so-subtle form of false dilemma.

3. **Argument by anecdote.** Some arguments are persuasive because of the powerful anecdotes, stories, examples, etc. that are put forth to support broad generalizations already uncritically held by numbers of people. Attacks on the Welfare System, Education, Government Bureaucracy, Politics, Science, Religion, the Military, the Police, Teenagers, etc., are often persuasive though the only support for the attacks may be an anecdotal horror story--perhaps not even a true story, just one made up to “illustrate” the general point being asserted (but not proved). Such arguments inevitably beg the question and play upon people's prejudices and preconceived notions.

IV. **The Baffle-You-With-Numbers Argument.** Every fallacy mentioned and described in chapter five can be committed using statistics. In the next chapter, the use and misuse of statistics will be discussed in more detail. Here we simply warn you to look out for suppressed evidence, irrelevant comparisons, and questionable claims in arguments which try to baffle you with numbers.

1. Do I understand the main conclusion?

2. Have I separated the reasons given to support the conclusion from background material, examples, illustrations, irrelevant fluff, etc.?

3. Can I list the main premises and sub-arguments?

4. Is there any ambiguity, vagueness or obscurity that hinders my understanding of the argument?

5. Have I evaluated the truth, relevance, fairness, completeness, significance, and sufficiency of the premises to support the conclusion?

6. Are there any fallacies?

7. Is the language excessively emotive?

8. What further information, if any, do I need in order to make a reasonable judgment on the issue?

9. What is my overall evaluation of the argument?

Exercise 6-2

Find an extended argument in a newspaper or magazine. Analyze and evaluate the argument. Use the Argument Evaluation Checklist to go over your evaluation. (Note: do not just answer the questions ‘yes’ or ‘no’! Demonstrate that you understand the premises, conclusions, and the like.)

Exercise 6-3

Visit the following WWW sites and evaluate the arguments posted there.

2. In support of the Death Penalty (John Stuart Mill): http://ethics.acusd.edu/Mill.html
5. Against Experimenting on Animals (Christopher Anderegg, M.D., Ph.D. et al.): http://www.mrmcmomed.org/Critcv.html