**Arguments: Deductive Reasoning**

It is helpful to keep in mind that there are two basic patterns of thinking and presenting our thoughts that are followed in argumentation—induction and deduction.

*Inductive reasoning*, the more common type of reasoning, moves from a set of specific examples to a general statement. In doing so, the writer makes an *inductive leap* from the evidence to the generalization. For example, after examining enrollment statistics, we can conclude that students do not like to take courses offered early in the morning or late in the afternoon.

*Deductive reasoning*, in contrast, moves from a general statement to a specific conclusion. It works on the model of the syllogism, a three-part argument that consists of a major premise, a minor premise, and a conclusion, as in the following example:

1. All women are mortal. *(Major premise)*
2. Jeanne is a woman. *(Minor premise)*
3. Jeanne is mortal. *(Conclusion)*

A syllogism will fail to work if either of the premises is untrue:

1. All living creatures are mammals. *(Major premise)*
2. A butterfly is a living creature. *(Minor premise)*
3. A butterfly is a mammal. *(Conclusion)*

The problem is immediately apparent. The major premise is false: Many living creatures are not mammals, and a butterfly happens to be one of the non-mammals. Consequently, the conclusion is invalid.

**WRITING ARGUMENTS**

By nature, an argument must be carefully reasoned and thoughtfully structured to have maximum effect. Fuzzy thinking, confused expression, and poor organization will be immediately evident to your reader. The following seven steps will remind you of some key features of arguments and help you sequence your activities as you research and write.

1. **Determine the Thesis or Proposition**

A thesis can be placed anywhere in an argument, but while learning to write arguments, you should place the statement of your controlling idea near the beginning of your composition.

- **Explain the importance of the thesis**
- **Assert that you share a common concern or interest in this issue with the reader**
- **State your central assertion directly in your first or second paragraph so that your reader will have no doubt or confusion about your position.**
- **You may also wish to lead off with a striking piece of evidence to capture your reader's interest.**

2. **Take Account of Your Audience**

The tone you establish, the type of diction you choose, the kinds of evidence you select to buttress your assertions, and the organizational pattern you follow can influence your audience to trust you and believe your assertions. If you judge the nature of your audience accurately, respect its knowledge of the subject, and correctly envision whether it is likely to be hostile, neutral, complacent, or receptive, you will be able to tailor the various aspects of your argument appropriately.
3. Gather the Necessary Supporting Evidence
For each point of your argument, be sure to provide appropriate and sufficient evidence:

- verifiable facts and statistics
- illustrative examples and narratives
- quotations from authorities

Demonstrate your command of the topic and control of the thesis by choosing carefully from all the evidence at your disposal.

4. Settle on an Organizational Pattern
Once you think that you have sufficient evidence to make your assertion convincing, consider how best to organize your argument. To some extent, your organization will depend on your method of reasoning—inductive, deductive, or a combination of the two. Consider the following:

- Is it necessary to establish a major premise before moving on to discuss a minor premise?
- Should most of your evidence precede your direct statement of an assertion or follow it?
- Will induction work better with the particular audience you have targeted?

As you present your primary points, you may find it effective to move from least important to most important or from most familiar to least familiar.

5. Consider Refutations to Your Argument
As you proceed with your argument, you may wish to take into account well-known and significant opposing arguments. To ignore opposing views would be to suggest to your readers any one of the following:

- you don't know about the opposing views
- you know about them and are obviously and unfairly weighting the arguments in your favor
- you know about them and have no reasonable answers for them.

6. Avoid Faulty Reasoning
Have someone read your argument for errors in judgment and for faulty reasoning. Sometimes others can see easily what you can't see because you are so intimately tied to your assertion. These errors are typically called logical fallacies. Review the Logical Fallacies box above, making sure that you have not committed any of these errors in reasoning.

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<th>Logical Fallacies</th>
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<tr>
<td><strong>Oversimplification</strong>: A drastically simple solution to what is clearly a complex problem: We have a balance-of-trade deficit because foreigners make better products than we do.</td>
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<td><strong>Hasty generalization</strong>: In inductive reasoning, a generalization that is based on too little evidence or on evidence that is not representative: My grandparents eat bran flakes for breakfast, just as most older folks do.</td>
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<td><strong>Post hoc, ergo propter hoc</strong>: &quot;After this, therefore because of this.&quot; Confusing chance or coincidence with causation. One event coming after another does not necessarily mean that the first event caused the second: I went to the hockey game last night. The next thing I knew I had a cold.</td>
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<td><strong>Begging the question</strong>: Assuming in a premise something that needs to be proven: Lying is wrong because people should always tell the truth.</td>
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<td><strong>False analogy</strong>: Making a misleading analogy between logically unconnected ideas: If we can clone mammals, we should be able to find a cure for cancer.</td>
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<td><strong>Either/or thinking</strong>: Seeing only two alternatives when there may in fact be other possibilities: Either you love your job, or you hate it.</td>
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<td><strong>Non sequitur</strong>: &quot;It does not follow.&quot; An inference or conclusion that is not clearly related to the established premises or evidence: She is very sincere. She must know what she's talking about.</td>
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7. Conclude Forcefully
In the conclusion of your essay, be sure to restate your position in new language, at least briefly. Don't qualify your conclusion with the use of too many words or phrases like I think, in my opinion, maybe, sometimes, and probably. These words can make you sound indecisive and fuzzy-headed rather than rational and sensible.
Thinking Critically about This Reading

What, according to the Declaration of Independence, is the purpose of government?

Questions for Study and Discussion

1. In paragraph 2, Jefferson presents certain "self-evident" truths. What are these truths, and how are they related to his argument? Do you consider them self-evident?

2. The Declaration of Independence is a deductive argument; therefore, it can be presented in the form of a syllogism. What are the major premise, the minor premise, and the conclusion of Jefferson's argument?

3. The list of charges against the king is given as evidence in support of Jefferson's minor premise. Does Jefferson offer any evidence in support of his major premise?

4. How does Jefferson refute the possible charge that the colonists should have tried to solve their problems by less drastic means? Where in the Declaration does Jefferson use parallel structure? What does he achieve by using it?

5. Although the basic structure of the Declaration reflects sound deductive reasoning, Jefferson's language, particularly when he lists the charges against the king, tends to be emotional. Identify as many examples of this emotional language as you can, and discuss possible reasons for why Jefferson uses this kind of language.

Classroom Activity Using Argument

Choose one of the following controversial subjects, and think about how you would write an argument for or against it. Write three sentences that summarize three important points, two based on logic and one based on persuasion/emotion. Then write one sentence that acknowledges the opposing point of view. For example, if you were to argue for stricter enforcement of a leash law and waste pickup ordinance for dog owners in your town, you might write the following:

Logic
Dogs allowed to run free can be a menace to joggers and local wildlife.

Logic
Dog waste poses a health risk, particularly in areas where children play.

Emotion
How would you feel if you hit an unleashed dog with your car?

Counterargument
Dogs need fresh air and exercise, too.

Suggested Writing Assignments

1. The issue of human rights is often discussed. Review the arguments for and against the U.S. government's active and outspoken promotion of the human rights issue as reported in the press. Then write an argument of your own in favor of a continued strong human rights policy on the part of leaders of the United States.

2. Using one of the subjects listed below, develop a thesis, and then write an essay in which you argue in support of that thesis:

   - Gun control
   - Tobacco restrictions
   - Cutting taxes and social programs
   - Paying college athletes
   - Assisted suicide for the terminally ill
   - Widespread legalization of gambling
   - Minimum wage
   - Welfare
   - Social Security
   - Separation of church and state
   - Capital punishment
   - First Amendment rights
   - Erosion of individual rights