Valid Arguments and Logical Fallacies

"The venerable tradition of respectful argumentation, based on evidence, conducted with courtesy, and leading to the exposition of truth, is a precious part of our heritage in this land of freedom. It is the duty of educated men to understand, appreciate and perpetuate this tradition."

------ James P. Shannon

A VALID ARGUMENT is a statement that exhibits a logical pattern of reasoning. This MEANS that a valid argument must have relevant, verifiable proof supporting a conclusion.

When making an argument, the writer must make a point and support that point.

As readers, we must recognize the point and determine whether or not that point is supported by relevant and verifiable proof. To evaluate an argument, the reader needs to ask these two questions:

1. Is this argument logical?
2. Are these reasons (given to support the conclusion) true?

Recognizing valid arguments is a difficult task that can be hindered by a reader’s lack of background on issues and topics. In fact, it is easier to recognize an argument that is INVALID than one that is VALID.

The recognition of INVALID ARGUMENTS can be facilitated by the reader’s familiarity with twelve common fallacies that are used by writers.

These fallacies may be used by writers who are so intent on making a point or gathering support for a conclusion that they inadvertently fail to use logical reasoning to prove their point. Fallacies may be used intentionally, either to mislead, to divert attention from the real issues, or as an aid to sell a product.

TWELVE COMMON LOGICAL FALLACIES

1. **Faulty Cause and Effect** (post hoc, ergo propter hoc). This fallacy falsely assumes that one event causes another. Often a reader will mistake a time connection for a cause-effect connection.

   EXAMPLES:  
   - *Every time I wash my car, it rains.*
   - *Our garage sale made lots of money before Joan showed up. Obviously, she scared off all the customers.*

2. **Non Sequitur.** The conclusion is not necessarily a logical result of the facts.

   EXAMPLES:  
   - *Mrs. Sedik really knows math; she would be an excellent math instructor.*
   (The conclusion may not be valid. Here an INFERENCE is substituted for a logical conclusion. One cannot automatically conclude that all individuals who are good at math can teach this subject well.)
Jim spends most of his spare time hiking and picking up rocks for his collection. He really should go to college and study to become a geologist.

3. **Begging the Question.** This fallacy presents as truth something that is supposed to be proven by argument.

   **EXAMPLES:**
   
   All hunting is inhumane and should be outlawed. (The reader is asked, or begged, to accept as truth the statement “hunting is inhumane” without proof.)
   
   All useless laws, such as Reform Bill 13, should be repealed.

4. **Circular Logic.** In this type of fallacy, the reason and the conclusion are the same. The writer simply restates the reason in the conclusion.

   **EXAMPLES:**
   
   There aren’t enough parking spaces on campus because there are too many cars.
   
   I dislike abstract art because it is unrealistic.

5. **Hasty Generalization.** The writer bases the argument on insufficient or unrepresentative evidence.

   **EXAMPLES:**
   
   I would never buy a Buick. My father owned two of them and both of them had frequent transmission problems. Buicks obviously break down all the time.
   
   Everyone is against child pornography. I asked Mrs. Smith and Mr. Jones at the PTA meeting and they are definitely against it.

6. **Either/Or Fallacy.** The writer tries to convince the reader that there are only two sides to an issue—one right, one wrong. The reader is led to believe that the issue has no other viewpoints.

   **EXAMPLES:**
   
   Love America or leave it.
   
   If you don’t pay taxes, you don’t deserve the right to vote.

7. **Faulty Analogy.** The writer tries to prove an argument by comparing things or situations that are really not comparable.

   **EXAMPLES:**
   
   If the state can require car seats for small children and infants, they can just as easily require mothers to breast-feed instead of using formula.
   
   Allowing people to possess guns is like giving a bomb to a bunch of kids.

8. **Argument to the Man** (Ad Hominem). In using this fallacy, the writer attacks a person rather than the issue he is promoting.

   **EXAMPLES:**
   
   The senator voted for the tax increase. It’s not hard to understand why when you consider that he is a millionaire and has never had to worry about money.
Dr. Bloom cannot be a competent marriage counselor because he is divorced.

9. **Argument to the people**. (Ad populum). The writer avoids the issues by trying to arouse an emotional reaction from the reader through the use of words or by the subject matter.

   **Examples:**
   - President Clinton is an advocate of socialized medicine, which is a form of communism.
   - If you are a true American, you will ask your congressman to vote against NAFTA.

10. **Bandwagon appeal**. The writer tries to validate a point by intimating that "everyone else believes in this".

    **Examples:**
    - Eat lamb--could thousands of coyotes be wrong?
    - We now produce the best program in existence; four thousand businesses subscribe to our program.

11. **Red Herring**. An irrelevant point is used to draw attention away from the real issue. (A smoked herring was often dragged by escaped prisoners to cover their scent and confuse the tracking dogs.)

    **Examples:**
    - Latin should not be taught in school since it is not spoken anywhere in the world. All learning should have some use to be of value, and a dead language has no practical use.
    - (The fact that Latin is a "dead" language is not relevant to why Latin should be taught in school. In point of fact, learning Latin would have a use because many of the prefixes and roots in the English language have their origin in the Latin language.)
    - There is no need for additional taxes for education. Every year we throw more money into education, and all they do is hire more management and build more buildings. None of the money actually reaches the classroom or is really used for education.

12. **Hypostatization**. The writer uses an abstract concept as if it were a concrete reality.

    **Examples:**
    - Science shows us that improved quality of life comes through research and invention.
    - Historians agree that studying the past is the best way to avoid repeating mistakes.