

Handout: Seven Types of Logical Proof

The seven types of logical proof categorize different types of evidence that you might use to support the sub-claims of your argument. Aristotle is famous for identifying these types of proof in the fourth century BCE, and his works on logic began gaining influence on Western thought when they were arranged (by the ancient Greek philosopher Andronicus of Rhodes) under the title of *The Organon* in the first century BCE. This is yet another example that the classical influence on contemporary approaches to argumentation are still undeniably evident.

- **Sign**
 - Useful for developing claims of definition and claims of cause
 - Certain (e.g. Fever is a sign of illness.) or Probable (e.g. The growing problem of obesity in America is a sign that a growing number of Americans are eating high calorie diets and are not doing adequate physical activity in their daily lives.)
 - Beware of false signs (eg. Increased body piercings are a sign that morals are eroding among today's youth; this is a logical fallacy, which we will discuss further at a future class meeting.)
- **Induction** (evidence → assumption → claim)
 - Use evidence to make an assumption that leads to a claim
 - Example: A large percentage of home schooled children perform above national averages on standardized tests; home schooled children receive a superior education; if I home school my child, he will receive a superior education
- **Cause**
 - Cause leads to effect or discuss an effect and trace it to its cause (When used, the cause and effect relationship should be central to the argument and crucial to the meaning or outcome.)
 - Example: Violent video games cause children to become violent.
 - Example: Children are violent as a result of playing violent video games.
 - Choosing to lead with either cause or effect is mainly a matter of preference (or strategy) for what you would like to emphasize in your argument.
 - Particularly useful for historical arguments. Examine a current situation and list the historical causes that led up to it.
- **Deduction** (assumption → evidence → claim)
 - Apply a general principle (or assumption) to a specific example (or evidence) in order to make a claim.
 - Example: Teachers want students to succeed in their studies; Monique is a teacher; she wants you to succeed in this class.
- **Analogy**
 - Useful for developing claims of definition.
 - Historical analogies explain current events by comparing them to historical events (e.g. using the history of the Vietnam War to analyze or predict current events in Iraq)

- Literal analogies compare two items that are categorically the same (e.g. comparing Israeli military policy to U.S. military policy)
- Figurative analogies compare two unlike items, that are categorically different, in order to create metaphorical proof (e.g. Believing in the Big Bang Theory is like believing that it's possible to blow up a building and end up with a 747; regardless of whether or not you agree with the argument that this analogy is trying to make, it demonstrates the vivid picture that analogies are capable of creating in the minds of your readers.)
 - Another example: “The mythic horror movie, like the sick joke, has a dirty job to do. . . . I like to see the most aggressive of them . . . as lifting a trap door in the civilized forebrain and throwing a basket of raw meat to the hungry alligators swimming around in that subterranean river beneath” (Stephen King).
- **Definition**
 - Allows us to come to a general agreement concerning a term or group of terms.
 - Example: The legal definition of marriage will effect whether or not marriage may be legalized for same-sex couples.
 - Example: The interpretation of what constitutes “life” will have a significant bearing on the treatment of embryos for the purposes of stem cell research.
- **Statistics**
 - The quantitative description (or interpretation) of the “relationships among data, people, occurrences, and events.”
 - We should end draft registration because it costs \$27.5 million dollars per year.
 - Please note: Statistics only serve your argument if you take the time to interpret them (and interpret them fairly) for your readers. Just as I ask you not to be guilty of the “hit-and-run quotation,” please avoid dumping hit-and-run statistics on your readers. In other words, don't just dump a bunch of statistics on us; take time to interpret each statistic, explain what it means, and (more importantly) explain how it supports your argument.