Informal Fallacies

Aristotle called humans the “rational animal.” But this does not mean that we are purely reasoning creatures. Humans possess reasoning capabilities but are likewise governed by emotions and related desires. As a result, we are often influenced to believe and accept ideas based on these other factors.

In logic, these types of appeals are called informal fallacies. A fallacy appears to be a rational argument but is persuasive (if at all) due to non-rational factors. For example, trial lawyers sometimes try to persuade the jury to convict a defendant by dwelling on the heinous nature of the crime itself. The issue, of course, is whether the defendant committed the crime and not how terrible it was. Nonetheless, this can be a very effective method. We should always be careful to recognize these ploys: in short, they amount to counterfeit reasoning.

There are numerous instances of informal fallacies and various treatments of them. We shall focus on the most common types. The objectives are to recognize these ploys in what you read while avoiding them in what you write.

It is convenient to separate fallacies into two main groups: fallacies of relevance and fallacies of presumption. A fallacy of relevance violates the condition that the evidence should have some logical connection with the claim. Instead the claimant is trying to manipulate you into accepting the claim. A fallacy of presumption is contains faulty reasoning. On the face of it, the evidence appears to have some logical connection, but there is a technical flaw.

Common fallacies of relevance

Most of these fallacies have been studied for centuries and are often known by their Latin designations.

ad hominem (against the man). Name-calling and mud raking are similar, but these are abusive arguments that criticize an opponent rather than the opposing view.

example: How can we trust candidate X? As a reformed alcoholic and twice divorced, he can't manage his own life, how could he help us manage ours?

example: Candidate X is too liberal for this district.

ad hominem circumstantial. This is a more subtle form of personal attack that impugns the opponent on the grounds that their position is self-interested, disingenuous, or some other circumstantial grounds.

example: Of course the RIAA would condemn file-sharing over the Internet, they would stand to lose millions of dollars from royalties they could not collect.

ad populum (appeal to the masses). This is also called the “bandwagon” fallacy, because the proponent tries to persuade you on the grounds that his claim is a popular one.

example: Fifty million Frenchmen can’t be wrong . . . .

example: God-fearing and patriotic citizens will vote for this bill.
appeal to authority. This is a common ploy that either bases a conclusion on unnamed or specified authorities or on authorities speaking outside their area of expertise.

example: leading sports authorities agree that Brand X is a fast and effective remedy.

example: a committee composed of prominent Nobel Prize winners have signed the petition opposing the administration’s foreign policy. It must be wrong!

appeal to pity. Rather than the merits of the case, the proponent tries to sway his audience on purely emotional grounds.

example: Student to teacher: This is my last course. I have to pass it to graduate. My ailing grandmother is planning to come to my graduation; if I don’t graduate this month, she will probably not live long enough to see her favorite grandchild get a college degree!

example: a famous trial lawyer once defended a young women on trial for murdering her parents on the grounds that she was now an orphan!

ad ignorantiam (appeal to ignorance). This fallacy exploits the fact that conclusive evidence against it is not available. Instead of reaching a particular conclusion, in the face of ignorance, nothing can be concluded.

example: I say that life exists on other planets! If you can’t you prove me wrong, then you have nothing to say against me.

appeal to force. This is either a subtle or not so subtle attempt to coerce someone to adopt your opinion.

example: Teacher to student: You can either accept what I say or suffer the consequences.

example: Stalin reputedly rejected the Pope’s advice on how to conclude peace with a defeated Germany by replying to Churchill and Roosevelt, “And how many armored divisions does the Pope have?”

tu quoque. This is the “you do too!” fallacy. In other words, the proponent tries to deflect criticism by accusing opponents of inconsistency (hypocrisy).

example: Before you accuse me of lying, ask yourselves, “Have you been truthful in all things?”

appeal to emotion. Inciting the audience to agree by arousing their emotions.

example: The defendant is accused of a crime that is so heinous, so uncivilized and shocking that decent people everywhere must stand up and strike down the guilty like avenging angels of God.

red herring. This ploy distracts the listener from the actual claim by supporting an entirely different conclusion.

example: We should support the death penalty in our country because the murder rate over the past decade has steadily risen.
Common fallacies of presumption

Fallacies of presumption are often effective because they seem more like logical arguments replete with evidence and reasons. The problem is that they contain hidden assumptions that when revealed show them to be spurious arguments.

fallacy of accident. Applying a generalization to an instance that is very exceptional.

   example: I don’t care if Fred is suicidal, you should always return things to their rightful owner. This means that you should return Fred his pistol.

false dilemma. This fallacy is based on the illicit assumption that there are only two alternatives in some dispute. Rejecting one must mean adopting the other.

   example: America! Love it or leave it.
   example: You are either with us or against us. What is going to be?

hasty generalization. Reasoning to a generality from too small a sample.

   example: Individuals from that country are lazy and dishonest. I once had a wallet stolen from one who recently immigrated here.

complex question. This is a ploy that makes it impossible for your opponent to reply to a criticism.

   example: Have you stopped beating your wife?
   example: How long will you continue to support a position that is patently un-American?

post hoc propter hoc (appeal to false cause.) The Latin reads “after this, therefore because of it.” In this instance the proponent assumes that just because two events are conjoined that one must cause the other.

   example: I win every time I wear my lucky socks. You can be sure that I will be wearing them for tonight’s game.

fallacies of composition/division. These are instances of false reasoning from part to whole (composition) or from whole to part (division). What is true about a class may not be true about each in the individual in the class. Likewise, aspects of the particular may not be applicable to the general.

   example: This computer has an extremely fast processor as well as a large cache of fast memory. It must be the best performer in the market!
   example: Harvard is considered to be the number one rated school in the country overall. The computer science department must be the best in the country too.

Other common fallacies

There are several common fallacies that fall outside the standard categories. They are often very effective ploys.

begging the question. Technically, this is a circular argument. In other words, the evidence is the same as the conclusion.
example: What I say is the truth because I always speak the truth!

example: Creation must be the product of intelligent design, because how could something so complicated not be purposefully designed?

equivocation. (aka "ambiguity") This fallacy trades on an ambiguous word or phrase that is used differently in different contexts.

example: Expensive things are usually rare. George likes his steaks rare. I guess he only like expensive cuts of meat.

straw man. The proponent attacks an exaggerated position that is not really held by his/her opponent.

example: My opponent supports the foreign trade bill. I suppose that he is in favor of shipping the jobs of hard-working Americans overseas.

slippery slope. This fallacy involves exaggerating the consequences of some claim. Specifically, the proponent argues that because there are undesirable consequences when the claim is applied generally, we cannot accept it in any instance.

example: Parent to child—"if I let you stay out late tonight, you will expect to stay out late every night."

Many of the examples above are exaggerated for effect. The important thing to keep in mind is that fallacious reasoning can be subtle. Furthermore, reasonable and educated people both employ as well as fall prey to these tricks of the trade.

Exercises

A. Each of the following passages illustrates some form of informal fallacy. For each passage, identify the fallacy and explain why it applies.

1. Either we ease up on environmental protection regulations or we let the energy shortage ruin our economy.

2. First, they wanted to register our handguns. Then, they wanted to ban certain kinds of guns such as assault rifles and automatics. Soon, we will be living in a police state where no man can protect himself and his interests.

3. The current school board supports sex education. It is clear that these board members oppose the God-given right of parents to educate their children as they see fit.

4. Whatever is less dense than water will float, because these kinds of objects don't sink in water.

5. I am very qualified for this job. True, I have very little experience, but I have been out of work for over a year and need the money badly.

6. All of these famous musicians and Hollywood celebrities oppose the building of the new nuclear power station. It must be a bad idea to build it.

7. Anyone who opposes this war does so because he is a coward.

8. You're telling me that I should drink less! This is choice advice from a member of Alcoholics Anonymous.
9. Man is the only rational animal. That explains why women can be so irrational.

10. I think that this candy is bad. Five days after I ate a few pieces of it, I had an awful stomach ache.

B. Consult the editorial or op-ed pages of a local newspaper. Find examples of informal fallacies employed by the writers. Letters to the editor is also a plentiful source of this kind of persuasion. In each case, isolate the passage and identify the fallacy or fallacies.

• find at least two examples of fallacies

NOTE: the Web site DailyOpEd.com collects opinion pieces from many major newspapers.