

If rhetorical appeals are the means by which a writer persuades an audience to accept his or her claim by using facts, emotional language, and the writer's character and values, then logical fallacies represent flaws in the writer's reasoning in an attempt to further influence the audience.

You have certainly had conversations where your counterpart in the discussion said something that didn't make sense, stretched an idea, or bounced suddenly from one point to another. You might have reacted by saying, "Didn't you just sort of skip over the real issue?" or "That's stretching things a lot" or "You lost me on that line of reasoning" or something similar. That's essentially what happens when a logical fallacy is used in an argument: the reasoning/logic stops making sense, which renders the argument invalid or its conclusion incorrect.

A logical fallacy is a flaw or mistake in reasoning that makes the argument invalid or its conclusion incorrect. Logical fallacies, on the whole, represent distorted logic. They distort the truth or prevent the audience from arriving at a conclusion and discovering the truth. Sometimes the distortion is deliberately deceptive; other times, the distortions occur as a result of lack of information. Rhetorical techniques that rely predominantly on emotion or ethos rather than fact create the basis of many logical fallacies. Writers of papers for English comp class often use fallacies as a way to expedite an argument or gloss over the lack of supporting evidence an argument needs. Sometimes the fallacies they use have been passed along from parent to child, sibling to sibling, teacher to student, authority figure to subordinate, or idol to fan; the student has accepted a theory or idea from someone without investigating its validity or truth.

Aristotle divided fallacies into three categories: fallacies of relevance, fallacies of ambiguity, and fallacies of presumption (Logical Fallacies.info). Writers use **fallacies of relevance to propose information that doesn't have any bearing on the truth.** They use **fallacies of ambiguity to manipulate language to deceive the audience.** Writers base **fallacies of presumption on false information, which prevents the audience from reaching a logical conclusion.** An additional category, **component fallacies**, should be added to this list. **Component fallacies occur when a writer does not establish a clear connection between facts or ideas he or she identifies in the argument.**

On the next several pages are descriptions and examples of the more common logical fallacies. As you read through the list, think about situations where you might have heard or experienced the fallacy. In the margins, jot down examples that will help jog your memory. Listen to conversations and dialogues, such as classroom discussions and news presentations, where logical fallacies are used to persuade the audience. Pay close attention to your own statements

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to determine if you rely on logical fallacies or the truth to persuade others. As you read and write, be aware of the use of fallacies to bolster an argument or deflect attention away from a significant point.

Fallacies of relevance

Ad hominem, or Personal Attack – the argument attacks or criticizes some aspect of the individual or group supporting an idea, rather than attacking the idea itself, in order to discredit the idea.

EXAMPLE: “Gary Johnson is a ‘young earth creationist’ who says that carbon-dating tests are part of a conspiracy to conceal the fact that the earth is only a few thousand years old. Gary Johnson dropped out of school after the eighth grade. Therefore, carbon-dating tests prove that the earth must be millions of years old.” (*This ad hominem attack criticizes Gary Johnson’s education but does not challenge his idea.*)

Bandwagon Fallacy – the notion that because more and more people accept an idea or follow a trend, then the idea or trend must be valid.

EXAMPLE: “Many of the students at Whitman High School started drinking diet soda with mashed banana added to it because a teacher said it was a way to lose weight. Nobody recalls who the teacher was, and now the students at Camino Real, Casper, and Roosevelt high schools are also drinking the soda-banana mixture as a diet drink. Judging from the drink’s popularity, that must mean that it works.” (*There is no medical or scientific evidence that the mixture works, but its popularity implies that it has medical or scientific merit.*)

Gambler’s Fallacy – the notion that the probability of an occurrence is based on past results rather than the properties of the activity.

EXAMPLE: “Because the last three employees hired for the job have quit abruptly after two months, the new employee hired for the job will also quit after two months.” (*While there is a pattern of people leaving the specific job, there is no apparent connection between the skills and personality of the new employee and the departures of the previous employees.*)

Genetic Fallacy – the notion that someone or something must be inferior due to ethnicity, geographical origin, or race.

EXAMPLE: “Everybody knows that fashion designs from Los Angeles are going to look skanky; Los Angeles is skanky.” (*This is stereotyping and has no basis in fact.*)

Appeal to Authority – a type of irrelevant appeal that suggests that because someone prominent or significant supports an idea, the idea is a good one.

EXAMPLE: “Because George Bush has endorsed the use of carbon-fiber prosthetics like those worn by sprinter Oscar Pistorius, every Olympic runner should be allowed to wear the devices.” (*Such an endorsement has little weight because Bush has no apparent association with or expertise in the development and use of carbon-fiber prosthetics for sports activities.*)

Appeal to Consequences – a type of irrelevant appeal that suggests that having a certain belief should have pleasant or appealing consequences, or that not having a certain belief will have unpleasant or unappealing consequences.

EXAMPLE: “When you support the March of Dimes, which is a good cause, everybody will think you are a great person. If you don’t contribute, people will hate you.” *(There is no way to determine if every person on the planet will be pleased if one person contributes to the charitable organization or displeased if a person does not make a donation.)*

Appeal to Pity – a type of irrelevant appeal that uses sympathy rather than reason.

EXAMPLE: “Your generous donation to the Children’s Assistance Fund will make a difference in a child’s life.” *(This kind of plea, usually accompanied by pictures of insect-infested food and children in tattered clothing, motivates the contributor to feel sorry for the child. The ad implies but does not state exactly how the donation will be used to make a difference.)*

Appeal to Tradition – the notion that older ideas and actions are better because they have been accepted as valid over time.

EXAMPLE: “Organic farming as a popular technique for hobbyists has not been around as long as traditional farming; hence, traditional farming is better.” *(Organic farming has been around for a long time but the implication is that it is a modern practice because it has received media attention in recent years. The statement suggests that, as a more recently identified practice, organic farming has not been as thoroughly tested and is therefore not as good as traditional farming.)*

Appeal to Force – the notion that a person’s reluctance to accept an idea will have dangerous consequences from external means.

EXAMPLE: “So far, all the non-believers who have stayed overnight in the house where the murders took place have developed brain cancer, leukemia, and tuberculosis. The believers are all healthy. Anyone who plans to stay in the house should be a believer.” *(The threat of serious illness associated with the lack of belief in ghosts is intended to pressure a person into believing in ghosts in order to stay healthy.)*

Appeal to Novelty – the notion that because an idea is new, it is valid or true.

EXAMPLE: “Because scientists have only recently discovered the similarities between dinosaurs with feathers and modern birds, the theory that birds evolved from dinosaurs must be true.” *(Researchers are trying to determine the relationship between dinosaurs, flightless birds in the Mesozoic era, and modern birds. There has not been sufficient time for researchers to establish the relationship, nor have there been many detractors to tear down the scientists’ hypotheses.)*

Appeal to Popularity – the notion that because an idea has received a lot of attention and popularity over time, it is a true idea.

EXAMPLE: “Children that grow up in single-parent households will likely turn into

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criminals before they reach middle age, while children that grow up in two-parent households will not have behavioral problems that lead to criminal activity.” (*Researchers have questioned the validity of this statement but its popularity persists as a way to discourage divorce and/or criticize single parenthood.*)

Appeal to Poverty – the notion that an idea is valid or true because it is held by the poor.

EXAMPLE: “Picking up a penny and carrying the coin in your shoe will bring you good luck.” (*The implication is that wealth is associated with luck, even when there is no substantiation for such a claim.*)

Appeal to Wealth – the notion that because something has more monetary value, it is the better or truer item.

EXAMPLE: “A BMW sedan costs more than a Nissan, and so the BMW is the better car.” (*The premise that one car is better than another based solely on cost is not a reliable determination; the way the cars operate should also be evaluated.*)

Component Fallacies

Moralistic Fallacy – The notion that because a situation should be a certain way, it is that way.

EXAMPLE: “Because all American children between the ages of 6 and 16 are required to attend school, every child in the United States is smart and adept.” (*This premise does not take into account the quality of education in specific school systems, absent children, home-schooled children, children that don’t pay attention in school, children with learning disabilities, children whose situations prevent them from going to school, and so on.*)

Naturalistic Fallacy – The notion that because a situation is a certain way, it *should* be that way.

EXAMPLE: “Lots of kids drink alcohol before they reach their 21st birthday. Therefore, the law should be changed to make it legal for people 15 years and older to drink alcohol.” (*This premise overlooks the percentages of underage drinkers and the consequences of underage drinking.*)

Red Herring – a method of using an unrelated idea to shift the focus from one topic to another.

EXAMPLE: “Driving after smoking marijuana does not endanger lives. If it did, all the head shops and convenience stores in Midtown would have gone out of business by now.” (*By implying that head shops and convenience stores in Midtown depend on business from customers under the influence of marijuana, the writer has shifted the premise from heavy machinery operation while under the influence to the success of various business operations.*)

Hasty Generalization – The notion of drawing a conclusion based on incomplete evidence.

EXAMPLE: “If every low-income family in a particular city includes at least one person on disability, then every family that has at least one person on disability must be a low-income family.” (*This premise is flawed because it does not take into account*

that disability is not related to income level or that the presence of disability has the potential to influence income.)

Straw Man Fallacy – the notion of simplification of an argument by exaggerating or over-simplifying the argument and ignoring the details.

EXAMPLE: “The Internet is evil because it has pornography websites.” (This premise overlooks the millions of non-pornographic websites that offer educational resources, databases, and learning services.)

Circular Reasoning – the practice of restating an idea as a premise and then a conclusion without providing evidence to prove the validity of the idea.

EXAMPLE: “American citizens enjoy the right to bear arms because the Constitution allows for it. Therefore, the government makes it possible through the highest law in the land for people to own and use guns.” (The idea in the first sentence sounds plausible, but there is nothing here that supports the idea; the second sentence is a re-statement of the first.)

Begging the Question – the practice of presenting a premise or thesis, ignoring the deeper issues of the premise, and leaping to a conclusion.

EXAMPLE: “The nation’s desire for a national health care program could have a negative impact on the insurance industry, which has been overcharging consumers for decades. Because so many people need care and treatment, the government should pay for health care services by taxing the products that make people sick.” (The issue of how to deal with the insurance industry is raised and then immediately dropped, leaving the reader to speculate about its role in national health care.)

False Cause – the practice of tying the wrong cause to an event, or suggesting that because one event occurred before the second event, that the first event must have caused the second event.

EXAMPLE: “Volcanic eruptions can alter the weather patterns in the area around the volcano. A number of volcanoes erupted around the middle of the 20th century. Not long after that, the amount of carbon dioxide in the earth’s atmosphere increased exponentially, causing the phenomenon known as global warming. Therefore, volcanic eruptions are the cause of global warming.” (Many factors may have contributed to global warming. To attribute its occurrence only to volcanic eruptions is misleading and inaccurate.)

Slippery Slope – the notion that one situation will lead to another situation that appears unrelated and that nothing can be done to prevent the situations from occurring consecutively.

EXAMPLE: “If we let the high school students grow mustaches, things will snowball. Pretty soon the kids will all have long hair and be anarchists and they’ll blow up the school.” (There is no direct relationship between facial hair and anarchy or facial hair and explosions.)

Non-sequitur – the practice of developing a conclusion that is not based on any of the premises in an argument; this is sometimes described as “the logic doesn’t follow.”

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EXAMPLE: “The airplanes that crashed into the World Trade Center towers were hijacked by Al-Qaida extremists. There are Al-Qaida extremists in Afghanistan. Therefore, the United States should attack Iraq and bring down Saddam Hussein.” (*The premises of this theory – Al-Qaida extremists and Afghanistan – are not related to the items Iraq and Saddam Hussein mentioned in the conclusion.*)

Either/Or – the notion that there are only two possible outcomes to any scenario when in fact there may be many.

EXAMPLE: “If Mexican citizens continue to enter the United States illegally, the United States as we know it will cease to exist.” (*There is no substantiation for this generalization.*)

Faulty Analogy – the practice of making poor comparisons that don’t make sense.

EXAMPLE: “Friendship is like a flower: fragile, short lived and subject to shattering if it isn’t cared for. Therefore, people should avoid having friends.” (*This comparison of flowers to friendship does not take into account that friends are human and have many attributes that flowers don’t have.*)

Fallacies of Omission

Stacking the Deck – the practice of disregarding opposing points of view or evidence and only using evidence that supports a premise.

EXAMPLE: “Nothing of note has emerged from Holland in the past five hundred years except for the recent decriminalization of marijuana.” (*This is not a true statement. Holland is, among other things, the source of artwork by well-known artists, unique architecture, popular tulips, and novel footwear.*)

Appeal to a Lack of Evidence – the practice of claiming that something is true because it cannot be disproved.

EXAMPLE: “Until somebody proves that God exists, He doesn’t.” (*This claim consists of two contradictory phrases, neither of which lends evidence to prove itself true or false.*)

Complex or Loaded Question – The practice of phrasing a statement to suggest that another, implied statement is true. These questions have an accusatory or critical tone.

EXAMPLE: The classic question, “When did you stop beating your wife?” is a loaded question because it implies that the person who is being asked the question was at some time beating his wife.

Contradictory Premise – the practice of challenging one’s premise with a premise that disagrees or contradicts.

EXAMPLE: “If the government’s obligation to its citizens is to protect them at all costs, then the president has to send its soldiers to war to protect the country’s citizens.” (*By putting one group – the soldiers – in harm’s way, the government is not*

protecting its citizens at all costs.)

Fallacies of Ambiguity

Fallacy of Composition – the notion that everyone in a group is capable of doing what one person can do, with the same consequences.

EXAMPLE: “If one man can drink and drive on the freeway without getting into an accident, then everybody can drink and drive on the freeway without getting into an accident.” (It’s feasible that one drunk driver will cause other drivers to be more careful and get out of the drunk driver’s way to avoid his recklessness, but many drunk drivers on the same road may not have the capacity to maneuver around a lot of reckless driving.)

Fallacy of Division – the notion that each part of a whole has the same character or quality as the whole.

EXAMPLE: “Schools in this state have a reputation for being under-funded, which must mean that the students don’t have enough resources and are therefore stupid.” (The intellectual level of each student is not wholly dependent on school funding, which makes this statement untrue.)

Occam’s Razor is a principle of logic that states that the simpler of two theories about the same situation or concept is more likely to be correct. In other words, if Theory 1 posits that it is possible to accomplish a task in two steps and Theory 2 posits that the same task can be accomplished in two steps as long as the moon is full and the person performing the task is wearing red pants and does his work in a room without windows, it is more reasonable to assume that Theory 1 is correct – that the task can be accomplished in two steps without additional conditions. Occam’s razor is often used to reduce an argument to its essential elements. It is not always reliable; sometimes the complications of an argument establish the argument’s validity.

Logical fallacies can be the result of sloppy or rushed research and writing. Avoid simplifying an argument and constructing a logical fallacy for the sake of introducing your thesis or claim quickly or conveniently. As you write your assignments, ask yourself whether the reasoning you are using to support your claims and ideas is sound reasoning or flawed reasoning. If it’s sound, it should hold up to this challenge question: “What am I overlooking that can punch holes in my line of reasoning?” If it’s flawed, it will not hold up to the same challenge question; you should be able to identify problems or distortions with your thinking.