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Recognizing and Avoiding Logical Fallacies

Logical fallacies are flaws in reasoning that lead to illogical statements. They tend to occur most often when ideas are being argued, although they can be found in all types of writing. Most logical fallacies masquerade as reasonable statements, but they are in fact attempts to manipulate readers by reaching their emotions instead of their intellects, their hearts rather than their heads. Most logical fallacies are known by labels; each indicates a way that thinking has gone wrong during the reasoning process.

Hasty generalization

A **hasty generalization** occurs when someone generalizes from inadequate evidence. If the statement “My hometown is the best place in the state to live” is supported with only two examples of why it is pleasant, the generalization is hasty. Stereotyping is a type of hasty generalization that occurs when someone makes prejudices, sweeping claims about all of the members of a particular religious, ethnic, racial, or political group: “Everyone from country X is dishonest.” Sexism occurs when someone discriminates against people on the basis of sex.

False analogy

A **false analogy** is a comparison in which the differences outweigh the similarities, or the similarities are irrelevant to the claim the analogy is intended to support. “Old Joe Smith would never make a good President because an old dog cannot learn new tricks.” Homespun analogies like this often seem to have an air of wisdom about them, but just as often they fall apart when examined closely. Learning the role of the President is hardly comparable to a dog’s learning new tricks.

Circular argument

A **circular argument**, sometimes called a **circular definition**, is an assertion merely restated in slightly different terms: “Boxing is a dangerous sport because it is unsafe.” Here, “unsafe” conveys the same idea as “dangerous” rather than adding something new. This “begs the question” because the conclusion is the same as the premise.

Non sequitur

Non sequitur in Latin translates as “does not follow,” meaning a conclusion does not follow from the premises: “Jane Jones is a forceful speaker, so she will make a good mayor.” It does not follow that someone’s ability to be a forceful speaker means that person would be a good mayor.

Post hoc, ergo propter hoc

Post hoc, ergo propter hoc – which means “after this, therefore because of this” – results when someone assumes that sequence alone proves something. This cause-and-effect fallacy is very common: “Because a new weather satellite was launched last week, it has not stopped raining.”

Self-contradiction

Self-contradiction occurs when two premises are used that cannot simultaneously be true: “Only when nuclear weapons have finally destroyed us will we be convinced of the need to control them.” This statement is self-contradictory in that no one will be around to be convinced after everyone has been destroyed.

Red herring

A **red herring**, sometimes referred to as **ignoring the question**, sidetracks an issue by bringing up a totally unrelated issue: “Why worry about the pandas becoming extinct when we should be concerned about the plight of the homeless?” Someone who introduces an irrelevant issue hopes to distract the audience as a red herring might distract bloodhounds from a scent.

Appeal to the person

An **appeal to the person**, also known as **ad hominem**, attacks the appearance, personal habits, or character of the person involved instead of dealing with merits of the issue at hand: “We could take her plea for money for the homeless seriously if she were not so nasty to the children who live next door to her.”

Bandwagon

Bandwagon, also known as **going along with the crowd**, implies that something is right because everyone is doing it, the truth is determined by majority vote: “Smoking must not be bad for people because millions of people smoke.”

False or irrelevant authority

Using **false or irrelevant authority**, sometimes called **ad verecundiam**, means citing the opinion of an “expert” who has no claim to expertise about the subject at hand. This fallacy attempts to transfer prestige from one area to another. Many television commercials rely on this tactic – a famous tennis player praising a brand of motor oil or a popular movie star lauding a brand of cheese.

Card-stacking

Card-stacking, also known as **special pleading**, ignores evidence on the other side of a question. From all the available facts, the person arguing selects only those that will build the best (or worst) possible case. Many television commercials use this strategy. When three slim, happy consumers rave about a new diet plan, they do not mention (a) the plan does not work for everyone, and (b) other plans work better for some people. The makers of the commercial selected evidence that helped their cause, ignoring any that did not.

The either-or fallacy

The **either-or fallacy**, also known as **false dilemma**, offers only two alternatives when more exist. Such fallacies often touch on emotional issues and can therefore seem accurate at first. When people reflect, however, they quickly come to realize that more alternatives are available. Here is a typical example of an either-or fallacy: “Either go to college or forget about getting a job.” This statement implies that a college education is a prerequisite for all jobs, which is not true.

Taking something out of context

Taking something out of context separates an idea or fact from the material surrounding it, thus distorting it for special purposes. Suppose a critic writes about a movie saying, “The plot was predictable and boring but the music was sparkling.” Then an advertisement for the movie says, “Critic calls this movie ‘sparkling.’” The critic’s words would have been taken out of context – and distorted.

Appeal to ignorance

Appeal to ignorance assumes that an argument is valid simply because there is no evidence on the other side of the issue. Something is not true merely because it cannot be shown to be false. Conversely, something is not false simply because it cannot be shown to be true. Appeals to ignorance can be very persuasive because they prey on people’s superstitions or lack of knowledge. Here is a typical example of such flawed reasoning: “Since no one has proven that depression does not cause cancer, we can assume that it does.” The absence of opposing evidence proves nothing.

Ambiguity and equivocation

Ambiguity and **equivocation** describe expressions that are not clear because they have more than one meaning. An ambiguous statement may be taken either way by the reader. A statement such as “They were entertaining guests” is ambiguous. Were the guests amusing to be with or were people giving hospitality to guests? An equivocal expression, by contrast, is one used in two or more ways within a single argument. If someone argued that the President *played an important role* in arms control negotiations and then, two sentences later, accused him of *merely playing a role*, the person would be equivocating.