Logical Reasoning

Though there are many techniques to make sure you are using logic well in your paper. Remember, even good ideas can be ruined by logical fallacies. A logical fallacy is an error in reasoning that renders an argument invalid. These can weaken the credibility of your paper and alienate your reader. There is a wide variety of logical fallacies, but many fall into a few basic categories.

Irrelevant Appeals
Irrelevant appeals use information or arguments that are unrelated to the given material. The following examples are types of irrelevant appeals:

**Popular Appeal to Authority**
This appeal relies on widespread acceptance, not logic.

**Example:** 85% of students think that college should be free; therefore, colleges should stop charging tuition. (Just because students think college should be free doesn’t make it the only viable option.)

**Appeal to Ignorance**
This appeal relies on the absence of contradictory knowledge or evidence.

**Example:** Of course unicorns exist. No one has ever proven that they don’t.

**Example:** There’s no way that Joey speaks Spanish; I’ve never seen any evidence that he does. (Lack of evidence doesn’t mean it is false)

**Ad Hominem**
This appeal relies on irrelevant characteristics of persons associated with an opposing argument. In politics, this is often called mudslinging.

**Example:** We can’t take this candidate seriously because he used to be an actor.

**Straw Man**
This appeal uses misquotation or oversimplification to misrepresent an opponent’s position as indefensible.

**Example:** The school principal wants to stop serving cake in the cafeteria. He clearly wants us to go hungry.

**Emotional Appeal (Ad Misericordiam)**
Though some emotional appeals can be appropriate, this appeal relies on irrelevant emotions instead of logic.

**Example:** Look at the cute little puppy! How could such a sweet little thing be capable of eating your shoe?

**Red Herring**
This appeal sidetracks an issue by introducing unrelated information to distract the audience.

**Example:** Our city wouldn’t be in the financial crisis it is in now if the previous mayor had adequately addressed the moral decline of our society! (Maybe there’s a connection here, but it seems like the primary purpose is to distract)
Improper Generalization
Improper generalizations summarize a point using inadequate evidence or faulty arguments. The following examples are types of improper generalization:

**Hasty Generalization**
This appeal makes a broad generalization based on scanty or inconclusive evidence.
**Example:** Most employers are too picky. I’ve applied for three different jobs and haven’t been hired.

**Slippery Slope**
This appeal takes several related ideas and inappropriately makes a generalized statement about them all.
**Example:** If we stop insisting that students wear button-up shirts to class, next thing you know, they’ll be coming to class in pajamas.

**Questionable Analogy**
This appeal takes an analogy and inappropriately generalizes the relationship between the two items.
**Example:** Forcing people to pay taxes is like cornering them in a dark alley and demanding their money.

False Assertion of a Cause
False assertion of a cause assumes that two different causes or events are somehow related. The following examples are types of false assertion of a cause:

**Oversimplified Cause (Post Hoc)**
This appeal attributes a causal relationship as being the only possible cause of a certain outcome, when other causes may have contributed to that outcome.
**Example:** When I wear these shorts and take a test, I get a good grade. I should wear these shorts to every test, so I will get good test scores.

**Questionable Cause**
This appeal correlates two irrelevant items, concepts, or factors, resulting in questionable or confused causes.
**Example:** Six months after President Hoover took office in 1929, the stock market crashed. Clearly, his taking office caused the stock market to crash.

Questionable Assumptions
Questionable assumptions reach a conclusion that does not follow according to the context. The following examples are types of questionable assumptions:

**Begging the Question (circular argument)**
This appeal assumes the point being proven is true based on the initial premises (reasons) alone.
**Example:** He must be telling the truth. He said so himself.

**Equivocation**
This appeal assumes that two or more inconsistent terms are the same.
**Example:** I’ve heard people say that time is money; therefore, if I have more time on my hands, I’ll have more money on my hands.