

Informal fallacies**What informal fallacies are****Some infamous informal fallacies****Begging the question****Appeal to inappropriate authority****Hasty generalization*****Ad hominem******Post hoc*****Distinction without a difference****False dilemma**

Recall that a fallacy is a psychologically compelling but nonetheless mistaken way of arriving at a conclusion or belief.

Some ways of arriving at conclusions or beliefs do not involve arguments/inferences at all (e.g., wishful thinking is a way of arriving at a belief that doesn't involve basing conclusions on premises--rather it involves being influenced to believe something simply by a strong wish or desire), but the ones we're interested in this course do. Thus, for our purposes, a fallacy may be understood as a psychologically compelling but nonetheless mistaken way of arguing/infering (hereafter, we'll let "reasoning" stand for "arguing/infering").

And here, "mistaken" means "does not result in a reasonable belief," which in turn often means that the reasoning in question is not sound (i.e., the argument/inference involved either has a false premise or is not logically strong).

Formal fallacies, as we've seen, pertain to deductive reasoning, and hence to the logical form of the deductive argument/inference in question: they are ways of reasoning deductively (e.g., affirming the consequent, denying the antecedent) that are invalid, which means they involve bad deductive forms.

Informal fallacies, by contrast, pertain to the non-form-related ways in which reasoning can be mistaken (i.e., be unsound or otherwise incapable of rendering belief in its conclusion reasonable):

Informal fallacy: a psychologically compelling way of reasoning that is mistaken for reasons other than the form of argument/inference it involves.

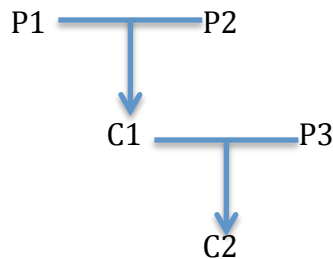
This means that informal fallacies often pertain to nondeductive reasoning. But not exclusively: if the mistake characteristic of the fallacy has to do with premise truth, for example, or some other non-form-related aspect of the argument/inference involved, the informal fallacy might pertain even to deductive reasoning.

Let's start with an example of a notorious informal fallacy that can pertain to deductive and nondeductive reasoning alike: Begging the Question. To get the feel for this fallacy, consider the following argument:

If the Bible is divinely inspired, everything it claims is true. The Bible is divinely inspired, so everything it claims is true. But since the Bible claims that God exists, it must be true that God exists.

This seems to be a complex argument with a lemma:

- P1 If the Bible is divinely inspired, then if the Bible claims something, that thing is true.
- P2 The Bible is divinely inspired.
- C1 If the Bible claims something, that thing is true.
- P3 The Bible claims that God exists.
- C2 It's true that God exists.



Each component argument of this complex argument is deductively logically strong. (Each component argument essentially has the valid form of Modus Ponens.)

But despite the argument's overall logical strength, there seems to be something fishy about it. And you can admit this even if you happen to be a theist who thinks that the premises of the involved argument are true: It's not a good argument overall, despite its deductive logical strength and (in your view, if you're the right sort of theist) soundness. So what's the mistake in reasoning when one reasons in accordance with this argument?

The mistake is that the argument commits the informal fallacy of Begging the Question:

Begging the Question (aka "*Petitio Principii*," "Circular Reasoning"): _____

The fallacy and reason in such a way that any sane, mature person who didn't accept the conclusion of the argument/inference involved would be bound to have a reason to doubt at least one of the arguments/inference's premises.

In this sense, Begging the Question involves reasoning in such a way as to *mistakenly or inappropriately assume* the very thing (conclusion) you're trying to establish. If you didn't assume that thing all along, at least one of the premises offered in support of it would be dubious.

(This way of characterizing Begging the Question is articulated and developed in the article by Frank Jackson, "*Petitio* and the Purpose of Arguing," *Pacific Philosophical Quarterly* (1984), Vol. 65, pp. 26-36. The name of the fallacy has to do with the idea that when one commits the fallacy of Begging the Question one "begs" or "pleads" with the audience to accept an answer to the very question one is supposed to be giving independent reasons to accept. The alternate name of the fallacy, "*Petitio Principii*" is Latin for "appeal [to what you're supposed to be giving reasons for] from the beginning [of your argument]." And the other alternate name, "Circular Reasoning," comes from the idea that if you were to accept a question-begging argument, you could then inappropriately go on to use the conclusion in support of one or more of the premises, and hence inappropriately reason in a "circle.")

Here are some other arguments that commit the fallacy of Begging the Question:

What we know is that refusing to cheat on the exam was morally right because it maximized expected utility, that stealing the iPod was morally wrong because it failed to maximize expected utility, that lying to your Mom about the tuition was morally wrong because it failed to maximize expected utility, and that treating your friends with respect is morally right because it maximizes expected utility. Clearly, the best explanation of these facts is that an action is morally right if and only if it maximizes expected utility. Therefore, this Utilitarian theory of morality is correct: an action is morally right if and only if it maximizes expected utility.

Haidar must have been at the party, because both Meiying and Haidar were at the party.

Another infamous informal fallacy is known as Appeal to Inappropriate Authority:

Appeal to Inappropriate Authority: _____

The fallacy of accepting premises on the basis of 'say-so' of someone who lacks the appropriate credentials to speak on the matter.

Here, "credentials" means past experience or training that puts one in a position to speak reliably on the matter in question.

There are two main ways in which one might accept a premise in one's reasoning on the basis of the say-so of someone who lacks appropriate credentials to speak on the

matter. First, one might accept the premise on the basis of the say-so of someone who is an irrelevant authority:

Irrelevant Authority: _____

someone who has a good credentials to speak on a matter, but not on the relevant matter.

E.g.:

Well, Dave says that Caesar crossed the Rubicon in 29 BCE, and Dave's got a PhD; that seems to me to be a good reason to accept it.

Dave's PhD is in philosophy, not in ancient history; it's thus not clear that Dave has good credentials to speak on the relevant *historical* matter.

Chris Benoit couldn't have had that degree of brain damage, as Vince McMahon has pointed out.

Vince McMahon may be an expert on the business of entertainment wrestling, but that doesn't given him relevant credentials to speak on the medical issue of whether Benoit could or could not have had that degree of brain damage from his steroid use, etc.

Second, one might a premise in one's reasoning on the basis of the say-so of someone who is an inadequate authority:

Inadequate Authority: someone who has credentials on the relevant matter, but not good credentials.

E.g.:

Why do I think that AIDS is not caused by HIV? Go check out the Weblog, "The Truth about AIDS." The Weblog creator, who is constantly discussing the issue, claims it isn't.

While you might think that his discussions about/interest in the issue give the Weblog creator some credentials, his discussions/interest alone do not give him anything like very good credentials.

I buy the view that contemporary string theory is both conceptually incoherent and empirically inadequate; that's the main message of

Jonas Jones (BSc, Disreputable University), in his book with Pay-to-Publish Press on the topic.

Jones has an undergraduate degree at a notoriously bad university, and a vanity press publication; these are not very good credentials.

The next informal fallacy we will consider is known as Hasty Generalization:

Hasty Generalization: _____

The fallacy of violating the size or the variation rule when engaging in enumerative induction.

The idea is that one commits a Hasty Generalization, one overgeneralizes from the sample to the entire class.

Thus, recall the following examples of Enumerative Induction, and consider how they might be involved in the fallacy of Hasty Generalization:

90% of tested extroverts are exceptionally happy. Therefore, 90% of extroverts are exceptionally happy. **Context: We have the background information that almost all of the tested extroverts happened to be on high doses of mood-boosting drugs.**

25% of trial patients experienced "brain-zaps" when coming off the antidepressant. So, 25% of patients experience "brain-zaps" when coming off the antidepressant. **Context: We have the background information that the "trial" or clinical study only involved eight patients.**

All Grizzly bears so far observed have been aggressive. Hence, all Grizzly bears are aggressive. **Context: We have the background information that the way in which the observed Grizzly bears were observed involved activities that the bears probably interpreted as severely threatening.**

Our fourth informal fallacy has a Latin name:

***Ad Hominem*:** The fallacy of reasoning in support of conclusion merely on the basis of a premise(s) about disagreeable characteristics of someone who doesn't accept that conclusion.

The Latin name means "to (or against) the person." The idea is that with *ad hominem* reasoning one is reasoning in accordance with logically weak (hence unsound, and hence bad) arguments because the arguments don't provide relevant

reasons to accept the conclusion--they at best provide reasons to dislike people who don't accept the conclusion.

E.g.:

Oh please. Berkeley's argument for philosophical idealism is bunk. Don't forget that he sold tar-water!

She's one of the worst profs ever, because the students who fawn over her make me sick, what with their over-zealous enthusiasm and all.

Every anti-monarchist I've encountered strikes me as some annoying blend of whiney and too intense. So we should accept monarchism as the best form of government.

Note, however, that not all appeals to premises about characteristics of persons commit the *ad hominem* fallacy.

E.g.:

Since he's cheated on a number of past partners, I really don't think you should hook up with him--he's not likely to make a good partner.

Sorry, but I don't think Chris is the right person for the job, because his reference letters are weak and his resume is rather slim.

In examples like these, the appeal to disagreeable characteristics of people who (presumably) don't accept the conclusion is not all that's offered up by way of support for the conclusion: presumably, they also include (at least implicit) premises to the effect that the disagreeable characteristics are quite relevant to the conclusion.

Now on to another infamous informal fallacy:

Post Hoc: _____

The fallacy of reasoning for a conclusion to the effect that one event was caused by another event, merely on the basis of a premise—> to the effect that second event came before the first event.

Here, the name is an abbreviation of the Latin phrase, "*Post hoc ergo propter hoc*," which means "After this, therefore because of this."

Although the fact that an event occurred before another event may provide some support for thinking that it caused the later event, it never *alone* provides strong

enough support to make for a logically strong (even in the nondeductive sense) argument to this effect.

E.g.:

Of course it was your driving that damaged the car, since it was just after you starting driving the thing that it broke down.

I had five bad hands, and then a winner. Nice to know, therefore, that bad luck eventually brings about some good luck!

Since she left shortly after I made that comment about cats, she must have left because of my comment.

Our next fallacy is often committed by people looking to excuse inappropriate behavior by trivial semantic or rhetorical maneuvers:

Distinction without a Difference: The fallacy of reasoning in support of a conclusion to the effect that a statement is not true, on the basis of a premise that treats that statement as substantially different from an alternatively worded but nonetheless equivalent statement.

Since the two alternatively worded statements are equivalent, they are not really substantially different, and the one will be true in all situations in which the other is; hence the premise involved in a Distinction without a Difference fallacy will always

be the same.

E.g.:

All I did was take the money without asking in a circumstance in which I had no prior right to take it. Since that's not the same thing as my stealing the money, I didn't really steal the money.

No, I wouldn't say that he's a sexist. Admittedly, he thinks that, by virtue of their sex, women are inferior to men; but that doesn't make him a sexist, so it's false to go around saying that he is one.

When reasoning with a disjunctive premise (e.g., when reasoning in accordance with an argument of the Disjunctive Syllogism form), be careful not to commit the False Dilemma fallacy:

False Dilemma: _____
 The fallacy in support to a conclusion on the basis of premise that presents two possibilities as the only relevant ones when they really aren't.

A premise that presents two options as the only two relevant possibilities will, in effect, be a disjunctive statement of the form "A or B," where "A" is one of the options and "B" is the other. (These two options are called the "disjuncts" of the disjunctive statement.) If the two options are not really the only two relevant possibilities, the disjunctive statement will be false (recall the truth table for disjunction), and hence the reasoning that appeals to it as a premise will not be sound.

Where someone's reasoning involves a disjunctive statement as a premise, to determine whether the reasoning commits this fallacy, you need to try to find a counterexample to that statement. (We've already seen how we can apply the method of counterexamples to conditional statements; we can apply it to disjunctive statements as well.)

Counterexample to a disjunctive statement: An example or situation in which

 neither of the disjunct is true.

If you can find a counterexample to a disjunctive statement, you know that it is false, and hence any reasoning employing this statement as a premise commits the False Dilemma fallacy.

E.g.:

Winter is either part of the Occupy Movement or she's opposed to it. She's obviously not part of it, so she must be opposed to it. [Counterexample to the

disjunctive premise: _____
 Winter is in favor of the movement but because she is unwell,
 she might not be part of the movement.

_____.]

James isn't a theist. Since one must either be a theist or an atheist, it follows that James is an atheist. [Counterexample to the disjunctive premise: One can be an agnostic--someone who is neutral on the question of whether God exists, in which case one is neither a theist--someone who believes that God exists--nor an atheist--someone who believes that God does not exist.]

Exercise 7.1: Provide a counterexample to each of the following disjunctive statements.

You're either with me or against me.

The man is insane or he's a divine inspired prophet.

A deductive argument is either sound or invalid.

Dave must have a masculine gender; either that, or he's really good at hiding the fact that he's a woman.

It flies or it's not a bird.

You either believe in God or you're an atheist.

Either Yelena has rich parents or she got into the university because of one of those politically correct equality programs.

A plane geometric figure is either a square or it hasn't got four right angles.

Exercise 7.2: Name the informal fallacy involved in each of the following arguments.

I wouldn't say that he's in awe of those criminals. His attitude toward them is partly one of fear and partly one of admiration, but since that's not to say that he's in awe of them, he's not really in awe of them.

Support for the university's new advertising strategy is very high among university faculty members, as is demonstrated by the recent poll of faculty members in top administrative positions; according to the poll, most of them are strongly in favor of the strategy.

I'm not sure why, but reading on the bus gives me nightmares. I say this because during each of my last three bus trips I read, and, sure enough, the night of each trip I had a nightmare.

If there are no supernatural beings, then there's no God as traditionally conceived. Let's face it: there are no supernatural beings. So there's definitely no God as traditionally conceived.

You must be a nihilist, i.e., someone who thinks there's no meaning to life. That's because you either believe in an afterlife or you think that there's no meaning to life,

and you clearly don't believe in an afterlife.

Mr. Speaker, the Honourable Member's claim that the government has shirked its responsibilities with respect to our country's single parents is ridiculous. For proof of the claim's ridiculousness, one needn't look any further than at the sorts of suspect characters who helped him win his seat in the last election.

Let's say that moral relativism is the view that what makes something morally right or wrong is simply whether the individual doing it thinks it's right or wrong; and we'll say that moral imperialism is the view that if you believe something to be morally right or wrong you ought to go around trying to convince everyone else to believe this as well. With these clarifications in mind, I think we can easily conclude that Helena is a moral relativist, because she clearly doesn't accept moral imperialism, and one either has to accept moral imperialism or accept moral relativism.

Soft determinism--the philosophical theory according to which a choice can be free even though it was determined by prior events--is plainly false, since my choice to eat the apple instead of the orange was free but it wouldn't have been if it were determined by prior events.

Crystal's brother is one of the most articulate English major's I've ever talked to, and according to him contemporary evolutionary theory has big flaws. I wouldn't want to bet on the truth of the evolutionary theory, then, seeing that it must therefore have some big flaws.

Crystal's brother is a total bore, and--to put it politely--his personal hygiene leaves a lot to be desired. Since he thinks we're headed for another economic meltdown, I'd say the opposite is true.

I can just tell: My partner is getting tired of me and is about to bail. The same thing happened with my last partner. I guess I'd better just get used to it, therefore: Every partner I'll ever be with will eventually get tired of me and bail.

Exercise 7.1 Solutions

You're either with me or against me. **Counterexample: You may neither support the speaker nor oppose the speaker.**

The man is insane or he's a divine inspired prophet. **Counterexample: Perhaps the man simply has (or has been falsely represented by others as having)**

mistaken beliefs about himself and what inspires him.

A deductive argument is either sound or invalid. **Counterexample: A valid deductive argument may nonetheless have a false premise, and hence be unsound.**

Dave must have a masculine gender; either that, or he's really good at hiding the fact that he's a woman. **Counterexample: Dave may be a man with a feminine gender.**

It flies or it's not a bird. **Counterexample: Maybe it's a penguin, in which case it is a bird (i.e., it's false that it's not a bird) but it doesn't fly.**

You either believe in God or you're an atheist. **Counterexample: Perhaps you're an agnostic, in which case you're neither a theist nor an atheist.**

Either Yelena has rich parents or she got into the university because of one of those politically correct equality programs. **Counterexample: Yelena may well have gotten into the university simply because of her academic merit, even if she has poor parents.**

A plane geometric figure is either a square or it hasn't got four right angles. **Counterexample: A rectangle is a plane geometric figure that has four right angles but is not a square.**

Exercise 7.2 Solutions

I wouldn't say that he's in awe of those criminals. His attitude toward them is partly one of fear and partly one of admiration, but since that's not to say that he's in awe of them, he's not really in awe of them. **Distinction without a Difference**

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