Cognitive Bias and Logical Fallacies on Social Media

October 24th, 2019

CSUF; CPSC 311

Professor Peralta

Chukwudi Ikem 889294070

David Huang 889433256

Namanh Tran 889433595

Derrick Lee 889227930

Introduction

In the twenty-first century, the introduction of social media has allowed for a larger sharing of ideas over the internet. With these new ideas, however, comes invalid arguments that come in the form of cognitive biases and logical fallacies. People online use these illogical tools to help them come to conclusions too soon. By doing this assignment, we can hopefully identify some of these biases and fallacies (and consequently stop using them in our daily lives).

Appeal to Authority

The appeal to authority logical fallacy is when someone assumes something is true just because authority claims it to be true. In the example above it shows that an "expert" on the subject claims it to be true. In this example, we can see that person A (first comment) claimed that GraphQL is a great way to learn how an API works. Then person B (second comment) said that REST APIs are better to understand the inner workings of an API. Person A then replies to person B's claim (third comment) by saying in essence, saying that person's B claim is invalid because his Udemy teacher said that his original claim was correct. The third part of the comment shows the logical fallacy because Person A is disregarding Person B's claim because his/her's Udemy teacher said so. This is illogical

because you cannot just point to a higher power and say "because he said so" as proof to

your claim.

Appeal to Numbers

Appeal to numbers is a logical fallacy used to illogically defend a claim. It is when

someone says a claim is true because many people believe it is true so that become the

"correct" claim. In this example, we see that person A asked their followers to see if a

certain movie is good. Then person B comes with the claim that the movie has to be good

because everyone loves it. This is the appeal to numbers logical fallacy because person B

believes that the movie is good because a large number of people think it is a good

movie. This is illogical because if everyone likes something that does not make the claim

correct or right.

Straw man

My workplace needs more people with diverse background. I am seeing too many problems that could've been prevented if the team who made the choices weren't all Racial group

9:04 PM · Sep 8, 2019 · Twitter for Android

3 Likes

· Sep 8

Replying to

You just hate Racial Group people don't you.

The straw man logical fallacy is when someone takes someone else's claim and changes it to the point where it seems like it is the weaker argument and does not address the same problem as the initial claim does then attacking it. In this example person A is saying their workplace needs more diversity because their company is in trouble because apparently there were not enough diverse people on the team (probably trying to say lack of diverse minds). Then person B attacks person A's argument by saying person A hates a particular racial group. This completely deviates from the original claim that the company needs diversity. Although it is not stated in the comments, indirectly this turned into
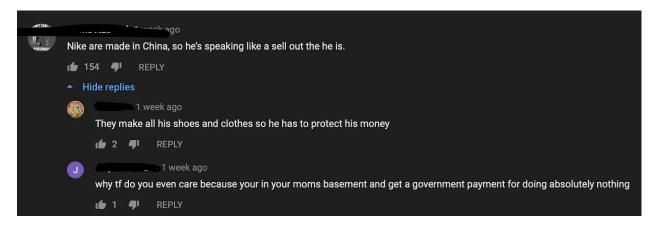
whether or not person A hates a certain race which is the first process of the straw man

fallacy. Then attacks this by essentially saying that person A hates this racial group.

Cherry Picking

Cherry-picking is when a person carefully chooses a piece of evidence to support their

claim despite other evidence existing that makes their claim weaker. In this example, we

can see that person A says that his political candidate is honest and morally straight

because he does things that are socially deemed as "good". Person B points out to person

A that their candidate is a part of a human trafficking ring in the past. This shows that

person A is trying to "cherry-pick" information to support their claim that their candidate

is "honest and morally straight" while omitting the fact that his candidate has been

involved in a human trafficking ring which would disprove their claim.

Ad Hominem

Ad hominem is a fallacy that attacks the person rather than attacking the argument itself.

In the example above an argument is made that since Nike is made in China, he(Lebron

James) is also a sellout. The third comment uses the ad hominem fallacy, because it

attacks the first person instead of the argument that the first person made. The first

person's argument is about Lebron being a sellout while the third person, instead of

attacking the argument of Lebron being a sellout, the third person attacks the first person

directing.

Slippery Slope

First the robots starting taking our jobs, then the next thing you know the will want civil rights, and take over the human race, and the world might end up like in terminator! Where does automation stop?

5:22 PM - 27 May 2019

13 Retweets 143 Likes

22   13   143
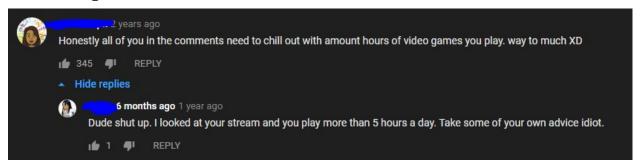
Slippery slope is a logical fallacy where a person first makes an initial claim, then states by allowing the first claim it will then trigger a chain of events to allow a second claim to be true. Basically the strategy for the fallacy is to take a claim and then state if that claim is allowed to happen a blown out of proportion scenario will happen. In the tweet above the person makes an initial premise that robots are taking the jobs. The person uses slippery slope by then stating that after allowing the first claim, a chain of events will happen. In this case the robots wanting civil rights and the taking over the human race. From the chain of events the person states his second claim saying it will be true due to the events that were triggered by allowing the first claim to happen. In this tweet
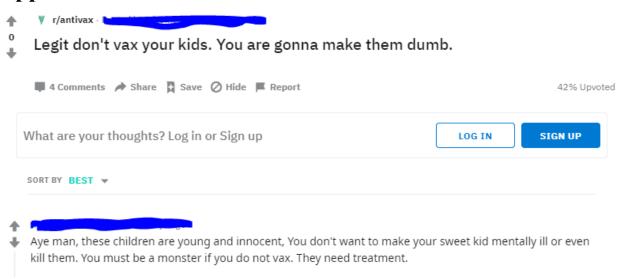
basically by letting robots take over jobs it will eventually lead to the world turning into a

scenario like the world in the movie terminator.

Tu Quoque

Tu quoque is a logical fallacy that uses hypocrisy to deny and discredit a person's claim by stating that the person who makes the claim does not even follow or abide by their own argument so why should anyone else. In the example person A says that people in the comments need to lower the amount of hours they spend playing video games. The Tu quoque fallacy happens when Person B tells person A that she should not be giving criticism on how many hours to spend playing when she plays more than 5 hours a day. Person b responses to person A's criticism by criticising person A for opposing her own criticism. In other words, person B is discrediting person A's criticism by calling her out on failing to obey her own logic. In even simpler terms Person B calls Person A a hypocrite.

Appeal to Emotion

Appeal to emotion is a logical fallacy that attempts to influence readers to agree with their claim by manipulating and bring out emotion to affect the reader's thinking. In the reddit example the first person makes a claim for anti vaccination. The second person uses appeal to emotion to try to convince readers to agree with them through manipulating emotions by painting a picture of innocent young children that fall ill. The second person uses appeal to emotion a second time, but instead of creating a sad image she uses trauma of making the reader seem like a monster if the reader doesn't agree with her. By using the appeal to emotion logical fallacy she is hoping to make the reason choose based off their emotions rather than logical reasoning.

No True Scotsman
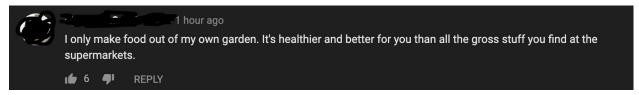
Sitting in front of a *CrAfT BeEr CoUpLe* at the Twins game and they keep going "THAT'S NOT BEER!" to the poor vendors selling Bud Light. Imagine being so uninteresting that you think this counts as a personality

10:03 PM · 8/9/19 · Twitter for iPhone
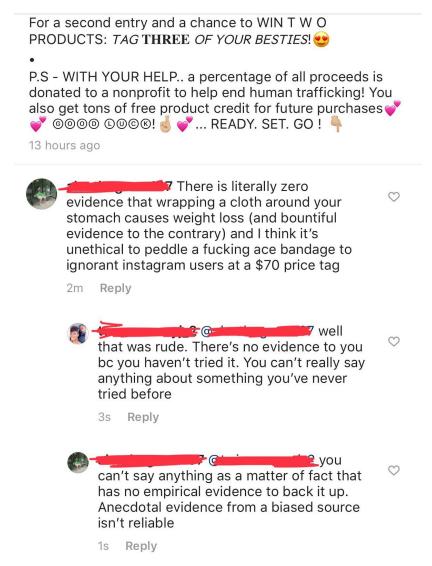
No True Scotsman is a fallacy that makes it so that a defined thing should have an even more specific definition attached to it. In this tweet, the poster describes a couple that keeps making fun of the beer carts for selling light beer. The couple keeps arguing that it is not "real" beer. The couple attaches an even more special definition to beer.

Appeal to Nature

Appeal to nature is the fallacy that just because something is more "natural" than something else, it is more beneficial. This commenter believes that because they had grown the food themselves instead of buying it in a supermarket, whatever they had grown is healthier. This is an example of appeal to nature because the commenter believes that the more natural a product is, the more beneficial it is.

Burden of Proof

For a second entry and a chance to WIN T W O
PRODUCTS: *TAG **THREE** OF YOUR BESTIES!*😍

•

P.S - WITH YOUR HELP.. a percentage of all proceeds is
donated to a nonprofit to help end human trafficking! You
also get tons of free product credit for future purchases💕
💕 Ⓖⓞⓞⓓ Ⓛⓤⓒⓚ! 🤞 💕 ... READY. SET. GO !👇🏼

13 hours ago

~~_____~~7 There is literally zero
evidence that wrapping a cloth around your
stomach causes weight loss (and bountiful
evidence to the contrary) and I think it's
unethical to peddle a fucking ace bandage to
ignorant instagram users at a $70 price tag

2m   Reply

~~_____~~2 @~~_____~~7 well
that was rude. There's no evidence to you
bc you haven't tried it. You can't really say
anything about something you've never
tried before

3s   Reply

~~_____~~7 @~~_____~~2 you
can't say anything as a matter of fact that
has no empirical evidence to back it up.
Anecdotal evidence from a biased source
isn't reliable

1s   Reply

The Burden of Proof fallacy is the fallacy that providing proof that disproves something

is as important as providing proof that supports something. In this Instagram screenshot,

a commenter is trying to dispute that there is no evidence that a weight-loss product

works. A replier then responds that there is no evidence that disproves it because the

original commenter didn't buy the product. This is a burden of proof fallacy because the

original commenter is asking for proof that the product works and assumes that it is a

scam unless proved otherwise. The second commenter then says that the product works

and assumes it works unless proved otherwise. The second commenter is assuming that

the lack of disproving evidence has as much weight as the lack of actual evidence.

False Dichotomy

you're either with me or against me no in between

5:56 PM · Oct 23, 2019 · Twitter for iPhone

11 Retweets   **17** Likes

False dichotomy is the fallacy that says that a person is either black or white. This is

especially prevalent when people try to rally others to go with them for fear of

opposition. In this tweet, the original poster is saying that people are going to be either

with him or against him. This is an example of a false dichotomy because there are going

to be people who have no idea who he is. They cannot be with him for they don't know

about him and similarly, cannot be against him. He has created a black and white

situation for everyone to belong to.
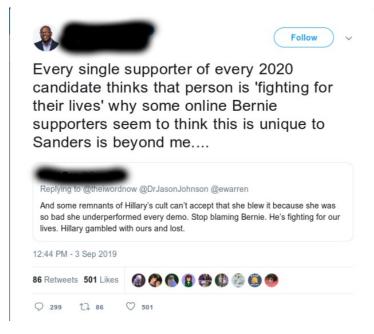
False Equivalence

False Equivalence is a logical fallacy that occurs when someone attempts to compare two

opposing arguments to the same standards as if they were in actuality the same argument.

In this case we have a Ph.D. student complaining about a check delay with her

employment. Although most would agree that this is a valid inconvenience. The last

comment implies that the Ph.D. student be grateful for the position that she is in, because

there are many people who would wish to be in the same situation. The problem with this

argument is that is attempts to compare two different types of suffering. Yes, the Ph.D.

student is most likely better off than other disadvantaged people, however that does not

invalidate her from feeling the inconvenience that she did nor does it prove that these two

cases of suffrage are equivalent.

Begging the Question

Follow

Every single supporter of every 2020 candidate thinks that person is 'fighting for their lives' why some online Bernie supporters seem to think this is unique to Sanders is beyond me....

Replying to @theiwordnow @DrJasonJohnson @ewarren

And some remnants of Hillary's cult can't accept that she blew it because she was so bad she underperformed every demo. Stop blaming Bernie. He's fighting for our lives. Hillary gambled with ours and lost.

12:44 PM - 3 Sep 2019

86 Retweets 501 Likes

299   86   501

Follow

Because you can't claim to be fighting the existential fight if you don't think, at minimum health care is a human right.

If you support a system that would continue to have people die bc they're poor, you're literally not fighting for their lives.

Same for the #greennewdeal

Jason Johnson ✔ @DrJasonJohnson
Every single supporter of every 2020 candidate thinks that person is 'fighting for their lives' why some online Bernie supporters seem to think this is unique to Sanders is beyond me.... twitter.com/Rooz739/status...

12:47 PM - 3 Sep 2019

517 Retweets 2,592 Likes

128   517   2.6K

Begging the Question is an informal fallacy that involves embedding the conclusion of the argument in the premise. In other words you are assuming what you are trying to prove. When she claims that because our country's system is one that continues to have people die because they're poor, we are actually turning away from the fight for their lives. Not only does this run on the assumption that our country is one that actually has people die because they are poor, the conclusion seems to be in the first premise. The first premise assumes that in order to be fighting for people's lives, you must think that healthcare is a human right which is a "begging the question" fallacy because you are assuming what you are trying to prove (that this is country is not fighting for people's lives because we don't have universal healthcare). She is trying to prove that this country is not fighting for people's live yet is assuming that it is already true because we do not have universal healthcare.

Moving the Goalposts

So using her own logic... Hypothetically, if @AOC made a drink while bartending, then served it to a person, who then killed a family of 5 while driving drunk, she should then be held accountable for the incident, right? Bartenders beware, she could be coming after you next!!

> **CSPAN** @cspan
> .@RepAOC @AOC: "So, hypothetically, if there was a leak from the Dakota Access Pipeline, why shouldn't Wells Fargo pay for the cleanup of it, since it paid for the construction of the pipeline itself?"
> 5:19

4:29 PM - 12 Mar 2019

1,178 Retweets 4,141 Likes

8.3K   1.2K   4.1K

Actually, in NYC if you're a bartender and knowingly over-serve to someone, you *ARE* liable for things they do after they leave the bar, because you knowingly put them at risk for $.

Its called the Dram Shop Act. It's a big reason why bartenders cut people off. And it works.

> **Marvel Marisa Murphy** @RodeoGirlsMarv
> So using her own logic... Hypothetically, if @AOC made a drink while bartending, then served it to a person, who then killed a family of 5 while driving drunk, she should then be held accountable for the incident, right? Bartenders beware, she could be coming after you next!! ...

4.9K   20K   127K

Replying to @AOC

To clarify my statement... Hypothetically, if they had just one drink, that you served them, making them even below the legal limit of blood alcohol content, but still caused an accident that killed a family of 5, you still should be held accountable...

4:44 PM - 12 Mar 2019

4 Retweets 97 Likes

494   4   97

Moving the goalposts fallacy is yet another common logical fallacy. This fallacy involves modifying a defeated argument in order to make it seem like the argument was never defeated in the first place. In this case, Marvel Murphy reformed her initial argument after having her first assertion rebuked. She reformed her argument in the efforts to make it appear as though her argument was never refuted in the first place. In doing so, she changed the basis of her argument trying to invalid the counterargument. She shifted the goals of her argument to avoid be discredited.

Special Pleading

Besides the fact there has been no observed evidence to that claim, that is what atheist say to push for the claim that nothing is something and something is nothing

So are you saying it's not a proven fact the atoms that smash or connect with other atoms don't make molecules? This is not an atheist claim but a scientific theory (not hypothesis).

let me help you buddy,
nothing is nothing
and nothing cannot come out of nothing without something.

I get where you're coming from so ask the age old question.....where did god come from?

Follow

Replying to ⬛⬛⬛ and 4 others

Thats the god delusion question

God means uncreated creator,
God did not come from anywhere He was there when there was nothing .

7:02 AM - 23 Oct 2019

Special Pleading is a fallacy that involves the attempt to refute the response to an argument by making up "special rules" that are invalid for the topic at hand. It operates like another form of moving the goalposts and is erroneous all the same. In this case it appears as though someone is claiming that God is the untreated creator. His argument

implies that something cannot arise from nothing, yet there is a special case for God as he is the only something that can come out of nothing. In other words he is making a special plead for God, and not for anyone else.

Final Thoughts

With these cognitive biases and logical fallacies plaguing most of online forums and social media, we should be more aware of the various types. Most people should spend some time in finding out more about what these biases and fallacies are and take steps to prevent their further use. However, it is important that these anti-fallacy brigade be used sparingly as not every single argument that seems as though it is using a fallacy actually is. Simply put, everyone should take some time to learn the various types of cognitive biases and fallacies and use that knowledge to determine what they should trust when they read information or arguments online. These are just some of the many types of logical fallacies that frequently used in conversations online. It is quite surprising on how many different types of fallacies you can find in places such as the YouTube comments when you are looking for them. Overall, by learning about logical fallacies you can recognize when someone is trying to use them on you and prevent yourself from falling victim to it.