Cognitive Biases and Logical Fallacies on Social Media

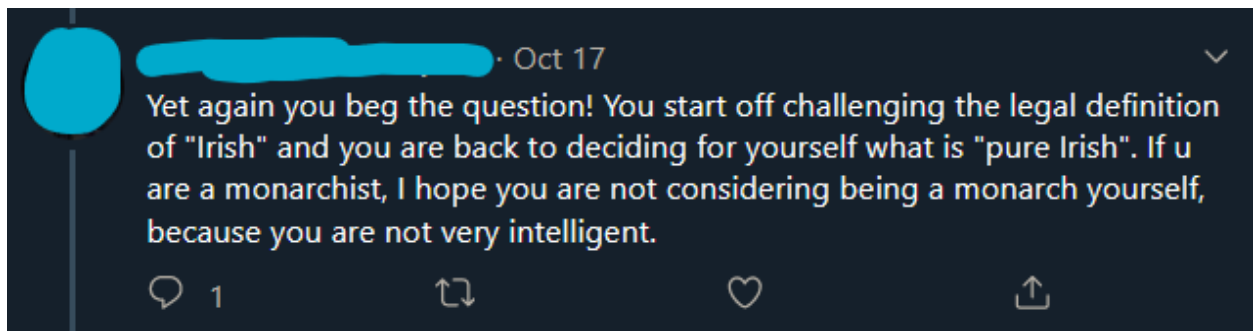Kevin Nguyen

Steven Steele

Daniel Banuelos

Introduction

Cognitive biases and logical fallacies are common phenomena to the human condition and, like all of the worst qualities of human beings, they can be found in the highest concentration on social media. Like racism, ignorance, rancor, and gross stupidity, logical fallacies and cognitive biases are in high supply on social media, which tends to reward negative emotion much more than positive emotion and bring out the absolute worst in people.

No True Scotsman

> · Oct 17
>
> I don't really care about democracy so you are barking up the wrong tree there. And just because they vote and get entitlements doesn't make them Irish. There are a ton of pure Irish in other parts of the world that don't vote in Irish elections. They're not Irish? Duh
>
> 1

This is an example of the No True Scotsman fallacy.This person has arbitrarily defined what a "real" Irish person is in a way that is convenient to his argument. He claims that someone who lives in Ireland, is a citizen of Ireland, votes in elections, and receives entitlements, is somehow not truly Irish. The other term for this fallacy is "Appeal to Purity," which perfectly describes this example, since he is himself defining what a pure Irish person is.

False Fallacy

> · Oct 17
>
> Yet again you beg the question! You start off challenging the legal definition of "Irish" and you are back to deciding for yourself what is "pure Irish". If u are a monarchist, I hope you are not considering being a monarch yourself, because you are not very intelligent.
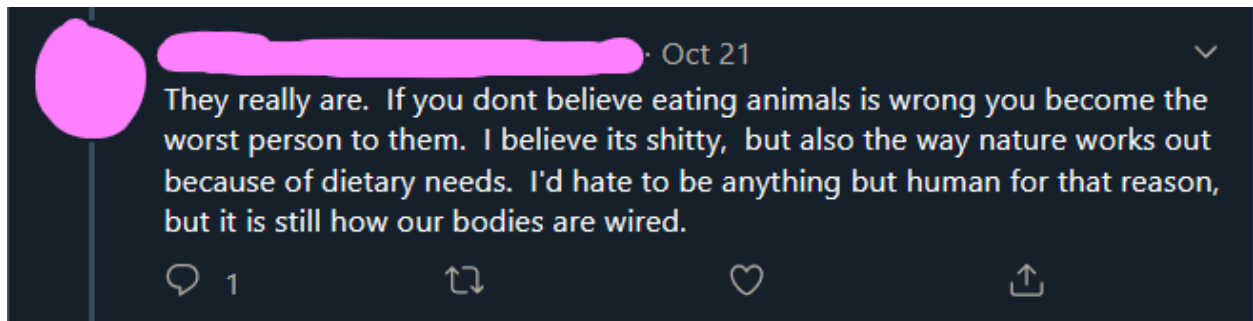>
> 1

This is a direct response to the previous example. This user, in blue, has falsly identified the above example as "begging the question," while the fallacy is clearly "no true Scotsman." In order to be "begging the question," a person has to use circular, self-justifying reasoning. I cannot see how the person in orange made that error.

Appeal to Authority

> **· 5h**
> From the Canadian Cancer Society: "1 in 2 Canadians is expected to develop cancer, 1 in 4 is expected to die from cancer."
>
> Canadian Cancer Society   Société canadienne du cancer
>
> **Cancer statistics at a glance - Canadian Cancer Society**
> An estimated 191,300 Canadians will be diagnosed with cancer in 2014 and 76,600 will die from it. Learn about Canadian cancer statistics.
> 🔗 cancer.ca
>
> 💬 1   🔁   ♡
>
> **· 5h**
> That has literally nothing to do with vaccines or GMOs.
> 💬 1   🔁   ♡ 1
>
> **· 5h**
> Yes, of course it does.
> 💬 1   🔁   ♡
>
> **· 4h**
> Oh, I see. You're a doctor then? Oncologist? Epidemiologist?
> 💬 2   🔁   ♡ 1

The last message in this thread is a classic example of "appeal to authority." These two were going back and forth about cancer and vaccines and GMO's (I'm not exactly sure what the argument was even about), and the person in red resorted to a fallacy by suggesting the person in green's arguments were invalid because he is not a figure of authority. By doing this, he is attempting to invalidate an argument without having to substantively refute it. The funny thing is that the person in in red is also not a doctor, oncologiest, or epidemiologist.

Appeal to Nature

They really are. If you dont believe eating animals is wrong you become the worst person to them. I believe its shitty, but also the way nature works out because of dietary needs. I'd hate to be anything but human for that reason, but it is still how our bodies are wired.

· Oct 21

This is a clear example of "appeal to nature." He says that eating meat is necessary because it's "the way nature works out." He makes a reference to "dietary needs," but provides no evidence for these needs, nor does he delineate any of the actual drawbacks of not eating meat. This argument essentially boils down to "humans ate meat in nature, therefore they must continue to eat meat." As noted in class, many things that are natural are not necessarily good.
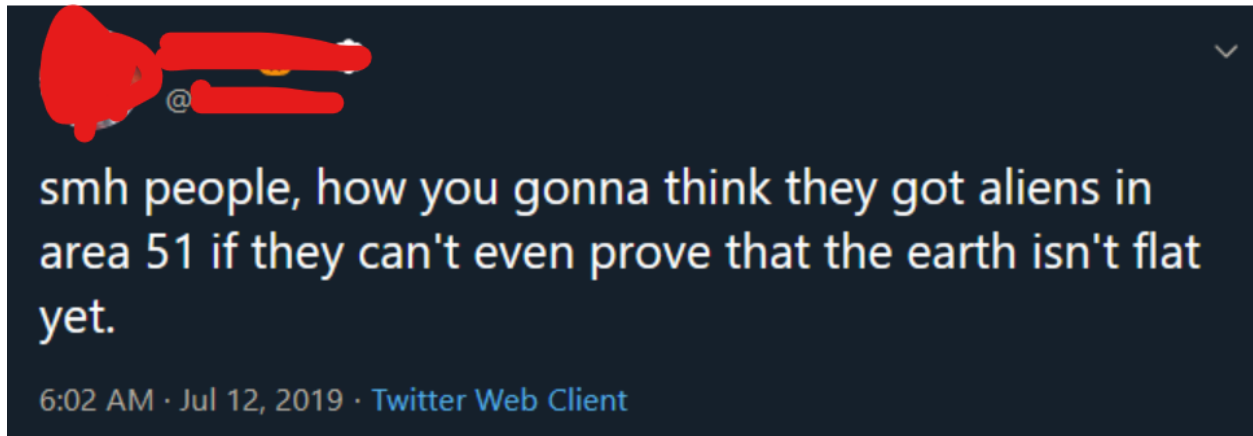
False Equivalence

Kobe Bryant is the best ball player in the world! He can shoot, ball handle, and has won 5 championships with one team!

12/13/15, 2:18 PM

1 LIKE

Mike Trout is a way better ball player! He can throw and hit better than Kobe!

1m

This is an example of False Equivalence fallacy because the first person is making an argument for Kobe being the best "ball" player (basketball player) in the world and states their reasons. The second person refutes this argument by stating that Mike Trout (baseball player) is the better player. This is an example of false equivalence
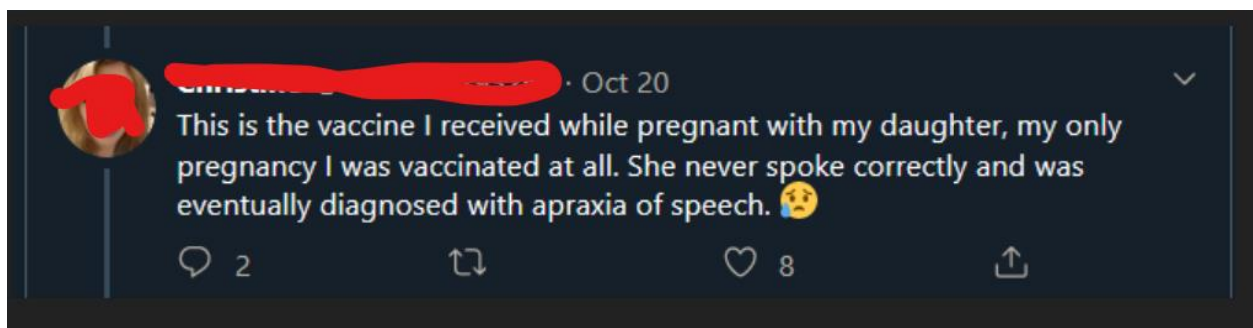
because the two players that are being compared do not play in the same sport, so any comparison between the two players will be invalid.
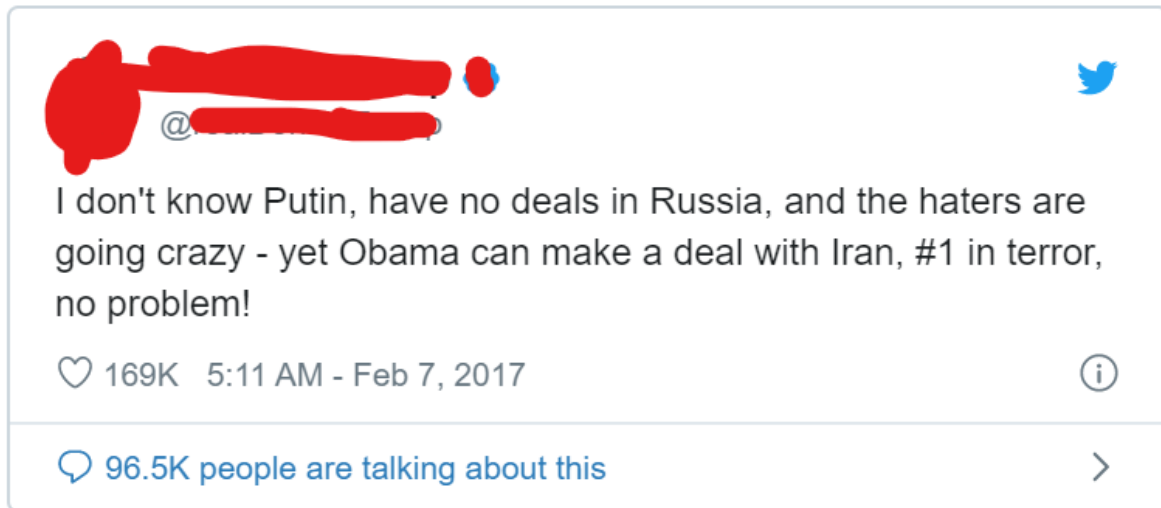
Burden of Proof

smh people, how you gonna think they got aliens in area 51 if they can't even prove that the earth isn't flat yet.

6:02 AM · Jul 12, 2019 · Twitter Web Client

This is an example of "burden of proof" fallacy because the tweeter is placing the burden of proof on the government to prove their claim that the earth isn't flat. This is a fallacy because the burden of proof is on the person making the positive claim.The burden of proof for the claim that the earth is flat rests with the person making the claim, and not the person refuting it.

Correlation Causation

· Oct 20

This is the vaccine I received while pregnant with my daughter, my only pregnancy I was vaccinated at all. She never spoke correctly and was eventually diagnosed with apraxia of speech. 😢

2   ⟳   ♡ 8   ⬆

This person is claiming that her daughter's diagnosis of apraxia of speech was caused by a vaccine she received while she was pregnant with her daughter. They are mistaking correlation with causation. Causation implies that the end result was directly influenced by the cause. In this case the result is apraxia of speech and the cause is the vaccine. Correlation does not imply cause, rather it shows that two events may share some mutual relationship between the two events. This argument does not consider the possibility that there is a correlation, instead it resorts straight to causation. Proof of a Correlation/Causation fallacy.

Red Herring

I don't know Putin, have no deals in Russia, and the haters are going crazy - yet Obama can make a deal with Iran, #1 in terror, no problem!

♡ 169K   5:11 AM - Feb 7, 2017   ⓘ

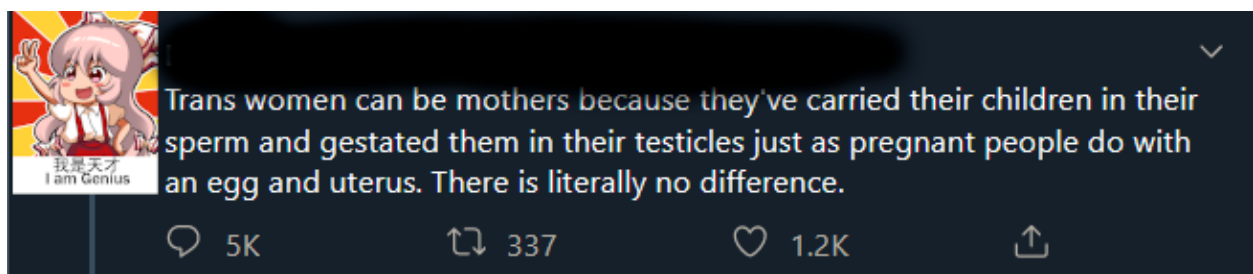💬 96.5K people are talking about this   ❯

   The Red Herring fallacy is a fallacy that was not mentioned in the lectures, so I will give a quick concise definition of the fallacy. Speakers use Red Herring to distract the listener from themselves or the problem at hand. This tweet is a good example of red herring because the speaker is distracting the reader by redirecting them onto another problem. The problem at hand involves some backlash the speaker has received due to Russian deals. The speaker diverts the reader's attention by bringing up a controversial topic that Obama was a part of.

Slippery Slope

So [REDACTED] unfollowed everyone after outrage over who he followed

Advertisers pulled political ads from everywhere in the wake of the Tucker Controversy

Its about time everyone severed associations with everyone else because any association, by anyone, anywhere, is offensive

7:33 AM - 19 Mar 2019
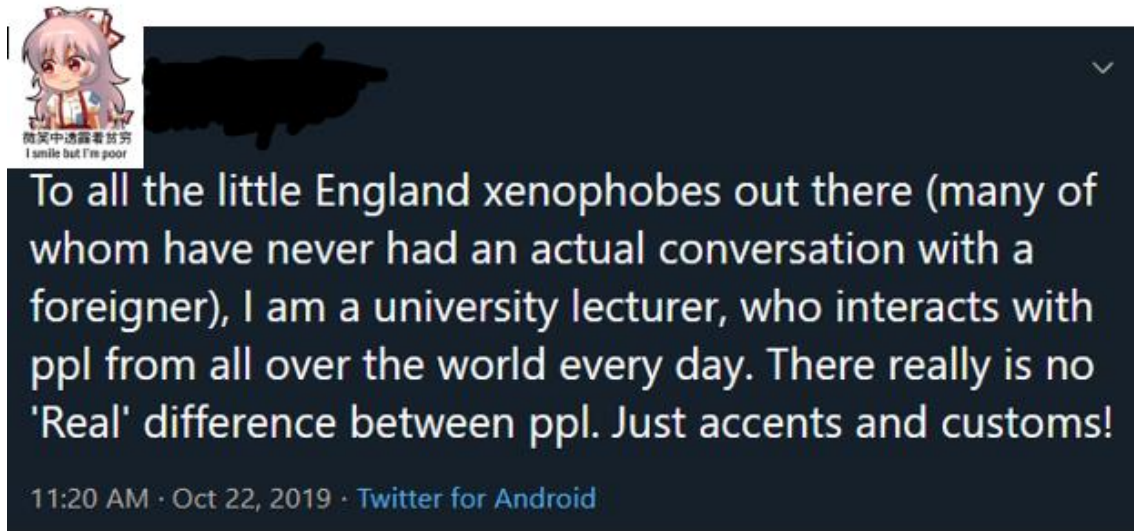
531 Retweets 3,162 Likes

156   531   3.2K

This would be an example of the slippery slope fallacy. The person is using the initial premise of companies and people disassociating with other people because of an issue or controversy and assuming that due to this, everyone will be disassociating with each other sooner or later because it's offensive just by associating itself. The result is a bit too extreme for it to have that result from two premises.

Conflation

Trans women can be mothers because they've carried their children in their sperm and gestated them in their testicles just as pregnant people do with an egg and uterus. There is literally no difference.

5K   337   1.2K

This would be an example of conflation because the user assumes that the male anatomy and the female anatomy regarding birth is the same thing. Even though the user arguing for trans women, the comparison doesn't work because still because of the anatomy difference.

Anecdotal

To all the little England xenophobes out there (many of whom have never had an actual conversation with a foreigner), I am a university lecturer, who interacts with ppl from all over the world every day. There really is no 'Real' difference between ppl. Just accents and customs!

11:20 AM · Oct 22, 2019 · Twitter for Android

The user is using their personal experience with talking to people from around the world to prove that there isn't any difference between people. The issue is that with only having limited data, it's hard to prove something because a well defined study can show something else and have more data to support something.

False Dichotomy

A false Dichotomy because the picture says that there are only two options to make a difference and that is either through marching or by voting but there are other methods that a person can take as well to make a difference. Make a youth organization for example. So there are more options out there.

Conclusion

Cognitive bias and fallacy are hard to avoid, but if a person takes a step back to analyze the person's argument and words, they can avoid falling into the same bias and fallacies in the future. We conclude that this was a useful exercise because it helped us realize how common

these errors are, and how easy it is to fall into the trap of using them without realizing it. They're not always obvious, and many very intelligent people can use them without realizing it. Many of these fallacies are common to online culture, and some, such as confirmation bias, may actually be common to our species.