

# Logical Fallacy Literacy



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# Preface

What can individuals or information professionals do about fake news and other forms of misinformation or disinformation?

- First of all, it would help to acquire some training in identifying logical fallacies, meaning mistakes in reasoning dressed up as rational arguments.
- Logical fallacies are arguments that appear to be grounded in evidence, fact and asserted based on a form of reasoning, most often false reasoning.
- They are used to try to persuade listeners to their viewpoint
- The University of Texas at El Paso has published a "Master List of Logical Fallacies" (Williamson, s.d.) which is available as open courseware. One of Trump's favorite weapons is the *argumentum ad hominem*, typically described as an attack on a person's character or physical appearance.  
<http://utminers.utep.edu/omwilliamson/ENGL1311/fallacies.htm>.
- For example, Trump's own *ad hominem* salvos on Bill Clinton include such phrases as "He doesn't know much," "Wild Bill," "There's never been anyone more abusive to women in politics," and "Highly overrated!"

# Objective

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- The goal of this lecture is to introduce a variety of logical fallacies
- It will not be a comprehensive list but ones commonly used in political rhetoric
- It should prepare you to identify many such fallacies that abound in everyday life.
- I will provide the Latin and English names, for those that are known both ways. There is a tradition that tends to use the Latin, which if mastered can play to one's intellectual advantage (i.e., you appear to be speaking as an authority). There is another master list that includes many alternative names for many fallacies: The Ultimate Collection of over 300 Logical Fallacies:

<https://www.logicallyfallacious.com/tools/lp/Bo/LogicalFallacies/3/Book-Contents>

# What is Fallacy?

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- A fallacy has two general meanings:
  - A false or erroneous statement, something that is untrue
  - Deceptive or specious reasoning, one that is superficially attractive
- Logical fallacies fall into the latter meaning as they are defects that weaken arguments.
- First, fallacious arguments are very common and can be quite persuasive, at least to the causal reader or listener. You can find dozens of examples of fallacious reasoning in newspapers, advertisements, and all through political rhetoric whether of liberal or conservative stripe.
- Second, mastering or understanding logical fallacies provides rhetorical advantage in being able to deflect the intended effect, to deceive.

# What is a Logical Fallacy?

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- One can get another insight into logical fallacies by looking at their opposite: a logical argument
- A logical argument is a series of statements or reasons to persuade someone to accept a contention or conclusion as true.
- Such arguments should be valid and sound
  - Validity: a deductive argument where if the premises are true, the conclusion must also be true. If all librarians read books and John is a librarian, John must read books. Problem: the premises must be true (i.e., about *all* librarians)
  - Soundness: a valid, deductive argument where the premises are actually true. Otherwise the argument is unsound.
- In this context, a logical fallacy is an error in reasoning, negating one or both of the above.
- They may be created intentionally or unintentionally. In the former case, it is usually created to deceive people.

# Argument to the man

## Argumentum ad hominem

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- This is a fallacy which occurs when one attacks the character of the person advancing the argument, rather than addressing or refuting the argument itself.
- It moves the discussion from issues to personalities or characteristics of the opponent
- One cannot demolish an argument by attacking the opponent's motives, background, or personal traits.
- The only way to address an issue is with reasons or evidence with regard to claims of the person advancing the argument, not comments about their character.
- It is perhaps the most heavily used logical fallacy in Trump's arsenal of fallacies. E.g., how can one trust "sleepy Joe" to run the country?

# Argument to the man Argumentum ad hominem

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Examples: “a big Dem hoax” (on investigations in the Trump presidency)

The New York Times has kept track of Trump's *ad hominem* tweets, which are mostly examples of name-calling, and it publishes these in an ongoing list (“The 598 People, Places and Things Donald Trump Has Insulted on Twitter: A Complete List”).

[https://www.nytimes.com/interactive/2016/01/28/upshot/donald-trump-twitter-insults.html?\\_r=0](https://www.nytimes.com/interactive/2016/01/28/upshot/donald-trump-twitter-insults.html?_r=0) (started in 2016, but current to May, 2019)

What is odd that when you see this list, the following is said by Trump of Fox News: “totally biased and disgusting reporting” “in the bag!” “clown announcers” “so biased it is disgusting” “only puts negative people on” “Biased - a total joke!” “the only network that does not even mention my very successful event last night” “childishly written & taunting PR statement” “The statement put out yesterday by @FoxNews was a disgrace to good broadcasting and journalism” “without me they'd have no ratings!” “pathetic” “treats me so badly” “not fair”

# A Form of ad Hominem: Tu Quoque

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- A particular form of an ad hominem argument
- From the Latin, meaning “you, too”
- In this case a person turns a charge back on his or her accuser
- Also known as the “two wrongs fallacy,” or “the pot calling the kettle black” or “look who’s talking”
- Example: George: You are cheating on your income tax  
Martha: How dare you talk! You cheated on yours last year!  
Martha dismisses George’s argument because she believes he is speaking in a hypocritical manner.



# Straw Man

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- In the straw man fallacy, one tries to strengthen his/her own arguments by anticipating the arguments that one's opponent may make.
- One creates a version of the opponent's argument that is easy to knock down.
- One distorts the opponent's position and frames it into easily refutable terms.
- By criticizing this distortion, he claims victory over the opponent, whose original argument was quite different.
- Example 1:
  - Debater 1: Cultural diversity cannot be our highest value. We must have cultural unity first. Once we are united as a nation, we can enjoy our diversities.
  - Debater 2: We can't get rid of cultural diversity. It is what makes America great. If we only have unity, we will have some sort of socialist nation.
  - The problem: The second debater changes the first debaters argument, by making cultural diversity the only value, not the dominant value. First debater is not suggesting getting rid of cultural diversity.

# Straw Man

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- Example 2:
  - Trump: “Hillary Clinton wants to take your guns away, and she wants to abolish the Second Amendment!” While she advocates for gun control, she never has suggested that she wants to eliminate guns. NRA produced an ad called “Don’t Let Hillary Clinton Leave You Defenseless,” which depicts a woman who is alone at night when her house is broken into. She reaches for her gun, but Hillary and her Supreme Justices have taken gun rights away, so there is no gun (NRA, 2016). Because it takes too long for the police to arrive, the woman becomes a victim because she could not defend herself.
- Example 3:
  - According to Rush Limbaugh, ‘Animals don't deserve and shouldn't have any rights because they don't have the power to claim them.’ The response to this claim: Rights can be given regardless of a being’s ability to claim those rights.
  - <http://americansformorality.com/animals/animals.html>

# Post hoc or False Cause

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- This fallacy gets its name from the Latin phrase "*post hoc, ergo propter hoc*," which translates as "*after this, therefore because of this*."
- Assuming that because B comes after A, A caused B.
- Examples:
  - Jim worked on his essay more than any other, therefore he expects an A.
  - President Donald Trump's speech to Congress provides an example: Since my 1916 election, President Trump said, "Ford, Fiat, Chrysler, General Motors, Sprint, SoftBank, Lockheed, Intel, Walmart and many others have announced that they will invest billions of dollars in the United States and will create tens of thousands of new American jobs." He is saying that because of him, investment will occur, when in fact the investment occurred before he took office. He is neither a cause nor an effect
  - Water fluoridation affects the brain. Citywide, student's test scores began to drop five months after fluoridation began. (does not work for lead?)
  - When Obama was elected president in 2008, former Massachusetts Governor Mitt Romney said "Now we have more chronic long-term unemployment than this country has ever seen before, twenty million people out of work, stopped looking for work, or in part-time jobs that need full-time jobs, we've got housing prices continuing to decline, and we have foreclosures at record levels. This president has failed." Romney argued that since the economy struggled in 2008, then Obama's presidency was the reason for chronic unemployment. Magill, E. (June 15, 2011). 5 Logical Fallacies from the Republican Debate. *The ReThink Blog*. (n.d.). Retrieved from <http://www.emagill.com/rants/eblog170a.html>

# Post hoc or False Cause

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- In the 2012 Presidential campaign, Newt Gingrich argued that the decline of NASA had come about only because of "bureaucracy." He asserted that because NASA was a publicly funded organization and declining, government funding necessarily caused the decline. In reality there were hundreds of different factors that were responsible for NASA's decline – it was not due solely to the government. Magill, E. (June 15, 2011). 5 Logical Fallacies from the Republican Debate. *The ReThink Blog*. (n.d.). Retrieved from <http://www.emagill.com/rants/eblog170a.html>
- Trump blamed video game use as the cause of the school shooting in Florida at Marjorie Stoneman Douglas High School. In fact, no causation has been found between video game use and school shootings. Ducharme, Jaime. (March 12, 2018). Trump Blames Video Games for School Shootings. Here's What Science Says, *Time*. Retrieved March 4, 2019 from <http://time.com/5191182/trump-video-games-violence/> . He has also claimed mental instability (in terms of the mass Las Vegas shooting)

# Appeal to Force/Argument from the Cudgel/Appeal to a Stick

## Argumentum ad Baculum

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- Fallacy committed when one appeals to force or the threat of force to bring about the acceptance of a conclusion.
- The use of coercion or threats of force as a substitute for reason and evidence for justifying a predetermined conclusion
- For a clear example, in one of Trump's early dealings with North Korea, he has attempted to influence Kim Jong Un with primal howls of "fire and fury" rather than with diplomacy or discourse.
- Conversation:
  - George: *"Why do I have to work weekends when nobody else in the company does?"*
  - Boss: *"Are you unhappy with your job? I can find another employee very quickly, if you are unhappy."*
  - Issue: The employee asked a legitimate question to which he did not get an appropriate answer. Instead his question was deflected by a threat of force, i.e., of losing his job

# Appeal to (False) Authority

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- Often we try to add strength to our arguments by referring to respected sources or authorities that do not have sufficient warrant for a claim.
- When a debater tries to use him/herself or other authorities as justification for believing a claim, but the claim can not be adequately anchored or grounded to the debater or the authorities they use.
- Authorities can be used in citing a claim, but they must be credible.
- Examples:
  - Examples are frequently found in the media through such activities as celebrity and professional endorsements in TV commercials and magazine and newspaper advertisements. LeBron James may be an expert on basketball but not on Smart Phones.
  - The Akron Beacon Journal wrote an article on homeschooling. They cited David Swarbrick who estimates that “60 percent of homeschoolers are on par with the public schools, 20 percent are above and 20 percent are below.” Unfortunately, Swarbrick is a math tutor for 225 homeschool students in Texas and his contact is primarily with them as a math tutor. His experience is limited.  
[http://www.fallacydetective.com/articles/read/newspaper-logic-akron-beacon-journal-attack-on-homeschooling?fb\\_comment\\_id=449818884087\\_10152582639864088](http://www.fallacydetective.com/articles/read/newspaper-logic-akron-beacon-journal-attack-on-homeschooling?fb_comment_id=449818884087_10152582639864088)
  - When Fox News used two discredited scientists about the effects of the coronavirus that is an appeal to false authority.
  - Opponents of global warming make the claim of scientific studies show that it is not occurring, but the sources are unscientific. Coral Davenport, Coral and Lipton, Eric. (June 3, 2017). How G.O.P. Leaders Came to View Climate Change as Fake Science, New York Times. Retrieved March 4, 2019 from <https://www.nytimes.com/2017/06/03/us/politics/republican-leaders-climate-change.html>



# Slippery Slope

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- The proponent claims that a sort of chain reaction, usually ending in some dire consequence, will take place, as the result of a particular action or failure to act
- It tends to take the form of scare tactic, to exaggerate the consequences of an action, to frighten the audience.
- Examples:
  - “By turning marriage into a socially constructed reality that doesn’t have a nature, marriage can then be whatever you want it to be. Not just the union of a man and another man, but also even two men and a woman—three partners in marriage. Or it could be a man and a child. Or maybe even a man and his dog, if he feels close enough to his pet to want to marry it.” William Lane Craig, Christian Scholar <http://skepticsplay.blogspot.com/2013/03/the-fallacious-slippery-slope.html>
  - Trump: if one votes for for Biden and the Democrats, you will get chaos, socialism, communism and the destruction of the American way.

# Slippery Slope

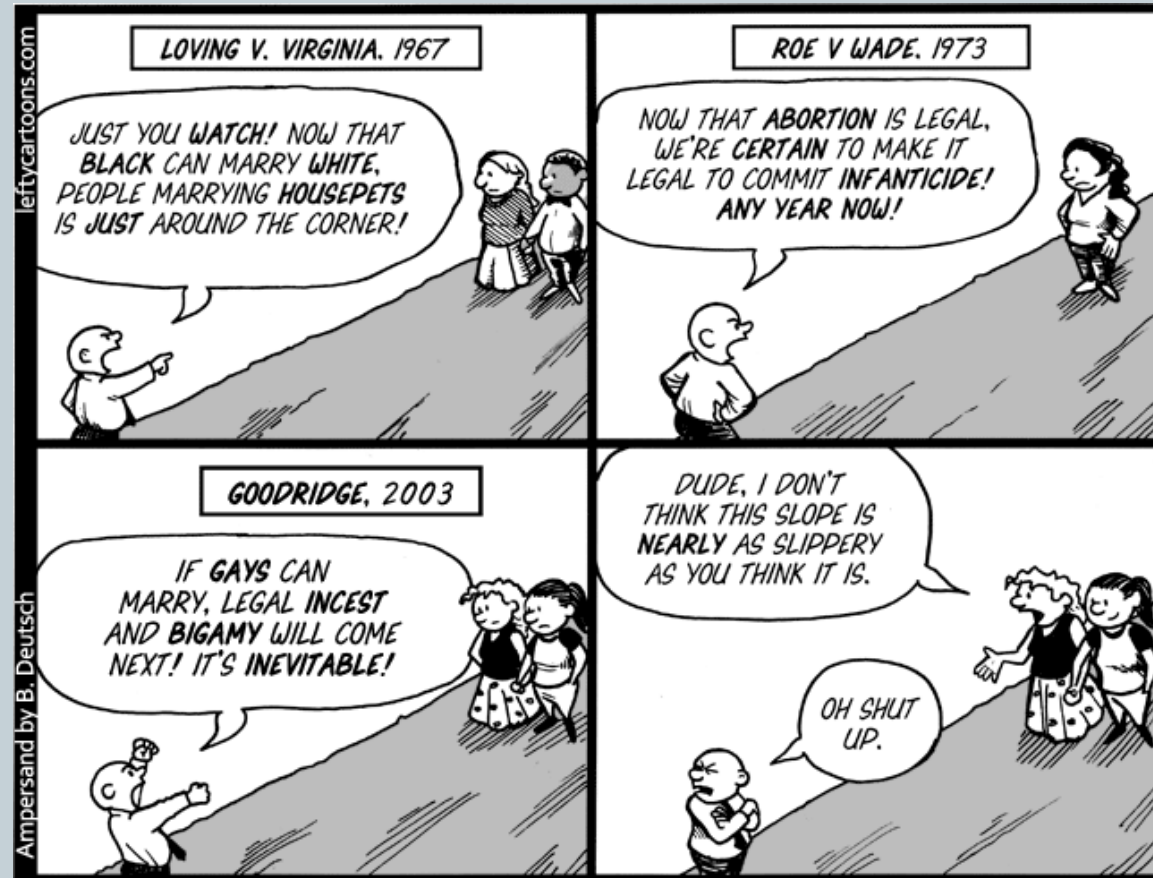
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- Trump: “This week it's Robert E. Lee. I notice that Stonewall Jackson's coming down. I wonder; is it George Washington next week, and is it Thomas Jefferson the week after? You know, you really do have to ask yourself, where does it stop?”
- In an October, 2015 rally, Trump said: “You know what’s going to happen,[Ford is] going to build a plant [in Mexico] and illegals are going to drive those cars right over the border. Then they’ll probably end up stealing the car and that’ll be the end of it.” Trump’s conclusion that Ford shouldn’t move its plant to Mexico, is not even directly related to the argument’s premise that undocumented immigrants will steal cars.
- Kent State Student: We have to stop the tuition increase! The next thing you know, they'll be charging \$40,000 a semester!
- The NRA repeatedly asserts that any form of gun regulation amounts to taking guns away from law abiding citizens. See: Haag, P. (2016, June 10). The NRAs Long-Running Relationship with Gun Manufacturers. *The Atlantic*. Retrieved March 06, 2018, from <https://www.theatlantic.com/politics/archive/2016/06/national-firearms-act-nra-gun-manufacturers/486281/>



# Slippery Slope

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# Red Herring

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- “Red Herring” is a hunting term that refers dragging a herring on the hunting course to lead the hounds away from the pursuit of the prey.
- The fallacy involves drawing attention to an irrelevant points, or changing the subject or dodging the issue.
- It is an attempt to distract from the subject at hand, often never to return to the main issue
- Example 1 – Trump examples:
  - When Ted Cruz started to make headway against Trump in some states in the Republican presidential campaign, Trump questioned whether his birth in Canada would make him ineligible for the presidency.
  - When asked about his immigration policy, Trump said that Mexico had conspired to send murderers and rapists into this country.
  - When Kizr Khan said at the Democratic convention that Trump insulted Muslim service members, Trump asks why Kahn’s wife didn’t speak.
  - Tweet: “The Democrats made up and pushed the Russian story as an excuse for running a terrible campaign. Big advantage in Electoral College & lost!”

# Red Herring

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- Example 2:
  - Grading this exam on a curve would be the most fair thing to do in this course. Classes are the best when there is collegiality among students and the professor. After all, classes go more smoothly when the students and the professor are getting along well.
- Example 3:
  - It is ridiculous to have spent thousands of dollars to rescue those two whales trapped in the Arctic. Why look at all the people trapped in jobs they don't like?
- Example 4:
  - On Fox News Insider, Tomi Lahren frequently posts her “Final Thoughts” on an issue in the form of an article or video. On February 16<sup>th</sup>, 2018, two days after the shooting in Parkland, Florida, she posted this op-ed that argued against people calling for action by saying that “thoughts and prayers aren't enough.” Lauren then goes on to assert that people who make such statements are attacking Christians and that it is instead the absence of faith in schools that causes this kind of violence. Lauren, T. (2018, February 16). Tomi Lahren's Final Thoughts on the Florida School Shooting. Retrieved March 06, 2018, from <http://insider.foxnews.com/2018/02/16/tomi-lahrens-final-thoughts-florida-school-shooting-calls-gun-control>

# Red Herring

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The Unabomber has no relation to the topic of global warming. Apparently, if you believe in global warming you are as crazy as the Unabomber. Fallacy Files. (n.d.). Retrieved from <http://www.fallacyfiles.org/Unabomb1.jpg>

# Appeal to Pity

## Argumentum ad Misericordiam

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- While appeals to pity are not always unacceptable – e.g., there should be serious concern about the starving children of the world, it becomes fallacious when the arguer tries to win support for his argument by exploiting his/her opponent's feelings of pity or guilt.
- It's a special kind of emotional appeal
- Its quaint name is "the sob story."
- Examples:
  - I really need to pass this class so I can get a degree and job. My family is to be kicked out of our apartment, my car is falling apart, etc. I have had to spend time taking care of my sick mother, etc.
  - A man is seeking a job and his interviewer asks for his qualifications. He reports that he needs the job to feed his large family, that will soon lack food and housing.
  - An ad that promoted Obamacare used a Republican Congressman whose life was saved by it, instead of providing statistics to make the case for Obamacare. Could also be seen as an argument from false authority. Lou, Lily. (June 23, 2017). Spot the Flaw in a Politician's Argument With This Guide to Logical Fallacies, *Lifehacker*. Retrieved March 4, 2019 from <https://lifehacker.com/spot-the-flaw-in-a-politicians-argument-with-this-guide-1796333209>.
  - Donald Trump claimed that no president in history has been treated worse than him, ever, at the commencement ceremony for the U.S. Coast Guard Academy. "No politician in history, and I say this with great surety, has been treated worse or more unfairly." Nakamura, David. (May 17, 2017). Trump claims 'no politician in history' has been 'treated worse or more unfairly,' *Washington Post*. Retrieved March 3, 2019 from:  
[https://www.washingtonpost.com/politics/2017/live-updates/trump-white-house/trump-comey-and-russia-how-key-washington-players-are-reacting/trump-says-no-president-has-been-treated-more-unfairly/?utm\\_term=.b36a3819ddf9](https://www.washingtonpost.com/politics/2017/live-updates/trump-white-house/trump-comey-and-russia-how-key-washington-players-are-reacting/trump-says-no-president-has-been-treated-more-unfairly/?utm_term=.b36a3819ddf9)

# Appeal to the People

## Argumentum ad Populum

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- In this fallacy, there is an appeal to traditional fears and prejudices.
- The arguments are emotionally charged so as to cloud the issues or prevent the people from squarely understanding or facing the issues
- It is an attempt to inhibit a person's rational capabilities
- Examples:
  - Almost all of Trump's campaign and post-campaign speeches supply examples
  - "There is a great hatred toward Americans by a large segments of the Muslim population. It's gonna get worse and worse. You're gonna have more World Trade Centers attacked." This is also an appeal to fear.
  - He frequently says: polls show e.g., that he won the popular vote. Polls are useful if they are scientifically conducted, but the quality of the polls he employs or invents are dubious.

# Begging the Question/Circular Reasoning

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- In the fallacy of begging the question, something is assumed to be true that has yet to be established or demonstrated.
- Examples:
  - Bill did not steal the trophy for we all know that Bill is an honest person
  - Trump in one of many speeches, argues for a particular point, like building the wall and his audience enthusiastically agrees, to which he asserts: “And these are the best and the finest” referring to his audience. I.e., if you agree with Trump, then you are the finest and best
  - Trump tweets: “With all the jobs I am bringing into back to the U.S. (even before taking office), with all the new auto plants coming back into our .... .... country and the massive cost reductions that I have negotiated on military purchases and more, I believe the people are seeing ‘big stuff.’” He defines himself as producing big stuff, on assertions not evidence.
  - “Abortion is murder.”



# Argument from Incredulity

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- The argument from incredulity attempts to persuade a group by claiming that something is true (or false) because there is a lack of evidence to prove that it isn't true (or false), and that this fact makes absolute no common sense to the speaker.
- Trump says "There is NO QUESTION THAT #voterfraud did take place," how could anyone doubt that? But he provides no evidence to establish that this is true. Also works for next type of logical fallacy, which are often related.
- When NASA claims that they put a man on the moon, and the doubter's response is: "Really? Then Elvis is alive and well."



# Argumentum ad Ignorantiam

## Appeal to Ignorance

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- This is the fallacy of assuming something is true simply because it hasn't been proven false.
  - For example, someone might argue that the universe is certainly expanding because nobody has demonstrated conclusively that it is not. But failing to prove the expanding universe theory false is not the same as proving it true.
  - “It’s coming from all over South and Latin America, and it’s coming probably from the Middle East,” Trump said in reference to illegal immigration. “But we don’t know 'cause we have no protection.”

# False Dichotomy/Either-Or/Black or White Fallacy

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- The fallacy comes with a variety of names.
- It assumes that only two positions exist on the matter at hand, obscuring legitimate alternatives.
- It is designed to seduce the uninformed, who may be unable to think of alternatives.
- Examples:
  - Referring to the removal of the Robert E. Lee statue in Charlottesville, VA, “The liberals are taking away our heritage,” said James Moore from North Carolina. “By taking these monuments away, that’s what they’re working on. They’re trying to erase the white culture right out of the history books.”
  - “If you don’t support Trump you don’t support this country,” argues a Trump supporter.
  - “If you aren’t vegan you hate animals,” argues an animal rights supporter.
  - After 9/11, George W Bush asserted: “Either you're with us, or you're with the terrorists.”

# Genetic Fallacy

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- The genetic fallacy (also the fallacy of origins) refers to genesis in the sense of where something came from: arguing that a claim is wrong because its source is untrustworthy or otherwise bad.
- It tries to establish a conclusion based on a person's or thing's source, history, or origin rather than current context.
- Example:
  - Trump says: "just another generic CNN part time wannabe journalist ! @CNN still doesn't get it. They will never learn!" The point is to try to dispute the claims of a CNN reporter by questioning the capabilities of CNN generally. The goal seems to be casting doubt on CNN's claims by casting doubt on CNN generally. Even if CNN was generally incompetent, that does not mean that a particular report is incorrect.
  - He was born and raised as a Catholic and confirmed in 7<sup>th</sup> grade. Therefore, he is bound to be opposed to abortion and gay marriage.
  - 
  -

# Appeal to Heaven

## Argumentum ad Coelum

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- An ancient, extremely dangerous fallacy that of claiming to know the mind of God (or History ('manifest destiny'), or a higher power), who has allegedly ordered or anointed, supports or approves of one's own country, standpoint or actions so no further justification is required and no serious challenge is possible.
- Evangelical leaders have claimed that Trump has been appointed by God, especially to turn the United States into a Christian nation and hasten the end times or the rapture.

Sullivan, Amy. January 27, 2018. Millions of Americans Believe God Made Trump President, *Politico Magazine*, commenting on a book *God and Donald Trump*, written by Stephen Strang. Retrieved March 3, 2019 from: <https://www.politico.com/magazine/story/2018/01/27/millions-of-americans-believe-god-made-trump-president-216537>

Sherwood, Harriet. October 3, 2018. The chosen one? The new film that claims Trump's election was an act of God, *The Guardian*. Retrieved March 3, 2019 from: <https://www.theguardian.com/us-news/2018/oct/03/the-trump-prophecy-film-god-election-mark-taylor>

# An Argument that Involves Multiple Fallacies

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- A given case can illustrate more than one logical fallacy. Responding to Ilhan Omar's supposedly "anti-Semitic" tweet about Israel, Sarah Huckabee Sanders, one of the White House press secretaries under Trump, defended President Trump's assertion that the Democratic Party has become "anti-Israel" and "anti-Jewish":
- The president has been an unwavering and committed ally to Israel and the Jewish people, and frankly the remarks that have been made by a number of Democrats and failed to be called out by Democratic leadership is frankly abhorrent, and it's sad, and it's something that should be called by name. (Moore, 2019)
- This assertion could be seen as a Red Herring fallacy. It involves drawing attention to irrelevant points, changing the subject or dodging the issue. "Sanders does not discuss the issue of the Democratic party being anti-Jewish; instead, she talks about how Trump supports the Jewish people. That fact may or may not be true, but it has nothing to do about the stance of the Democratic party."

# An Argument that Involves Multiple Fallacies

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- Sanders's remarks also exemplify the Hasty Generalization (or Jumping to a Conclusion) fallacy. That is, it is drawn from inadequate evidence. Sanders indicates that remarks by some Democrats such as Ilhan Omar must mean that all Democrats are anti-Semitic.
- Sanders's remarks can also be seen as instances of Begging the Question or Circular Reasoning. That is, something is assumed to be true that has yet to be established or demonstrated. In this case, she implies that because Democrats failed to challenge those statements, they must be anti-Semitic. Thus, she proves something not with evidence but with a lack thereof.

# Conclusion

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- Clearly, understanding, explaining and/or confronting logical fallacies belong in the arsenal of trying to cope with fake news, doxing and other forms of disinformation
- Professionally, what does that mean?
- How do we approach their occurrence in patrons or in patron's beliefs (including fake news beliefs) or in library resources? Or in ourselves?
  - a) Ignore it – information professionals have no responsibility
  - b) Point it out and try to educate the patron about the fallacy (ies) they are embracing
  - c) Create an information literacy program or display to educate patrons about them
  - d) Confront the patrons about the error of their ways!