Lecture 4 – Good and Bad Arguments

Jim Pryor – “Some Good and Bad Forms of Arguments”
Agenda

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Reductio Ad Absurdum

A *reductio ad absurdum* is a good form of reasoning in which you accept some hypothesis for the sake of argument, and then show the hypothesis leads to a contradiction or a false conclusion. You can thus reject the hypothesis since it can’t be true.

Modus Tollens is an example of a *reductio*.

If P, then Q.
Not Q.

\[ \text{Not Q.} \]

\[ \text{Not P.} \]
Example of a Reductio

A computer scientist announces that he’s constructed a computer program that can play the perfect game of chess: he claims that this program is guaranteed to win every game it plays, whether it plays black or white, with never a loss or a draw, and against any opponent whatsoever. Should you believe the computer scientist’s claim that the program is so designed that it will always win against every opponent?

No. Here’s why: Suppose for the sake of argument that a perfect chess program that always wins were possible. Then we could program two computers with that program and have them play each other. By hypothesis, the program is supposed to win every game it plays, no matter who the opponent is, and no matter whether it plays white or black. So when the program plays itself, both sides would have to win. But that’s impossible! In no chess game can both white and black be winners. So the supposition that a perfect chess program is possible leads to an absurd result. So that supposition must be false. A perfect chess program with the abilities the computer scientist claims must not be possible.
Burden of Proof

If no positive argument has been given for a claim $P$, then the following line of reasoning is fallacious:

[BAD] $P$ has not been shown to be false. So it must be true.
Burden of Proof

If P is some claim which *seems intuitively to be true*, or if in our dispute *there is some presumption that P is true*, then anyone who seeks to prove not-P bears the **burden of proof**. If she doesn’t succeed in proving not P, then we’re entitled to go on believing P.

[OK] There is some presumption that P is true. And P has not been shown to be false. So we can reasonably continue to accept P.

This isn’t a deductive argument that P. There might be some reason why P is in fact false—we just haven’t thought of it yet.
Where the burden of proof lies will sometimes depend on the dialectical situation:

Eric is a committed believer in God who is trying to convince Matt that God exists. Matt is not convinced by Eric’s arguments, and raises many doubts, which Eric attempts to answer. Matt is not an atheist. He is agnostic. Here Eric has the burden of proof. Matt only needs to examine and criticize Eric’s arguments. He is not obliged to argue that God does not exist.
Burden of Proof

Karl is a committed atheist, who is arguing that God does not exist. Eric is a committed believer in God and he is trying to convince Karl that God does exist. Each person is trying to refute the other.

Here both philosophers have the burden of establishing their position.

“It annoys me that the burden of proof is on us. It should be: 'You came up with the idea. Why do you believe it?' I could tell you I've got superpowers. But I can't go up to people saying 'Prove I can't fly.' They'd go: 'What do you mean 'Prove you can't fly'? Prove you can!'”

Ricky Gervais
Arguments by Analogy

**Arguments by analogy** often involve **shifting the burden of proof**.

- Person A makes an analogy between two cases to show that they should be regarded similarly. The burden of proof shifts to her opponent to show the two cases are different.

- Person B finds a **disanalogy** between the two cases and shifts the burden of proof back onto Person A.
Arguments by Analogy

Lefty argues:

Imposing the death penalty for murder is hypocritical and inconsistent. You only punish people for murder because you believe killing to be wrong. But then the death penalty itself must be wrong, because it too involves killing someone. And two wrongs don’t make a right. So imposing the death penalty is just as bad as killing someone in cold blood.
Arguments by Analogy

Righty responds:

You say capital punishment is supposed to be analogous to murder. Well, then, you should also count other activities committed by the state as analogous to those same activities when committed by criminals. In particular, since kidnapping--confining someone against their will--is wrong when committed by criminals, so too must it be wrong for the state to confine people against their will (in jails). Hence, if your argument that capital punishment is inconsistent is successful, then by the same reasoning, it would also be inconsistent to jail kidnappers. That is clearly an unacceptable result. So there must be something wrong with your analogy. Murder and capital punishment are similar in some respects. But there are important differences between them, too. And these differences are morally important.
Begging the Question

Begging the question does not mean “prompting or inviting the question” even though sometimes it is misused that way.

To beg the question is to assume the very point at issue in attempting to argue for it. This is also sometimes called “circular reasoning.”

We know that God exists, because it says so in the Bible. And we can trust the Bible on this matter because it’s the Word of God, and so must be correct.
Equivocation

An **equivocation** is a bad form of argument where one of the key terms can be understood in two ways, and the plausibility of the argument depends on reading the term differently in different premises.

1. All politicians are snakes.
2. No snake has legs.
3. So no politician has legs.

1. Nature is governed by fixed and unchangeable *laws*.
2. But every *law* is the work of some legislator.
3. Therefore, there is some legislator responsible for the governing of Nature.
Dilemmas

• A dilemma is a form of reasoning that presents a choice between two alternatives. Example: If P then Q. And if R then also Q. But either P or R. So in any event, Q.

• P and R are called “the horns” of the dilemma.

Two ways to reject a dilemma:

1. You can “take the dilemma by one of its horns.” Accept one of the options (P or R) and argue that that option doesn’t lead to the consequences your opponent says it leads to. (Or, you might argue that it does lead to those consequences, but that those consequences are not so bad or implausible as your opponent makes them out to be.)

2. You can try to “go between the horns of the dilemma.” Show that the options you’re presented with do not exhaust the relevant possibilities.
False Dilemmas

A dilemma where the options do not exhaust the relevant possibilities is called a **false dilemma**.

- Caliph Omar ordered the destruction of the Library at Alexandria, proclaiming that the books either contained the same doctrines as the Koran, and so were unnecessary, or else they contradicted the Koran, and so were pernicious. In either case, they should be destroyed.

- Should we allow the government to take total control of the software industry, or must we allow companies like Microsoft to be completely free of government regulation?
Information Manipulations misrepresent the facts at hand to try to convince readers of something that is not necessarily true.

- **Hasty Generalizations** (including Stereotypes) draw conclusions about an entire group after observing just a small (and not necessarily representative) sample of its members.
  - Asian students are good at math. Therefore, an Asian student should manage our organization’s budget.

- **Confirmation Bias** is when an author cherry-picks sources and pieces of evidence that confirm the view they already hold, while ignoring or suppressing evidence to the contrary.
  - Verizon is the most reliable network. Just check out the statistics on Verizon.com.

- **Slippery Slope Arguments** claim that one small step will inevitably lead to much more drastic (and typically undesirable) consequences.
  - Marijuana should be illegal because it is a gateway drug. Once people smoke marijuana, they’ll start experimenting with ‘harder’ drugs like cocaine and heroin.

- **Strawman Arguments** misrepresent an opponent’s view, thereby making it easier to defeat.
  - It’s ridiculous to say that all human beings are created equal: if that were true, we’d all be able to dunk like LeBron!
The queen told the curious little crane that she could have jam every other day, but never today, since today was not any other day.
"I have never seen food that is not circle-shaped. All food is therefore definitely circle-shaped."

"I have never seen food that does not have straight edges..."
If you let a bully come in your front yard, he will be on your porch the next day and the day after that. He will eat your babies!
...AND GIVEN MY CONTRIBUTIONS TO THIS PAPER, I THINK THAT I DESERVE TO SHARE CREDIT WITH THE FIRST AUTHOR.

SO FAME IS MORE IMPORTANT TO YOU THAN SCIENCE, HUH? THAT'S SAD.

WHAT? I DIDN'T SAY THAT.

OH, SO NOW I'M SENILE TOO!
Off-Limit Appeals

Off-Limit Appeals give reasons involving information that should be irrelevant to the matter at hand.

• **Ad Hominem Attacks** criticize the author of an opposing claim, instead of criticizing the claim itself.
  • *Voldemort says the sky is blue, but we can’t trust anything Voldemort says because he’s evil.*

• **Anecdotal Evidence** is an appeal to one’s own limited experience, or hearsay about someone else’s limited experience.
  • *The G train is very reliable: it came right away the one time I took it.*

• **Appeals to Authority** claim something is true merely because an expert (or someone who purports to be an expert) says so.
  • *The Atkins diet must be a great way to lose weight because a doctor invented it.*

• ** Appeals to Emotion** (including Scare Tactics) try to convince the reader that something is true by arousing their emotions instead of appealing to their reason.
  • *Petroleum is a terrible energy source: just think of all the cute baby sea animals that were harmed in the Gulf of Mexico oil spill!*
According to a recent Nationwide survey:

MORE DOCTORS SMOKE CAMELS THAN ANY OTHER CIGARETTE
THE ADVENTURES OF:

FALLACY MAN!

MASTER OF PHILOSOPHY,
LORD OF DEBATE,
SULTAN OF REASON!

Wherever someone is illogical...
I will be there.
Whenever someone is wrong,
I will tell them why.

DUN DUN DUN
DUN DUN DUN
DUNNNNNNN!

Yeah, I don’t know man,
Peyton Manning says
this is the most talented
roster he’s been on, I think
this might be their year.

APPEAL TO AUTHORITY!

Dude, what
the hell....
YEAH, BUT GLENN BECK IS AN IDIOT, YOU SHOULDN’T LISTEN TO ANYTHING HE SAYS.
Off-Limit Appeals

• **Appeals to Popularity** (or **Bandwagon Fallacies**) assume that a claim is true just because many or most other people believe it (or false just because few others believe it).
  
  • *Few of Galileo’s contemporaries believed his claims that the earth revolves around the sun – so he must have been a total quack.*

• **Appeals to Tradition** claim that something is correct just because it’s what has always been done.
  
  • *The next President of the United States should be a man because that’s how it’s always been.*

• **Red Herrings** distract the reader by introducing information that isn’t pertinent to the topic at hand.
  
  • *Hunter College is the best CUNY college, because that’s the school I go to.*
THERE IS A RED HERRING ON THE FIELD

WHAT THE HELL DOES THIS HAVE TO DO WITH ANYTHING?
MAN. IT SEEMS LIKE EVERYWHERE I GO, PEOPLE ARE ALWAYS COMMITTING FALLACIES.

WHAT THE...

CONFIRMATION

BIAS!