

Introduction to Logic and Critical Thinking Fallacies of Concealment

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Critical Thinking Concepts

Equivocation: involves the shifting of a meaning of a term, concept, or phrase within the process of an argument.

Another way of thinking about this is that different meanings of an expression are used at different stages in an argument in a way that compromises inference.

“Who did you pass on the road?” the King went on, holding his hand out to the messenger for some hay.

“Nobody,” said the messenger.

“Quite right,” said the King; “this young lady saw him too. So of course Nobody walks slower than you.” --Through the Looking Glass.

"It depends on what the meaning of the word 'is' is. If the--if he--if 'is' means is and never has been, that is not--that is one thing. If it means there is none, that was a completely true statement....Now, if someone had asked me on that day, are you having any kind of sexual relations with Ms. Lewinsky, that is, asked me a question in the present tense, I would have said no. And it would have been completely true."

--Bill Clinton in response to a question of whether there is anything going on between he and Monica Lewinsky

Detecting Equivocation

Some triangles are obtuse. Whatever is obtuse is ignorant. Therefore, some

SENSE 1

SENSE 2

triangles are ignorant.

CONCLUSION BASED ON SENSE 2

Detecting Equivocation

Any law can be repealed by the legislative authority. But the law of gravity is

SENSE 1

SENSE 2

a law. Therefore, the law of gravity can be repealed by the legislative

SENSE 1

SENSE 2

authority.

Detecting Equivocation

We have a duty to do what is right. We have a right to speak out in defense

SENSE 1

SENSE 2

of the innocent. Therefore, we have a duty to speak out in defense of the

CONCLUSION BASED ON SENSE 1

innocent.

Equivocation?

An athlete is a human being. Therefore, a good athlete is a good human being.

Emeralds are seldom found in this country, so you should be careful not to misplace your emerald ring.

A crust of bread is better than nothing. Nothing is better than true love. Therefore, a crust of bread is better than true love.

The publication ban in the Paul Bernardo case ought to be lifted. After all, there is a great public interest in the case and the courts always ought to act in the public interest.

We are told that discrimination is morally wrong. But how can that be the case? We praise people all the time for being discriminating -- in their taste for good wine, books and friends, for example. From now on, I'm not going to be inhibited against discriminating against women when they apply for jobs in my department.

Equivocation?

John Angus Smith, approaching an undercover agent, offered to trade his firearm, an automatic, for two ounces of cocaine that he planned to sell at a profit. Upon being apprehended, Smith was charged with “using” a firearm “during and in relation to...a drug trafficking crime.” Ordinarily conviction under this statute would result in a prison sentence of five years; however, if the firearm, as in this case, is “a machine gun or other automatic weapon” the mandatory sentence is 30 years. Smith was convicted and sentenced to 30 years in prison. The case was appealed to the U.S. Supreme Court.

Justice Scalia argued that, although Smith certainly did intend to trade his gun for drugs, that was not the sense of “using” intended by the statute. “In the search for statutory meaning we give nontechnical terms their ordinary meanings...to speak of ‘using a firearm’ is to speak of using it for its distinctive purpose, as a weapon.” If asked whether you use a cane, he pointed out, the question asks whether you walk with a cane, not whether you display “your grandfather’s silver-handled walking stick in the hall.”

Justice O'Connor retorted that we may do more than walk with a cane. "The most infamous use of a cane in American history had nothing to do with walking at all -- the caning (in 1856) of Senator Charles Sumner in the United States Senate."

Justice Scalia rejoined that the majority of the Court "does not appear to grasp the distinction between how a word can be used and how it is ordinarily used...I think it perfectly obvious, for example, that the falsity of the requirement for a perjury conviction would not be satisfied if a witness answered 'No' to a prosecutor's enquiry whether he had ever 'used a firearm' even though he had once sold his grandfather's Enfield rifle to a collector."

Justice O'Connor prevailed; Smith's conviction was affirmed.

--*John Angus Smith v. United States*, 508 U.S. 223, June 1, 1993

Equivocation?

Background: A philosopher named Martha Nussbaum argues as follows: It seems sensible to determine what is good for human beings and then argue that anything that reduces an individual human being's capacity in this way is bad for that human being.

Another philosopher, Louise Antony, argues in response:

“This argument does not work, of course, because of its equivocation on the notions of ‘good’ and ‘good for’. A bomb is a good bomb if it explodes when and only when its owner wants it to -- that much can be read off the bomb's distinctive function. But we reason fallaciously if we continue in either of two ways: if we say that that's a good bomb, good things are good, and, therefore, that's a good bomb. Or if we say that keeping a bomb in a dry, good place preserves its capacity to fulfill its function, that is, explode, and, therefore, that keeping it in a cool, dark place is good for the bomb.”

--Louise Antony, “Natures and Norms” (2000).

Critical Thinking Concepts

Complex Question: A complex question contains an assumption that is hidden but that must be implicitly acknowledged if the respondent is to answer the question.

Usually in answering the question, the respondent is forced into a position she doesn't want to be in.

This can, but doesn't need to, take the grammatical form of a question.

Note: complex questions represent the way in which someone can fail at responsibly arguing and defending their position. On the other hand, they don't always represent the way in which something has gone wrong *in an argument*.

Critical Thinking Concepts

The implicit argument of the complex question:

Complex question: Have you stopped cheating on exams?

Implicit argument: You were asked whether you have stopped cheating on exams. You answered 'yes'. Therefore, it follows that you cheated in the past.

Complex question: Where did you hide the cookies you stole?

Implicit argument: You were asked where you hid the cookies you stole. You replied, "under the bed." It follows that you did in fact steal the cookies.

Examples of complex questions

Why is the private development of resources so much more efficient than any government-owned enterprise?

How can you expect the majority of the voters, who rent but don't own property and don't have to pay the tax, to care if the tax burden of others is made even more unfair?

If America's booming economy depends on people's using consumer credit beyond their means, thus creating poverty, do we really have a healthy economy?

What are the consequences of reducing the world's gene pool to patented intellectual property, controlled by a handful of life-science corporations?

Do you realize that the vast majority of painful animal experimentation has no relation at all to human survival or the elimination of disease?

Why is it so difficult for you to reach a decision?

Examples of complex questions

What is your number one reason to support Hillary Clinton for president?

What is the best explanation for psychic powers?

If you don't think that God created the universe, then what did?

Why should merely cracking down on terrorism help to stop it, when that method hasn't worked in any other country? Why are we so hated in the Muslim world? What did our government do there to bring this horror home to all those innocent Americans? And why don't we learn anything, from our free press, about the gross ineptitude of our state agencies? about what's really happening in Afghanistan? about the pertinence of Central Asia's huge reserves of oil and natural gas? about the links between the Bush and the bin Laden families?

False Dichotomy

When a disjunctive premise presents two unlikely alternatives as if they were the only ones available, and the arguer then eliminates the undesirable alternative, leaving the desirable one as the conclusion.

Note: These arguments are typically valid, but they are unsound.

Structure of a false dichotomy:

P1: Either you let me attend the Coachella festival or I'll be miserable for the rest of my life. (Disjunctive)

P2: I know you don't want me to be miserable the rest of my life. (Rejection of one of the disjuncts)

C: So it follows that you'll let me attend the festival. (Affirms the other disjunct)

Note: the reason this argument isn't sound is because P1 is false.

Appeal to Ignorance

This fallacy involves drawing a conclusion on the basis of absence of evidence against that conclusion.

This fallacy reverses the burden of proof.

Appeal to Ignorance

The easiest examples to recognize:

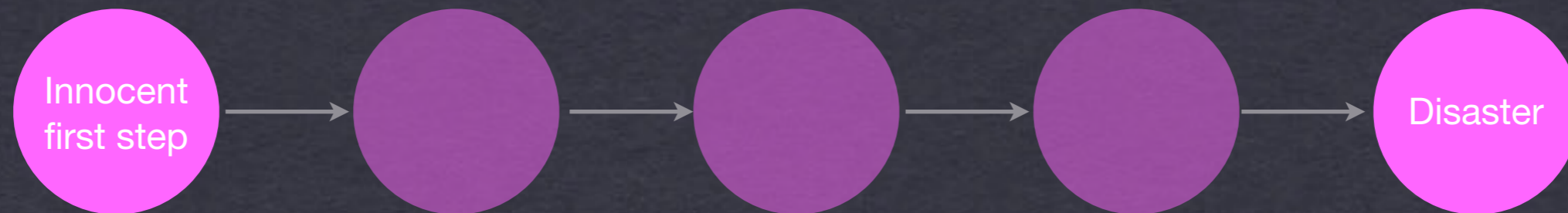
The absence of evidence disproving the existence of ghosts is proof for the claim that ghosts exist, on the grounds that if they did not, someone would have shown this by now.

“If the tobacco industry truly believed it could commission a study to prove that advertising tobacco products does not affect consumption, it would have done so by now. Thus, advertising tobacco products does affect consumption.”

ON THE SENATE FLOOR IN 1960, JOE MCCARTHY ANNOUNCED THAT HE HAD PENETRATED "TRUMAN'S IRON CURTAIN OF SECRECY." HE HAD 81 CASE HISTORIES OF PERSONS WHOM HE CONSIDERED TO BE COMMUNISTS IN THE STATE DEPARTMENT. OF CASE 40, HE SAID, "I DO NOT HAVE MUCH INFORMATION ON THIS EXCEPT THE GENERAL STATEMENT OF THE AGENCY THAT THERE IS NOTHING IN THE FILES TO DISPROVE HIS COMMUNIST CONNECTIONS."

Slippery Slope

1. Is each of the causal steps plausible?
2. Could one stop and go back, or is the “slope” clearly slippery?
3. Is the alleged outcome really negative?



CHAIN REACTION (NOT LIKELY TO OCCUR)

BOTH OF THESE ARE SLIPPERY SLOPES

Immediate steps should be taken to outlaw pornography once and for all. The continued manufacture and sale of pornographic material will almost certainly lead to an increase in sex-related crimes such as rape and incest. This will in turn erode the moral fabric of society and result in an increase in crimes of all sorts.

Attempts to outlaw pornography threaten basic civil rights and should be summarily abandoned. If pornography is outlawed, censorship of newspapers and news magazines is only a short step away. After that there will be censorship of textbooks, political speeches, and the content of lectures delivered by university professors.

Begging the Question:

when a speaker assumes in the premises the very thing she is asserting in the conclusion. Since the same statement cannot be used to prove itself, the argument is circular.

Note: complex questions will often be in question form, but usually when we beg the question, no grammatical question is actually asked.

Note: you can be guilty of begging the question in a perfectly valid argument. All truly circular arguments are valid. For example:

Premise: All men are mortal.

Conclusion: Therefore, all men are mortal.

But, we only use “begging the question” to refer to those arguments that try to hide a missing premise, or disguise the conclusion as a new piece of information.

Begging the question?

In a motion picture featuring the famous French comedian Sacha Guitry, some thieves are arguing over the division of seven pearls worth a king's ransom. One of them hands two to the man on his right, then two to the man on his left. "I," he says, "will keep three." The man on his right says, "How come you keep three?" "Because I am the leader." "Oh, But how come you are the leader?" "Because I have more pearls."

A heavier-than-air craft could never fly because in order to lift up and travel over distance a machine would have to be lighter than the environs surrounding it.

God is the only perfect being and perfection includes all the virtues. So, we know that God is benevolent.

Murder is morally wrong. This being the case, it follows that abortion is morally wrong.

I just can't face the prospect of living my life without the possibility of a heavenly reward. Therefore, I know a heavenly reward awaits me at death.

1. The Dalai Lama argues that China has no business in Tibet and that the West should do something about it. But the Dalai Lama just wants the Chinese to leave so he can return as leader. Naturally he argues this way. Therefore, we should reject his arguments.
2. TV commentator Larry Kudlow argues that government should get off the back of the American businessman. Obviously, Kudlow wants to abolish government altogether. Yet without government there would be no defense, no judicial system, no Social Security, and no health and safety regulations. None of us wants to forgo these benefits. Thus, we can see that Kudlow's argument is absurd.
3. Dr. Morrison has argued that smoking is responsible for the majority of health problems in this country. However, we should disregard Dr. Morrison's arguments because only yesterday I saw him smoking a cigar.
4. Dr. Bradshaw, our family physician, has stated that the creation of muonic atoms of deuterium and tritium hold the key to producing a sustained nuclear fusion reaction at room temperature. In view of Dr. Bradshaw's expertise as a physician, we must conclude that this is indeed true.
5. The county tax collector issued a press release stating that property tax revenues are higher this year than last. Therefore, we conclude that these revenues are indeed higher this year.

1. People have been trying for centuries to disprove the claims of astrology, and no one has ever succeeded. Therefore, we must conclude that the claims of astrology are true.
2. Members of the jury, you have heard the prosecution present its case against the defendant. Nothing, however, has been proved beyond a reasonable doubt. Therefore, under the law, the defendant is not guilty.
3. No one has proved conclusively that America's nuclear power plants constitute a danger to people living in the immediate vicinity. Therefore, it is perfectly safe to continue to build nuclear power plants near large metropolitan centers.
4. Consumers Digest reports that GE light bulbs last longer than Sylvania bulbs. But do you realize that GE used to be this country's major manufacturer of nuclear weapons? The social cost of GE's irresponsible behavior has been tremendous. Among other things, we are left with thousands of tons of nuclear waste with nowhere to put it. Obviously, Consumers Digest is wrong.
5. Frank: People always act in such a way as to promote their own interests. Jack: What about someone like Mother Theresa? She clearly seems to be a person who acted selflessly in putting others' interests first. Frank: If she wasn't interested in acting that way, she wouldn't have done so. So this just serves to support my point.