

Chapter 3, Tutorial 4
Fallacies of Ambiguity

There are lots of real reasoning problems when it comes to *unclear language*. We look at just a few ways.

My brain is a part of the universe, so the cosmos is a universal mind

Huh? This thinking about the brain is a bit *fast*, to say the least. Even if my brain thinks, it doesn't follow that the universe itself is a thinking thing. But often "metaphysical" or "philosophical" speculation jumps to such a conclusion.

Similarly, we wouldn't say that because every basic part of the universe is subatomic, o the whole universe is subatomic.

1. Reasoning from properties of the parts of an object to the claim that the whole object has these same properties is obviously fallacious. This is the **fallacy of composition**.

2. Likewise, if one reasons that the parts have the same properties as the whole, one is confused. Just because my brain thinks, doesn't mean the each neuron thinks. The parts taken together may have the property in question, but they need not have this property individually.

So, it is also a fallacy to argue that the parts of an object have all the properties of the whole. This is the **fallacy of division**.

It all depends on what the meaning of the word "is" is

Dose anyone still recall President Clinton? He made this phrase famous. And yes, "is" can have various meanings.

We can mean it in

(1) a present tense way, "to be *now*", as in "He is in the house".

or

(2) a tenseless way, as in "the number 7 is greater than 3" or "Aristotle is one of the greatest philosopher-logicians of all time".

Perhaps Clinton was trying to confuse us about his statement to the grand jury (something about "is there an affair between you and woman X "). there is some intent to deceive here and so maybe fallacious argument. Or maybe some good linguistics? This is probably best left to other sources than a logic book; Let me just quote another website:

Steven Pinker, [Listening Between the Lines](#):

In his grand jury testimony, Mr. Clinton expounded on the semantics of the present tense ("It depends on what the meaning of the word 'is' is") and of the words "alone," "cause" and, most notoriously, "sex."

Clinton's rebuttal to the Starr report:

Literally true statements cannot be the basis for a perjury prosecution, even if a witness intends to mislead the questioner. Likewise, answers to an inherently ambiguous question cannot constitute perjury.

A joke:

Have you ever touched Paula Jones or Monica Lewinsky?
It depends on your definition of "or".

(Thanks to: <http://www.squarefree.com/categories/linguistics/>)

We do have a fallacy of reasoning whenever a word or phrase is used in more than one way. Or when the grammar confuses.

3. [Begin with one sort of ambiguity](#):

Fallacies of equivocation arise from one word or phrase that is used with different meanings.

Think about this argument.

(a) He's a good worker, and a man, so a good man.

If you don't think too hard, (a) may seem like fine reasoning. But being a good worker is one, thing. A good man quite another. The conclusion only *seems* to follow. This is a fallacy because something of a play on the word "good".

Here's how you spot an equivocation: One word or phrase is used with two different, i.e., equivocal, meanings in the course of the argument.

There are more important examples of this fallacy. [Here's one that is important and controversial:](#)

(b) Whatever will be will be: therefore fatalism is true.

Is this a confusion of the meaning of "will be"? I would seem that "whatever will be, will be" is a logical truth. But "will be" may be interpreted as meaning "everything that in fact happens" *or* as "everything now settled or determined to happen". Only if we *change meaning* of "will be" does this look like a reason for fatalism:

Interpretation of "will be":

Whatever will be will be

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Whatever in fact happens [meaning 1 of "will be"] is something that is settled in advance [meaning 2 of "will be"] to happen

Only if you interpret "will be" as changing meaning in the course of the one premise does (b) seem valid. If this is right, then the argument (b) is a fallacy of equivocation: one phrase ("will be") has different meanings in the course of the argument.

4. But ambiguity can arise from [mistakes of grammar as well](#).

A mistake of grammar that leads to confusion and fallacious reasoning is called an **amphiboly**.

Many of the examples standardly given of this sort of grammatical confusion are really just poor jokes like this:

I say: "There is a picture of the current president in my house". Your conclusion: "I didn't know you were so familiar with our commader-in-chief!"

But this is a mistake of interpretation! The premise could mean that the president is pictured in my house. But it's more likely that I'm a fan and merely have, in my house, a picture of the president. That is, more likely, the picture is in my house but the president never was.

Here's how you spot an amphiboly: A premise or conclusion can be read in two different ways because of unclarity in the grammar. This ambiguity may confuse one into thinking the conclusion is true.

(This ambiguity is easily *distinguished from equivocation*: in equivocation one word or phrase is used more than once and with more than one meaning.)

Still, there are more subtle [grammatical confusions that cause serious misunderstanding](#).

Remember that dividing by zero is *not* defined and think about this objection to mathematics:

(c) $8/4$ is taking 8 and dividing into four parts, so it's 4. $8/2$ is taking 8 and dividing it into two parts to get 4. So, dividing by 0 would be not dividing at all: $8/0 = 8$. (*Fallacy of Amphiboly!*)

But in (c) the grammar of "dividing by zero" as opposed to "not dividing" leads to the confusion. Not dividing up 8 is one thing. But dividing by 0 is a real attempt to perform the mathematical operation with a real thing, the number 0. This is different from not dividing at all.

Bottom line: this too is a fallacy from a problem of confusing grammar. So, we call this an amphiboly too.

Another one...

Or think about a classic -- *and all too easy* -- proof for the existence of God:

(d) God by definition is the perfect being. But wouldn't be perfect if he didn't exist. So he must exist. (*Fallacy of Amphiboly???*)

This one is a bit controversial too! It has been taken seriously as a proof of the existence of God.

Here's the argument that this one is fallacious: The reasoning with (d) *may* best be seen as a problem of the grammar: "God" should not be defined as "the perfect being". Doing so presupposes his/her existence. Better to follow our usual means of giving a definition: "a being is God if and only if that being is the perfect being." On this new definition, the argument does not have the intuitive force.

(d') A being is God if and only if that being is the perfect being. But wouldn't be perfect if he didn't exist. So, what? The reasonable conclusion that *if there is no perfect being then God does not exist* is not of much interest.

Summary:

Fallacies of Ambiguity		
Arguments that give the <i>illusion</i> that premises support a conclusion only because of unclarity in their meaning. (I try to use fairly generic terminology and description here so that the reader can utilize Web resources to greatest benefit.)		
Fallacies of Meaning		
<i>Amphiboly</i>	An ambiguous premise misleads due to faulty grammar.	"Headline: 'Zoo Staff Mothers Abandoned Chimp'. So, clearly, their staff should be punished."
<i>Equivocation</i>	Misleading reasoning based on a word or phrase with different meanings.	"Socrates is a man, so too is Plato. Socrates is man, so Socrates = man. Plato is man, so Plato = man. Therefore, by the properties of identity, Socrates = Plato, indeed we all are one."
Parts/Wholes Reasoning Problems		
Composition	Mistakes properties of the part as properties also of the whole.	"My brain can't really think, because my neurons don't think, they just electro-chemically signal."
Division	Mistakes properties of the whole as properties also of the parts.	"The table is visible, so all its parts are. Therefore, the atomic theory of matter must be wrong."