

# An Introduction to Arguments

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*Today's reading introduces you to the idea of a philosophical argument, and provides you with some common terminology for discussing such arguments. It is absolutely crucial for you to familiarize yourself with this terminology at the start of the quarter, since we will be discussing philosophical arguments every day in class. Pay special attention to the boxed definitions in the text, since these will provide the basis of an extra-credit pop quiz next week. Also, be sure to think through the boxed questions in the text, since these will be the subject of class-room discussion on Friday.*

One of my all-time favorite comedy scenes is the *Argument Clinic* from *Monty Python's Flying Circus*. In the sketch, Michael Palin enters an office (an "Argument Clinic") and hires John Cleese (an "Argument Specialist") to have a dispute with him. However, Palin ends up getting more (or is it less?) than he bargained for.

Palin: I came here for a good argument.

Cleese: No you didn't; you came here for an *argument*.

Palin: Well an argument's not the same as contradiction.

Cleese: It can be.

Palin: No it can't. An argument is a connected series of statements to establish a definite proposition.

Cleese: No it isn't.

Palin: Yes it is! It isn't just contradiction.

Cleese: Look, if I am to argue with you, I must take up a contrary position.

Palin: But it isn't just saying "no it isn't."

Cleese: Yes it is.

Palin: No it isn't!

The scene is intended to be comedic, but it also serves to introduce two different senses of the word ‘argument’. In one sense of the word, Cleese is clearly correct: *an argument is just a disagreement*. Two people can have an argument of this kind without having any sort of rationale or reason for their positions. (*The Yankees suck! No, the Red Sox suck! No, you suck! Oh yeah? Well your mamma...* etc.) We are going to try and avoid having these kinds of argument in class.

Our focus will instead be on arguments in Palin’s sense of the term: *an argument is a connected series of statements to establish a definite proposition*; or, to put it another way, an argument is a series of statements, one of which is offered as a claim to be supported and the rest of which are offered as support. The claim to be supported is called *the conclusion*, while the claims offering support are called *the premises*.

### Definition

An **argument** is a series of statements, one of which is offered as a claim to be supported and the rest of which are offered as support.

When we present arguments in this class, we will always write out all of the premises and number them as we go along. We will then draw a line and write out the conclusion in the same way. So, for example, we might write out Palin’s argument as follows:

- (1) All you’re doing is contradicting me.
  - (2) If all you’re doing is contradicting me, then we’re not having an argument.
- 
- (3) We’re not having an argument.

In this example, (1) and (2) are the premises and (3) is the conclusion. The first premise says that Cleese is only contradicting Palin. This is based on observation. The second premise is a *conditional* claim (an “if-then” statement)—it says that *if* Cleese is only contradicting Palin, then he isn’t giving him a proper argument. This premise is based on our current definition of ‘argument’, which says that an argument must have premises and a conclusion. From these two premis-

es, it follows that Cleese and Palin aren't having an argument (in Palin's sense of the term).

Of course, not all arguments are about arguments. Arguments can be on any topic, from politics to religion to pizza. In this class, we will be focusing on arguments for *philosophical* conclusions. To get a sense of what a philosophical argument looks like, we can begin with one of the most famous philosophical arguments of all time—the *problem of evil*. Here is how the contemporary philosopher James Bebee puts this problem:

The existence of evil and suffering in our world seems to pose a serious challenge to belief in the existence of a perfect God. If God were all-knowing, it seems that God would know about all of the horrible things that happen in our world. If God were all-powerful, God would be able to do something about all of the evil and suffering. Furthermore, if God were morally perfect, then surely God would want to do something about it. And yet we find that our world is filled with countless instances of evil and suffering. These facts about evil and suffering seem to conflict with the orthodox theist claim that there exists a perfectly good God. The challenged posed by this apparent conflict has come to be known as the problem of evil.

(from James Bebee, "The Logical Problem of Evil")

In this passage, Bebee begins by noting that God is supposed to be a *perfect* being—that is, a being with every perfection, including omniscience, omnipotence, and omnibenevolence. But a being with those features would prevent all evil from occurring. Since not all evil is prevented, it would seem to follow that there is no such being. We can write this argument out more carefully as follows:

- (1) If God existed, then He would be all-knowing, all-powerful, and morally perfect.
- (2) If God was all-knowing, then He would be aware of all evil.
- (3) If God was all-powerful, then He would be able to prevent all evil.
- (4) If God was morally perfect, then He would be motivated to prevent all evil that He is aware of and able to.
- (5) If God was aware of all evil, and was able to prevent all evil, and was motivated to prevent all evil that He is aware of and is able to, then there would be no evil.
- (6) There is evil.

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(7) God does not exist.

This lengthy line of reasoning can be simplified as follows:

- (1) If God existed, then there would be no evil.
- (2) There is evil

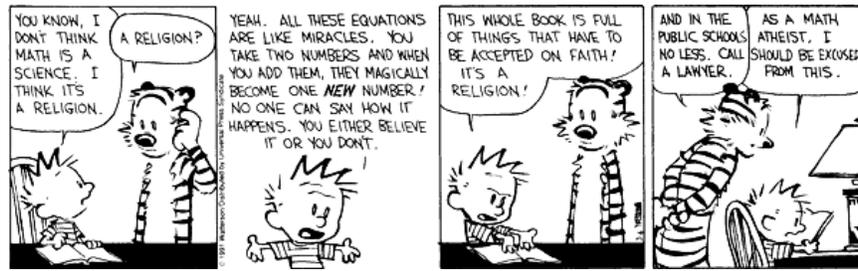
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(3) God does not exist.

In this case, (1) and (2) are the premises and (3) is the conclusion. The first premise is based on the standard Judeo-Christian conception of God. The second premise is based on simple observation. And the conclusion says that there is no God (in the standard Judeo-Christian sense).

Note that our presentation and explanation of these arguments—Palin’s argument and the problem of evil argument—share a common pattern. We begin with a passage in which an argument is presented. We then identify the intended conclusion of that argument and list the supporting premises. Finally, we try to provide the rationale behind each step of the argument, where providing a rationale often involves explaining some of the key terms in that step (terms like ‘argument’ or ‘God’).

We will be presenting and explaining arguments like this every day in class. Ideally, you should also follow this method when doing reading assignments; ask *what* the author is trying to argue for, *how* he is trying to argue for it, and *why* he thinks that you ought to accept the premises being put forward. Also, be sure to take special note whenever an author introduces or defines key terms—this is often crucial to understanding the argument in which those terms appear. But be warned: *some* of the authors that we will be reading are explicit about what conclusions they hope to establish. *Some* are perfectly clear about which premises they want to employ. And *some* provide careful definitions of all the key terms. *But this is not the norm.* In many cases, you will have to do quite a bit of work in order to identify and understand the arguments being put forward. In some cases, this work will be quite challenging. Don’t get discouraged. The ability to identify and understand arguments is a skill and, like most skills, it takes practice to perfect. This class will give you a lot of practice. You can begin by reading the cartoon in Figure 1 and answering the question that follows.



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Figure 1

### Question

What are the premises and conclusion of Calvin's argument?

As the Calvin example illustrates, not every argument is a good argument. Some arguments are strong; others are weak. And in many cases there is a great deal of controversy about how strong or weak an argument is. So, once we've presented and explained an argument, we need to *evaluate* that argument in order to determine whether or not it is any good. How does one go about evaluating an argument? The short answer is: by using *logic*, where logic is the study of methods for determining whether the premises of an argument adequately support the conclusion.

### Definition

**Logic** is the study of methods for determining whether the premises of an argument adequately support the conclusion.

Logic is a huge field. In this paper, we'll stick to the basics. I will begin by identifying two features that help to make for good arguments. Then, I'll discuss three features that make for bad arguments. Finally, I'll say a few words about why you should care about arguments and logic in the first place.

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There are two questions that you need to ask when evaluating an argument. First: *Are the premises true?* Second: *Do the premises support the conclusion?* We will discuss these questions in reverse order.

First, there are different ways in which some premises might support a conclusion, but one obvious kind of support is when the truth of the premises *guarantees* the truth of the conclusion. When an argument has this feature, we say that it is *valid*. A valid argument is one in which it is necessarily the case that: if the premises are true, then the conclusion is true as well.

### Definition

A **valid** argument is one in which it is necessarily the case that: if the premises are true, then the conclusion is true as well.

To put it another way, a valid argument is one in which it is impossible for the premises to be true and the conclusion false. Here is an example:

- (1) Seattle is in Washington.
  - (2) If Seattle is in Washington, then Seattle is in the United States.
- 
- (3) Seattle is in the United States.

Obviously, it would be impossible for (1) and (2) to both be true without (3) being true as well. If Seattle is in Washington, and if being in Washington implies being in the United States, then Seattle must be in the United States as well. In this sense, the truth of (1) and (2) guarantees the truth of (3). So, once you've determined that (1) and (2) are both true (by consulting an atlas, for example), you don't need to do any more work to determine whether or not (3) is true.

### Question

Look back at Palin's argument and the problem of evil argument in the previous section. Do you think these arguments valid? Why or why not?

The validity of an argument is often determined by its *form*. To illustrate, we can represent the form of the preceding argument as follows:

A.  
If A, then B.  
-----  
B.

Here, the letter ‘A’ replaces the sentence ‘Seattle is in Washington’ and the letter ‘B’ replaces the sentence ‘Seattle is in the United States’. Many arguments are instances of this same form. For example, if we uniformly replace ‘A’ with ‘Trogdor is a dragon’ and ‘B’ with ‘Trogdor is a mythical beast’, we get the following:

- (1) Trogdor is a dragon.
  - (2) If Trogdor is a dragon, then Trogdor is a mythical beast.
- 
- (3) Trogdor is a mythical beast.

You might not know who Trogdor is. That depends on how cool you are. But even if you have no idea who Trogdor is, you should still be able to recognize that the above argument is valid. Just suppose for the sake of argument that Trogdor is a dragon. And suppose that if he’s a dragon, then he’s also a mythical beast. Then, given those assumptions, it would immediately follow that Trogdor is a mythical beast. In other words, it’s impossible for (3) to be false on the assumption that (1) and (2) are true.

This form of argument is so common that logicians have given it a special name: *modus ponens*.\*

### Definition

A **modus ponens** argument is any instance of the following form:

A.  
If A, then B.  
-----  
B.

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\* Note that the order of the premises does not make a difference to its form.

Modus ponens is a valid argument form, in the sense that every instance of that form is a valid argument. In other words, it is impossible for the premises of a modus ponens argument to be true and the conclusion false. This leads to a very important point: *validity is a matter of form, not content*. Whether or not an argument is *valid* (in the relevant sense) is determined by its *form* and so does not depend upon the truth of its premises.<sup>†</sup> Here it is important to recall the conditional in the definition of ‘valid’: *A valid argument is one in which it is necessarily the case that:*

## IF

*the premises are true, then the conclusion is true as well.* That’s a big ‘if’. The definition does *not* say that the premises of a valid argument must actually be true—it just says that *if* they’re true, then the conclusion would have to be true as well.

To illustrate the point, consider one more example of a modus ponens argument:

- (1) Katy Perry is a lion.
- (2) If Katy Perry is a lion, then she is a mythical beast.

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(3) Katy Perry is a mythical beast.

This argument obviously has a few problems. For one thing, Katy Perry is not a lion (though she does claim to be louder than a lion). Moreover, lions are real creatures, so even if Katy *were* a lion, she wouldn’t be a mythical beast. Finally, we know that the conclusion of the argument is also false: Katy Perry is a lot of different things, but she is not a mythical beast. Still, despite all of these shortcomings, the argument in question is valid. That’s because it’s still true that *if* Katy were a lion and *if* lions were mythical beasts, then Katy would have to be a mythical beast as well.

This leads to a very important point. You might be asking yourself: Why should we care about validity? After all, the preceding argument was valid and it was completely ridiculous. Doesn’t that mean that validity is totally worthless? No. The preceding example does show that validity isn’t the *only* requirement for a good argument, but that doesn’t mean it’s totally worthless. *Valid arguments are important because they present us with clear options and force us to make*

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<sup>†</sup> There are exceptions to these rules, but we can ignore them for now.

*definite decisions.* Remember that a valid argument is one in which it's impossible for the premises to be true when the conclusion is false. So, if the conclusion of a valid argument is false, at least one of the premises has to be mistaken as well. And that means that if you want to deny the conclusion of a valid argument, you'll have to reject at least one of the premises that lead to that conclusion. To illustrate, recall the simplified version of the problem of evil from before:

- (1) If God existed, then evil would not exist.
- (2) Evil does exist.

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(3) God does not exist.

Many people want to reject the conclusion of this argument. But the argument is valid, so it's impossible for (1) and (2) to be true if (3) is false. So, if you want to reject (3), you'll also have to deny (1) or (2). Ideally, what you should do is say *which* of these premises you deny and explain *why* you think it's mistaken. But the main point is that the validity of the argument helps to clarify your options. When confronted with the problem of evil, you must (a) deny the existence of evil, (b) deny the existence of God, or (c) deny the incompatibility of God and evil. *Those are the only three options.* And once we put things this way, a definite decision must be made: (a), (b), or (c)?

This is a very important point to keep in mind for this course, since we will be looking at a lot of arguments for surprising conclusions. In many cases, you'll want to say that these conclusions are silly or upsetting or just plain wrong. But it's not enough to just *say* that these conclusions are silly or upsetting or wrong. If an argument is valid, you must also identify a premise to reject.

#### Question

Which premise of the problem of evil argument do you think a theist should reject? Why?

Earlier, I stressed that validity isn't the only feature to look for in a good argument. The other key ingredient is *truth*. A *sound* argument is a valid argument in which all of the premises are true.

### Definition

A **sound argument** is a valid argument in which all of the premises are true.

Here is an example of a sound argument from earlier in this paper:

- (1) Seattle is in Washington.
  - (2) If Seattle is in Washington, then Seattle is in the United States.
- 
- (3) Seattle is in the United States.

This argument is valid, and its premises are true. So, the argument is sound.

The definition of ‘soundness’ is simple. But it is often difficult to determine whether an argument is sound, since it is often difficult to determine whether the premises are true. In fact, all of the arguments we’ll be looking at in this class will have controversial premises. That’s what makes those arguments interesting.

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To this point, we have focused on two features that help make for good arguments. We will now look at some common mistakes that make for bad arguments. To begin, take a careful look at Figure 2.

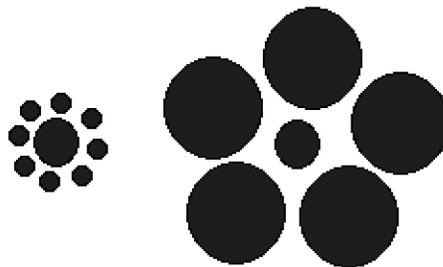


Figure 2

Now, compare the center circle on the left with the center circle on the right and ask yourself: *which circle is bigger?*

Somewhat surprisingly, the answer is *neither*. The two center circles are exactly the same size. This is an example of an *optical illusion*, in which appearance differs from reality. One interesting feature of a good optical illusion is that it is *resilient*, in the sense that the illusion persists even after you know that it's an illusion. For example, you can measure the center circles in Figure 2 and confirm that they're equal in size, but the one on the left will still look larger—your mind tells you one thing, but your eyes tell you another.

Philosophers are interested in an analogous phenomenon, which we might call *logical illusions*. A logical illusion is an argument that *looks* good when it's really bad. Philosophers call these arguments *fallacies*.

### Definition

A **fallacy** is a bad argument that is psychologically persuasive.

Consider, for example, the following passage from Keay Davidson:

If “experts” could always be trusted to make the right moral decision, then public participation would not be necessary—but they cannot be, and so it is.

(from Keay Davidson, *Carl Sagan: A Life*)

This passage contains the following argument:

- (1) If “experts” could always be trusted to make the right moral decision, then public participation would not be necessary.
- (2) Experts cannot always be trusted to make the right moral decision.

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- (3) Public participation is necessary to make the right moral decision.

This argument may seem sound, but it's not. In fact, it's not even valid. The argument *looks* like an instance of *modus tollens*, which *is* a valid argument form:

If A, then B.

It's not the case that B.

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It's not the case that A.

But the argument is actually an instance *denying the antecedent*, which is an invalid argument form:

If A, then B.

It's not the case that A.

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It's not the case that B.

To see that this form is invalid, replace 'A' with 'Barack is a bachelor' and 'B' with 'Barack is a man':

(1) If Barack is a bachelor, then Barack is a man.

(2) It's not the case that Barack is a bachelor.

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(3) It's not the case that Barack is a man.

In this case, the premises are clearly true while the conclusion is clearly false—Barack (Obama) is a happily married man. So the form of argument is not valid, even though it sometimes seems that way.

Good logical illusions—like good optical illusions—are resilient: they are easy to fall for even when you know about them. So we need to be on guard. Unfortunately, it would take an entire *book* to cover all of the different fallacies, so we will focus on a just a few of the most common kinds.

Let's begin with the following example:

Dan Marino was not the best quarterback ever, because he didn't win the Super Bowl. Even though Dan Marino had incredible statistics during his career, he was not able to win the Super Bowl. This means that he was not able to do enough to help his team win, despite [his] amazing talent.

Was Dan Marino the best quarterback ever? The Record books say it all. At one point in time he owned every significant record there was to have and his best running back may have been Kareem Abdul Jabbar. I know, I know, everyone has to go back to the no Super Bowl wins thing. That is when I tell them to shut their mouths...

(from debate.org)

This exchange *seems* to involve a disagreement over a specific statement: Dan Marino is the best NFL quarterback ever. But appearances may be deceiving. The problem is that the word ‘best’ is plausibly *ambiguous* in the sense that it has more than one meaning—among other things, ‘best’ (in this context) could mean “most talented”, “most accomplished,” or “most impressive combination of talent, personal accomplishment, and team success”. If an argument illicitly uses this kind of ambiguity, then the result is *equivocation*.

### Definition

The **fallacy of equivocation** occurs when an argument illicitly uses the same term or phrase in more than one way.

In some cases, the fallacy of equivocation is obvious; in others, it is not. Ultimately, the ability to identify equivocation is a skill that can only be developed with practice. Here is a fun example to think about:

There are 365 days in the year, but the average person only works 8 hours a day. That’s one-third of a 24-hour day. So the average person only works the equivalent of one-third of 365 days—that is, about 122 days. However, the average person doesn’t work on the weekends. This means 2 days off a week. There are 52 weeks in a year, so there are 104 days off per year. Subtracting this from 122 days leaves only 18 days. But the average person gets at least this many days off each year between holidays and vacation time. So the average person doesn’t work at all.

(from Robert Martin,  
*There are Two Errors in the  
the Title of this Book*)

### Question

How does the last argument commit the fallacy of equivocation?

Another excellent source of fallacies is political speeches, where complicated policy issues are simplified to a pair of extreme positions. Here, for example, is a famous passage from a George W. Bush speech:

Our response [to 9/11] involves far more than instant retaliation and isolated strikes. Americans should not expect one battle, but a lengthy campaign, unlike any other we have ever seen. It may include dramatic strikes, visible on TV, and covert operations, secret even in success. We will starve terrorists of funding, turn them one against another, drive them from place to place, until there is no refuge or no rest. And we will pursue nations that provide aid or safe haven to terrorism. Every nation, in every region, now has a decision to make. Either you are with us, or you are with the terrorists.

(from *The State of the Union Address*)

The final line of the speech drew rapturous applause from the audience, but it also contains a clear logical blunder. In presenting his two options, Bush is suggesting that every nation must either support terrorist activities or support the US's response to those activities. But there are obviously other options. A nation might vigorously oppose terrorism, for example, without endorsing the President's "enhanced interrogation techniques". Bush's speech thus contains a *false dilemma*.

### Definition

The **false dilemma fallacy** occurs when an argument incorrectly assumes that there are only two options on some issue, when in fact there are more.

Here is a more challenging case to think about, from a talk by the Christian philosopher William Lane Craig:

[I]f God exists, then the objectivity of moral values, moral duties, and moral accountability is secured, but... if God does not exist, then morality is just a human convention, that is to say, morality is wholly subjective and non-binding. We might act in precisely the same ways that we do in fact act, but in the absence of God, such actions would no longer

count as good (or evil), since if God does not exist, objective moral values do not exist.

(from William Lane Craig, “Can We be Good Without God?”)

Question

How might this passage commit the false dilemma fallacy?

A third and final fallacy involves the misrepresentation of an opponent’s position in order to gain a rhetorical advantage. Here is an example taken from Dr. Michael Egnor, who is a professor of neurosurgery and a friend of the Discovery Institute (a creationist think tank based in Seattle):

Those who claim that randomness can generate biological complexity seem to lack an understanding of the vastness of what statisticians call “combinatorial space.” A grammatically correct, meaningful twenty-word English sentence cannot be generated by chance without an intelligently designed target that captures grammar and meaning. Did randomness generate the human beings who write English sentences? I have not seen any scientific evidence that would even suggest that it could or that it did.

(from evolutionnews.org)

In this passage, Dr. Egnor is putting forth an argument against the theory of evolution and in favor of an intelligent creator. The problem is that this argument subtly mischaracterizes the scientific theory. Evolutionists do *not* claim that everything is the result of random chance; rather, they claim that the complexity of life on earth is the result of random chance *and natural selection*. Since natural selection is a non-random process, the second premise is false. This is an illustration of *the straw man fallacy*, in which an argument attacks a misrepresentation of a view and then concludes that the view is false. This method of attack can be rhetorically effective, but it is also intellectually dishonest.

### Definition

The **straw man fallacy** occurs when an argument attacks a misrepresentation of a view and then concludes that the view is false.

The most obvious way to counter a straw man argument is to provide a more accurate representation of the view under discussion. That can obviously be quite difficult when one knows little about the topic at issue, but the general idea is to be as charitable as possible when interpreting the views and arguments of others. As an exercise, consider the following argument from the political activist Lyndon LaRouche:

You have perhaps noted that global warming has struck Washington, hard. Since Gore behind talking about this nonsense, the weather has gone cold all over North America: We've had record storms in the Midwest; we have a record low temperature right now at Washington, D.C., for this time of year. So, everything seems to be say, God seems to be saying "Gore is wrong!"

(from the LaRouche webcast)

### Question

How does this argument commit the straw man fallacy?

At this point we have looked at three of the most common mistakes that people make when constructing arguments: the fallacy of equivocation, the straw man fallacy, and the false dilemma fallacy. You should be on the lookout for these fallacies when doing reading assignments for this course but, more importantly, you should avoid making these mistakes yourself. So, when presenting, explaining, and evaluating arguments of others, you should (a) be clear and unambiguous, (b) be fair and charitable, and (c) try to think creatively and identify all of the available options. If you are clear and unambiguous in your thinking, you will avoid equivocation. If you are fair and charitable with the views of others, you will avoid straw men. And if you think carefully and creatively about the

topics being discussed, you will avoid false dilemmas. And if you do *all* of these things, then you just might learn something valuable in the process.

That brings us to our final question...

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If you have followed along to this point, you now know a bit about logic and the process of presenting, explaining, and evaluating arguments. You also know about some of the most common fallacies that people make when working with arguments. All of these things are important components of *critical thinking*—i.e., the process of identifying, explaining, and evaluating beliefs (either your own beliefs or the beliefs of others).

#### Definition

**Critical thinking** is the process of identifying, explaining, and evaluating beliefs.

But you might be wondering: *Who cares?* Why is critical thinking such a big deal? That's an excellent question. In fact, it's exactly the kind of question that a good critical thinker should ask.

There are many reasons to think that critical thinking is a big deal, but I will limit myself to three brief points.

First, critical thinking plays an important part in our personal development. As children, we all tend to unthinkingly absorb the beliefs and attitudes of those around us. As a result, we are little more than passive products of our environment. Critically reflecting upon the beliefs that you have picked up in this way is a large part of growing up and becoming your own person. In some cases, you will find that there are good arguments in support of what you have been taught. In other instances, the process of self-evaluation may lead you to give up some of your views. But whatever the result, the views that you end up with will be your own. You want to be your own person. So you need to engage in critical thinking.

A second reason to care about critical thinking is that it helps us to defend ourselves against manipulation and control. You may not always be aware of it,

but you are being bombarded with arguments all day long —when you read the newspaper, when you listen to your teachers, and even when you’re sitting in traffic.

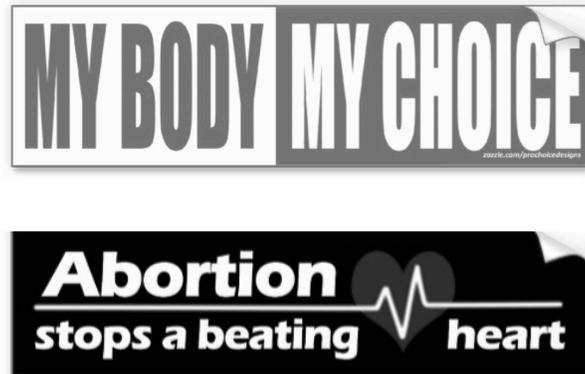


Figure 3

#### Question

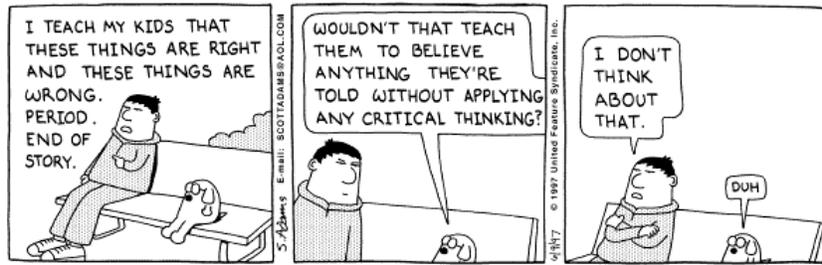
How would you write out the arguments from these bumper stickers in standard premise-conclusion format?

Do you think those arguments are sound? Why or why not?

The truth is that everybody is trying to sell you something. And critical thinking is required to determine whether or not you should buy in. If you ignore this process, you risk false, unsupported, and contradictory beliefs. In short, you risk ending up like the guy in this Dilbert comic.<sup>‡</sup>

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<sup>‡</sup> Monty Python provides an excellent example of this danger. Google “she’s a witch”.



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Figure 4

In the end, the most fundamental reason that you should care about critical thinking is that it is a basic dictate of rationality. Rationality requires that you hold rational beliefs and that means having beliefs that are backed by evidence and good reasoning. To ignore critical thinking is to forsake rationality, and that is to forsake one of the main things that make us human. The British mathematician and philosopher William K. Clifford sums up the point in this way:

It is wrong always, everywhere, and for any one, to believe anything upon insufficient evidence... if I let myself believe anything on insufficient evidence, there may be no great harm done by the mere belief... But I cannot help doing this great wrong towards Man, that I make myself credulous. The danger to society is not merely that it should believe wrong things, though that is great enough; but that it should become credulous, and lose the habit of testing things and inquiring into them; for then it must sink back into savagery.

(from "The Ethics of Belief")

So, in conclusion, critical thinking is essential to your personal growth, to your interactions with others, and to our continued existence as rational beings. The question, therefore, should not be *Who Cares?* but *Who Doesn't?!*