

Think Again: How to Untangle an Arguments

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Contents

1 Argument Markers	2
1.1 Identifying Intent	2
1.2 Types of Argument Markers	2
1.2.1 Conclusion Markers	2
1.2.2 Reason Markers (Premise Markers)	2
1.3 The Importance of Context	3
1.4 The Substitution Test	3
1.5 A Special Case: The Word “If”	4
2 Arguments and Argument Markers: Worked Examples	4
3 Standard Form	6
4 A Problem for Arguments	7
4.1 The Need for Justified Premises	8
4.2 The Skeptical Regress	8
4.3 Evaluating the Options	8
4.3.1 Unjustified Premises	8
4.3.2 Circular Arguments	9
4.3.3 Infinite Chains	9
4.4 Practical Solutions in Everyday Life	10
5 Notes (Abhinav)	11

1 Argument Markers

To spot an argument, we need to understand how language indicates that some sentences are intended as reasons for others. Certain words, which we will call **argument markers**, signal the presence of an argument by clarifying the relationship between premises and conclusions.

1.1 Identifying Intent

The difference between simply stating two facts and presenting an argument lies in the speaker's intent, which is revealed through word choice.

- **Conjunction:** In the sentence, "I am tall, and I am good at sports," the word "and" simply conjoins two separate statements. The order can be reversed without changing the meaning.
- **Argument:** In "I am tall, so I am good at sports," the word "so" indicates a rational connection. The order matters greatly; reversing it ("I am good at sports, so I am tall") creates a different argument.

1.2 Types of Argument Markers

Argument markers fall into two main categories based on what they signal.

1.2.1 Conclusion Markers

These words indicate that the statement immediately following them is the conclusion of an argument.

- **Examples:** so, therefore, thus, hence, accordingly.
- **Structure:** [Premise], so [Conclusion].
- **Example:** "I am tall, *therefore* I am good at sports."

1.2.2 Reason Markers (Premise Markers)

These words indicate that the statement immediately following them is a reason (a premise) for a conclusion.

- **Examples:** because, for, as, since, for the reason that.
- **Structure:** [Conclusion] because [Premise].
- **Example:** "I am good at sports *because* I am tall."

Argument Markers

Conclusion Markers	Reason (Premise) Markers
so	because
therefore	for
thus	as
hence	since
accordingly	for the reason that

1.3 The Importance of Context

A word that functions as an argument marker in one context may not in another. You must analyze the role the word is playing.

- **Example with “since”:**

- *As a reason marker:* “I’m good at sports **since** I am tall.” (Here, being tall is the reason for being good at sports).
- *As a temporal marker:* “It has been raining **since** my vacation began.” (This indicates timing, not a causal or rational link).

- **Example with “so”:**

- *As a conclusion marker:* “I am tall, **so** I am good at sports.”
- *As an intensifier:* “You don’t need to eat **so** much.” (This does not indicate a conclusion).

1.4 The Substitution Test

To determine if a word is being used as an argument marker, try substituting it with a clear, unambiguous marker like “therefore” (for conclusions) or “because” (for reasons).

- **Rule:** If the substitution can be made without changing the fundamental meaning of the sentence, then the original word was likely being used as an argument marker.

- **Example 1:** “Since he failed out of college, he’s unemployed.”

- *Substitute with “because”:* “**Because** he failed out of college, he’s unemployed.” The meaning is preserved.
- *Conclusion:* “Since” is used as a reason marker here.

- **Example 2:** “He’s so cool!”

- *Substitute with “therefore” or “because”:* “He’s therefore cool” or “He’s because cool.” Both are nonsensical and change the meaning.
- *Conclusion:* “So” is not used as an argument marker here.

1.5 A Special Case: The Word “If”

The word “if,” often found in “if...then” statements (conditionals), is **not** an argument marker.

- An “if-then” statement by itself does not make an argument because it does not assert that the “if” clause (the antecedent) is true.
 - **Conditional Statement (Not an Argument):** “If I am rich enough, then I can buy a baseball team.” This doesn’t claim I am rich, nor that I can buy a team.
 - **Full Argument:** “If I’m rich enough, I can buy a baseball team. I am rich enough. Therefore, I can buy a baseball team.”
 - Because the word “if” alone does not assert a premise, we do not count it as an argument marker.
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2 Arguments and Argument Markers: Worked Examples

Question 1

Statement: Charles went bald because most men his age go bald.

Correct Answer: Is an argument

Reason: This sentence claims that the fact that most men his age go bald is a reason that explains why Charles went bald. According to this claim, his age helps us understand why he went bald and makes it less surprising that he went bald.

Question 2

Statement: Charles went bald, and most men his age go bald.

Correct Answer: Is not an argument

Reason: This sentence says only that both facts are true and does not explicitly say that one is a reason for the other.

Question 3

Statement: My roommate likes to ski, so I do, too.

Correct Answer: Is an argument

Reason: This sentence claims that the fact that my roommate likes to ski is a reason that explains why I like to ski. According to this claim, my roommate’s likes help us understand why I like to ski and make it less surprising that I like to ski.

Question 4

Statement: My roommate likes to ski, and so do I.

Correct Answer: Is not an argument

Reason: This sentence says only that both facts are true and does not explicitly say that one is a reason for the other. The word “so” here is simply short for “also” and does not function as an argument marker.

Question 5

Statement: I have been busy since Tuesday.

Correct Answer: Is not an argument

Reason: The sentence says only that I have been busy after the time or day when it was Tuesday. It does not say that I have been busy *because* that day was Tuesday. The sentence states a single fact and does not contain both a premise and a conclusion. Since an argument requires at least one premise and a conclusion, this sentence is not an argument.

Question 6

Statement: I am busy, since my teacher assigned lots of homework.

Correct Answer: Is an argument

Reason: This sentence claims that the assignment of lots of homework is a reason why I am busy.

Question 7

Statement: He apologized, so you should forgive him.

Correct Answer: Conclusion marker

Reason: The word “so” indicates that the sentence following it is a conclusion. The meaning does not change if we replace “so” with “*therefore*”:

He apologized. Therefore, you should forgive him.

Question 8

Statement: In view of the fact that he apologized, you should forgive him.

Correct Answer: Premise marker

Reason: The phrase “*In view of the fact that*” introduces a premise. The meaning does not change if we substitute “*because*” for the phrase:

Because he apologized, you should forgive him.

Question 9

Statement: He apologized. Accordingly, you should forgive him.

Correct Answer: Conclusion marker

Reason: The word “*accordingly*” signals that what follows is a conclusion. This is shown by the fact that the meaning remains the same if we replace it with “*therefore*”.

Question 10

Statement: After he apologizes, you should forgive him.

Correct Answer: Neither

Reason: The word “*after*” indicates only a temporal relationship, not a logical relationship of premise to conclusion. Replacing it with “*because*” or “*therefore*” changes the meaning of the sentence.

Question 11

Statement: Seeing as he apologized, you should forgive him.

Correct Answer: Premise marker

Reason: The phrase “*seeing as*” introduces a premise. The meaning remains unchanged if we substitute “*because*”:

Because he apologized, you should forgive him.

3 Standard Form

Now that we’ve identified arguments, and we’ve also identified premises and conclusions, we need to put them in order. The actual word order doesn’t always tell us the order of the argument. Compare these two sentences: “Because I am a professor, I teach classes,” and “I teach classes, because I am a professor.” In those two examples, the phrase “I am a professor” occurs at the beginning in one instance and at the end in the other. However, they express exactly the same argument: the fact that I’m a professor is a reason why I teach classes.

Contrast both of those with this example: “I teach classes, so I must be a professor.” The point there must be something like, “nobody but professors can teach classes,” and whether or not that’s true, the point here is that this is a different argument from the first one.

We need to represent the difference between these arguments very carefully. To show what is shared by the first two examples that’s different from the third, we put the arguments

in what's called **standard form**. It's really easy. Basically, you write the premise, and if there's another premise, you write that down on a new line. Then you draw a line. After the line, you put a "dot pyramid" (\therefore)—three dots with two at the bottom and one at the top—and then you write the conclusion.

It's also useful to number the premises and the conclusion so that we can refer back to them by number instead of having to repeat them. That's all there is to standard form. You list the premises on different lines, draw a line, add the dot pyramid, and then write the conclusion, numbering all the parts.

This standard form accomplishes what we want: it helps us show what's common to the first two examples that distinguishes them from the third.

The first two examples were, "I teach classes because I'm a professor," and "Because I'm a professor, I teach classes." In standard form, the premise that goes above the line is "I am a professor," and the conclusion that goes below the line is "I teach classes."

(1) I am a professor.

\therefore (2) I teach classes.

The third example was, "I teach classes, so I must be a professor." Here, "I am a professor" is the conclusion that goes below the line, and the premise is "I teach classes."

(1) I teach classes.

\therefore (2) I must be a professor.

When you put these two arguments in standard form next to each other, it makes the difference absolutely clear. No matter how easy this seems, it's worthwhile to practice with a few exercises to make sure we've got it straight, because this notion of standard form will become important later.

4 A Problem for Arguments

Now that we've learned how to identify an argument and put it in standard form, we also know from the definition of an argument that the premises are intended to be reasons for the conclusion. Intentions are nice, but success is better. What we need to figure out is when a person succeeds in giving premises that really are reasons for the conclusion. For simplicity, let's focus on arguments whose purpose is justification. The question then is: do the premises justify you in believing the conclusion?

4.1 The Need for Justified Premises

Imagine that you don't know whether there's any life on Mars. You have no evidence one way or the other. Then you ask a friend, and the friend says, "Hah, I know there's life on Mars. I can prove it to you. This argument will show you that there's life on Mars: There is at least one bacterium on Mars. Therefore, there is life on Mars."

Notice that if the premise is true, the conclusion has to be true. And if you and your friend are justified in believing the premise, then you are also justified in believing the conclusion. So, this argument looks pretty good so far. But of course, you have to ask your friend, "Well, how do you know that there's at least one bacterium on Mars?" Suppose your friend says, "Well, I'm just guessing." Then, the argument is clearly no good. If there's no reason to believe the premise because your friend is just guessing, then you're not justified in believing that premise. And if you're not justified in believing the premise, then how can that premise make you justified in believing the conclusion?

More generally, an argument cannot justify you in believing the conclusion unless you're justified in accepting the premises of that argument.

4.2 The Skeptical Regress

Now, suppose your friend says, "But I do have a reason for the premise, I do!" Then, we have to ask what kind of reason it is. At that point, your friend needs to express that reason, and how do we express reasons? In arguments. So your friend needs to give another argument for the premise, where the premise of the first argument is the conclusion of the second argument. But wait a minute, now we've got a problem.

Because that second argument is itself going to have premises, and you have to be justified in believing those. So, the premises of the second argument have to be the conclusion of a third argument, and so on. This problem is called **The Problem of the Skeptical Regress**, because you regress back from one argument to another, to another, to another. It's hard to see how that regress is ever going to come to an end.

There seem to be only three ways to get around the skeptical regress:

1. Start with a premise that's unjustified.
2. Have a structure where the arguments move in a circle.
3. The chain of arguments goes back infinitely.

4.3 Evaluating the Options

4.3.1 Unjustified Premises

The first possibility is to start with a premise that's unjustified. That seems pretty neat, if you can get away with it. But we already saw why that won't work with the Mars example. If you just guess at your premises, you have no reason to believe them. Then, an argument that uses those premises cannot justify you in believing the conclusion.

In addition, you could prove anything if we let you start with unjustified premises. If you can just make up your premises for no reason, then there's no stopping you from believing whatever you want, including things that are obviously false. So it seems to be a real problem to start with premises that are unjustified.

4.3.2 Circular Arguments

The second way to respond to the skeptical regress is to use a circular structure. It's kind of neat if you think about it. One claim is justified by another, which is justified by another, which is justified by the first claim. The arguments move in a circle, but that means that every premise has an argument to back it up.

If you think about it a little bit, it'll be obvious that that's no good. This can be shown by looking at the smallest circle there is. Suppose your friend says, "I can prove there's life on Mars. Here's my argument: There is life on Mars. Therefore, there is life on Mars."

Clearly that's no good. The reason it's no good is that if you didn't know whether there was life on Mars to begin with, you wouldn't know whether the premise was true, because the premise is the conclusion. So if you're not justified in believing the conclusion to begin with, you're not justified in believing the premise, and that means that the argument didn't really get you anywhere.

In addition, it has the same problem as the first approach: you can use circular arguments to prove anything. You can prove there's life on Mars ("There's life on Mars, therefore there's life on Mars"), and you can prove there's no life on Mars ("There's no life on Mars, therefore there's no life on Mars"). The fact that this structure can be used to prove either conclusion suggests there's a big problem with it.

4.3.3 Infinite Chains

The third and final way to get around the skeptical regress is to use an infinite chain of arguments. But if you think about it in a concrete case, you'll see why that's a problem as well. Suppose your friend says, "There's life on Mars and I can prove it." You ask for a reason.

- **Friend:** There's at least one bacterium on Mars, therefore, there's life on Mars.
- **You:** But how do you know there's at least one bacterium?
- **Friend:** There are at least two bacteria on Mars, therefore, there's at least one.
- **You:** But how do you know there are at least two?
- **Friend:** Well, there are at least three, so there are at least two.
- **You:** And how do you know that?
- **Friend:** Well, there are at least four, so there are at least three... and so on, infinitely.

An infinite chain of arguments would allow you to “prove” that there’s life on Mars, even if you have no evidence whatsoever. If the premise you’re arguing from doesn’t have an independent justification, then the infinite chain is no good at all.

4.4 Practical Solutions in Everyday Life

Many people see the skeptical regress as a deep and serious philosophical issue. If unjustified premises, circular arguments, and infinite chains don’t work, it’s hard to see how any argument could ever justify us in believing anything. Philosophers worry about this a lot.

But how do we solve this problem in everyday life? There are various tricks that people use.

One way is to just start from **assumptions that everybody shares**. If I say, “You really ought to buy a Honda, because Hondas are very reliable cars,” I’m assuming that you and I both agree that reliability is a good quality in a car.

But of course, you might ask, “Are Hondas reliable?” Then I might **appeal to an authority**. “Well, Consumer Reports has done a study that shows that they’re reliable.” If you accept that authority, the argument works.

Suppose someone raises an objection: “Consumer Reports has been wrong before.” Then I need to **discount that objection**. I might say, “Well, maybe they have been wrong sometimes, *but* this time their study was very careful.”

I might also just **guard my claim**. I could say, “Well, they’re *probably* right,” instead of claiming they are definitely right.

So, we can:

- **Assure** you by citing an authority.
- **Discount** objections.
- **Guard** our premises by weakening them.

These are three ways of solving the skeptical regress problem in everyday life that we’re going to look at in much more detail in the next three lectures. The main point is that to solve the problem, you have to find some assumptions that you and your audience share. This is tricky and depends on the context. If you’re dealing with an audience that shares a lot of your assumptions, arguing is relatively easy. If they don’t, it can be impossible.

What these tricks do is give you ways to get the argument going, but they’re not going to work in every case. We’ll have to look at that as we explore these three different ways to solve the skeptical regress problem in the next three lectures.

5 Notes (Abhinav)

Now we've learned how to identify an argument and put it in standard form, and we've also learned from the definition of argument that the premises are intended to be reasons for the conclusion. Great. Intended to be a reason for the conclusion. Well, intentions are nice, but success is better. What we need to figure out is when the person succeeds in giving premises that really are reasons for the conclusion. For simplicity, let's focus on arguments whose purpose is justification. Then the question is, do the premises justify you in believing the conclusion?

Well, imagine that you don't know whether there's any life on Mars. You have no evidence, one way or the other. Then you ask a friend, and the friend says, hah, I know there's life on Mars. I can prove it to you. Here, this argument will show you that there's life on Mars. There is at least one bacterium on Mars. Therefore there is life on Mars.

Now, notice that if the premise is true, the conclusion has gotta be true. And if you and your friend are justified in believing the premise, then you and your friend are also justified in believing the conclusion. So, this argument looks pretty good so far. But of course, you have to ask your friend, well, how do you know that there's at least one bacterium on Mars? And suppose your friend says, well, I, I'm just guessing. Then, the argument is clearly no good. If there's no reason to believe the premise because your friend is just guessing, then you're not justified in believing that premise, and if you're not justified in believing the premise, then how can that premise make you justified in believing the conclusion?

More generally, an argument cannot justify you in believing the conclusion unless you're justified in accepting the premises of that argument. Now, suppose your friend says, but I do have a reason for the premise, I do! Then, we have to ask, what kind of reason is it? And, at that point, your friend needs to express that reason, and how do we express reasons? In arguments. So your friend needs to give another argument for the premise, where the premise of the first argument is the conclusion of the second argument. But wait a minute, now we've got a problem.

Because that second argument is itself going to have premises, and you have to be justified in believing those. So, the premises of the second argument have to be the conclusion of a third argument, and so on and so on. Because the third argument needs premises, they have to be justified, so they have to be the conclusion of another argument, which also has to have premises, and those have to be the conclusion of another argument, and so on and so on. It looked like we've got a real problem here. In order for the premises to be justified, they have to be backed up by an argument, but the argument has premises of its own that have to be backed up by another argument, and so on and so on. This problem is called The Problem of the Skeptical Regress, because you regress back to one argument after another, after another, after another, after another, after another, after another. And it's hard to see how that regress is ever going to come to an end.

There seem to be only three ways to get around the skeptical regress. The first is to start with a premise that's unjustified. If it's unjustified, then it doesn't need an argument to back it up, and that means that you're not going to have this chain of arguments going

back and back and back and back and back and back. The second possibility is to have a structure where the arguments move in a circle. One claim is justified by another, which is justified by another, which is justified by another, which is justified by the first claim, and they just move in a circle. The third possibility is that the chain of arguments goes back infinitely. It never stops. Every claim has an argument to back it up.

And there's no end, so you never have a premise which doesn't have an argument to back it up, because it's infinite. Those seem to be the three main options here to avoid the skeptical regress. The first possibility then, is to start with a premise that's unjustified. And that seems pretty neat, if you can get away with it. But we already saw why that won't work. We saw your friend arguing that there's life on Mars because there's at least one bacterium on Mars, and he was just guessing. If you just guess at your premises, you have no reason to believe them.

Then, an argument that uses those premises cannot justify you in believing the conclusion. But in addition, just think about it this way, you could prove anything if we let you start with unjustified premises. If you can just make up your premises for no reason, then there's no stopping you from believing whatever, including things that are obviously false. So it seems to be a real problem to start with premises that are unjustified. Next, the second way to respond to the skeptical regress is to use a circular structure, and it's kind of neat, if you think about it. Because, if you want to prove one claim, you prove it on the basis of another claim. And then you prove that second claim on the basis of a third.

And that third on the basis of fourth. And the fourth on the basis of a fifth. And the fifth on the basis of the first. And now you've got this circle. And the arguments go in a circle, but that means that every premise has an argument to back it up, because you can keep going around the circle forever. And if you think about it a little bit, it'll be obvious that that's no good, and that can be shown by looking at the smallest circle there is. So, suppose your friend says, I can prove there's life on Mars, here's my argument.

There is life on Mars. Therefore, there is life on Mars. Clearly that's no good. And the reason why it's no good is that if you didn't know whether there was life on Mars to begin with, you wouldn't know whether the premise was true. because if you don't know the conclusion, you can't know the premise since the premise is the conclusion. So if you're not justified in believing the conclusion to begin with, you're not justified in believing the premise, and that means that the argument didn't really get you anywhere. It just ends up where it started. And in addition, it has the same problem we saw in the first approach, involving unjustified premises.

Because you can use circular arguments to prove anything. You can prove there's life on Mars. There's life on Mars, therefore there's life on Mars. You can prove there's no life on Mars. There's no life on Mars, therefore there's no life on Mars. You can do it either way. And the fact that an argument can be used either way to prove either conclusion suggests there's a big problem with that kind of argument.

So now we're down to the third and final way to get around the skeptical regress, and that's to use an infinite chain of arguments. But if you think about it in a concrete case, you'll see why that's a problem as well. Suppose your friend says, there's life on Mars and

I can prove it. And you say fine, give me a reason. Well, there's at least one bacterium on Mars, therefore, there's life on Mars. And you go, okay, fine, but how do you know there's at least one bacterium on Mars? I've got another argument, he says.

There are at least two bacteria on Mars. Therefore, there's at least one bacterium on Mars. But how do you know there's at least two? Well, there are at least three bacteria on Mars, therefore there are at least two bacteria on Mars. But how do you know there are at least three? Well, there are at least four, so there are at least three. Well, there are at least five, so there are at least four.

Well, there are at least six, so there are at least five, and so on, and so on, and so on. You could go on infinitely. So, an infinite chain of arguments would allow you to prove that there's life on Mars, even if you have no evidence whatsoever of any bacteria. Because you're going to have an argument, but if the premise that you're arguing from doesn't have an independent justification, then the infinite chain is going to be no good at all in justifying the conclusion of that argument. So many people see the skeptical regress as a deep and serious philosophical issue. If the unjustified premise approach doesn't work, and the circular argument structure doesn't work, and the infinite chain of arguments doesn't work, then it's hard to see how we can get around the problem, which is to say it's hard to see how any kind of argument could ever justify us in believing anything. Philosophers really scratched their heads about that for a long time and worry about it.

It keeps them up at night. But, we're going to have to look at how practical people solve a similar problem in everyday life. So how do we solve the skeptical regress problem in everyday life? Well, there are various tricks that you can use. For example, one way is to just start from assumptions that everybody shares. So, if I say, well you really ought to buy a Honda, because Hondas are very reliable cars. Then I'm assuming that you want your car to be reliable.

You don't like to have to take it in to the mechanic all the time. You don't want it to break down on the road. And if you want reliability and I want reliability, then we can start from the assumption that reliability is a good thing and that that's a reason to buy a car that is reliable. But of course you might say, well, but are Hondas reliable? And then I might appeal to an authority. Well, it's obvious that they are, or Consumer Reports has done a study that shows that they're reliable. And I can appeal to an authority and if you accept that authority, you go Consumer Reports, we can trust them.

Then my argument's going to work. You're going to have a reason to believe the conclusion, and it might persuade you, and make you come to believe the conclusion. But, suppose that someone is going to raise an objection. They say, well, Consumer Reports has been wrong before, they might be wrong this time. Well, then I need to discount that objection. I need to respond to it and say, well, maybe they have been wrong sometimes but this time, you know, they've got a good study and it was careful or whatever, and the but means I'm discounting the objection that you raised, and I might even discount it in advance. Or I might just guard my claim.

I might say well, they might be right in this case or they're probably right without claiming that they definitely are right. So, I can assure you by citing some kind of authority. I

can discount objections and I can guard my premises by saying, well, it's probably right, instead of saying it's definitely right. And those are three ways of solving the skeptical regress problem in everyday life that we're going to look at in much more detail in the next three lectures. But the point of this lecture has been more general. In order to solve the skeptical regress problem, you have to find some assumptions that you and your audience share. They might be assumptions about the premises of your arguments.

They might be assumptions about authorities that supposedly support your premises and they accept as authorities, or whatever. But there have to be some assumptions that you share with your audience in order to get the argument going. And that's kind of tricky, because it's going to depend on the context. If you're dealing with an audience that shares a lot of your assumptions, then argument's going to be relatively easy. But if you're dealing with an audience that doesn't share any of your assumptions, it's going to be impossible, and in areas where there's lots of disagreement, it's going to be hard to get your arguments going because your premises are going to be questioned and denied or rejected by the people in the audience. So what these tricks do is they give you ways to get the argument going, but they're not going to work in every case. And we'll have to look at that, as we're looking at these three different ways to solve the skeptical regress problem in the next three lectures.