

A Brief Guide to Argument Mapping

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1. Introduction

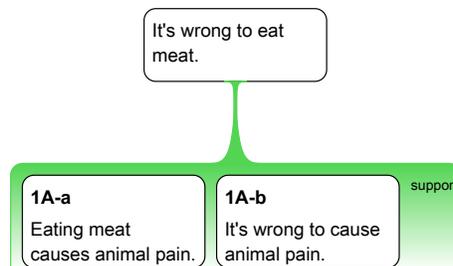
We all have opinions and views. Sometimes we support our views with arguments. By an argument I mean a reason to believe the view in question. Argument maps are visual representations of these arguments.

Suppose you believe that it's wrong to eat meat, and you support your view with the following speech:

“Look, it's wrong to eat meat. Why? Because eating meat causes animal pain, and it's wrong to cause animal pain.”

Congratulations, you just gave an argument! We can represent the argument visually as follows:

Map 1:



The claim at the top, “It’s wrong to eat meat”, is called the *contention*. It’s the claim that the argument tries to support. The other claims, 1A-a and 1A-b, are called *premises*. They’re the reasons offered in *support* of the contention; they’re the reason to believe the contention.

The green line represents this idea that 1A-a and 1A-b support the contention. The line can be read as “because” or “therefore”, depending on whether you’re reading the argument map top-down or bottom up:

Top-down: It’s wrong to eat meat *because* eating meat causes animal pain and it’s wrong to cause animal pain.

Bottom-up: Eating meat causes animal pain and it’s wrong to cause animal pain. *Therefore*, it’s wrong to eat meat.

That’s the basic idea: every argument map consists of a *contention*, some *premises*, and *lines of support*.

Constructing argument maps is an extremely valuable skill. It will improve your critical thinking not just in philosophy and other classes, but also in everyday life as you navigate a

complex world that barrages you with misleading information. Unfortunately, argument mapping can be difficult at first—it turns out that human beings generally find it difficult to clearly set out reasons for their views. The good news is that it gets much easier with practice. We'll be practicing throughout the semester.

This guide will describe how these maps work in more detail and list some important rules of argument mapping.

2. The rule of description

In Map 1, each box contains a *statement*. A statement “describes” the world as being a certain way and can be said to be true or false. “It’s wrong to eat meat” is a statement, but “Don’t eat meat!” is not. The latter is a direction: it doesn’t describe the world, it tells you to do something. It makes no grammatical sense to ask whether it is true or false. Likewise, “Is it wrong to eat meat?” is not a statement; it’s a question. This illustrates our first rule of argument mapping:

Rule of description: Every box must contain a statement.

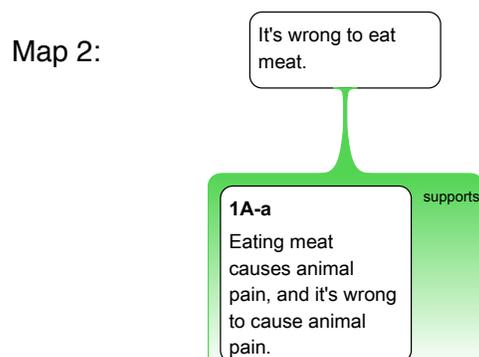
For example, suppose you had made the following speech against eating meat:

“Don’t eat meat! After all, eating meat causes animal pain, and it’s wrong to cause animal pain.”

To represent this as an argument map, the contention would *not* be “Don’t eat meat!” since that’s not a statement. Instead, you would turn it into a statement such as “It’s wrong to eat meat”. Indeed, this speech is perfectly represented by Map 1 above.

3. The rule of simplicity

In Map 1, each box is *simple* statement. Compare Map 1 with Map 2:



In one sense, Map 2 contains the same information as Map 1: the only difference is it fuses the two premises in Map 1 into one big premise. But it’s not a good argument map because it doesn’t visually display the fact that there are two separate premises at work supporting the contention. The point of argument mapping is to display as much of the logical structure of the

argument as possible, and Map 2 fails on this count. This illustrates our second rule of argument mapping:

Rule of simplicity: The statement in each box must be as simple as possible.

It's not always possible to be perfectly simple like Map 1, but you should aim for as much simplicity as possible. If you find yourself writing out a complex statement in a box, try splitting it into parts.

4. Objections

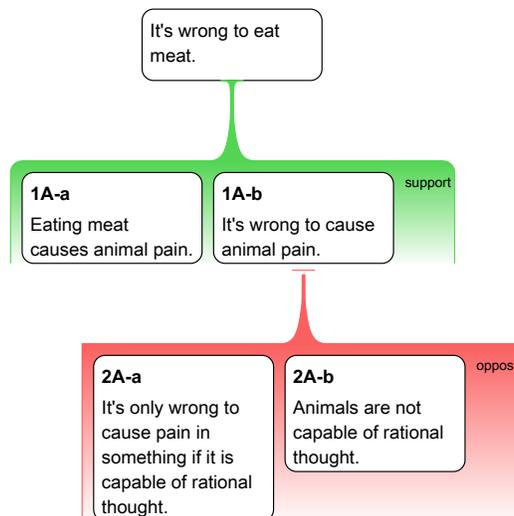
To see why this last rule is important, suppose someone objects to the argument in Map 1. What exactly do they disagree with? They might think that eating meat doesn't cause animal pain, so that 1A-a is false. Or they might think that eating meat does cause animal pain, but that it's OK to cause animal pain; in this case they think that 1A-b is false. With Map 1, they can easily point to what they disagree with. With Map 2, they can't.

Suppose they voice their objection as follows:

"I disagree with 1A-b. It's only wrong to cause pain in something if it is capable of rational thought, and animals aren't capable of that."

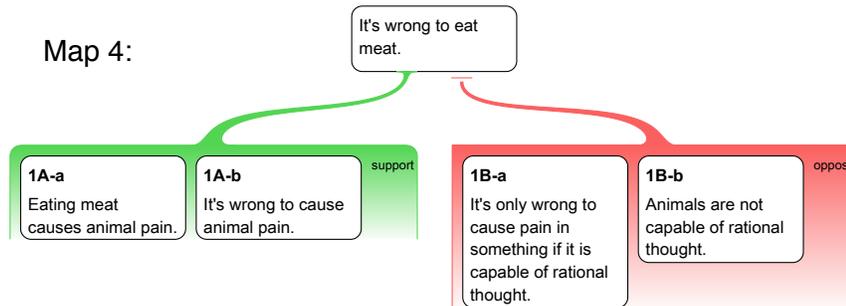
We can then map their objection as follows:

Map 3:



The top of this map is just Map 1; Map 3 just adds the red bit. While the green line represents *support*, the red line represents *opposition*. Reading top-down from 1A-b, the map reads: "The statement in 1A-b is false. This is because it's only wrong to cause pain in something if it is capable of rational thought, and animals aren't capable of rational thought." I said that the red line represents an *opposition to 1A-b*, but you can also think of it as a *support for the negation of 1A-b*.

Note that opposition here is to 1A-b, *not* to the contention. That is, Map 4 wouldn't correctly represent the objector's position:



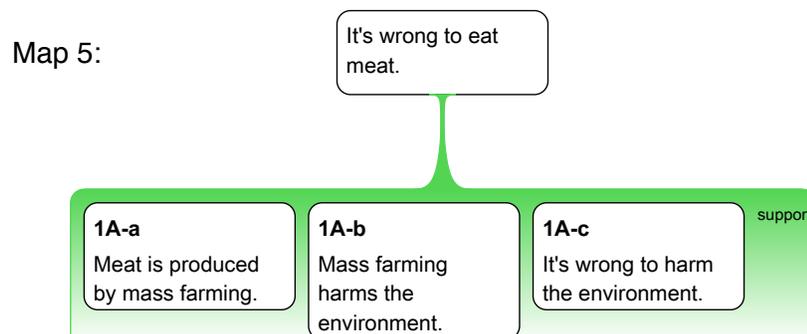
After all, the objector only said she disagrees with 1A-b. For all she said, she may *agree* with the contention that it's wrong to eat meat, just not for the reason in Map 1. By contrast, Map 4 represents the objector as saying that the contention is false.

5. Rules of separation and collection

Go back to the person who made the original speech we mapped as Map 1. Suppose she continues:

“Oh, and there's another reason why it's wrong to eat meat. Meat is produced by mass farming, which harms the environment. It's wrong to harm the environment.”

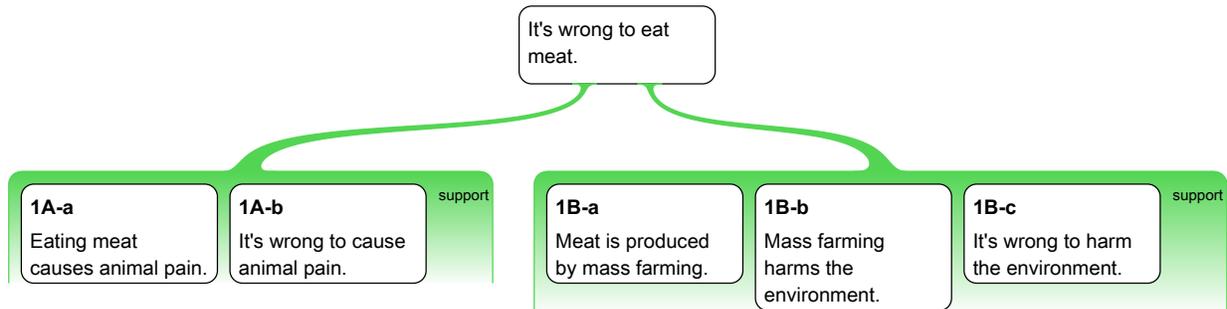
Here she's adding a second reason to believe that it's wrong to eat meat. We can represent this second argument as follows:



Note the subtle use of the rule of simplicity here. Given what the speaker said, it might be tempting to put the statement “Meat is produced by mass farming, which harms the environment” in one box. But that statement isn't as simple as possible: the rule of simplicity demands that we break it into two pieces, 1A-a and 1A-b.

This person has now offered two arguments for why it's wrong to eat meat. We can combine them as follows:

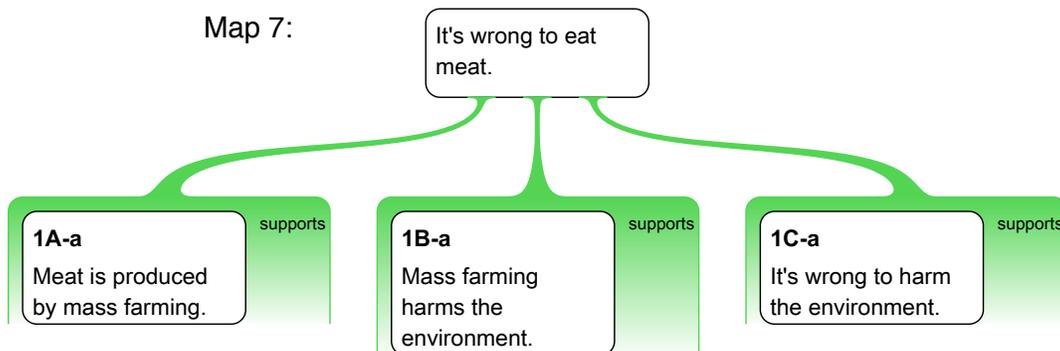
Map 6:



Here we use two green lines to indicate that we have two independent arguments to believe that it's wrong to eat meat. One argument has to do with causing pain, the other has to do with harming the environment.

If we're using multiple green lines now, why didn't we use multiple green lines from the start? That is, why did we map the argument about the environment with Map 5 rather than Map 7?

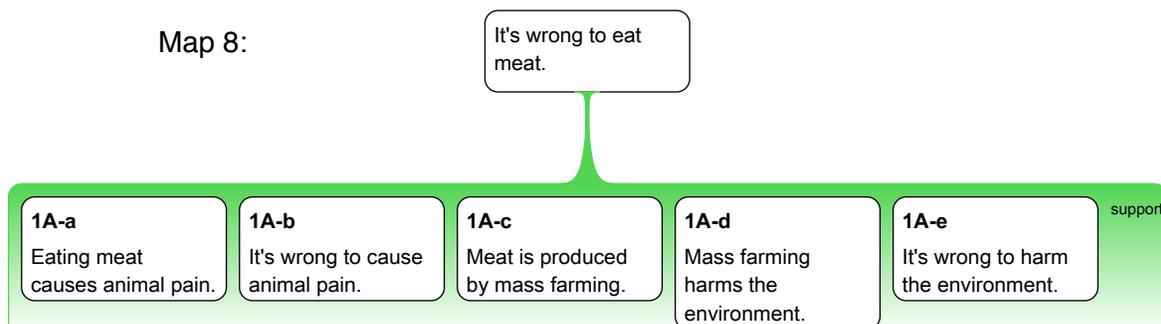
Map 7:



The answer is that in Map 7, 1A-a doesn't support the contention *on its own*. The fact that meat is produced by mass farming isn't *on its own* a reason to think it's wrong to eat meat. We only get a reason to believe the contention if we add that mass farming harms the environment, and that it's wrong to harm the environment. Remember, the green lines represent lines of support; they represent that what comes below the green line is *reason to believe* the contention. It's only when the three premises *work together* that we have a reason for the contention. That's why we must group them together and use one green line of support, as in Map 5.

Thus, what Map 5 says is "These three premises *when working together* support the contention". That is true. What Map 7 says is "Each premise *on its own* supports the contention". That is false. It might now be clearer what Map 6 is saying. It says: "The premises 1A-a and 1A-b, *when working together*, support the contention. Additionally, the premises 1B-a, 1B-b, and 1B-c, *when working together*, also support the contention."

Note that it would be bad mapping to collect *all* these premises together into one big group like this:



What this map says is “These five premises, when working together, support the contention”. That’s *sort of* true, since the first two premises are enough support the contention (though see section 8 below). But this map loses information. It doesn’t tell you that the first two premises are enough to support the contention without the last three, and vice-versa. Map 6 contains this information.

When we group premises together and use one green line, as in Map 5, we call them *co-premises*. When we use more than one green line, each green line is called a separate *argument*. Thus, in Map 6 we have two arguments for the contention; the first has two co-premises, the second has three. This all serves to illustrate our third and fourth rules of mapping:

Rule of collection: If multiple premises support the contention only when working together, they should be co-premises in a single argument.

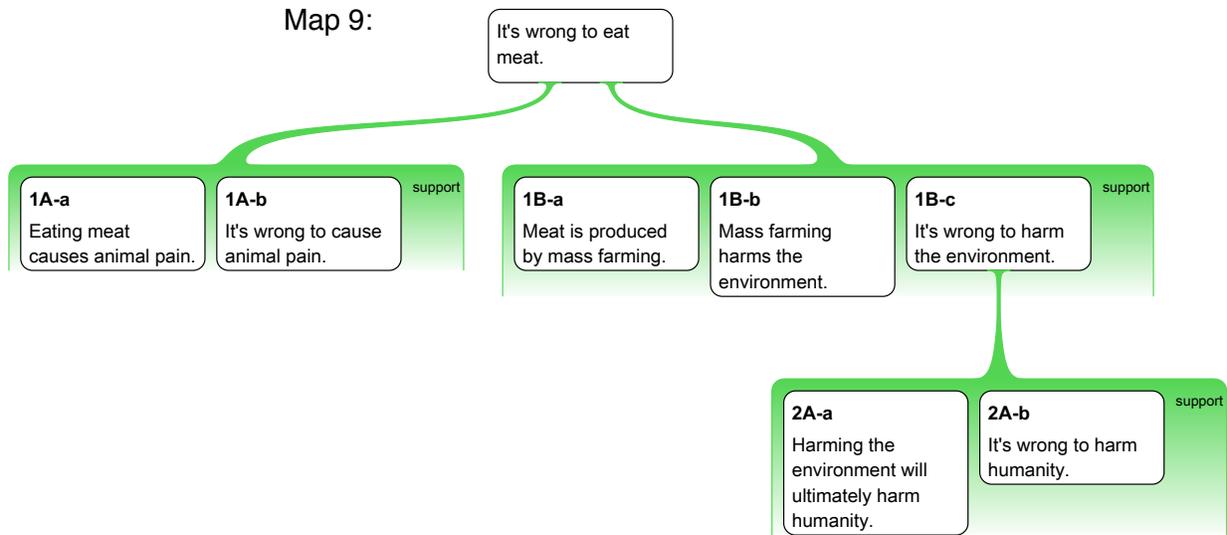
Rule of separation: If one group of premises supports the contention, and another group of premises also supports the contention, there should be a separate argument for each group.

7. The rule of independence

Suppose you say it’s wrong to eat meat. Your friend asks why they should believe that, and you offer them Map 6 with it’s two arguments. Of course, those arguments appeal to premises; in particular premise 1B-c which says that it’s wrong to harm the environment. So your friend might now ask why they should believe *that*. Suppose you say

“Well, harming the environment will ultimately harm humanity, and it’s wrong to do things that will ultimately harm humanity.”

We can add this little argument to Map 6 as follows:

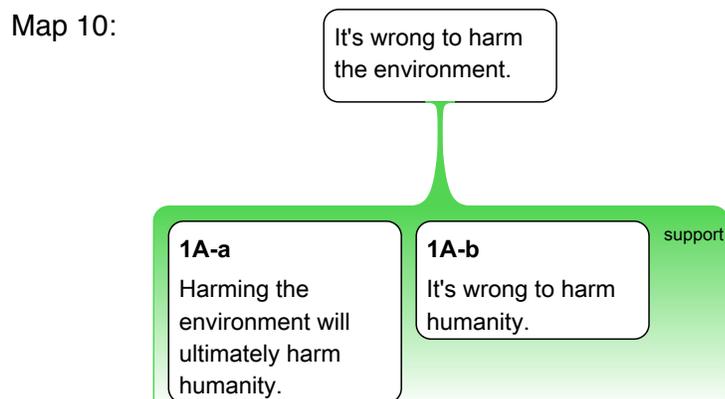


This is just Map 6, with premises 2A-a and 2A-b added in support of 1B-c. Note that Map 9 contains 3 arguments: the argument from line 1A supporting the top contention, the argument from line 1B supporting the top contention, and our little argument supporting 1B-c. You can count how many arguments a map contains by counting the green and red lines. (Sometimes we use “argument” to mean the whole map. Other times we mean a particular line. It should be clear in the context what’s meant; if not I’ll be explicit.)

If your friend is persistent she might now ask why she should believe 2A-a, and you can then add a reason in support of it. And so on down the tree as far as you want...

Each time you add a reason in support of a premise, you can think of that premise as now acting as a contention. Thus, we can say that 1B-c is now a *contention* supported by 2A-a and 2A-b. Of course, it’s also a co-premise, since it works with 1B-a and 1B-b to support the original contention that it’s wrong to eat meat. So it’s now playing two roles: as a co-premise in support of the original contention, and as a contention itself supported by 2A-a and 2A-b.

Indeed, we can pull out this little argument for 1B-c and consider it on its own:



Here, the claim that used to be in 1B-c is now the top contention. We can evaluate Map 10 on its own and ask whether it's a good argument. Do its premises support the contention? That is, do its premises provide a reason to believe the contention?

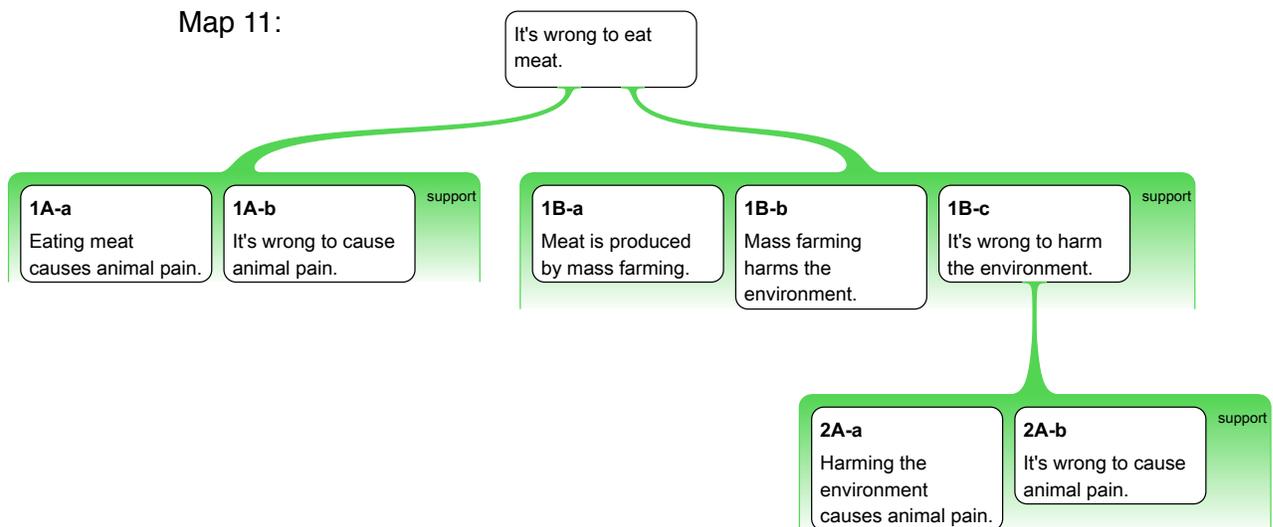
Importantly, exactly the same standards apply when this little argument is part of Map 9. Suppose we evaluate Map 9—the whole thing. Map 9 contains 3 arguments, so we must check whether each argument provides a good support for its contention. One of those arguments is our little argument for 1B-c. The important point is that we must evaluate it *all on its own*, independently of the rest of the map. The question we must ask is this: if we were to pull it out and think of it as Map 10, would it still be a good argument after being separated from the rest of Map 9? This illustrates a sixth rule of mapping:

Rule of independence: If a premise is supported by an argument, that part of the map should be evaluated independently of the rest of the map.

To see this rule in action, imagine you had defended 1B-c a bit differently and said

“Well, it’s wrong to harm the environment because doing so causes animal pain, and it’s wrong to cause animal pain.”

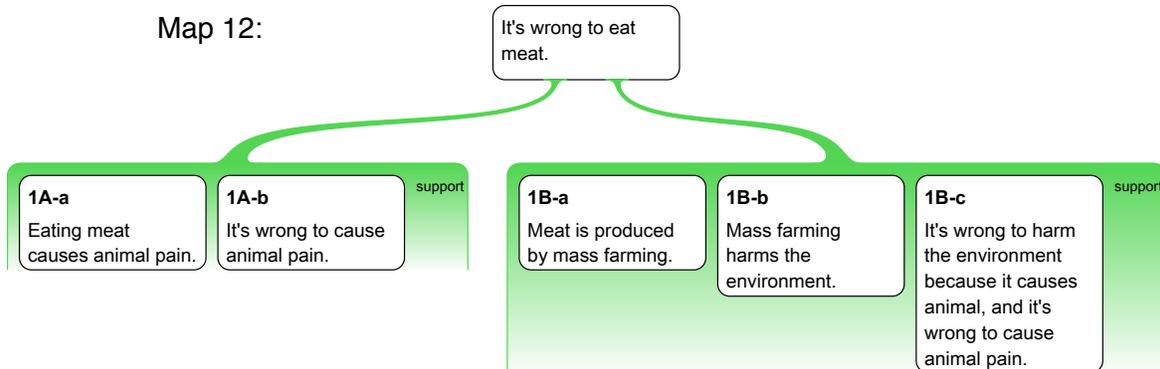
We could then represent your overall view by changing 2A-a and 2A-b as follows:



Now, you might say “There’s no point in including 2A-b. I already made that claim in 1A-b, so it would be redundant to repeat it again.” That is a mistake! If we deleted 2A-b, the argument for 1B-c would no longer be good. The fact that harming the environment causes animal pain isn’t *on its own* a reason to believe that it’s wrong to harm the environment; you also need to add that it’s wrong to cause animal pain. The rule of independence says you can’t pretend it’s been added just because it’s stated elsewhere on the map.

9. The rule of support

Look again at Map 11. You might be tempted to fold the argument for 1B-c into 1B-c itself and write something like this:



But this would be a mistake. For one thing, 1B-c now violates the rule of simplicity. But there's a more important problem: it contains the term "because".

The whole point of argument maps is to visually represent relations of support between statements; to visually represent when some statements are reasons to believe others. These relations of support are typically expressed in English with words like "because", "therefore", "so", "it follows that", and so on. These words are represented in the map by the green (or red) lines, so you should *never* use these words inside the boxes! This illustrates our seventh rule of argument mapping:

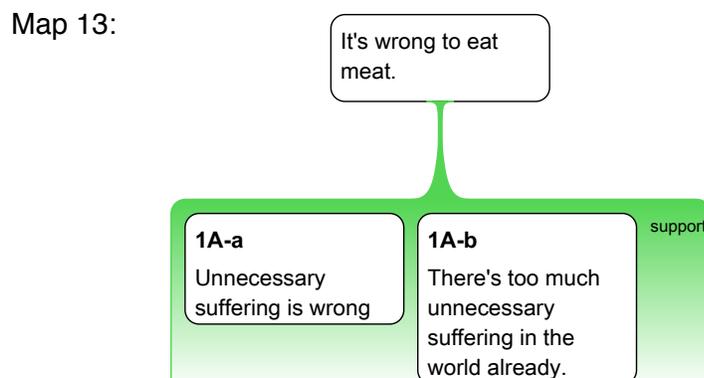
Rule of support: All relations of support should be represented by green lines; they should never be expressed with words like "because" and "therefore" in the boxes.

10. The rule of inheritance

Suppose that when asked why you think it's wrong to eat meat, you had said

"Well, I just think that unnecessary suffering is wrong, and there's too much unnecessary suffering in the world already."

We could try representing your argument as follows:

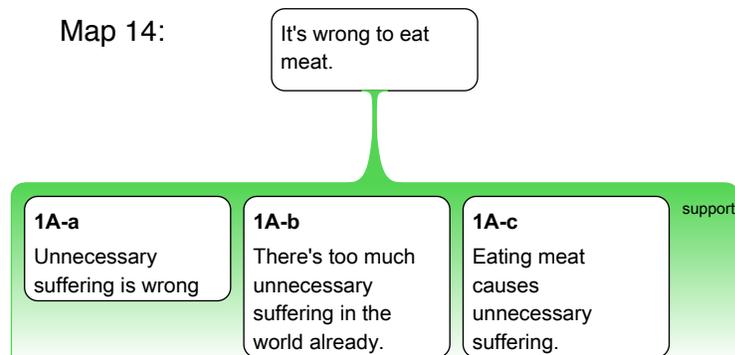


This is a bad argument! For all this argument says, eating meat may not cause any unnecessary suffering, in which case the premises are entirely irrelevant to the topic at hand.

We can tell that something's gone wrong by noting that the premises say nothing about meat. How can you argue that eating *meat* is wrong without saying anything *about meat itself*? It would be magic, like pulling a rabbit out of a hat. You can't do it. You know you have a bad argument if some central concepts in the contention just don't appear anywhere in the premises. Figuratively, the main concepts in the contention must be "inherited" from the premises; they can't come from nowhere. This illustrates an eighth rule of argument mapping:

Rule of inheritance: If some premises are used to support a contention, the central concepts in the contention should appear somewhere in the premises.

We can fix the argument by adding a premise 1A-c:



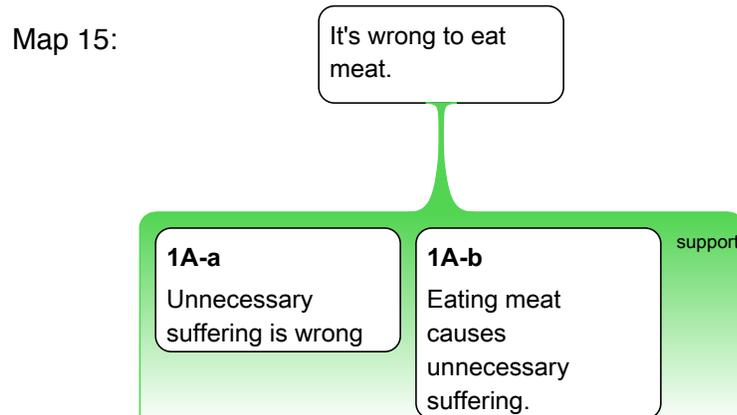
This argument obeys the rule of inheritance. Unfortunately, we now have another problem...

11. The rule of redundancy

The problem is that 1A-b isn't really doing any work. Look at 1A-a and 1A-c. Together, they're enough to support the contention. You don't need to add 1A-b. This illustrates a ninth rule of argument mapping:

Rule of redundancy: An argument should contain no more co-premises than are needed to support the contention.

We can fix the argument by deleting the redundancy, which results in:



This argument now obeys the rule of redundancy.

This rule is surprisingly difficult to obey, especially when trying to represent arguments you hear in real life. If someone at a dinner party wanted to express the argument in Map 15, they might say

“Look, it’s wrong to eat meat because it causes unnecessary suffering, and that’s wrong. I mean c’mon, there’s way too much unnecessary suffering in the world already!”

If you now tried to map their argument, you might be tempted to produce Map 14. After all, they *said* that there’s too much unnecessary suffering in the world, so why not include it in the map? The answer is that it doesn’t add anything to the logic of their argument. It was said for conversational effect, perhaps as a plea for your agreement or to make you aware of the importance of the issue. Your task in mapping is just to represent the logical structure of the argument, and nothing else.

For the same reason, suppose they had instead given a more rambling speech:

“Oh I gotta tell you, I met this awesome woman the other day. She was so nice and friendly and invited me over to see her dog. We had a great time and she even *totally* convinced me to be a vegetarian! I mean her argument was just so simple it had to be true. It was just totally bowled me over. Basically, meat eating causes unnecessary suffering, and my word isn’t there enough of that in the world? It’s totally wrong! I’d never seen it like that before. Wow. I feel like a different person”.

This whole speech is perfectly mapped by Map 15. All the other stuff they said is completely irrelevant to the actual argument. Once again, your task in mapping is just to represent the logical structure of the argument, not the other stuff.

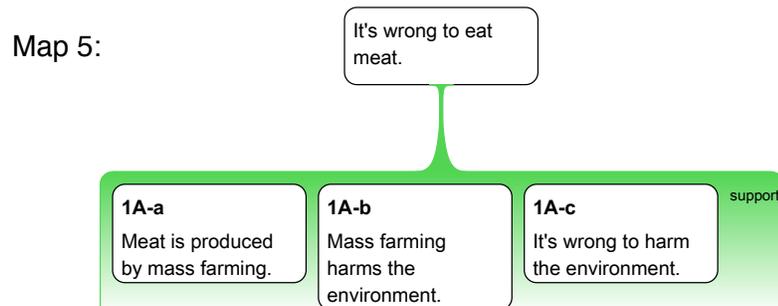
Unfortunately, the *vast majority* of what we hear and read in the real world is the other stuff! One of the hardest things about mapping someone else’s argument is to distill the core, logical structure of their argument out of the blizzard of words they throw at you.

12. The rule of charity

We come to the final rule of argument mapping. This rule applies not when you're constructing your own argument but when you're representing someone else's argument. You may have read their argument in an article or heard them talk through their idea in a lecture; your task is to represent their argument in map form. The rule is simple:

Rule of charity: When representing someone else's argument, make it as good as possible.

To see this rule in action, recall Map 5:

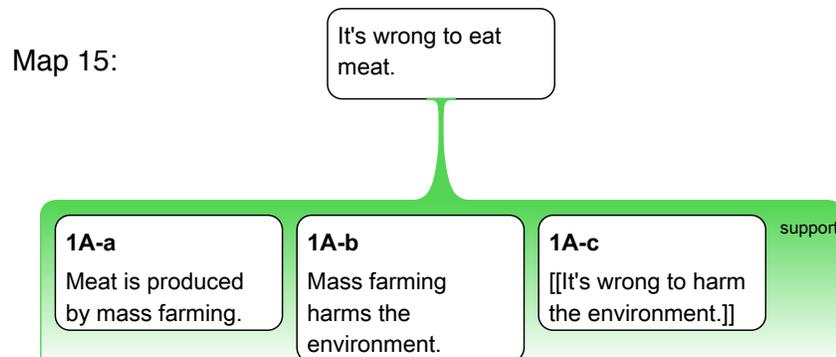


Imagine someone running this argument in a public lecture. It would be natural for them to say

“Look everyone, I really want to convince you that it's wrong to eat meat. I mean, just think about it: meat is produced by mass farming, and mass farming is terrible for the environment”.

Here they didn't explicitly say 1A-c. They might assume that pretty much everyone agrees that harming the environment is wrong. They might even be delivering the lecture at a convention for environmental protection where you're only admitted if you believe 1A-c. Given all that, it would sound weirdly pedantic to actually say “Oh yeah, and by the way it's wrong to harm the environment.”

Does that mean their argument is bad? Yes and no. Sure, *what they actually said* isn't quite a good argument. But charity demands that we understand them as articulating the argument in Map 5, even if they didn't actually verbalize all of it. Their argument is Map 5, it's just that 1A-c was *implicit* in what they said. We can represent implicit premises with square parentheses:



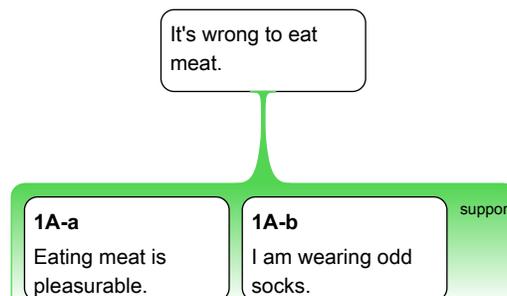
So, if you were asked to map their argument, the rule of charity demands that you produce Map 15.

One reason to be charitable is that it's polite. But another reason is that exposing implicit premises often reveals weaknesses in the argument! With 1A-c articulated in the map, we can now subject it to critical examination. Is it *always* wrong to harm the environment? What if by cutting down 1 acre of trees I could save 500 lives? Hmm, so perhaps 1A-c should be revised to say that it's wrong to harm the environment *if the benefits to us don't outweigh the harms*. OK, but then to keep the co-premises working together we need to revise 1A-b to say that mass farming harms the environment *more than it benefits to us*. Is that true? Golly, I don't know. What sounded in the lecture like an obvious line of thought is now revealed as somewhat speculative!

Of course, sometimes people really do run terrible arguments. In those cases, we should represent what they said for what it is. Suppose I said,

"It's wrong to eat meat. Why? Because eating meat is pleasurable, and I'm wearing odd socks."

This is just a terrible argument. The premises provide no reason to believe the contention, and there are no implicit premises you could reasonably attribute to me, given my intentions and background beliefs, that could patch it up. So you should just represent the argument for what it is:



13. Conclusion

We now have 9 rules of argument mapping. If we think of an argument abstractly as a bunch of nodes (the boxes) connected by lines of support, then five of these rules are in effect very general constraints on what makes for a *good* argument. The rules of description and simplicity say that a good argument only contains statements, broken down into maximally simple parts; the rule of redundancy says that a good argument never contains redundant premises; the rule of inheritance says that in a good argument the concepts in the contention also appear in the premises; and the rule of support says a good argument must have as many lines of support as possible.

The rules of separation and collection have a *slightly* different flavor. They don't really tell you what makes an argument good; they clarify two relations that two premises for a contention can stand in. In one case they can work together to support the contention, in another case they can be parts of independent arguments. These rules clarify these two relations and explain how they're to be represented in the map.

The rule of independence has a different flavor again. It tells you something about what it *means* for a complex argument to be good: all of its sub-arguments must be good when considered independently of the rest.

Finally the rule of charity is a very different beast altogether. It has nothing to do with what makes an argument good and everything to do with how to *interpret* other people's arguments. The rule is to make their arguments as good as possible, given their background beliefs, intentions, context, and so on. If they said redundant stuff, cut it out for them. If they stated most of it but left a few things out, put them in as an implicit premise. Give them the best crack.