

## 1.11. Argument Critique

**1. Argument Criticism: Two Kinds.** We've recognized two factors in an ideally convincing argument.

1. The **premises** of the argument must **all** be **true**.
2. The **argument** must be **valid**.  
(Informally: the conclusion must *follow from* the premises.)

Since such an argument needs to clear both these hurdles, we see as well two different ways an argument can be unconvincing: by failing to meet one or the other requirement. And that yields different ways of **criticizing** an argument: by finding **one or more of the premises false**, or by finding the whole **argument invalid**. (A third way is the overlap of these: declaring the argument invalid **and** one or more premises false.)

So suppose Jake argues as follows.

Obviously the first president was born in Boston. After all, Benjamin Franklin was the first U.S. president, and he was born in Boston.

Then Kitty could accuse it of being unconvincing by holding that one of the premises is false.

Brilliantly deduced! Only problem is, Benjamin Franklin *wasn't* the first U.S. president. So your whole little proof collapses.

On the other hand, suppose Elvis makes this argument.

Look, Rex and Neko aren't *both* playing mahjongg this weekend. In particular, Rex definitely isn't playing. So Neko's not playing either.

Jack could criticize the argument like so.

No way: even if they're not both playing mahjongg – and, in particular, Rex isn't playing – **it doesn't follow** that Neko's not playing.

Here Jack's not challenging the truth of any of Elvis' premises, but alleging instead that, even granted all those premises, the conclusion doesn't follow.

But here as elsewhere, simply **claiming** something will be less **convincing** than providing **evidence** to **support** that claim. If we provide evidence of one or another flaw in an argument, we're constructing an **argument** that the original argument is flawed. So instead of merely claiming that Jake's argument has a false premise, Kitty might could have constructed the following argument.

Look, as a matter of fact George Washington ran unopposed in the first U.S. election for president; so Benjamin Franklin, in particular, didn't run against him. Which means Benjamin Franklin couldn't have been the first U.S. president.

And with the second argument, Jack could criticize it like so.

Your conclusion doesn't follow: maybe Rex isn't playing because he's going to the International Beauty Show in Las Vegas; but Neko, who hates conventions of all kinds, is staying home to play mahjonn.

Notice that the scenario Jack claims possible is one where **all the premises** of Elvis' argument are **true** (Rex and Neko aren't both playing mahjonn, and in particular Rex isn't playing), while the **conclusion** (that Neko's not playing) is **false**. That's a **validity counterexample** for Elvis' argument.

Here some of the same conclusion markers catalogued earlier<sup>1</sup> reappear – but now negated.

From the mere fact that... it doesn't **follow that**...  
Just because... doesn't **mean that**...  
Even if... that doesn't **show that**...

Of course, in ordinary conversation people often don't state criticism as explicitly as in a logic book. So Jack might simply have sketched out that

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<sup>1</sup> In 1.2 §2.

scenario, treating as obvious that it's a counterexample, and hence shows the invalidity of Elvis's argument.

No way: even if Rex isn't playing mahjongg, Neko might still be playing.

Likewise Kitty could have stated her earlier criticism more briefly, trusting context to make clear that she's alleging a false premise (and hence an unconvincing argument).

Just one problem: Benjamin Franklin *wasn't* the first U.S. President.

## [2. Mapping Argument Criticisms.]

**3. Counterarguments.** Finally, note that criticizing an argument doesn't necessarily mean disagreeing with the argument's conclusion – as the next example illustrates.

**Jake:** Benjamin Franklin was born in Westmoreland County, Virginia, so that's where the first U.S. president was born.

**Kitty:** Benjamin Franklin wasn't born in Westmoreland County, Virginia – he was born in Boston. And anyway even if he had been born in Westmoreland County, Virginia, that doesn't prove anything about where the first U.S. president was born – since Benjamin Franklin wasn't the first U.S. president.

Here Kitty's making a double-barreled criticism of Jake's argument – accusing it of a false premise, and also of a conclusion that doesn't follow from that premise. All the same Kitty might well agree that the first U.S. president was born in Westmoreland County, Virginia (the birthplace of George Washington).

So even when we make an argument that, say, a premise in the original argument is false, that doesn't count as an argument that the conclusion of that argument is false.

[Hence it would be an error to conclude, in response to an argument criticism, that the critic must be opposed to the conclusion of the argument getting criticized. The following exchange illustrates that error at work.

**Dr. Slim:** Clearly every event has a cause; so there must have been a first cause, God.

**Rex:** Look, even if every event has some cause, it doesn't follow that there was a first cause. There might just have been an infinite chain of earlier and earlier causes.

**Dr. Slim:** Well, you heard it here, folks: Rex has come out and argued against the existence of God!

Dr. Slim's accusation here isn't entailed by anything Rex said.

[2.28.19: So criticism of an argument isn't the same as arguing for a different conclusion. Argument critique isn't automatically a counterargument.

**Argument critique:** claiming that the original argument is flawed.

**Counterargument:** arguing for a conclusion that's the opposite of (or at least: incompatible with) the original arguer's conclusion.

(Example: if the original argument conclusion was that Trixie is the best choice for bowling lifeguard, a counterargument would be that she's not the best choice, or that Jake is the best choice.)

Of course if we do want to argue for a different conclusion than our opponent's, criticizing his argument can be lend a persuasive advantage. For one thing, if the original argument seemed convincing, it shows that the appearance was an illusion. ]

Call an argument against the conclusion of some prior argument a **counterargument**.

**Counterargument:** an argument made, in response to a prior argument, arguing against the conclusion of that prior argument.

The conclusion of the counterargument could be the denial of the original conclusion (for example, “The first U.S. president wasn’t born in Boston”), or

Kitty would have made a

[Of course, if we **do** think an argument’s conclusion is false, we’re bound to believe that either the argument has a false premise, or that the argument’s invalid (possibly both). That’s clear from the very definition of ‘valid argument’: if an argument is valid, and all its premise are true, then the argument’s conclusion is bound to be true. So any counter-argument alleges, however implicitly, a criticism of the original argument.]

**[2. Argument Criticism vs. Counterarguments.** <or just fold this into the end of the previous section.> ]

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Then there are different ways Y can criticize the argument.

X’s argument is no good.

[NB: people often don’t bother to say “That argument is flawed, because...” – they just point out the flaw, treating as obvious that this is meant as a criticism of the argument.]

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In map format, that combo argument looks like this.

**Since (1), (2)**

1. It was brillig.

∴ 2. The slithy toves grimbled.





The second sentence is also a combo sentence.

(3) They also gyred and gimbled in the wabe, since (4) the borogoves were all mimsy.

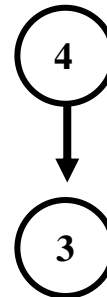
“Since” marks “the borogoves were all mimsy” as the premise.

**(3), since (4)**

4. The borogoves were all mimsy.

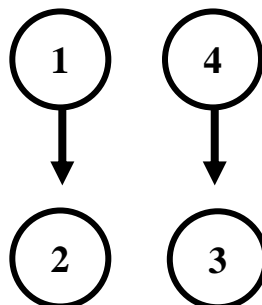
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∴ 3. They [the slithy toves] also gyred and gimbled in the wabe.



Just from breaking apart combo sentences, we’ve already put this much of the argument into the following argument map.

**Since (1) it was brillig, (2) the slithy toves gimbled. And we know that (3) they also gyred and gimbled in the wabe, since (4) the borogoves were all mimsy.** Now, if the slithy toves both gimbled and also gyred in the wabe, then the mome raths outgrabled. So clearly, the mome raths outgrabled.



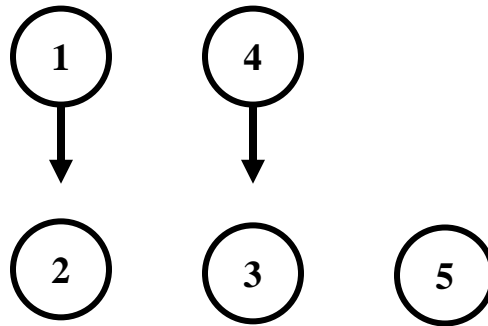
The third sentence of the argument is an “if... then” sentence.

If the slithy toves both grimbled and also gyred in the wabe, then the mome raths outgrabled.

Like all “if... then” sentences, it has two smaller sentences as parts: the “the slithy toves both grimbled and also gyred in the wabe”, and “the mome raths outgrabled”. But “if...then” isn’t a premise or conclusion marker, so “if... then” sentences **don’t** count as combo sentences. Thus we **do not break an “if-then” sentence into its two smaller parts**, as we would with a combo sentence.<sup>2</sup>

Not being a combo sentence, the “if... then” sentence is simply numbered.

Since (1) it was brillig, (2) the slithy toves grimbled. And we know that (3) they also gyred and grimbled in the wabe, since (4) the borogoves were all mimsy. Now, (5) **if the slithy toves both grimbled and also gyred in the wabe, then the mome raths outgrabled**. So clearly, the mome raths outgrabled.



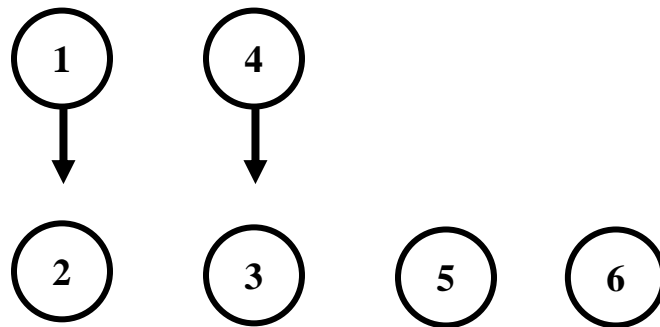

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<sup>2</sup> An “and” sentence such as “It’s sunny *and* it’s warm” is likewise not a combo sentence. But with “and” no harm comes from breaking the sentence into its parts; for (as noted earlier, in 1.2) whenever we assert an “and” sentence, we assert each of its component parts in the bargain.

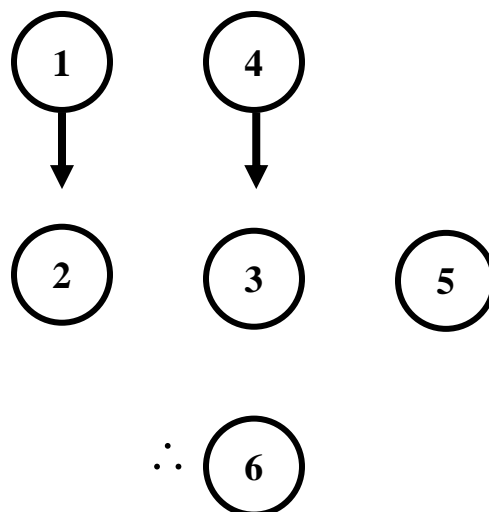


The last sentence isn't a combo sentence, so it's simply given a number.

Since (1) it was brillig, (2) the slithy toves grimbled. And we know that (3) they also gyred and gimbled in the wabe, since (4) the borogoves were all mimsy. Now, (5) if the slithy toves both grimbled and also gyred in the wabe, then the mome raths outgrabed. So clearly, (6) **the mome raths outgrabed**.



But the conclusion marker “so,” and the location of Sentence (6) at the end of the passage, suggest strongly that (6) is the conclusion of the whole argument – the **main conclusion**. In the map we put the conclusion symbol “∴” before (6).



Now as it stands, the map is just four disconnected ‘islands’. For all this diagram tells us there might be *no* relationship between sentences (2), (3), (5), and (6).

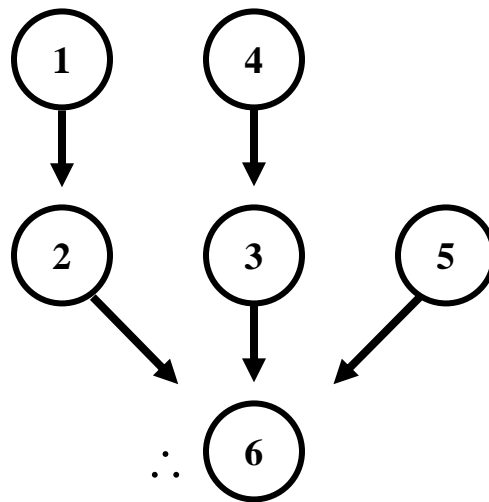
But intuitively that seems wrong: an argument shouldn't form a disconnected cluster of sentences. In particular, it would be odd for the author to state sentences – and even bothering to back some up with further evidence – if these sentences did no work supporting the main conclusion. In fact, with no sentences supporting the main conclusion, this would hardly count as an argument at all.

Here we've put our finger on a **second** basic principle used in arguments (and argument mapping): **each sentence should play some role in the argument.**

This assumption – that every sentence should be included for a reason – will be called the **No Useless Sentences Principle**.

Since the ultimate purpose of an argument is to convince someone of its main conclusion, the No Useless Sentences Principle dictates that every sentence in the argument not already supporting something is assumed to be supporting the main conclusion. So far sentences (2), (3), and (5) have no arrows linking them to any sentence.

The No Useless Sentences Principle leads us to assume that these sentences are supporting the main conclusion, (6). We show this by drawing arrows from (2), (3), and (5) to the main conclusion.



Here every sentence (other than the main conclusion itself) supports the main conclusion either directly (sentence 2, 3, and 5) or indirectly (sentences 1 and 4).<sup>3</sup> Intuitively, this map makes much more sense of the argument, since **every sentence serves some purpose**.

The No Useless Sentences Principle applies to more than just arguments. In fact it's a general principle of communication, one we've followed all along. Earlier we noted, for instance, that though questions aren't an essential part of an argument (and so don't appear in standard form), they still play a communicative role: rhetorical questions point out an unspoken declarative sentence, while issue questions help mark the conclusion. And other, purely 'introductory' material can serve the communicative role of easing the audience gently into the conversation – thereby avoiding an abruptness that might seem rude or angry.

Reaching beyond just arguments to communication in general, the No Useless Sentences Principle isn't really a principle of logic, but a matter of **pragmatics**. In our later discussion of pragmatics we revisit this principle in more detail.

Note how nicely that nonsensical argument example illustrates the power of these mapping principles: appealing only to (i) markers (including those in combo sentences), (ii) likely places, and (iii) the No Useless Sentences Principle, we can map an argument even when we don't understand its subject matter.

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<sup>3</sup> The reason the main conclusion isn't required to support anything is obvious: it counts as the **main** conclusion precisely because it **doesn't** support anything further sentence.

### Summary: Argument Mapping Principles

- 1. Number each premise and conclusion.** This includes each sub-conclusion – so the two **parts a combo sentence receive *different numbers***.
- 2. When one sentence supports a second sentence** (as shown by markers), draw a **downward arrow from premise number to conclusion number**. (If two or more sentences act as premises for the same conclusion, draw an arrow from each premise number to the conclusion number.)
- 3. Identify the **main conclusion**** using markers and likely places. The main conclusion is noted in the diagram with the **conclusion symbol “∴”**.
- 4. Apply the *No Useless Sentences Principle* to close any remaining gaps:** any sentence (other than the main conclusion) not yet supporting anything should be marked (with an arrow) as supporting the main conclusion.