1.6. Argument Mapping Principles

The following odd chain argument illustrates some important morals for argument mapping.

> Since it was brillig, the slithy toves grimbled. And we know that they also gyred and gimbled in the wabe, since the borogoves were all mimsy. Now, if the slithy toves both grimbled and also gyred in the wabe, then the mome raths outgrabed. So clearly, the mome raths outgrabed.
>
> – Adapted from Lewis Carroll, **Through the Looking-Glass and What Alice Found There**

Though we don't understand what (if anything) this argument is talking about, we will have no trouble mapping it. And that demonstrates that in argument mapping we're guided by clues and principles quite independent of the subject matter of the argument.

We noted before that **each combo sentence must be broken up** into its two parts, premise and conclusion. The first sentence in the above argument is a combo sentence: "since" marks (1) as a premise, making (2) a conclusion.

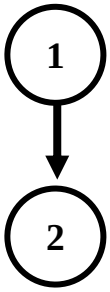
> Since (1) it was brillig, (2) the slithy toves grimbled.

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.

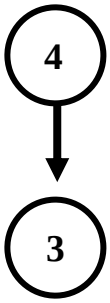
> (3) They also gyred and gimbled in the wabe, since (4) the borogoves were all mimsy.

"Since" marks "the borogoves were all mimsy" as the premise.

(3), since (4)

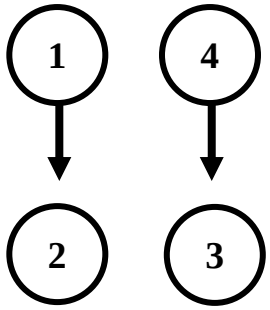
4. The borogoves were all mimsy.

∴ 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 grimbled. 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 grimbled and also gyred in the wabe, then the mome raths outgrabed. So clearly, the mome raths outgrabed.



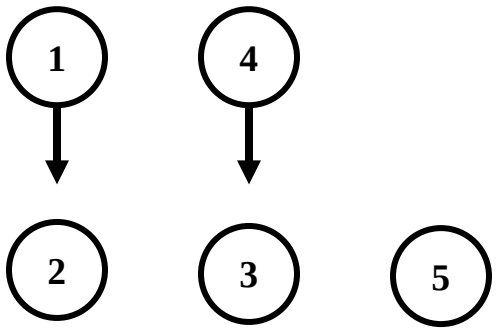
The third sentence of the argument is an "if... then" sentence.

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

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 outgrabed". 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.[1]

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

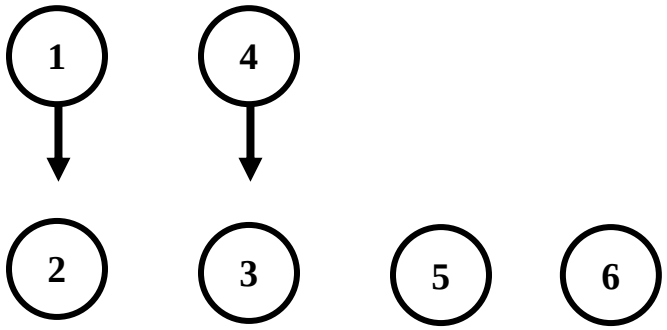
Since (1) it was brillig, (2) the slithy toves grimbled. And we know that (3) they also gyred and gimbled in the wabe, since (4) the borogoves were all mimsy. Now, **(5) if the slithy toves both grimbled and also gyred in the wabe, then the mome raths outgrabed**. So clearly, the mome raths outgrabed.



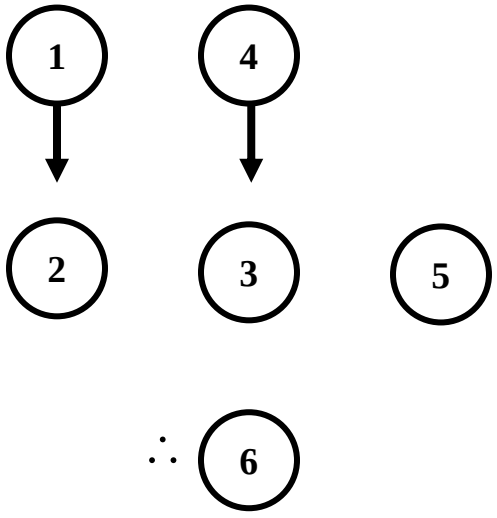
[1] An "and" sentence such as "It's sunny *and* it's warm" is likewise not a combo sentence. But with "and" no harm comes from breaking the sentence into its parts; for (as noted earlier, in 1.2) whenever we assert an "and" sentence, we assert each of its component parts in the bargain.

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).

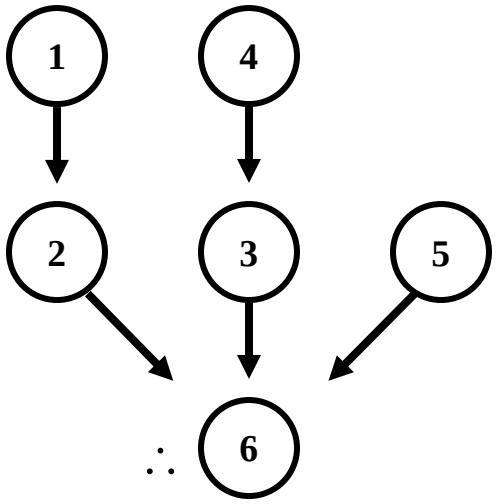
But intuitively that seems wrong: an argument shouldn't form a disconnected cluster of sentences. In particular, it would be odd for the author to state sentences – and even bothering to back some up with further evidence – if these sentences did no work supporting the main conclusion. In fact, with 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).[2] 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.

[2] 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.