## atomic argument

*by Dao - Wednesday, 17 August 2011, 10:31 AM*

The atomic argument wasn't clarified in detail in this week's lecture. What is the definition of an atomic argument? and an example?

Thanks.

Very confuzzled Wondonga study group.

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## Re: atomic argument

*by Norva Lo - Wednesday, 17 August 2011, 07:57 PM*

Hi,

An atomtic argument is one which contains only one inference. For example, the following one is an atomic argument:

P1. All men are mortal.
P2. John is a man.
---
C. John is mortal. (from P1 & P2)

Since the argument contains only one inference, which moves from P1 and P2 to C, its argument map will contain also only one arrow, looking like this:

P1
|-----> C
P2

If an argument's argument map contains **only one inference** (represented by one arrow), then it is an **atomic/simple** argument.

On the other hand, **compound/complex** arguments are those that contain **more than one inference**. For example:

P1. All men are mortal.
P2. John is a man.
P3. John is mortal (intermediate conclusion, from P1 & P2)
P4. All mortal beings desire to live.
---
C. John desires to live. (from P3 & P4)

Here, the argument contains **more than one** inference. So it is a **compound/complex** argument. In this case, the argument contains two inferences: the first from P1 and P2 to P3, and the second from P3 and P4 to C. Its argument map will also contains two arrows, looking like this:

P1
|-----> P3
P2 |-----> C
P4

You can go on to construct ever more complex arguments by expanding it and adding more inferences to it.

Hope this is helpful.
Norva

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*by ALEXANDRA - 3 September 2009, 2:23 PM*

I was just wondering whether we should be able to construct argument maps from scratch for complex arguments. I understand the examples in the lecture and how the premises are linked to each other to generate and intermediate conclusions and then the final conclusion. However I had a go at trying to make my own (without looking at your version) and I kept wanting to start with different premises from the one used in your version. I just can't work out where to start. So would I need to know how to construct an argument map, or just interpret one (because I can do that). Thanks.

*by Norva Lo - September 2009, 3:20 PM*

Hi Alexandra, there is no absolutely correct order to draw an argument map or absolutely correct starting point. To make the process simpler, we should start by highlighting all the inference indicators, and then use numbers to label all the premises, intermediate conclusions, and the final conclusion (these are the statements to which the inference indicators are attached).

Example: Consider the following complex argument:

"Today is a holiday because today is the first day of the year and also because the first day of the year is always a holiday. it is also a sunny day today. So, we should go to the boat house or going cycling. But given that today is a holiday, there will be too many people at the boat house. Therefore, we better not go to the boat house. In conclusion, we should go cycling instead."

First, we highlight the inference indicators and then label the sentences in order:

"(1) Today is a holiday **because** (2) today is the first day of the year **and also because** (3) the first day of the year is always a holiday. (4) it is also a sunny day today. **So**, (5) we should either go to the boat house or go cycling. But **given that** (1) today is a holiday, (6) there will be too many people at the boat house. **Therefore**, (7) we better not go to the boat house. **In conclusion,** (8) we should go cycling instead."

Given the argument's internal logic and the positions of the inference indicators, the argument contains the following sub-arguments:

- Sub-argument from (2) and (3) to (1)
- Sub-argument from (4) to (5)
- Sub-argument from (1) to (6)
- Sub-argument from (6) to (7)
- Sub-argument from (5) and (7) to (8)

After we have identified all the sub-arguments, we may proceed to draw an argument map in the order the sub-arguments identified (the order of drawing indicated by going from the darkest to the lightest colour):

(2)
| → (1) → (6) → (7)
(3) | → (8)
(4) → (5)

But it does not matter which sub-argument we draw on the map first. For example, we may start by drawing the first sub-argument, and then third, and then the fourth, and then the second, and then the fifth:

(2)
| → (1) → (6) → (7)
(3) | → (8)
(4) → (5)

Drawing argument maps is it rather like playing with jigsaw puzzle: sometimes you may need to put the puzzle pieces together to complete one corner of the picture first, and then put other pieces together to complete another corner of the picture, and then link the two corners up by completing the middle bit of the picture.

Apart from highlighting the inference indicators and labelling the premises, intermediate conclusions and the conclusion in the start of the process of drawing an argument map, a general strategy is to first identify one sub-argument to start with – usually the one that is easiest to identify. And then identify another sub-argument. And so on. And then link them up with each other in the ways suggested by the inference indicators given in, and also the internal logic of, the argument.

Norva

PS: As the online exam is in the format of multiple choices, students will not be asked to draw argument maps. However, it will be advantageous if a student can do that, which will help them answer some questions faster.