

Critical thinking in Global Challenges

Week3

'Assessing arguments'

Hello and welcome to Week 3 of Critical Thinking in Global Challenges.

Last week we learned how to evaluate the evidence given to support arguments or theories.

We reviewed the different parameters to take into account to critically evaluate the credibility and relevance of the evidence given.

Now that we are confident in evaluating evidence, this week we will learn how to assess arguments.

The learning objective of this week is simply to be able to understand and apply the key steps in assessing an argument.

Unfortunately there is no formula to apply to see whether an argument is strong or weak.

What I propose instead to give you is a 'step by step' technique, a technique that summarises the key elements to look for when assessing arguments. Following this technique should help you assess any argument regardless of the context.

This technique has 5 steps:

Structure, clarity, evidence, logic and evaluation.

The 1st step is to look at the structure of the argument

Start by identifying the evidence and identify the concluding sentence or sentences. To identify the conclusion look out for concluding words like; Thus, So, or Therefore.

Have a look at the following example, can you identify the evidence? Can you identify the concluding sentence?

Yes indeed the conclusion is here in red while the evidence precedes in green.

The 2nd step is looking at the clarity of the argument. Does it all make sense? Is it all clearly described? Is there any vagueness or confusion?

The next step is a familiar one, you need to assess the evidence.

As you learnt to do last week, you need to assess the reliability and relevance of the evidence given to support the argument.

As we've seen you need to assess all these parameters.

The 4th step is to assess the logic of the argument.

You should ask: Is this argument sound?

To do this, you need to be able to identify potential fallacies.

A fallacy is a misleading or unsound argument.

We distinguish 2 types of fallacies

The Formal and the informal fallacies

Formal fallacies are invalid arguments due to mistakes in the reasoning or the logic which occur independently from the actual content of the arguments. They are simply invalid or unjustified deductions or conclusions

Informal fallacies are invalid arguments due to mistakes in reasoning that are related to the content of the argument. Since Informal fallacies are not linked with a logical error in the structure of the argument, we need to look closer at how the argument has been interpreted.

Today, we will focus on informal fallacies as they are the ones that are more often met in arguments around us, in the media for example.

There are many varieties of informal fallacies

Here are some of the most common examples

The False dilemma fallacy, when an argument offers only 2 possible conclusions when many more are possible

For instance, "To lose weight, you should either stop eating fries or have liposuction".

This is a fallacy as many other options are possible to lose weight such as taking up exercise for instance.

Another fallacy example is: that "correlation proves causation" fallacy.

Here an argument assumes that when 2 events occur, one causes the other.

For instance, "whenever I clean my car it rains". This is clearly a fallacy as I don't have any power to make rain.

Another very common fallacy is the cherry picking fallacy when an argument uses supporting evidence selectively, and contradicting evidence is simply ignored.

For instance, claiming that climate change has stabilised by looking only at certain periods where little change has taken place rather than the longer term trends.

There are many more types of fallacies. Make sure to have a look at the list of reading materials provided this week as it contains links to very good websites on fallacies.

But don't worry if you can't remember all types of fallacies, what's important is that you are able to recognise that an argument is a fallacy rather than being able to say what type of fallacy it is.

We've seen 4 steps out of our 5 steps technique.

The last step is the most important: 'evaluation'. This is when you can conclude what you think of the argument.

Taking all your findings from the 4 previous steps, you should now evaluate the argument. Is the argument clear and logically sound? Is the evidence given relevant and credible? Are you sure it does not contain fallacies?

If so, well the argument is likely to be a strong argument. However if the answer is no, then the argument is a weak argument and its conclusion should be rejected, at least until better evidence is available.

So this week we have seen how to assess arguments by following a 5 steps technique. Make sure to check your understanding of this week concepts by doing this week review quiz.

And now it is time to put in practice what you have learnt in the past 3 weeks .

To do so, we offer you 4 global challenges to choose from:

In the theme 'Obesity' with John Menzies, you will look behind the headlines of recent news stories on health in obesity .

In the theme 'Climate change' with Dr Richard Milne, you will investigate arguments in global warming.

In the theme "population" with Mayank Dutia, you will investigate the dramatic increase in human population in the recent past.

In the theme "infectious diseases" with Dr Kim Picozzi, you will investigate whether infectious diseases are diseases of the past.

The choice is yours,

Note that each exercise is accompanied by a background video on the selected global challenge, so make sure to watch the video before doing the exercise. I hope you'll enjoy doing the exercise

Good luck, and see you next week!