

ELEMENTS OF ARGUMENTS

An argument, in Critical Thinking, is not just a conversation in which two people hurl abuse at each other. Neither is it the same thing as straightforward disagreement; there's a difference between arguing with someone and merely contradicting them.

The main Elements of Arguments are thus reasons and a conclusion. The ability to read a passage and pick out its conclusion and the reasons offered in support of it is perhaps the most basic skill required for Critical Thinking.

As you progress to more complicated arguments, you'll also need to be able to spot intermediate conclusions and counter-arguments. Indicator Words can be helpful in flagging up how different parts of a passage are functioning in the argument that it contains.

1. CONCLUSIONS

The conclusion of an argument is the main point that it is trying to get you to accept. You'll often (but not always) find this statement either at the beginning or the end of a passage. It may be indicated by a word such as "therefore", "thus", or even "in conclusion".

- The Therefore Test

A test that can help you to identify the conclusion of a passage is the "therefore test". Simply insert the word "therefore" into the passage directly before the phrase that you think is the conclusion. If the passage makes sense, then you've probably got the right section. If it doesn't, then you haven't.

- Quote!

When you're asked to identify the conclusion of a passage, you must give a direct quotation. You're being asked to pick out a specific phrase that the rest of the passage is trying to get you to accept. If you give a rough paraphrase, then you risk changing the meaning of the phrase slightly, and so giving an inaccurate statement of the conclusion. This can lose you marks. Even missing out a word or two can change the meaning of the conclusion resulting in inaccuracy in your answer. To err on the side of caution, always quote word-for-word.

2. REASONS

The reasons in an argument are the claims made in an attempt to persuade you that the conclusion is true.

- The Because Test

A test that can help you to identify the reasons in a passage is the "because test". Simply insert

the word “because” into the passage directly before the phrase that you think is a reason. If the passage makes sense, then you’ve probably got the right section. If it doesn’t, then you haven’t.

- Quote!

When you’re asked to identify the reasons in a passage, you must give direct quotations. You’re being asked to pick out a specific claim that the passage makes in attempting to prove its conclusion. If you give a rough paraphrase, then you risk challenging the claim, resulting in inaccuracy in your answer and so losing you marks.

3. INTERMEDIATE CONCLUSIONS

An intermediate conclusion is something in an argument that functions both as a reason and as a conclusion. To function as a reason, it must offer support to the main conclusion of the argument (or another intermediate conclusion). To function as a conclusion, there must be something else in the argument that lends in support.

4. ASSUMPTIONS

An assumption, for the purposes of A-level Critical Thinking, is an unstated reason. It is something that must be true for an argument to work, but which is not explicitly stated in the argument.

- The Negative Test

To test whether something is assumed an argument, you can use the negative test. This involves inserting the opposite of the alleged assumption into the argument and seeing if it still makes sense. With the opposite of the alleged assumption inserted, the argument clearly doesn’t make sense, so the alleged assumption must be true for the argument to work; it is assumed by the original argument.

- Don’t Quote!

When answering a question that asks you to identify an assumption, unlike when answering other questions, you should never give a quote from the text; by definition, assumptions are unstated.

5. COUNTER ARGUMENTS

A counter-argument is an argument that goes against the author’s main conclusion. Typically, counter-arguments are considered and rejected in an attempt to strengthen the author’s case.

6. INDICATOR WORDS

There are certain words that often indicate the presence of a particular element of an argument. These are called indicator words. Not every element of an argument is flagged up by an indicator word, and not every use of an indicator word is associated with an element of an argument, but indicator words are useful guides.

- Conclusions

Conclusions are often indicated by one of the following words or phrases: “therefore”; “thus”; “hence”; “so”; “in conclusion”; “consequently”; “showing that”; “demonstrating that”; “proving that”; “establishing that”; “meaning that”; “entails that”; “implies that”; “as a result”. In past papers, conclusions have often been statements about how we ought to respond to something, so “should”, “must”, and “ought to” should also be treated as indicator words, albeit cautiously.

- Reasons

Indicator words for reasons include the following: “because”; “as”; “since”; “in order to”; “otherwise”. Sometimes authors enumerate their reasons, writing “First”, “Second”, “Third”, etc., which can also help in their identification.

- Counter-Arguments

Counter-arguments can be given away by phrases like “some might argue that”, “it has been suggested that”, or equivalent phrases. The main giveaway for counter-arguments, though, is that the reason(s) cited count against the author’s conclusion rather than for it.

7. EVIDENCE SAMPLING

When presented with observational evidence to support a claim, we need to be wary. It is said that there are lies, damned lies, and statistics, and that you can devise a survey to prove anything you want. If we are told “A study has shown that...” then we should think twice before we accept the conclusion that is drawn from it.

- Misrepresenting the Data

The most basic mistake in interpreting evidence is simply misrepresenting the data. If the observational data do not fit the inference drawn, then there is a problem. There is the possibility of deliberate distortion, accidental misinterpretation, and selectivity.

- Insufficient Data

A more common error is drawing a conclusion from insufficient data. Every study has a margin of error and the smaller the study the greater this will be. Studies with a significant margin of error always leave doubt about any conclusions based on them, so it is important to consider the quantity of data in a study in assessing its validity.

- Unrepresentative Data

A constant danger in empirical studies is unrepresentative data. A study that has a sufficient quantity of data may nevertheless be flawed due to insufficient quality of evidence. For a general conclusion to be drawn with any confidence from a limited data set, it must be reasonable to believe that the data set is representative.

8. LOGICAL FALLACIES

Logical fallacies are common errors of reasoning. If an argument commits a logical fallacy, then the reasons that it offers don't prove the argument's conclusion. (Of course, that doesn't necessarily mean that the conclusion is false, just that these particular reasons don't show that it's true.)

There are literally dozens of logical fallacies (and dozens of fallacy web-sites out there that explain them). For OCR's Critical Thinking course, the fourteen fallacies below are those that it's most important to know about (these are the fallacies listed in the course specification).

You need to be able to recognize each of these fallacies, and also to explain what is wrong with arguments that commit them. Once you've learned what the fallacies are, pay attention and see if you can spot any of them being committed on TV, the radio, or in the press.

- Ad Hominem

"Ad hominem" is Latin for "against the man". The ad hominem fallacy is the fallacy of attacking the person offering an argument rather than the argument itself. Ad hominem can simply take the form of abuse: e.g. "don't listen to him, he's a jerk". Any attack on irrelevant biographical details of the arguer rather than on his argument counts as ad hominem, however: e.g. "his claim must be false as he has no relevant expertise"; "he says that we should get more exercise but he could stand to lose a few pounds himself".

- Appeal to Authority

An appeal to an authority is an argument that attempts to establish its conclusion by citing a perceived authority who claims that the conclusion is true. In all cases, appeals to authority are fallacious; no matter how well-respected someone is, it is possible for them to make a mistake. The mere fact that someone says that something is true therefore doesn't prove that it is true. The worst kinds of appeal to authority, however, are those where the alleged authority isn't an authority on the subject matter in question. People speaking outside of their area of expertise certainly aren't to be trusted on matters of any importance without further investigation.

- Appeal to History

There are two types of appeal to history. The first is committed by arguments that use past cases as a guide to the future. This is the predictive appeal to history fallacy. Just because something has been the case to date, doesn't mean that it will continue to be the case. This is not to say that we can't use the past as a guide to the future, merely that predictions of the

future based on the past need to be treated with caution.

The second type of appeal to history is committed when it is argued that because something has been done a particular way in the past, it ought to be done that way in the future. This is the normative appeal to history fallacy, the appeal to tradition. The way that things have always been done is not necessarily the best way to do them. It may be that circumstances have changed, and that what used to be best practice is no longer. Alternatively, it may be that people have been consistently getting it wrong in the past. In either case, using history as a model for future would be a mistake.

- Appeal to Popularity

The appeal to popularity fallacy is the fallacy of arguing that because lots of people believe something it must be true. Popular opinion is not always a good guide to truth; even ideas that are widely accepted can be false.

- Circularity

Circular arguments are arguments that assume what they're trying to prove. If the conclusion of an argument is also one of its reasons, then the argument is circular. The problem with arguments of this kind is that they don't get you anywhere. If you already believe the reasons offered to persuade you that the conclusion is true, and then you already believe that the conclusion is true, so there's no need to try to convince you. If, on the other hand, you don't already believe that the conclusion is true, then you won't believe the reasons given in support of it, so won't be convinced by the argument. In either case, you're left believing exactly what you believed before. The argument has accomplished nothing.

- Confusing Necessary and Sufficient Conditions

Necessary conditions are conditions which must be fulfilled in order for an event to come about. It is impossible for an event to occur unless the necessary conditions for it are fulfilled. Sufficient conditions are conditions which, if fulfilled, guarantee that an event will come to pass. It is impossible for an event to occur if the sufficient conditions for it are fulfilled.

- Correlation not Causation

The correlation not causation fallacy is committed when one reasons that just because two things are found together (i.e. are correlated) there must be a direct causal connection between them. Often arguments of this kind seem compelling, but it's important to consider other possible explanations before concluding that one thing must have caused the other.

- Inconsistency

An argument is inconsistent if it makes two or more contradictory claims. If an argument is inconsistent, then we don't have to accept its conclusion. This is because if claims are contradictory, then at least one of them must be false. An argument that rests on contradictory claims must therefore rest on at least one false claim, and arguments that rest on false claims prove nothing.

In an argument that makes contradictory claims, whichever of those claims turn out to be false the arguer won't have proved their conclusion. This means that it is reasonable to dismiss an inconsistent argument even without finding out which of its contradictory claims is false.

- Generalization

Arguments often use specific cases to support general conclusions. In order for a set of evidence to support a general conclusion, the evidence must meet certain conditions. Arguments that base conclusions on insufficient evidence commit the generalization fallacy.

- Restricting the Options

We are sometimes faced with a number of possible views or courses of action. By a process of elimination, we may be able to eliminate these options one-by-one until only one is left. We are then forced to accept the only remaining option. Arguments that do this, but fail to consider all of the possible options, excluding some at the outset, commit the restricting the options fallacy.

- Slippery Slope

Sometimes one event can set off a chain of consequences; one thing leads to another, as the saying goes. The slippery slope fallacy is committed by arguments that reason that because the last link in the chain is undesirable, the first link is equally undesirable. This type of argument is not always fallacious. If the first event will necessarily lead to the undesirable chain of consequences, then there is nothing wrong with inferring that we ought to steer clear of it. However, if it is possible to have the first event without the rest, then the slippery slope fallacy is committed.

- Straw Man

Straw man arguments that misrepresent a position in order to refute it. Unfortunately, adopting this strategy means that only the misrepresentation of the position is refuted; the real position is left untouched by the argument.

- Tu Quoque (Latin for “you too”)

The tu quoque fallacy involves using other people’s faults as an excuse for one’s own, reasoning that because someone or everyone else does something, it’s okay for us to do it. This, of course, doesn’t follow. Sometimes other people have short-comings, and we ought to do better than them. We can be blamed for emulating other people’s faults.

- Weak Analogy

Arguments by analogy rest on a comparison between two cases. They examine a known case, and extend their findings there to an unknown case. Thus we might reason that because we find it difficult to forgive a girlfriend or boyfriend who cheated on us (a known case), it must be extremely difficult for someone to forgive a spouse who has had an affair (an unknown case). This kind of argument relies on the cases compared being similar. The argument is only as strong as that comparison. If the two cases are dissimilar in important respects, then the argument commits the weak analogy fallacy.