

Language of Reasoning

Reasoning – A system of thinking which involves the creation of a conclusion from one or a series of facts or assumptions. These facts and assumptions are known as reasons. The reasons are used in an argument as a base on which the conclusion is drawn from. Usually reasons are used in conjunction with each other to add strength to the conclusion or judgment being made. The stronger the conclusion is the more likely we will be able to persuade someone so reasoning is a central part for any argument.

Words like therefore, because, then and if are known as argument indicators. Argument indicators are used in reasoning and debates as tools which structure and link reasons and conclusions together into a fluent framework. Argument indicators can further split into reason indicators and conclusion indicators. Reason indicators highlight the premises that the conclusion, and therefore the argument, are based upon. Examples of reason indicators are because, since and for. Conclusion indicators also act as indicators for the conclusion or judgement made due to the reasons and examples of these types of indicators are so, thus and hence. Here I have highlighted some argument indicators within the text.

- It's an issue for today, because we need to reduce our carbon use within the next ten years.
- Fossil fuels should be abandoned because there are superior alternatives.
- Consequently, the demand that smokers bring to the market does not represent the true benefits of tobacco for them

Argument indicators help to identify different sections of the argument and clarify connections between various points, reasons and judgements. Consequently is a conclusive indicator the statement after that word therefore is a judgement that the writer has made on the reason he put forward previously. The other two bullet points show one of the most common indicators or reasoning 'because' both of which connect a reason to a conclusion.

Opinion can be seen as a statement which cannot be objectively proven and isn't based on facts.

- 'I believe that the creation of the NHS is one of the greatest achievements of the 20th century.'
- 'I believe that we need a new direction for the NHS, and that new direction should be based on our idea of social responsibility.'

Opinions have no basis in fact consequently politicians (like David Cameron above) use opinions as devices which are hard to argue objectively against.

Evidence can be contained within a reason and involves facts and figures which support the argument. Whilst evidence does not usually have indicator words it is easy to identify because of the fact it often contains figures, dates etc.

- The "social cost of smoking" \$130 billion per year in the U.S., according to a 1998 Treasury study.

Inference is a conclusion or judgement that has been arrived at because something else has been decided as true, through logic. Examples of this I think can be found throughout verbal 11 plus papers.

- 1) All cats are dogs.
- 2) All dogs are elephants.

So by using inference we can conclude that all elephants are cats. A judgement or conclusion is derived from a fact which has been arrived at through logic and reason.

We can tell whether people are engaged in reasoning during an argument because they use many of the devices shown above. Here are some examples.

The Prime Minister: Such centres will number roughly 2,500 nationwide by 2008, and a whole new frontier of the welfare state has been developed. They do a fantastic amount of work, not just for the children but often for their parents who, for the first time, have gained access to advice about skills and jobs. They are therefore a very worthwhile addition to the provision that the Government make for people in this country.

Use of evidence (yellow) is used in reasoning as something which cannot be argued against; this adds credibility to the speaker's argument. Argument indicators (green) are always signs of reasoning as they show there are reasons in which conclusion are based on. Whilst evidence is not necessarily a sign of reasoning (could just be an explanation) when combined with a conclusion it becomes a process of reasoning.

The only activity is the administration department paying bills to keep an empty hospital maintained. Is that not an episode straight out of "Yes Minister"?

This is a kind of ad hominem but maybe not wholly as ridicule is being used to add strength to the point.

There are no patient complaints, no delays, no operations cancelled. That is because the hospital has never opened.

Because is one of the most widely used reason indicators. The indicator because is useful for this reason because it is easily found and, once found, can be used to strip an argument down into its components (e.g. reasons, conclusions and elements of persuasion).

Reasoning as stated earlier is based around facts and ideas from which a conclusion is drawn from. If people use reasoning in an attempt to resolve issues it is more likely that they will reach agreement. This is because both sides' arguments are based on logic and facts which in turn can be counter reasoned against until a compromise is reached. However in quarrelling the views and conclusions are not based on reasonable premises or are not explained properly. Quarrels and reasoning both contain views (otherwise there wouldn't be a disagreement) and often elements of persuasion.

Assertions, opinions and commands are often used in quarrels. Assertions are often the only way in which quarrels are forcibly resolved and often leave the losing party with a sense of dissatisfaction. Also ad hominem is sometimes used in quarrels. This is where the opposing sides' views is dismissed or not held seriously and discredited through satirical and mocking remarks.

Nuclear power is
the best energy
source.

Coal is the best
energy source.

Nuclear power does not give
off CO2 emissions **therefore** it
is the best energy source.

Coal is the best energy source
because it does not carry the
risk of a nuclear meltdown.

Argument indicators - (page 1 paragraph 2) additionally indicator words can be used as tools which assist in the creation of counter arguments. As implied in the word indicate the help identify the structure of an argument and so help show what the basis of the reasoning is.

Unfortunately people do not always use indicators in their argument. Whilst it is clear they are arguing for something without indicators being present it is often hard to determine the arguer's points were. A useful way to determine the arguer's points is to use the 'therefore test'. This involves placing indicators into an argument so that the reasons and conclusions of the argument can be found.

Explanations always contain a reason or description of something and then a conclusion connected to these facts. However, in contrast to arguments, the conclusion has no element of persuasion; it just states simply an impartial judgment on the reasons.

My Critical Thinking class has both sexes in it **because** the
teachers want us to have discussions from different perspectives.

The example above (<http://www.criticalthinkingcourse.com/AS2005/unit1d.asp>) is an example of an explanation. Yellow shows the conclusion green shows a reason indicator and blue the reason. Arguments contain an element of persuasion with the conclusion. The blue, in this case, highlights the persuasive element in the conclusion.

You ought to take your umbrella out tomorrow as it is likely to rain.

Consistency throughout a constructive argument is very important. Without consistency the speaker's argument can lose clarity and the whole point of the argument is then lost. If the listener/reader does not understand the points behind the argument or conclusion being made from them, the arguer will not be able to persuade them. A contradiction is a type of inconsistency which leads to confusion in an argument. It is where two or more things within an argument disagree with each other.

The word converse in critical thinking means the opposite of what has just been said (in meaning). The term conversely is sometimes used as a reason indicator which identifies a relationship between two reasons and how that they are at odds to one another.

Examples are used like evidence as reasons which support a conclusion. They are a type of evidence which shows a situation of where this point has actually taken place. They can be used in arguments sometimes to discredit the opposition as well as add strength to your argument. As examples are based on an actual event that happened they are hard to argue against.

If something is implied then it is not expressed specifically or directly by the writer but rather more subtly or implicitly. It can be used in sensitive environment (someone on your political party) as a way to discredit the opponent without committing to ad hominem or similar.

Hypothetical ideas are concepts or theories that are suppositional. Often hypothetical situations are discussed in political circumstances. The term is used often when policies for reactions to certain situations which haven't occurred (radioactive bomb in London etc) are being made.

Necessary conditions are factors which have to be met to allow the possibility of an event happening. Sufficient conditions are conditions which when met mean that the event will definitely happen.

Semi technical words are terms which can be used across a range of subjects. This means they are quite useful due to the fact they can be applied in so many different areas whilst having different meanings.

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