CTO Notes

Topics Covered:

Week 1: Arguments I

Week 2: Arguments II

Week 3: Rhetorical Ploys

Week 4: Deduction I

Week 5: Deduction II

Week 6: Induction

Week 7: Evaluating Arguments

Week 8: Fallacies

Week 9: Faulty argument techniques

Week 10: Innovation in the use of search engines

Week 11: Innovation in evaluating information on the internet

Week 1: Arguments I

Outline:

- Reasons and justifications
- Arguments
- Recognising arguments
- Argument forms

Reasons and justifications:

- When we ask 'why?' we're asking for a <u>reason</u>.
- <u>Justifications</u> are good reasons to do or believe something.

Example: Why reduce our carbon footprint?

- Because my Dad says so
- Because CO_2 contributes to global warming, which has various detrimental effects on the environment and agriculture

Arguments:

- Persuading someone by giving good reasons is to give an <u>argument</u>.

NOTE: Non-argumentative ways of persuading (rhetoric) will be covered in Week 3 (e.g. 'I have a dream' speech).

Rhetoric: any verbal or written attempt to persuade someone to believe, desire or do something that does not attempt to give good reasons for the belief, desire or action, but attempts to motivate that belief, desire or action solely through the power of words used.

- Threats and bribes are special cases of rhetoric
- Rhetorical techniques can be manipulative and coercive; their use should generally be avoided by those who aspire to think critically and to persuade by reason

NOTE: Arguments appeal to your reason, whereas rhetoric relies on the persuasive power of certain words and verbal techniques to influence your beliefs, desires and actions by appealing to your desires, fear and other feelings.

- Critical thinking is all about the ability to create and evaluate arguments
- Having the skills to create and evaluate arguments including your own is essential to make intellectual progress and to innovate

An argument:

- Gives3 reasons for a claim OR
- Is a set of propositions of which one is a conclusion and the remainder are premises, intended as support for the conclusion

Proposition or claim or statement: declarative sentence describing a state of affairs.

Recognising arguments:

- Identify the issue and determine whether the writer/speaker is trying to persuade you with an argument (Week 1 + 2)
- Reconstruct the argument in terms of premises and a conclusion (Week 1 + 2)
- Evaluating the argument: are the premises true and do they support the conclusion (Week 7)

Truth:

- All arguments attempt to provide reasons for thinking some claim is true
- Analytic propositions are true by virtue of their meaning (e.g. all cardiologists are doctors, all bachelors are unmarried)
- Synthetic propositions are true by how their meaning relates to the world (e.g. there are 4 paintings in the gallery, Australia has 22 million inhabitants)

NOTE: The same proposition may be expressed by different sentences. For example, on a given occasion, 'the government has decided to hold a public enquiry into the affair' would express the same proposition as 'it was decided that the government would hold a public enquiry into the affair.'

Claims:

- It's going to rain later
- The world is facing environmental catastrophe

Reasons:

- It's going to rain later, I know because I heard the weather forecast on the radio which is usually reliable.
- Climate scientists predict that the world is facing environmental catastrophe, and they are the experts on these issues.

Argument form:

Standard form:

An argument may be about any subject and have any number of premises, but it will always have only one final conclusion.

5 steps of standard form:

- Identify the conclusion
- Identify the premises
- Number the premises and conclusion
- Draw the inference bar (line between last premise and conclusion; the bar should be read as standing for 'therefore'; purpose of inference bar is distinguish steps in reasoning)
- Write out the conclusion, placing 'C' in front of it

NOTES:

- Standard form method of setting out arguments maximises clarity, and helps us to see the stages of reasoning clearly and to make comparisons between arguments of similar form.
- Setting out arguments in standard form is part of <u>reconstructing</u> the argument. The end product (the argument set out in standard form), is called a <u>reconstruction</u> or <u>argument-reconstruction</u>.

Example:

Premise 1: Bart has two sisters

Conclusion: Therefore, Bart is not an only child

P1: Helping someone to commit suicide is murder

P2: Murder is wrong

C: Therefore, helping someone to commit suicide is wrong

P1: Car use is damaging to the environment

P2: Reducing car journeys would reduce damage to the environment

P3: We should do what we can to protect the environment

C: Therefore, we should use less cars.

Week 2: Arguments II

- Identifying conclusions
- Identifying premises
- Arguments and explanations
- Intermediate conclusions

NOTE: To determine if a text/speech is attempting to persuade by argument, consider the <u>context</u>.

Identifying conclusions:

When reading or listening to an argument, the first step is to identify the conclusion (i.e. what the arguer is trying to convince you of).

Examples:

Since Jo Bloggs is a politician and politicians are always corrupt, I guess Jo Bloggs is corrupt.

- P1: Jo Bloggs is a politician
- P2: Politicians are always corrupt
- C: Jo Bloggs is corrupt

I'm anti-hunting because I believe that hunting animals is wrong. After all, it's wrong to kill simply for pleasure and hunting involves the killing of innocent animals for pleasure.

- P1: It's wrong to kill simply for pleasure.
- P2: Hunting involves the killing of innocent animals for pleasure.
- P3: Hunting animals is wrong.
- C: I am anti-hunting.

NOTE: In the second example conclusion comes first followed by premises (vice versa for first example.

Words that indicate a conclusion:

- Therefore, thus, so, consequently, as a result, since, in conclusion
- Proves, implies, establishes, shows

Types of conclusions:

<u>Intermediate conclusions</u>: where the conclusion of one argument serves as a premise of a subsequent argument. The conclusion of that argument may itself serve as a premise for another argument, and so on.

Example: 'Larry is a dog. All dogs are mammals, <u>so</u> Larry is a mammal. And <u>since</u> all mammals are warm-blooded, <u>it follows that</u> Larry is warm-blooded.

- P1: Larry is a dog.
- P2: All dogs are mammals.
- C1: Larry is a mammal
- P3: All mammals are warm-blooded.
- C2: Larry is warm-blooded.

NOTE: The last conclusion is the 'conclusion of the argument,' whereas any other conclusions are referred to as 'intermediate conclusions.'

<u>Implicit conclusions</u>: conclusions are sometimes not stated, but are implied.

Example: 'There is so much pornography around these days and young people are so easily influenced, it's <u>bound to</u> result in a social collapse into an orgy of rape, abuse, and indecency.'

Identifying premises:

- What are the reasons and what is the evidence supporting the conclusion?
- Premises can be controversial
- They may be buried anywhere in a text

Words/phrases that indicate premises/reasons:

- Since, because, for, follows from the fact that, is implied by

Examples:

- <u>On the basis of the fact that</u> they have promised to reduce the size of the state's role in people's lives, I conclude that the Conservative Party will probably win the next general election in Great Britain.

Arguments and Explanations:

<u>Argument</u>: the answer to 'why do I believe X?'

<u>Explanation</u>: the answer to 'why X?'

- When the word 'because' is used to indicate a <u>logical relation</u> it's used to introduce an <u>argument</u>
- When the word 'because' is used to indicate a <u>relation of cause and effect</u> it's used to introduce an <u>explanation</u>

Examples:

Dunkirk was nominated for Best Picture Award at the Oscars.

- Argument: because I saw it on the news this morning
- Explanation: because the screenplay was exceptionally good

Bill is drunk:

- A: because he can't walk straight
- E: because he drank too much VB

The butler committed the murder:

- A: because there is a knife with blood on it in his room
- E: because he was very angry

Chapter 1 (Arguments) summary:

- Successful critical thinking enables us to ensure that we have <u>good reasons</u> to believe or do that which people attempt to persuade us to do or believe, and helps to prevent us from doing and believing wrong or silly things.
- Attempts to persuade may be <u>argumentative</u> or <u>non-argumentative</u>. Most of the latter count as <u>rhetoric</u>, which is any attempt to persuade that does not attempt to give good reasons for the belief, desire or action in question, but attempts to motivate that belief, desire, or actions solely through the power of the words used. The former, on the other hand, persuades us by giving reasons for us to accept a claim or take the action suggested.
- Not all arguments are good arguments. Good arguments are those that provide us with <u>good reasons</u> to act or to accept a claim.
- Setting out arguments in <u>standard form</u> is a 5 stage process that enables us to see the form of arguments better and, hence, to compare, analyse and assess them more easily.
- An argument consists of a <u>set of propositions</u>. The proposition expressed by a statement is its factual content, and should as far as possible be distinguished from the rhetorical content of the sentence. <u>Propositions may be implicated by an utterance without being explicitly stated: a proposition is implicated by an utterance when it would reasonably be taken to have been intended.</u> Among the propositions that constitute an argument, one is its <u>conclusion</u> – the proposition argued for – and the rest are its <u>premises</u> – the reasons given to accept the conclusion.
- Once we have determined that a text or speech contains an argument, we must work out which sentence is intended to express the argument's conclusion and which are intended to express its premises. Words that serve as <u>conclusion indicator</u> and <u>premise indicators</u> offer a helpful (but not foolproof) guide to doing so successfully.
- We should also pay close attention to the <u>context</u> of the text or speech under consideration and be careful to <u>exclude any extraneous material</u> (irrelevant or unrelated to the subject being dealt with) from our argument reconstruction.
- Arguments must be distinguished from <u>explanations</u>: arguments attempt to provide reasons for believing a proposition whose truth is not assumed to be accepted yet; explanations assume a certain proposition is already accepted as fact, and attempts to specify the cause.