# 1. Identifying and representing simple arguments

## Arguments and other kinds of discourse

Presenting an argument is only one kind of linguistic activity. We also use language in an infinite variety of other ways: to describe things we have seen, to report information, to explain why something happened, to tell stories, to insult or threaten, to ask questions, to give excuses and so on endlessly. The most basic skill of argument analysis then, is simply that of recognizing an argument when you see one.

Giving an argument should be sharply distinguished from simply *asserting* or *denying* something. According to our definition of *argument*, every argument must contain at least two parts: a conclusion and some reasons for believing that conclusion. If a communication does not contain both of these things, it cannot be an argument. Consider the following dialogue:

> Reporter: What do you have to say to the recent accusations that you have in the past accepted bribes for political favours?
> Politician: I deny these accusations completely and categorically. They have no basis in fact whatsoever. They are not only untrue but hurtful and mean.

The politician's remarks do not constitute an argument. She has simply *denied* the claims made against her without providing any evidence or reasons for thinking that they are false. But an argument must contain at least one reason. Denial is not the same thing as argument. Now consider this example, from the pre-amble to the U.S. constitution:

> We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain inalienable rights, that among these are life, liberty and the pursuit of happiness.

This is not an argument. It is an example of a forthright *assertion*. It is claimed that all people have certain rights. But no reasons are given in support of that claim, so it cannot be an argument. Of course, that does not mean the assertion isn't true. The point is that in this case we have not been given an argument for thinking that it *is* true – we are simply told that it is *self-evidently* true. Assertion is not the same thing as argument.

By contrast, all of the following are examples of arguments. In each case, a claim is made and reasons are given for thinking that the claim is true. See if you can identify which statement is the main claim being made (the conclusion of the argument) and which statements are the reasons given for that conclusion (the premises of the argument):

> Cigarette smoking has been shown to be a health hazard; therefore, governments should ban all advertisements that promote smoking.
>
> The proposal to raise petrol taxes to support public transport is unfair. Drivers who will never use train or bus lines should not be forced to pay for them.
>
> There can't have been a full moon last night. If there had been, the tide would be higher than usual. But the tide is no higher than usual today.
>
> Recent heavy rainfalls in the metropolitan area have filled the reservoirs, so water rationing will not be necessary this summer.
>
> Bob must be a beer drinker. He's an Australian and all Australians drink beer.

> Lightning causes fires and damages electronic equipment. Since lightning rods can prevent any major damage, every building should have one.

## Conclusion indicators

How can you tell when a passage of text contains an argument? Languages contain many words and phrases that are used to signal that an argument for a particular conclusion is being presented. Here are some examples of these **conclusion indicators**:

> Therefore
> So
> It follows that
> Hence
> Thus For this reason
> … must (be true that)…
> .. cannot (be true that) …

You can probably think of many more. Several of the example arguments given above make use of such indicators. For example:

> Cigarette smoking has been shown to be a health hazard; therefore, governments should ban all advertisements that promote smoking.

Here the word 'therefore' is used to indicate that the conclusion of an argument is being presented. In this case the conclusion is:

> Governments should ban all advertisements that promote smoking.

The word 'so' can be used in the same way, as in this example:

> Recent heavy rainfalls in the metropolitan area have filled the reservoirs, so water rationing will not be necessary this summer.

The words 'cannot' and 'must' can also be used as conclusion indicators. In this example:

> Bob must be a beer drinker. He's an Australian and all Australians drink beer.

The word 'must' indicates the conclusion of an argument. The conclusion is:

> Bob is a beer drinker.

The two premises given in support of this conclusion are:

1. Bob is an Australian.
2. All Australians drink beer.

In this argument, the word 'must' is used to signal the idea that the conclusion is a necessary consequence of these two supposed facts: that is, that the conclusion *must* be true, if the premises are true.

The word 'cannot' sometimes operates in the same way, as in this example:

> There can't have been a full moon last night. If there had been, the tide would be higher than usual. But the tide is no higher than usual today.

Here the conclusion of the argument is that:

The moon was not full last night.

The two premises are:

1. If there had been a full moon last night, the tide would be higher than usual today.
2. The tide is not higher than usual today.

In this case, the word 'can't' ('cannot') is again used to signal the relationship between the conclusion and the premises: if both premises are true the conclusion *cannot* be false.

## A warning

You should be aware that the presence of these indicator words in a passage of text does not *guarantee* that the passage is an argument. Many of these words and phrases have different uses as well. For example, consider the following:

You should practice every day so you can win the diving competition.

Here the word 'so' is not being used to indicate the conclusion of an argument. In this case it means something like 'in order to' rather than 'therefore'. The example is a statement or assertion, rather than an argument. It might be paraphrased as: If you want to win the diving competition, you should practice every day.

Similar remarks apply to 'must' and 'cannot'. For example, 'cannot' often means 'is unable to', as in:

Nigel can't resist stuffing his face at every barbecue.

This is not an argument but a single statement or assertion. It makes a claim about Nigel – that he is unable to resist overindulging – but does not provide any reasons for thinking this claim is true. So it is not an argument.

The use of conclusion indicators to identify arguments is therefore not a simple mechanical process. You will often have to use your own judgement and knowledge of the language to decide. Nonetheless, learning to recognise conclusion indicators can provide a useful (though not infallible) test for telling whether a passage contains an argument or not.

## Passages without conclusion indicators

What if the passage you are analysing has no conclusion indicator words or phrases? How can you tell if it is an argument in that case? The key question to ask is still whether the passage contains a conclusion – a claim for which *reasons* are given. Do some of the statements provide reasons for believing that a claim made in the passage is true? If so, then the passage contains an argument. If the passage does not contain a conclusion, if no reasons are given for any of the claims made in the passage, then it does not contain an argument. Here is an example:

> The proposal to raise petrol taxes to support public transport is unfair. Drivers who will never use train or bus lines should not be forced to pay for them.

The first sentence of this passage makes a claim: that the proposed increase in petrol taxes is unfair. It is clear that the second sentence is then used to provide some support for that claim – a reason for thinking that it is true. So, although there are no specific conclusion indicator words

here, we can be sure we have an argument. Notice, by the way that in this example, the conclusion comes right at the beginning of the passage, rather than at the end.

To sum up: If you can find a conclusion (either by looking for indicators or by identifying a claim for which reasons are given) you can be confident that the passage is an argument. Equally, if there is no conclusion, the passage cannot be an argument.

## Premise indicators

In addition to conclusion indicators, languages also contain many words and phrases that are often (though not always) used to indicate that a *reason* is being given in support of a claim. Here are some examples of such **premise indicators**:

Since
Because
For
But
The reason is
There are several reasons for this …
First … second … third …

Consider this example again:

> Lightning causes fires and damages electronic equipment. Since lightning rods can prevent any major damage, every building should have one.

The conclusion of this argument is:

Every building should have a lightning rod.

This claim is supported by two premises. One premise comes at the start of the passage:

1. Lightning causes fires and damages electronic equipment.

The second premise is introduced by the word 'since':

2. Lightning rods can prevent any major damage (caused by lightning).

## Another warning

As with conclusion indicators, premise indicators do not provide a *guarantee* that a reason for a conclusion is being presented. Consider this example:

> I haven't seen Tracy since the party last Tuesday.

Here the word 'since' is not being used to indicate a premise. There is no argument to a conclusion in this example, which simply makes a statement without giving any supporting reasons. In this case, the word 'since' has a temporal meaning: it serves to indicate the period of time during which the statement 'I haven't seen Tracy' is true.

## Representing arguments in standard form

It is often useful, when dealing with arguments, to summarise them in a standard format. This is called putting the argument into *standard form*. There are many ways of doing this. The simplest way is to write down each of the premises, followed by a separator (such as the word 'Therefore') followed by the conclusion. The premises should be numbered so that you can refer to them again later. Here is the lightning rod example again:

> Lightning causes fires and damages electronic equipment. Since lightning rods can prevent any major damage, every building should have one.

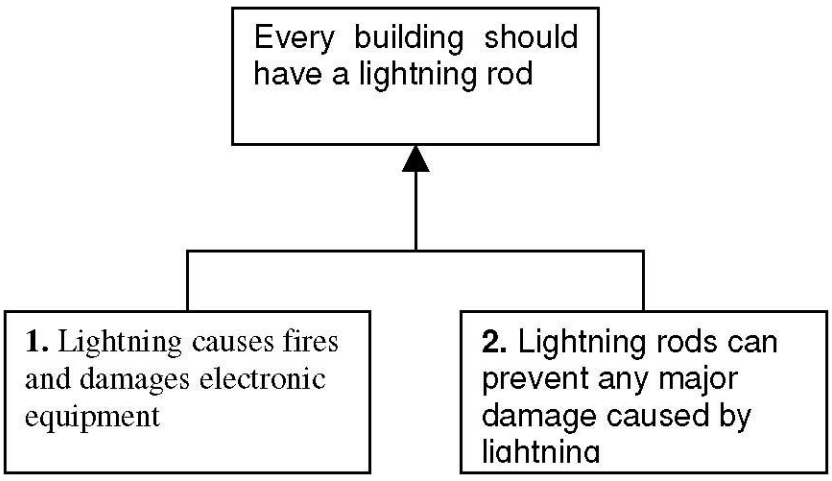
In standard form, we would represent this argument as follows:

1. Lightning causes fires and damages electronic equipment.
2. Lightning rods can prevent any major damage caused by lightning.

**Therefore**:
**C.** Every building should have a lightning rod.

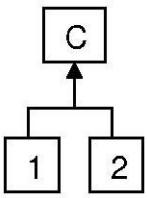
Notice that when putting an argument in standard form, the premises and conclusion are written out as complete sentences. In this example, the conclusion of the original passage was 'every building should have one'. This has been changed in the standard form version to 'every building should have a lightning rod', which is clearly what is meant in the context of the passage.

Another way of representing arguments is to use a 'box and arrow' diagram, or *argument map*. Here we put the conclusion in a box and then put boxes for the premises below it. We represent the support provided by the premises using arrows. Here is the same argument again, represented as an argument map:



Again, the premises have been numbered for ease of reference and all statements are written out in full. The advantage of diagrams like this is that they more clearly reveal the structure of the argument, which is especially important when the argument is more complex than this one. (We will have more to say about the structure of arguments in the next chapter). However, drawing, correcting and modifying diagrams like this can become laborious without the use of special software. An alternative method combines the two formats, like this:

**1.** Lightning causes fires and damages electronic equipment.
**2.** Lightning rods can prevent any major damage caused by lightning.
**Therefore**:
**C.** Every building should have a lightning rod.




Here the argument has been written out in standard form and the premises and conclusion have been labelled. To the right, a little box and arrow diagram is added to portray the structure of the argument. But instead of putting the actual text of the premises and conclusion in the boxes, we just use their labels. Such diagrams are easier to work with because they can be quickly sketched and re-sketched by hand, without having to write out the premises and conclusion each time.

## Further Reading

On identifying and representing arguments, see:

Alec Fisher: *Critical Thinking: an introduction* (2nd edition), Chapter 2

Anne Thomson: *Critical Reasoning: a practical introduction*, pp. 5-16

Jill LeBlanc: *Thinking Clearly*, chapter 1.

# Exercises

## Exercise 1.1 Identifying arguments

For each of the following passages, decide whether the passage contains an argument or not. If the passage does contain an argument, highlight any conclusion indicators and write out the conclusion in full.

For now, do not worry if you think the argument is not a very good one. The point of the exercise is to give you some practice at distinguishing arguments from non-arguments, rather than assessing the quality of arguments.

**1** The water authority is responding to the current drought by restricting residential water use. Yet reservoir levels are now at the same height they were during the drought ten years ago when no restrictions were put into effect and none proved necessary. Therefore, imposing restrictions now is clearly premature.

**2** Traditionally, members of a community such as a town or neighbourhood share a common location and a sense of necessary interdependence that includes, for example, mutual respect and emotional support. But as modern societies grow more technological and sometimes more alienating, people tend to spend less time in the kinds of interactions that their communities require in order to thrive. Meanwhile, technology has made it possible for individuals to interact via personal computer with others who are geographically distant.

**3** Teacher: The best way to learn a foreign language is the way native speakers do -by conversing with someone who speaks the language freely.

**4** The consistency of ice cream is adversely affected by even slight temperature changes in the freezer. To counteract this problem, manufacturers add stabilizers to ice cream. Unfortunately, stabilizers, though inexpensive, adversely affect flavour.

**5** Even if we admit that societies often hold different ethical principles, this does not mean that there are no correct or true principles. To take a parallel case, we know that societies and cultures frequently hold different beliefs about the nature of the world and the things that are in it. This does not mean that the different beliefs are all correct or that the choice among them is arbitrary or due to upbringing.

**6** Newspaper report: Thailand and India have had to fight costly legal battles to protect Thailand's jasmine rice and India's basmati rice because a company in Texas, called Rice Tec, was granted patents in the United States on varieties of rice it claimed to have developed, which closely resembled the Thai and Indian versions.

**7.** Government spokesperson: Though investigations are continuing, the trawler which sank suddenly in relatively calm seas last week probably went down because a submarine fouled its nets and dragged it down.

**8.** All the vegetarians I know don't drink alcohol. So there's no point giving Cecile a bottle of wine for her birthday.

**9.** In 1649, King Charles refused to conciliate with Parliament, and consequently he was overthrown and beheaded.

**10.** Most authoritarian rulers who undertake democratic reforms do so not out of any intrinsic commitment or conversion to democratic ideals, but rather because they foresee or recognize that certain changes and mobilizations in civil society make it impossible for them to hold on indefinitely to absolute power.

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## Exercise 1.2 Standardising arguments

Each of the following passages contains an argument. Identify any conclusion and premise indicators that are used in the arguments and then write out the argument in standard form. Make sure each sentence is written out on a separate line and in full and that the premises are numbered. The conclusion should be labelled with the letter **C** instead of a number.

**1.** Large inequalities in wealth always threaten the viability of true democracy, since wealth is the basis of political power, and true democracy depends on the equal distribution of political power among all citizens.

**2.** There are a growing number of organisations which have been set up to deal with bullying. So bullying must be on the increase.

**3.** If the world's climate was getting warmer, we would find that some of the ice at both the North and South Pole was melting at an unusually high rate. If the ice was melting, we would see its effect in rising sea levels. There is evidence that sea levels are increasing, so the world's climate must be getting warmer.

**4.** When girls are educated in single-sex secondary schools, they tend to do better academically than girls who attend mixed-sex schools. Since Alice achieved higher grades than any other woman in her first year at the university, she was probably educated at a single-sex school.

**5.** Since youngsters who read voraciously are more likely to have defective vision than youngsters who do not read very much, it follows that children who do not like to read usually have perfect vision.

**6.** When children have parents who help them with their homework, they usually do well in school. Therefore, having help with homework is probably the cause of high academic achievement.

**7.** It is often asserted that there are fewer good teachers than there used to be because teachers' salaries have reached a new low. But teachers have always been poorly paid, so low salaries cannot fully explain the perceived decline in the effectiveness of teachers.

**8.** All efforts to identify a single gene responsible for predisposing people to manic-depression have failed. In fact, nearly all researchers now agree that there is no "manic-depression gene." Therefore, any claim that some people are genetically predisposed to manic-depression is simply false.

**9.** Everyone who is a gourmet cook enjoys a wide variety of foods and spices. Since no one who enjoys a wide variety of foods and spices prefers bland foods to all other foods, it follows that anyone who prefers bland foods to all other foods is not a gourmet cook.

**10.** The capture of a wild animal is justified only as a last resort to save that animal's life. But many wild animals are captured not because their lives are in any danger but so that they can be bred in captivity. Hence, many animals that have been captured should not have been captured.