

## Philosophy 105 Notes:

### Week One:

- Cognitive Biases. Some of these obstacles to good logical and critical thinking come in the form of common 'cognitive biases', ways of thinking which lead us astray if we're not careful.
- Confirmation bias. One of the most familiar is confirmation bias: a tendency to prefer evidence that confirms or supports views we already hold.
- Reasoning Heuristics. Some significant obstacles to effective, logical, and critical thinking come in the form of reasoning heuristics. A heuristic is a mental shortcut we use to simplify decision making.
- The availability heuristic. One of the best known is the availability heuristic: We judge the probability of an event by how quickly and easily examples of that event come to mind – by how available they are to us – rather than by identifying the alternatives and working out the real probabilities. Suppose for instance we're asked whether there are more English words that start with the letter 'r' (rotunda, robot, rocks ....) or more that have 'r' as their third letter (terriers, mermaid, border)? Or whether you're more likely to be attacked by a vicious dog or to be injured by your TV set? We tend to answer questions like these by using the availability heuristic. Words that start with the letter 'r' are easier to bring to mind than words that have 'r' as their third letter, so we tend to think that there are more words that start with 'r'. Dog attacks are newsworthy, striking, and frightening, so they make the papers, and they stick in our minds. They're more newsworthy than accidents with furniture, so they're more available to us. It's easy to see why we use the availability heuristic. It seems plausible that more common things will be more available to us. We'll be familiar with them, because we see them frequently, and so we can easily call examples to mind. We might think, then, that availability – the ease with which something comes to mind – reliably indicates the probability that it will occur. A highly probable event, we might suppose, will be more available than a rare event. But that's not always the case. In fact, there are far more English words with 'r' as their third letter than there are words that start with the letter 'r', around 23,000 to 9,000. And in the U.S., at least, for which we have statistics, many more people are injured by falling television sets than by dog attacks. Why does availability mislead us in these cases? It does so because the readiness with which things come to mind is not caused only by commonness or probability. We can think of words which begin with 'r' because we list words that way in the dictionary, and because starting syllables come to mind first. Dog attacks are easy to bring to mind, because they're striking, even if relatively rare. Events which have had a lot of media coverage, plane crashes, wardrobe malfunctions, terrorist or shark attacks are likely to be easy to bring to mind in the days after that coverage, even if they're pretty uncommon. Availability then can be caused by something other than probability.
- The Framing Effect. Here's a third example of a common obstacle to effective logical and critical thinking. The way a question is framed often effects the way people answer, even though the framing is not really relevant to the options: patients offered a drug and told it's a wonderful new treatment, a dramatic improvement over earlier options, which has cured 50% of those who have had it, are more likely to agree to the treatment than those told that, sadly, treatment options are limited and that the best drug available only works 50% of the time. In a study, 40 people were asked about headaches, and a key question was framed differently, as either:  
Do you get headaches frequently? And if so, how often?  
B. Do you get headaches occasionally? And if so, how often?  
People asked question A reported an average of 2.2 headaches a week, while people asked question B reported an average of 0.7. The words "frequently" and "occasionally" framed the questions differently, leading people to report the same experience differently.
- Species of Fallacious Arguments. The common fallacies are usefully divided into three categories:
- Fallacies are patterns of bad reasoning. Fallacies of relevance offer reasons to believe a claim or conclusion that, on examination, turn out to not in fact to be reasons to do any such thing.
  - Fallacies of Unacceptable Premises attempt to introduce premises that, while they may be relevant, don't support the conclusion of the argument.
  - Fallacies. Some arguments are fallacious not because of their content – because of what they say – but because of their form or structure. Any argument with these forms or structures will be invalid, no matter what content we put them in.
- The Red Herring Fallacy is an example of a fallacy of relevance. We see it when someone offering an argument tries to side track an opponent by raising an irrelevant issue and then claims that the original argument has been settled by the irrelevant diversion. Suppose, for instance, that someone offers the following argument against eliminating or reducing the use of pesticides in food production:  
"There is a good deal of talk these days about the need to eliminate pesticides from our fruits and vegetables. But many of these foods are essential to our health. Carrots are an excellent source of vitamin A, broccoli is rich in iron, and oranges and grapefruits have lots of Vitamin C."  
However, plans to eliminate or reduce pesticides probably don't entail stopping the production of common vegetables. The suggestion they do is an irrelevant red herring
- Begging the Question  
Begging the question is an example of a fallacy of unacceptable premises. In philosophy, unlike in many other areas, 'begging the question' does not mean 'raises a question which must be answered'. In philosophy, when someone begs the question, they state or assume as a premise the very thing they are trying to prove as a conclusion. Here's a familiar example:  
Arthur: God exists. Barbara: How do you know? Arthur: Because it says so in the Bible. Barbara: How do you know what the Bible says is true? Arthur: Because the Bible is divinely inspired. Everything it says is true.  
What's wrong with Arthur's argument? Well, he offers the Bible as proof of God's existence and he says that we can rely on the Bible because it's divinely inspired. But the Bible could only be divinely inspired if God existed, so Arthur's appeal to the Bible to prove the existence of God assumes the very thing he's trying to prove: namely that God exists.
- Negativity bias- tendency to see sensational tragedy as more likely than run-of-the-mill tragedy
- Observational selection- tendency to see what you're primed to see.

## Week Two:

- What makes something a statement? Definition: Statements are the kind of sentences that are either true or false. As such, a statement is an assertion that something is or is not the case. A statement is true if what it asserts is the case, and it is false if what it asserts is not the case.
- However, it doesn't make sense to say that the sentence "Welcome to the University of Auckland!" is either true or false. Wouldn't you be puzzled if someone answered "true" in response to such a greeting? It wouldn't be an appropriate answer. And "How can I stop tailgating?" is a question; the sentence doesn't express something that is either true or false.
- In the second list – the list of non-statements, we had questions and commands.
- When someone is trying to get you to believe something, they will express the thing they are trying to get you to believe as a statement. But how do you know if what they are trying to persuade you of is true or false? Unless they just want you to take their word for it without further discussion—and in most contexts you shouldn't do this—they will give you reasons in support of their views. Those reasons will also be expressed as statements. Together, all those statements form what we call an argument. This book is all about developing skills to evaluate whether arguments are good or bad. We will talk about good and bad arguments later. Before that, we need to be clear on what arguments are, and how to recognise them. Definition: An argument is a group of statements some of which, the premises, are offered in support of another statement, the conclusion.
- The standard form of an argument is a way of presenting the argument which makes clear which propositions are premises, how many premises there are and which proposition is the conclusion.
- Notice that in the prose, the conclusion came first, but we always put it last in the standard form. Notice also that we have removed indicator words like "first", "second". In standard form, we want the premises to be written in a clear way, and sometimes this means that we have to remove some words and reformulate statements. You need to do this carefully, to make sure that you don't change the meaning of a premise. Notice also that we always have the word "therefore" in standard form, even if it wasn't explicitly used in the prose.

## Week Three And Four:

- There are two kinds of support that premises can give for a conclusion: deductive and non-deductive. When the premises of an argument, if true, would guarantee the truth of the conclusion, we say that the conclusion follows deductively from the premises. Deductive support is the strongest kind of support that premises can give to a conclusion. When the premises of an argument support the conclusion to some significant degree, but do not support it deductively, we say that they support it non-deductively. In this case, the argument is non-deductive.
- A deductive argument is an argument for which the premises are offered to provide logically conclusive support for its conclusion. If a deductive argument succeeds in providing conclusive support for its conclusion, it would be impossible for the premises to be true and the conclusion false. The kind of support intended in deductive arguments is infallible, inevitable, necessary, "bomb-proof"...
- A non-deductive argument is an argument for which the premises are offered to provide probable – but not conclusive – support for its conclusions. I.e. It's cloudy today, so there's a high probability that it will rain today. To indicate that an argument is non-deductive in standard form we write "Therefore, probably".
- A valid argument is a deductive argument that succeeds in providing decisive logical support. A valid argument is thus a deductive argument – an argument that attempts to establish conclusive logical support for its conclusion – that succeeds in doing this. True premise true conclusion.
- An invalid argument is a deductive argument that fails in providing conclusive logical support. For deductive arguments you answer "yes" to the question "Do the premises provide enough logical support for the conclusion?" if the argument is valid, and you answer "no" otherwise. True premise false conclusion.
- A strong argument is a non-deductive argument that succeeds in providing probable, but not conclusive, logical support for its conclusion. A weak argument is a non-deductive argument that fails to provide probable support for its conclusion. Unlike validity strength is a matter of degree. If an argument is weak, you'd be better off throwing a coin to know if the conclusion is true, and that's far from succeeding in providing reasons for a conclusion. So if the conclusion is unlikely to be true when the premises are true, then the argument is weak; game over. If the conclusion is more likely than not to be true given the premises, then the argument is strong.
- Remember that an argument is valid if it's impossible for the premises to be true and the conclusion false, and it is strong if it's very unlikely that the premises are true and the conclusion false.
- A counter-example to an argument is a situation that shows that the argument can have true premises and a false conclusion. An argument is valid if and only if there are no counter-examples to the argument.
- A sound argument is a deductive argument that has true premises. Firstly, a sound argument is a deductive argument. It's trying to establish conclusive support for its conclusion. Secondly, the argument is valid: the premises, if true, would guarantee that the conclusion is also true. And on top of all that, the premises are actually true. Therefore, a sound argument guarantees that its conclusion is true. We say that a sound argument is a good argument. It is a good argument because it guarantees that the conclusion is true.
- A cogent argument is a strong non-deductive argument that has true premises. And again, we say that cogent arguments are good. A cogent argument is by definition non-deductive, which means that the premises are intended to establish probable (but not conclusive) support for the conclusion. Furthermore, a cogent argument is strong, so the premises, if they were true, would succeed in providing probable support for the conclusion. And finally, the premises are actually true. So the conclusion indeed receives probable support.
- Simply put, the principle of charity tells you to treat other people as intelligent people. If you treat people as being intelligent, you will do a better job at evaluating their arguments. To illustrate the principle of charity, suppose you're given this argument:  
Alex: "The human race has managed to land somebody on Mars and split the atom, therefore, we should be able to do something simpler, like redistribute the world's substantial food supplies so that the poor get plenty." Here is an uncharitable way to evaluate the argument: the first premise is false. We haven't managed to land somebody on Mars. Since it has a false premise, the argument couldn't be either sound nor cogent. So it's a bad argument. Game over. That's uncharitable to Alex, because everybody knows that the human race has managed to land somebody, not on Mars, but on the Moon. Surely Alex also knows that, and must have made a mistake. Instead of dealing with the argument as if it was about Mars, do a charitable interpretation in which you make the simple correction. The principle of charity is important when you have suppressed