

Philosophical Terms and Methods

What Is an Argument?

An **argument** is not the same thing as a quarrel. The goal of an argument is not to attack your opponent, or to impress your audience. The goal of an argument is to offer good **reasons** in support of your **conclusion**, reasons that all parties to your dispute can accept.

Nor is an argument just the denial of what the other person says. Even if what your opponent says is wrong and you know it to be wrong, to resolve your dispute you have to produce arguments. And you haven't yet produced an argument against your opponent until you offer some reasons that *show* him to be wrong.

When you're arguing, you will usually take certain theses for granted (these are the **premises** of your argument) and attempt to show that if one accepts those premises, then one ought also to accept the argument's conclusion.

Here's a sample argument. The **premises** are in red.

1. **No one can receive an NYU degree unless he or she has paid tuition to NYU.**
2. **Shoeless Joe Jackson received an NYU degree.**
3. So, Shoeless Joe Jackson paid tuition to NYU.

In this argument, it is clear what the premises are, and what the conclusion is. Sometimes it will take skill to identify the conclusion and the premises of an argument. You will often have to extract premises and conclusions from more complex and lengthy passages of prose. When you do this, it is helpful to look out for certain key words that serve as indicators or flags for premises or conclusions.

Some common premise-flags are the words **because**, **since**, **given that**, and **for**. These words usually come right before a premise. Here are some examples:

Your car needs a major overhaul, **for** the carburetor is shot.

Given that euthanasia is a common medical practice, the state legislatures ought to legalize it and set up some kind of regulations to prevent abuse.

Because euthanasia is murder, it is always morally

wrong.

We must engage in affirmative action, **because** America is still a racist society.

Since abortion is a hotly contested issue in this country, nobody should force his opinion about it on anyone else.

Some common conclusion-flags are the words **thus, therefore, hence, it follows that, so,** and **consequently**. These words usually come right before a conclusion. Here are some examples:

You need either a new transmission, or a new carburetor, or an entirely new car; **so** you had better start saving your pennies.

Affirmative action violates the rights of white males to a fair shake; **hence** it is unjust.

It is always wrong to kill a human being, and a fetus is undoubtedly a human being. **It follows that** abortion is always wrong.

A woman's right to control what happens to her body always takes precedence over the rights of a fetus. **Consequently**, abortion is always morally permissible.

Euthanasia involves choosing to die rather than to struggle on. **Thus**, euthanasia is a form of giving up, and it is **therefore** cowardly and despicable.

Authors do not always state all the premises of their arguments. Sometimes they just take certain premises for granted. It will take skill to identify these hidden or unspoken premises. We will discuss this more [later](#).

Whether an argument convinces us depends wholly on whether we believe its premises, and whether its conclusion seems to us to follow from those premises. So when we're evaluating an argument, there are two questions to ask:

- i. Are its premises true and worthy of our belief?

and:

- ii. Does its conclusion really follow from the premises?

These are completely independent issues. Whether or not an argument's premises are true is one question; and whether or not its conclusion follows from its premises is another, wholly separate question.

If we *don't accept the premises* of an argument, we don't have to accept its conclusion, no matter how clearly the conclusion follows from the premises. Also, if the argument's conclusion *doesn't follow* from its premises, then we don't have to accept its conclusion in that case, either, even if the premises are obviously true.

So bad arguments come in two kinds. Some are bad because their premises are false; others are bad because their conclusions do not follow from their premises. (Some arguments are bad in both ways.)

If we recognize that an argument is bad, then it loses its power to convince us. That doesn't mean that a bad argument gives us reason to **reject** its conclusion. The bad argument's conclusion *might* after all be true; it's just that the bad argument gives us **no reason to believe** that the conclusion is true.

Let's consider our sample argument again:

1. **No one can receive an NYU degree unless he or she has paid tuition to NYU.**
2. **Shoeless Joe Jackson received an NYU degree.**
3. So, Shoeless Joe Jackson paid tuition to NYU.

In this argument, the conclusion *does* in fact follow from the premises, but at least one of the premises is false. It's not true that one has to pay tuition in order to receive an NYU degree. (NYU gives out a number of honorary degrees every year to people who were never NYU students, and never paid tuition.) Probably the other premise is false, too: as far as I know, Shoeless Joe Jackson did not ever receive an NYU degree.

So this argument does not, by itself, establish that Shoeless Joe Jackson paid tuition to NYU.

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Philosophical Terms and Methods

Vocabulary Describing Arguments

Contents

- [Valid Arguments](#)
 - [Sound Arguments](#)
 - [Persuasive Arguments](#)
 - [Conditionals](#)
 - [Necessary and sufficient conditions](#)
 - [Consistency](#)
-

Most of the arguments philosophers concern themselves with are--or purport to be--**deductive** arguments. Mathematical proofs are a good example of deductive argument.

Most of the arguments we employ in everyday life are not deductive arguments but rather **inductive** arguments. Inductive arguments are arguments which do not attempt to establish a thesis *conclusively*. Rather, they cite evidence which makes the conclusion *somewhat reasonable to believe*. The methods Sherlock Holmes employed to catch criminals (and which Holmes misleadingly called "deduction") were examples of inductive argument. Other examples of inductive argument include: concluding that it won't snow on June 1st this year, because it hasn't snowed on June 1st for any of the last 100 years; concluding that your friend is jealous because that's the best explanation you can come up with of his behavior, and so on.

It's a controversial and difficult question what qualities make an argument a good inductive argument. Fortunately, we don't need to concern ourselves with that question here. In this class, we're concerned only with *deductive* arguments.

Philosophers use the following words to describe the qualities that make an argument a good deductive argument:

Valid Arguments

We call an argument **deductively valid** (or, for short, just "valid") when the conclusion is entailed by, or logically follows from, the premises.

Validity is a property of the argument's *form*. It doesn't matter what the premises and the conclusion actually say. It just matters whether the argument has the right form. So, in particular, a valid argument *need not* have true premises, nor need it have a true conclusion. The following is a valid argument:

1. All cats are reptiles.
2. Bugs Bunny is a cat.
3. So Bugs Bunny is a reptile.

Neither of the premises of this argument is true. Nor is the conclusion. But the premises are of such a form that *if* they were both true, then the conclusion would also have to be true. Hence the argument is valid.

To tell whether an argument is valid, figure out what the *form* of the argument is, and then try to think of some other argument of *that same form* and having true premises but a false conclusion. If you succeed, then every argument of that form must be invalid. A valid form of argument can *never* lead you from true premises to a false conclusion.

For instance, consider the argument:

1. If Socrates was a philosopher, then he wasn't a historian.
2. Socrates wasn't a historian.
3. So Socrates was a philosopher.

This argument is of the form "If P then Q. Q. So P." (If you like, you could say the form is: "If P then not-Q. not-Q. So P." For present purposes, it doesn't matter.) The conclusion of the argument is true. But is it a valid form of argument?

It is not. How can you tell? Because the following argument is of the same form, and it has true premises but a false conclusion:

1. If Socrates was a horse (this corresponds to P), then Socrates was warm-blooded (this corresponds to Q).
2. Socrates was warm-blooded (Q).
3. So Socrates was a horse (P).

Since this second argument has true premises and a false conclusion, it must be invalid. And since the first argument has the same form as the second argument (both are of the form "If P then Q. Q. So P."), both arguments must be invalid.

Here are some more examples of invalid arguments:

The Argument

Its Form

If there is a hedgehog in my gas tank, then my car will not start.

If P then Q.

My car will not start.

Q.

Hence, there must be a hedgehog in my gas tank.

So P.

If I publicly insult my mother-in-law, then my wife will be angry at me.

If P then Q.

I will not insult my mother-in-law.

not-P.

Hence, my wife will never be angry at me.

So not-Q.

Either Athens is in Greece or it is in Turkey.

Either P or Q.

Athens is in Greece.

P.

Therefore, Athens is in Turkey.

So Q.

If I move my knight, Christian will take my knight.

If P then Q.

If I move my queen, Christian will take my knight.

If R then Q.

Therefore, if I move my knight, then I move my queen.

So if P then

R.

Invalid arguments give us no reason to believe their conclusions. **But be careful:** The fact that an argument is invalid doesn't mean that the argument's conclusion is false. The conclusion might be true. It's just that the invalid argument doesn't *give us any good reason to believe* that the conclusion is true.

If you take a class in Formal Logic, you'll study which forms of argument are valid and which are invalid. We won't devote much time to that study in this class. I only want you to learn what the terms "valid" and "invalid" mean, and to be able to recognize a few clear cases of valid and invalid arguments when you see them.

Exercise

For each of the following arguments, determine whether it is valid or invalid. If it's invalid, explain why.

Your high idle is caused either by a problem with the transmission, or by too little oil, or both.
You have too little oil in your car.
Therefore, your transmission is fine.

If the moon is made of green cheese, then cows jump over it.
The moon is made of green cheese.
Therefore, cows jump over the moon.

Either Colonel Mustard or Miss Scarlet is the culprit.
Miss Scarlet is not the culprit.
Hence, Colonel Mustard is the culprit.

All engineers enjoy ballet.
Therefore, some males enjoy ballet.

Sometimes an author will not explicitly state all the premises of his argument. This will render his argument invalid as it is written. In such cases we can often "fix up" the argument by supplying the missing premise, assuming that the author meant it all along. For instance, as it stands, the argument:

1. All engineers enjoy ballet.
2. Therefore, some males enjoy ballet.

is invalid. But it's clear how to fix it up. We just need to supply *the hidden premise*:

1. All engineers enjoy ballet.
2. Some engineers are male.
3. Therefore, some males enjoy ballet.

You should become adept at filling in such missing premises, so that you can see the underlying form of an argument more clearly.

Exercise

Try to supply the missing premises in the following arguments:

If you keep driving your car with a faulty carburetor, it will eventually explode.
Therefore, if you keep driving your car with a faulty carburetor, you will eventually get hurt.

Abortion is morally wrong.
 Abortion is not a constitutional right.
 Therefore, abortion ought to be against the law.

Sometimes a premise is left out because it is taken to be obvious, as in the engineer argument, and in the exploding car argument. But sometimes the missing premise is very contentious, as in the abortion argument.

Sound Arguments

An argument is **sound** just in case it's valid *and* all its premises are true.

The argument:

1. If the moon is made of green cheese, then cows jump over it.
2. The moon is made of green cheese.
3. Therefore, cows jump over the moon.

is an example of a valid argument which is not sound.

We said above that a valid argument can never take you from true premises to a false conclusion. So, if you have a sound argument for a given conclusion, then, since the argument has true premises, and since the argument is valid, and valid arguments can never take you from true premises to a false conclusion, the argument's conclusion *must* be true. Sound arguments always have true conclusions.

This means that if you read Philosopher X's argument and you disagree with his conclusion, then you're committed to the claim that his argument is unsound. Either X's conclusion does not actually follow from his premises--there is a problem with his reasoning or logic--or at least one of X's premises is false.

When you're doing philosophy, it is never enough simply to say that you disagree with someone's conclusion, or that his conclusion is wrong. If your opponent's conclusion is wrong, then there must be something wrong with his argument, and you need to say what it is.

Exercise

Here are some sample arguments. Can you tell which ones are valid and which of the valid arguments are also sound? (There are 5 valid arguments and 2 sound arguments.)

I. If Socrates is a man, then Socrates is mortal.
Socrates is a man. So, Socrates is mortal.

II. If Socrates is a horse, then Socrates is mortal.
Socrates is a horse. So, Socrates is mortal.

III. If Socrates is a horse, then Socrates has four legs.
Socrates is a horse. So, Socrates has four legs.

IV. If Socrates is a horse, then Socrates has four legs.
Socrates doesn't have four legs. So, Socrates is not a horse.

V. If Socrates is a man, then he's a mammal. Socrates is not a mammal. So Socrates is not a man.

VI. If Socrates is a horse, then he's warm-blooded.
Socrates is warm-blooded. So Socrates is a horse.

VII. If Socrates was a philosopher then he wasn't a historian.
Socrates wasn't a historian. So, Socrates was a philosopher.

Persuasive Arguments

Unfortunately, merely having a sound argument is not yet enough to have the persuasive force of reason on your side. For it might be that your premises *are* true, but it's *hard to recognize* that they're true.

Consider the following two arguments:

Argument A

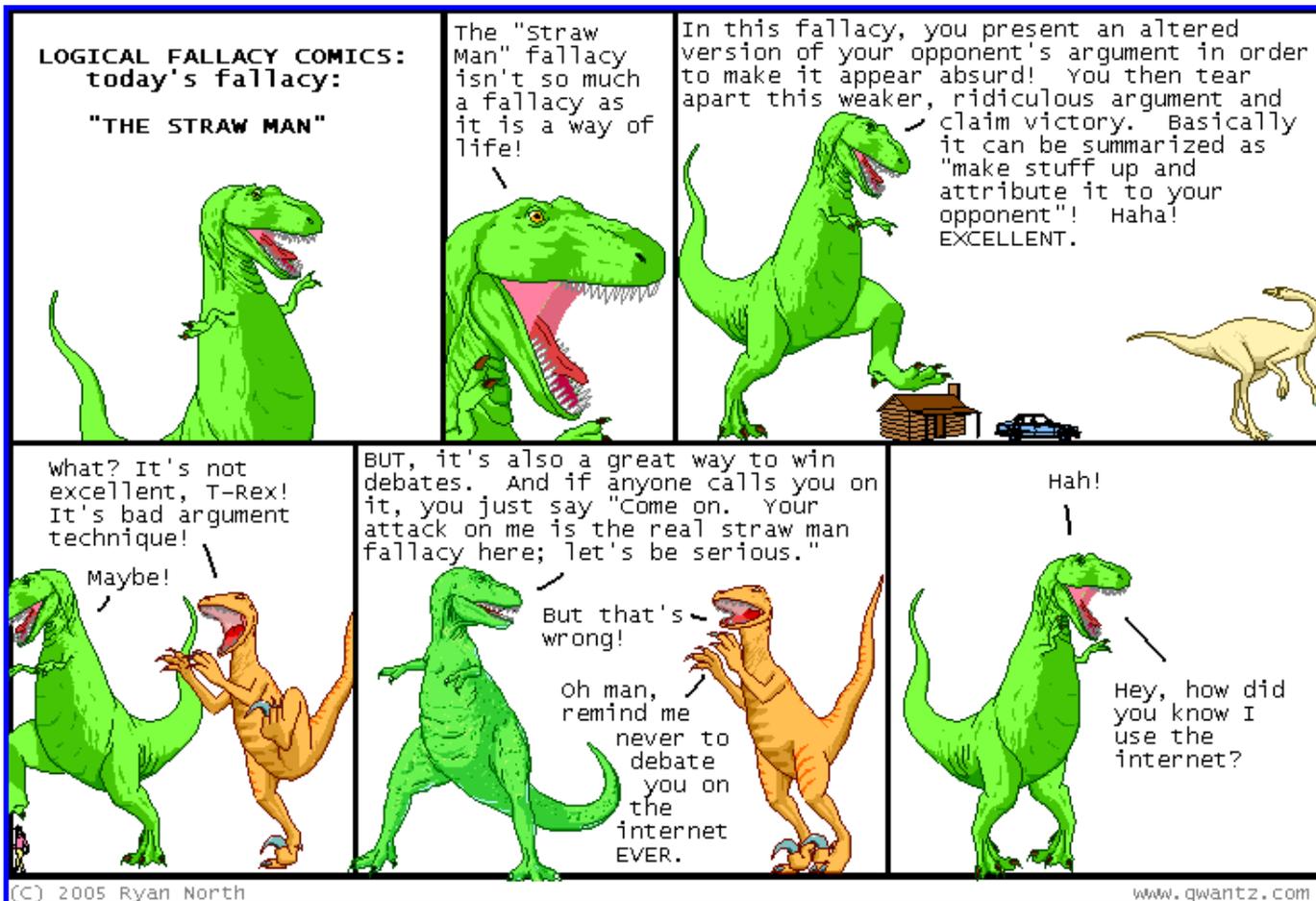
1. **Either God exists, or $2+2=5$.**
2. **$2+2$ does not equal 5.**
3. So God exists.

Argument B

1. **Either God does not exist, or $2+2=5$.**
2. **$2+2$ does not equal 5.**
3. So God does not exist.

Both of these arguments have the form "P or Q. not-Q. So P." That's a valid form of argument. So both of these arguments are valid. What's more, at least one of the arguments is sound. If God exists, then all the premises of Argument A are true, and since Argument A is valid, it must also be sound. If God does not exist, then all the premises of Argument B are true, and since Argument B is valid, it must also be sound. Either way, one of the arguments is sound. But we can't tell *which* of these arguments is sound and which is not. Hence neither argument is very **persuasive**.

In



general, when you're engaging in philosophical debate, you don't just want valid arguments from

premises that happen to be true. You want valid arguments from premises that are *recognizable* as true, or already accepted as true, by all parties to your debate.

Hence, we can introduce a third notion:

A **persuasive** argument is a valid argument with plausible, or obviously true, or antecedently accepted premises.

These are the sorts of arguments you should try to offer.

Conditionals

A claim of the form "If P then Q" is known as a **conditional**. P is called the **antecedent** of the conditional, and Q is called the **consequent** of the conditional.

In this class, you can take all of the following to be variant ways of saying the same thing:

- If P then Q
- P implies Q
- $P \rightarrow Q$
- P is sufficient (or: a **sufficient condition**) for Q
- If you've got P you must have Q
- A **necessary condition** for having P is that you have Q
- Q is necessary for having P
- It's only the case that P if it's also the case that Q
- P only if Q

Note the terms **sufficient condition** and **necessary condition**.

To say that one fact is a sufficient condition for a second fact means that, so long as the first fact obtains, that's enough to guarantee that the second fact obtains, too. For example, if you have ten children, that is sufficient for you to be a parent.

To say that one fact is a necessary condition for a second fact means that, in order for the second fact to be true, it's required that the first fact also be true. For example, in order for you to be a father, it's necessary that you be male. You can't be a father unless you're male. So being male is a necessary condition for being a father.

When P entails Q, then P is a sufficient condition for Q (if P is true, that guarantees that Q is true, too); and Q is a necessary condition for P (in order for P to be true, Q also has to be true).

Exercise

Consider the following pairs and say whether one provides sufficient and/or necessary conditions for the other.

1. a valid argument, a sound argument

2. knowing that it will rain, believing that it will rain

Now, just because P entails Q, it doesn't follow that Q entails P. However, sometimes it's *both* the case that P entails Q *and* also the case that Q entails P. When so, we write it as follows (again, all of these are variant ways of saying the same thing):

- P if and only if Q
- P iff Q
- P just in case Q
- $P \leftrightarrow Q$
- if P then Q, and if Q then P
- P is both sufficient and necessary for Q
- P is a necessary and sufficient condition for Q

For example, being a male parent is both necessary and sufficient for being a father. If you're a father, it's required that you be a male parent. And if you're a male parent, that suffices for you to be father. So we can say that someone is a father if and only if he's a male parent.

Consistency

When a set of propositions cannot all be simultaneously true, we say that the propositions are **inconsistent**. Here is an example of two inconsistent propositions:

1. Oswald acted alone when he shot Kennedy.
2. Oswald did not act alone when he shot Kennedy.

When a set of propositions is *not* inconsistent, then they're **consistent**. Note that consistency is no guarantee of truth. It's possible for a set of propositions to be consistent, and yet for some or all of them to be false.

Sometimes we say that a proposition P is **incompatible** with another proposition Q. This is just another way of saying that the two propositions are inconsistent with each other.

A **contradiction** is a proposition that's inconsistent with itself, like "P and not-P."

Sometimes it's tricky to see that a set of propositions is inconsistent, or to determine which of them you ought to give up. For instance, the following three propositions all seem somewhat plausible, yet they cannot all three be true, for they're inconsistent with each other:

1. If a person promises to do something, then he's obliged to do it.
2. No one is obliged to do things which it's impossible for him to do.
3. People sometimes promise to do things it's impossible for them to do.

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Philosophical Terms and Methods

Some Good and Bad Forms of Argument

reductio ad absurdum

The following is a valid form of argument: "If P, then Q. But not-Q. So not-P."

Some students initially have difficulty understanding why this is a valid form of argument. Think of it this way: We know that if P, then Q. Now *suppose for the sake of argument* that P is true. Then Q would have to be true, too, right? Since if P, then Q. But we know that Q is not true!--this is one of our premises. So *our supposition that P is true must be wrong*: it leads us to something that we know is false. That is, it must be the case that not-P.

This kind of reasoning is known as *reductio ad absurdum*: you accept some hypothesis for the sake of argument, and then you show that the hypothesis leads to a contradiction, or to some other conclusion you know independently to be false. Hence the hypothesis can't be true. It has to be rejected.

It can be disorienting when you come across a philosopher employing a *reductio*, if you misunderstand him as actually subscribing to the contradiction he derives. You have to recognize that the philosopher who offers a *reductio* does *not* endorse the contradiction himself. He's arguing that the contradiction is something that follows from *his opponent's* view.

Here's an example of a *reductio*:

A computer scientist announces that he's constructed a computer program that can play the perfect game of chess: he claims that this program is guaranteed to win every game it plays, whether it plays black or white, with never a loss or a draw, and against any opponent whatsoever. The computer scientist claims to have a mathematical proof that his program will always win, but the proof runs to 500 pages of dense mathematical symbols, and no one has yet been able to verify it. Still, the program has just played 20 games against Gary Kasparov and it won every game, 10 as white and 10 as black. Should you believe the computer scientist's claim that the program is so designed that it will always win against every opponent?

No. Here's why: *Suppose for the sake of argument* that a perfect chess program that always wins were possible. Then we could program two computers with that program and have them play each other. By hypothesis, the program is supposed to win every game it plays, no matter who the opponent is, and no matter whether it plays white or black. So when the program plays itself, both sides would have to win. But that's impossible! In no chess game can both white and black be winners. So *the supposition that a perfect chess program is possible leads to an absurd result*. So that supposition must be false. A perfect chess program with the abilities the computer scientist claims must not be possible.

This is a *reductio*. We assumed some hypothesis for the sake of argument and showed that it leads to an absurd result. Hence the hypothesis must be false.

Equivocation

An equivocation is a bad form of argument where one of the key terms can be understood in two ways, and the plausibility of the argument depends on reading the term differently in different premises. For instance, consider the argument:

1. All politicians are snakes.
2. No snake has legs.
3. So no politician has legs.

There's a metaphorical sense of the word "snake" in which premise 1 might have some plausibility. But for premise 2 to be plausible, we have to understand the word "snake" there in its literal sense. There's no single sense of the word "snake" which makes both premises plausible. So this argument does not establish its conclusion: it **equivocates** on the word "snake."

Here are some trickier examples of equivocation:

Nature is governed by fixed and unchangeable *laws*.
But every *law* is the work of some legislator.
Therefore, there is some legislator responsible for
the governing of Nature.

It's impossible for two objects to be separated by a vacuum. For if a vacuum is to separate them then *nothing* can be between them. But if *nothing* is

between them, then they obviously aren't separated.

That dog over there is a father. In addition, that dog over there is yours. So that dog must be your father.

Begging the question



This does *not* mean "prompting or inviting the question," though you'll sometimes see people (even prominent journalists) misusing the expression that way.

To beg the question is to assume the very point at issue in attempting to argue for it. This is also sometimes called "circular reasoning." Here is an example of an argument which begs the question:

We know that God exists, because it says so in the Bible. And we can trust the Bible on this matter because it's the Word of God, and so must be correct.

This argument begs the question because one of its premises says that the Bible is the Word of God. Presumably, one would only accept this premise if one already believed that God exists. But that's

precisely what we're supposed to be arguing for!

A good rule of thumb is the following: if an argument contains a premise or step that would not be accepted by a reasonable person who is initially prone to doubt the argument's conclusion, then the argument begs the question.

We will seldom see obvious cases of begging the question in our readings. It's the unobvious cases of begging the question which are really dangerous, because they're so hard to spot.

Issues about the Burden of Proof

If no positive argument has been given for a claim P , then the following line of reasoning is fallacious:

[BAD] P has not been shown to be false. So it must be true.

If however, P is some claim which *seems intuitively to be true*, or if in our dispute or investigation *there is some presumption that P is true*, then anyone who seeks to prove not- P bears what we call **the burden of proof**. If he doesn't succeed in proving not- P --if we can show that his arguments that not- P are no good--then we're entitled to go on believing P .

In such a case, we're legitimately reasoning as follows:

[OK] There is some presumption that P is true. And P has not been shown to be false. So we can reasonably continue to accept P .

Of course, this isn't a deductive argument that P . There might be some reason why P is in fact false--we just haven't thought of it yet.

Here's an example of this sort of argument:

The CIA carefully scrutinized Margaret Thatcher for years, and never found her guilty of any terrorist activities or conspiracies. Nor is she known to associate with any terrorist organizations. Hence, until we acquire evidence to the contrary, we can reasonably accept that Margaret Thatcher is not a terrorist.

There is some presumption that Margaret Thatcher is *not* a terrorist. So unless a convincing proof that she is a terrorist turns up, it's reasonable to believe that she's not a terrorist. The burden of proof

is on the person who wants us to believe that she is a terrorist.

As you can imagine, philosophers often seek to establish that it's their opponents, and not they themselves, who bear the burden of proof.

Where the burden of proof lies will sometimes depend on the dialectical situation. For example, contrast these two situations:

- i. Eric is a committed believer in God who is trying to convince Matt that God exists. Matt is not convinced by Eric's arguments, and raises many doubts, which Eric attempts to answer. Matt is not an atheist. He is agnostic. Here Eric has the burden of proof. Matt only needs to examine and criticize Eric's arguments. He is not obliged to argue that God does not exist.
- ii. Karl is a committed atheist, who is arguing that God does not exist. Eric is a committed believer in God and he is trying to convince Karl that God does exist. Each person is trying to refute the other. Here *both* philosophers have the burden of establishing their position.

Arguments by Analogy

These sorts of arguments often raise issues about the burden of proof, because they are hostage to the discovery of unnoticed disanalogies. For example, here's a common argument against the death penalty. Suppose Lefty argues:

Imposing the death penalty for murder is hypocritical and *inconsistent*. You only punish people for murder because you believe killing to be wrong. But then the death penalty itself must be wrong, because it too involves killing someone. And two wrongs don't make a right. So imposing the death penalty is just as bad as killing someone in cold blood.

Lefty is trying to convince us that we have to take the same view of murder and of capital punishment, else we're being inconsistent.

Now suppose Righty comes along, and criticizes Lefty's argument as follows:

You say capital punishment is supposed to be analogous to murder. Well, then, you should also count other activities committed by the state as analogous to those same activities when committed by criminals. In particular, since kidnapping--confining someone against their will--is wrong when

committed by criminals, so too must it be wrong for the state to confine people against their will (in jails). Hence, if your argument that capital punishment is inconsistent is successful, then by the same reasoning, it would also be inconsistent to jail kidnappers. That is clearly an unacceptable result. So there must be something wrong with your analogy. Murder and capital punishment are similar in some respects. But there are important differences between them, too. And these differences are morally important.

Of course, Righty hasn't established here that the death penalty *is morally acceptable*; he's only criticized *Lefty's argument* that the death penalty is unacceptable. There might be other arguments against the death penalty, which are better than Lefty's.

In this exchange, we've seen an example of **shifting the burden of proof**. Lefty pointed out an analogy between murder and capital punishment and urged that they be regarded similarly. This puts the burden of proof on Righty, who wishes to regard the cases differently: Righty has to find some disanalogy, or to argue that the cases aren't genuinely analogous.

In our exchange, Righty argues that if Lefty's analogy were good, then so too should a second analogy be good, but the second analogy leads to clearly absurd results. So Righty concludes that the original analogy must be bad too.

This shifts the burden of proof back on Lefty, who has to argue that the cases really are analogous after all.

False Dilemmas

A **dilemma** is a form of reasoning that presents a choice between two alternatives. Here is an example: "If P then Q. And if R then also Q. But either P or R. So in any event, Q." Dilemmas are perfectly respectable forms of argument.

In an argument of this sort, P and R are called "the horns" of the dilemma. If you want to reject a dilemma, then you have several choices:

- You can "take the dilemma by one of its horns," that is, accept one of the options (P or R) and argue that that option doesn't lead to the consequences your opponent says it leads to. (Or, you might argue that it does lead to those consequences, but that those consequences are not so bad or implausible as your opponent makes them out to be.)
- Alternatively, you can try to "go between the horns of the dilemma," that is, show that the

options you're presented with do not exhaust the relevant possibilities.

A dilemma where the options do not exhaust the relevant possibilities is called a **false dilemma**. Here's an example:

Caliph Omar ordered the destruction of the Library at Alexandria, proclaiming that the books either contained the same doctrines as the Koran, and so were unnecessary, or else they contradicted the Koran, and so were pernicious. In either case, they should be destroyed.

This isn't a good argument that the books should be destroyed, because it hasn't considered all the possibilities: what if the books at Alexandria *talk about different things* than the Koran, and so neither contain the same doctrines nor contradict the Koran?

Here's another example of a false dilemma. Can you explain why?

Should we allow the government to take total control of the software industry, or must we allow companies like Microsoft to be completely free of government regulation?

Further Info

Some more forms of argument are described in [A Philosophical Glossary for Beginners](#), on this same web site.

The following site describes even more forms of bad argument:

- Stephen's Guide to the Logical Fallacies <<http://onegoodmove.org/fallacy/welcome.htm>>

But the kinds of arguments described above are the main ones you'll encounter in philosophical discussion, and they are the only ones you need to familiarize yourself with right now.

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Philosophical Terms and Methods

Analyzing Concepts

An **analysis** is a kind of definition. Distinguish, though, between **stipulative definitions** and **analyses of pre-existing concepts**. A person may stipulate:

In this essay I shall use the word "grog" to mean such-and-such.

As long as such stipulations are clear and consistent and the author consistently holds to them, there is no objection.

If a philosopher asks a question like "What is death?" on the other hand, he's not just after some stipulative answer. He wants to know what death really is. He wants to know what we're thinking and talking about when we think and talk about death. He's seeking an analysis of our pre-existing concept of death.

Thought-Experiments and Counter-Examples

One way we test analyses is by trying to come up with **counter-examples**.

Say for instance that Professor Smith analyzes death as: having the biological processes of your body stop.

To test his analysis, we try to imagine a case where some creature has died but the biological processes of his body continue, or a case where the creature's biological processes have stopped but the creature is not yet dead. To do this is to engage in a **thought-experiment**. A thought-experiment is sort of like *an imaginary test case*. We're trying to see whether we can conceive of some situation that's incompatible with the proposed analysis.

Philosophical thought-experiments often involve pretty far-out science fiction. For instance, this term we'll be discussing brain transplants, teletransportation, and time-travel. Newcomers to philosophy tend to find all this science fiction bewildering. What relevance can science fiction cases have to real life?

To answer this question, you have to understand the nature of philosophical claims and what's required to produce a counter-example to them.

Professor Smith, for instance, is trying to tell us *what death is*. He's not just making a claim about actually existing creatures on the planet Earth, and what happens when they die. He's making a claim which purports to be true of *any imaginable creatures anywhere*, no matter how bizarre and science-fiction-y they may be.

Hence, Professor Smith's claim about what death is seems vulnerable to the following counter-example. Suppose Charles is put into suspended animation, and his body is frozen to near absolute zero. One week later, he is thawed out and revived. Now, during the period where he was frozen, all biological processes in his body had stopped. But it does not seem correct to say that Charles was dead during this period. Hence, Professor Smith's analysis of death is incorrect. Charles' biological processes had stopped but he was not dead.

Perhaps it is not in fact technologically possible to freeze a person and revive him again. This is not important.

Professor Smith's claim purports to be true of any imaginable creatures anywhere. So if it's *possible even in principle* for someone to be frozen, and for his biological processes to stop, without his thereby dying, then Professor Smith's claim is false. This is what our counter-example purports to show.

Several comments:

First, Professor Smith might have given us a perfectly good biological **test** for death: a way of checking whether actual creatures of the sort we're likely to come across have died. It's just not a good *analysis* of death.

In general, we want to distinguish between questions about **what it is** to be X and questions about **how we find out** that something is X. In the same way, defining the difference between two things--say, hydrogen and helium--is different from finding a practical way to tell hydrogen and helium apart.

Second, in offering our counter-example, we appealed to certain **intuitions** about whether Charles had died in the imagined scenario. We often do this in assessing philosophical claims.

It's important to acknowledge that our intuitions aren't sacrosanct. Sometimes they're wrong. For example, modern physics forces us to revise many of our intuitions about time, space, and probability.

So it can sometimes happen that we ought to accept a philosophical claim that conflicts with our intuition, and throw out the intuition. But in general, there is a **presumption** that our pre-philosophical intuitions are true, and we should throw them out only if we have very good reasons for doing so.

Sometimes we can say "Imagine a situation in which..." and go on to describe a situation which is *incoherent* or contradictory or otherwise impossible. For instance, if a philosopher says "Every square has four corners," and you say "Not so! Imagine a round square," you haven't in fact described a coherent possibility, and so you haven't succeeded in offering a genuine counter-example to his claim.

Sometimes it's hard to tell whether you've described a coherent possibility or not. That's a big part of what makes philosophy so difficult.

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Philosophical Terms and Methods

A Philosophical Glossary for Beginners

Ad hoc

You call something *ad hoc* when it's introduced for a particular purpose, instead of for some general, antecedently motivated reason. So, for instance, an *ad hoc* decision is a decision you make when there's no general rule or precedent telling you what to do.

Philosophers sometimes accuse their opponents of making ***ad hoc* hypotheses** (or *ad hoc* stipulations, or *ad hoc* amendments to their analyses, etc.). These are hypotheses (or stipulations or amendments) adopted purely for the purpose of saving a theory from difficulty or refutation, without any independent motivation or rationale. They will usually strike the reader as artificial or "cheating."

For instance, suppose you analyze "bird" as "any creature that can fly." I then cite mosquitos as a counter-example. They can fly, but they aren't birds. Now, you might fix up your analysis as follows:

A bird is any creature that can fly, and which is not a mosquito.

This would be an *ad hoc* response to my counter-example. Alternatively, you might fix up your analysis as follows:

A bird is any creature that can fly, and which has a backbone.

This would be an independently motivated, and more appropriate, response to my counter-example. (Of course, someone may discover counter-examples even to this revised analysis.)

Appeals to authority

In philosophy, there are no real authorities. It is never acceptable to support a position *simply* by pointing out that someone you've read holds it. You can explain why you think Philosopher X's arguments for that position are persuasive, but a mere statement that the renowned Professor X holds a certain position carries no argumentative weight.

Ad hominem

An ***ad hominem* argument** is an argument that attacks a claim on the basis of features of the person who holds it. Two different sorts of argument are called "*ad hominem* arguments." One of these is a fallacious sort of argument; the other is perfectly respectable.

The *fallacious version* is where you criticize someone's views because of logically irrelevant personal defects. For instance:

His views about relationships must be false because he's a philanderer.

or:

His views about politics must be false because he doesn't know what he's talking about.

You should remember that authorities no matter how eminent can be wrong, and that scoundrels and fools--even if they are unjustified in their beliefs--might nonetheless turn out to be right. The *source* of a belief is one thing, and whether there are any

good reasons to hold the view is something else.

The *respectable* argument called an "*ad hominem* argument" consists in objecting to someone's claim on the grounds that it's incompatible with other views he holds--regardless of whether you regard those other views as correct.

For instance, suppose Max says:

The U.S. Postal Service is very unreliable. I think we should allow private, for-profit companies like FedEx and UPS to compete on an equal footing with the Postal Service.

Then Sally objects:

But Max, you are a communist!

Sally is not just calling Max a name. Sally's point is that Max's previous commitments force him to support state control and oppose private enterprise, and these commitments conflict with the view he's advocating now. This is a perfectly legitimate criticism of Max.

Philosophers generally use the phrase "*ad hominem* argument" in the second sense.

ambiguous

In a philosophical discussion, you should call a term "ambiguous" when and only when the expression has more than one acceptable meaning.

For instance, "bank" is ambiguous (river bank, Bank of Boston).

Also, sentences can be ambiguous, as in "Flying planes can be dangerous." Is it the activity of flying which is dangerous, or is it the planes which are dangerous?

Or: "Every child loves a clown." Does this mean there is one lucky clown that all the children love? Or does it mean that for each child, there is a particular clown which he or she loves (but not necessarily the same clown for each child)? Or does it mean that every child is favorably disposed to clowns in general?

You should not call an expression "ambiguous" just because different people have different views or theories about it. Different people have different views about what it means to be good, but that doesn't yet show that the expression "good" is ambiguous. It just shows that there's some controversy over what "good" means.

Nor should you call an expression "ambiguous" just because it's [vague](#), or imprecise, or difficult to know what the correct philosophical theory of it is.

When an argument illegitimately trades on an ambiguity, we say that the argument [equivocates](#).

vague

Philosophers call a term "vague" when there's no sharp borderline between cases where the term applies and cases where it doesn't apply.

So, for instance, it's a vague matter how few hairs on your head makes you *bald*, or how many dollars in your bank account makes you *rich*, or how many grains of sand it takes to make *a heap*.

"Vague" does not mean "[ambiguous](#)." Nor does it mean "unclear" or "difficult to understand." Consider the following sentence:

The point of this essay is to prove that human beings never perceive material objects themselves, but only the *a priori* interface between a phenomenal object and its conceptual content.

This doesn't mean anything. It's just a bunch of words I put together in a way that doesn't make any clear sense. You can call such prose "opaque," or "difficult to understand," or "gibberish." Don't call it "vague."

equivocal

"Philosopher Smith is equivocal here" means that he gives some argument which **equivocates**. It does not mean that he's neutral or agnostic about the matter. Nor does it mean he can't make up his mind. (These might be explanations of *why* he equivocates; but you shouldn't use the phrase "He equivocates" to describe his neutrality or agnosticism or indecision.)

truth and validity

In philosophical discussions, only *arguments* can be **valid**. Not points, objections, beliefs, or claims.

Claims, beliefs, and statements are true or false.

Don't call a claim "valid." Don't call an inference or an argument "true."

falsehood and fallacy

A fallacy is an error in one's inferences or argument. A falsehood is an error in the claims one makes.

Claims, beliefs, and statements are true or false. Only inferences and arguments can be fallacious.

meaningless

Something is meaningless if it is nonsense, like "XH\$%^IE". Don't say that a claim is meaningless if all you mean is that it is false.

logical

In everyday speech, people often use the word "logical" like this: "John's attitude to smoking just isn't logical," or: "Spock is incapable of emotion because he tries to be so logical."

You should not speak this way in philosophical discussions. In philosophy, the word "logic" has a special technical meaning. (If you want to know what it is, you'll have to take some courses in logic.) You should say instead:

John's attitude to smoking is *unreasonable*.

Also, don't say such things as: "That was a logical point," or "That was a logical objection," or "This is a logical argument."

Say instead:

That was a *fair* or *convincing* point.

or:

That is a *reasonable* objection.

or:

This is a *valid* or *persuasive* argument.

refuting and proving

Refuting a claim is showing it to be false--typically by producing reasons that make it clear that it's false. Until you produce reasons, you may *deny* or *reject* the claim, but you won't have refuted it.

In addition, don't say:

Berkeley refutes Locke's claim that there are material objects.

unless you think that Berkeley *has succeeded* in demonstrating that Locke's claim is false. If Berkeley has refuted Locke, then Locke must be wrong. You can't write: "Berkeley refuted Locke's claim, but in fact Locke was right."

If you doubt whether Berkeley's criticisms of Locke are successful, you should say instead:

Berkeley *denies* Locke's claim that...

or:

Berkeley *argues against* Locke's claim that...

or:

Berkeley *rejects* Locke's claim that...

or:

Berkeley *tries to refute* Locke's claim that...

Similarly, you should not say that Locke has *proven* some claim, or shown that something is the case, unless you think that Locke's arguments for his claim are successful. If Locke has proven a claim, then the claim must be true.

If you doubt whether Locke's arguments for a claim are successful, then you should say instead:

Locke *argues* that...

or:

Locke *defends the claim* that...

or:

Locke *tries to prove* that...

or something of that sort.

infer and imply

Inferring is the psychological activity of drawing conclusions from premises. Only people can infer. So don't say:

This argument infers that...

What the argument does is *imply* or *entail* a conclusion. It doesn't infer it.

In addition to arguments implying things, sometimes we talk about *people* implying things. In this usage, implying is an activity, but it's a different activity than inferring. For instance:

Sarah implied that I was a fool.

means that Sarah suggested that I was a fool, without explicitly saying so.

But in the primary usage of these words, *implying* is something premises and arguments do: they imply their conclusions. And *inferring* is something people do. People infer by looking at the evidence and deciding what hypothesis that evidence best supports.

imagine, conceive

To imagine or conceive of some possibility is to form an idea of it, to entertain that possibility in your mind. When you imagine some possibility, you are not committing yourself to the claim that that possibility actually obtains or is likely to obtain.

proposition, concept

A proposition is something that you could hold, or believe, or put forward as a claim. It's capable of being true or false. It's expressed in language by a complete sentence.

A concept is usually expressed in language by a noun phrase, not by a sentence.

So, we have "the concept of electricity," and "The proposition that Socrates was a philosopher."

thought and things

The Charles River and my idea of the Charles River are two very different things. One of them (the river) has existed since before I was born. The other (my idea of the river) has only existed since I first heard about the Charles River.

Nevertheless people often confuse thoughts with things. Don't write like this:

Descartes realizes that even if all things are false, still he is thinking about those things, and if he is thinking about them he must exist.

You should instead say something like this:

Descartes realizes that even if all *his thoughts or beliefs* are false, *thinking falsely* is still a form of thinking, and if he is thinking at all then he must exist.

Foreign Phrases Used in Philosophy

You may come across some of these in the readings. Most of these are from Latin.

e.g.

"for example"

i.e.

"that is"

viz.

"namely"

cf.

"compare," "see"

a fortiori

"even more so," or "all the more so," as in:

If all donkeys bray incessantly, then *a fortiori* all young donkeys bray incessantly.

ceteris paribus

"other things being equal," or "other things happening normally," as in the following dialogue:

Henry: Careful! You almost dropped the vase. If you dropped it, it would shatter, and Mom would kill us.

Lola: It might not have shattered. Maybe a gust of wind would have blown the pillow off the couch just as I dropped it, and it would have landed on the pillow.

Henry: You know what I mean. If you had dropped the vase, then, *if things had otherwise happened normally*, the vase would have hit the ground and shattered.

de facto, de jure

de facto means "in fact," or "as a matter of fact"; *de jure* means "as a matter of law." Examples:

In this town, the clergy have *de facto* immunity to the traffic laws. In the eyes of the law, of course, a speeder is a speeder; but no cop hereabouts would actually give a clergyman a speeding ticket.

The old brigand wielded a *de facto* authority over his pack of thieves--though of course he had no legal authority.

ersatz

"substitute, imitation"

ipso facto

"by that very fact," as in:

Anyone who wears chartreuse socks is *ipso facto* unfit to make fashion decisions.

non sequitur

"it doesn't follow." The premises do not support the conclusion.

pace

"despite what X says," as in:

Pace Freud, it is unusual for young boys to form sexual attachments to their mothers.

per se

"itself," as in:

It's not leisure *per se* which turns the mind to criminal pursuits; but rather the boredom which usually accompanies leisure.

prima facie

"at first glance," as in:

Prima facie, it seems that George will inherit control of most of father's estate; but the will is complicated, and our lawyers are looking into it even as we speak. Perhaps they'll discover some clause that blocks George's inheritance.

simpliciter

"without qualification," as in:

There are good leaders, good businessmen, and good fathers. But is there to be found anywhere in the world a man who is good *simpliciter*?

sui generis

"unique, one of a kind," as in:

Greed is an appetite, like hunger and sexual desire. It's not the same thing as hunger or sexual desire, though. It's *akin* to them, but in other respects it's different. So there are more than just those two sorts of appetite. Greed is a *sui generis* appetite.

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