How to PEE an Argument

'P' stands for 'Present'

Before you can explain or evaluate an argument, you must present it. An argument is a sequence of numbered sentences. The last numbered sentence is called the "conclusion". The other numbered sentences are called the "premises". In an argument, the conclusion is supposed to follow from the premises. Here's an example of an argument:

Cosmological Argument

1. The universe began to exist.

2. Everything that begins to exist has a cause.

3. Therefore, something caused the universe to exist.

In this example, lines 1 and 2 are the premises. Line 3 is the conclusion. You can tell that line 3 is the conclusion because it has the word "Therefore" in it. Clearly the philosopher making this argument believes that line 3 *follows* from lines 1 and 2. They believe that 1 and 2 provide evidence from which we can establish that the universe had a cause.

Whether the Cosmological Argument succeeds in establishing its conclusion is interesting to think about. But when you present an argument, you're not trying to agree or disagree: you're simply trying to understand what the argument is and write it down succinctly and accurately.

Unfortunately, philosophers don't often explicitly tell you what arguments they are making. They usually *hide* their arguments inside of paragraphs. Whenever you read a passage in a philosophy class, your job is to identify the conclusion and then identify the premises. What is the author trying to convince me of? What is their support for the conclusion? When you present an argument, you must write down the argument that's hidden in the passage.

An Example of Presenting

> I believe that philosophy is simply a waste of time. Why? Philosophy will not help you get a job. Just ask my dad. When he hires people to work at his company, he doesn't care whether they can think deeply about ethics, or about political philosophy. Employers don't care if you love wisdom. So what's the point of studying philosophy? You have a limited amount of time in college, and so you shouldn't squander it on classes that won't look good on your resume. If philosophy will not help you get a job, then philosophy is a waste of time. Therefore, philosophy is a waste of time.

There's an argument hidden in this passage. What is it?

Start with the conclusion. What is the author trying to convince you of? Some hints: check the topic sentence; check the last sentence; look for key words like 'Thus', or 'Therefore', or 'In conclusion'.

Then decide what main points the author is making to establish the conclusion. You want the most general evidence. The premises should give just the skeleton of the author's reasoning. Simplify, simplify, simplify. (You will have an opportunity to explain the premises in just a bit.)

Finally, make sure that you format the argument correctly. Do you have numbered lines? Is each line a complete sentence? Is the conclusion stated in the last line? Does the conclusion begin with "Therefore,"?

In this case, the argument in the passage above is best presented as follows:

> *Waste of Time Argument*
>
> 1. Philosophy will not help you get a job.
>
> 2. If philosophy will not help you get a job, then philosophy is a waste of time.
>
> 3. Therefore, philosophy is a waste of time.

The first 'E' stands for 'Explain'

Once you've presented an argument, you need to explain it. An argument is just a summary of the author's reasoning. What support does the author offer for each premise? Each premise is evidence for the conclusion, but what is the *secondary evidence* for each premise?

This is important: we cannot hope to say anything intelligent about an argument unless we understand it. Before we can evaluate what a philosopher is trying to say, we need to explain the details of their argument. (Otherwise we may end up disagreeing with something that *no one* has actually said!)

So when you explain an argument, you are simply going line-by-line and writing as clearly as you can why the author believes premise 1 and then premise 2, and so on (if there are more premises). A *rationale* is an example, reason, or sub-argument that shows why someone would reasonably believe a premise to be true. When you explain an argument, you are giving rationales.

Recall premise 1 of the Cosmological Argument: "The universe began to exist". If you've studied physics—even a little bit—you probably have a grasp about the rationale for this premise. Physicists tell us that before there were stars, planets, and people, there was a tiny little speck. At some point in the very distant past, this speck exploded. Boom! This event is called the Big Bang. The Big Bang provides evidence for believing that the universe began to exist. Before the Big Bang there was nothing (except for a tiny little speck). After the Big Bang, the universe came to exist. This description of the Big Bang provides the rationale for premise 1.

Another important requirement of explaining an argument involves defining any terms that might have a specific meaning according to the author. For example, in the Cosmological Argument, we might suspect that the author has a particular understanding of what a "cause" is. For this reason, it makes sense to treat "cause" as a *technical term*. It is a word that should be defined if we are to really understand what the argument is all about. In this case, a "cause" is an event that is sufficient for and completely determines its effect. When you explain the Cosmological Argument, you need to state that definition.

An Example of Explaining

Here we can simply give the rationales for the premises in the Waste of Time Argument.

> *Waste of Time Argument*
>
> 1. Philosophy will not help you get a job.
>
> 2. If philosophy will not help you get a job, then philosophy is a waste of time.
>
> 3. Therefore, philosophy is a waste of time.

Rationale for Premise 1: The author's dad explains that when he hires people to work at his company, he doesn't care whether they can do philosophy. Thinking deeply about ethics, political philosophy, or any of the other types of philosophy is not a requirement of the job. What employers seem to care about is whether you can perform the skills listed in their job description; they don't really care if you love wisdom. So philosophy will not help you get a job.

Technical Term in Premise 1: "Philosophy" is a technical term. Based on what the author says in this passage, it appears that they would define "philosophy" as the love of wisdom.

Rationale for Premise 2: The author points out that you have a limited amount of time in college. The purpose of college is to take classes that will look good on your resume, so that you can get a job after you graduate. You waste your time by taking classes that won't advance your job prospects. So if philosophy won't help you get a job, then philosophy is a waste of time.

The second 'E' stands for 'Evaluate'

After we know what the author is arguing and what support they are offering, then we can evaluate the argument. We are in a position to decide (1) whether the argument has good reasoning, and (2) whether the premises are true.

Start with the reasoning. An argument is *valid* if the conclusion follows logically from the premises in the following sense: it is im-

possible for the premises to be true and the conclusion false. In a valid argument, the truth of the premises guarantees the truth of the conclusion. The Cosmological Argument is valid because the conclusion cannot fail to be true if the premises are true.

Cosmological Argument

1. The universe began to exist.

2. Everything that begins to exist has a cause.

3. Therefore, something caused the universe to exist.

Think about it: if the universe began to exist, and if every thing that begins to exist has a cause, then the universe must have had a cause. It's logical. Rock-solid reasoning.

You can be certain that an argument is valid if it has a special logical form. Start by comparing the following two arguments:

Argument A

1. The Bible says that God exists.

2. If the Bible says that God exists, then God exists.

3. Therefore, God exists.

Argument B

1. The Bible says that Wakanda exists.

2. If the Bible says that Wakanda exists, then Wakanda exists.

3. Therefore, Wakanda exists.

It may have occurred to you that at least one of these example arguments isn't any good. But they share something in common. Both arguments are valid. Take Argument A. It is impossible to accept both Premise 1 and Premise 2 and reject the conclusion. *If* you believe that the Bible says that God exists, and *if* you believe that whatever the bible says is true, *then* you must believe that God exists. There's no way around it. You can't deny that the argument

has a logical flow. It is impossible for the premises to be true and the conclusion false. Argument B has the same logical flow. In other words, it has the same *form*.

What is the form that Arguments A and B share in common? The logical form of an argument is what you are left with when you take away all of the non-logical vocabulary and just leave in the logical terms. Some logical terms are 'if', 'then', 'not', 'and', and 'therefore'. Replace the repeating sentences or phrases with letters 'P' and 'Q'.

Logical Form of Arguments A and B (Modus Ponens)

1. P

2. If P, then Q.

3. Therefore, Q.

This is a valid argument form. It has a special name: *modus ponens*. No matter what you plug in for 'P' and 'Q' it will be impossible for the premises to be true and for the conclusion to be false. Try it for yourself. Plug anything you want in. Can you imagine a world where *P* is true, *If P, then Q* is true, but *Q* is not? You can't. "If P, then Q" just means that whenever P is true, Q has to be. And the other premise is saying that P is in fact true.

Here's an important fact: an argument can be valid even if it has false premises. Argument B has a valid argument form. But the Bible doesn't mention Wakanda.

When you evaluate an argument, you must first say whether the argument is valid. If it is valid, you should justify that it's valid by telling us what its logical form is. Appendix B contains a list of different logical forms.

Next, when you evaluate an argument, you have to give an objection. An objection is the opposite of a rationale. You must identify the weakest premise (pick just one premise!) and explain why someone might reasonably believe that the premise is false. This is your chance to identify a problem with the author's argument.

For example, premise 1 of the Cosmological Argument has a serious problem. The Big Bang doesn't actually give us reason to believe that the universe had a beginning. Instead, it merely shows us that

the universe has *changed in size*. First the universe was very tiny—contained in a minuscule little speck. Then the universe exploded and stars and planets formed. This doesn't count as a *beginning*, though. It just counts as a change. The universe went from one state to another. Furthermore, many physicists don't believe the Big Bang was the beginning. Some subscribe to a view according to which the universe has existed forever.

An Example of Evaluating

Return to the Waste of Time Argument. The evaluation proceeds as follows:

Waste of Time Argument

1. Philosophy will not help you get a job.

2. If philosophy will not help you get a job, then philosophy is a waste of time.

3. Therefore, philosophy is a waste of time.

The argument is valid. We know it's valid because it's in the form of modus ponens. The weakest premise is premise 2. Just because philosophy won't help you get a job doesn't mean that it's a waste of time. The college experience is an opportunity for students to explore different fields of knowledge—including subjects that are not directly related to their majors. In fact, Springfield College has a general education curriculum under which students have to take a 'Spiritual and Ethical Dimensions' class, and philosophy classes fulfill this general education requirement. Furthermore, learning how to do philosophy is an important life skill that students can use *outside* of their future careers. Even if philosophy will not help you get a job, that doesn't mean it's a waste of time. Premise 2 is false.

That's it. Now you know how to PEE. But see Appendix A for a complete example of all of the steps combined together. See Appendix C for an opportunity to try it out yourself.

Appendix A: Complete Example

Bob Gruber

The Waste of Time Argument

1. Philosophy will not help you get a job.

2. If philosophy will not help you get a job, then philosophy is a waste of time.

3. Therefore, philosophy is a waste of time.

Rationale for Premise 1: The author's dad explains that when he hires people to work at his company, he doesn't care whether they can do philosophy. Thinking deeply about ethics, political philosophy, or any of the other types of philosophy is not a requirement of the job. What employers seem to care about is whether you can perform the skills listed in their job description; they don't really care if you love wisdom. So philosophy will not help you get a job.

Technical Term in Premise 1: "Philosophy" is a technical term. Based on what the author says in this passage, it appears that they would define "philosophy" as the love of wisdom.

Rationale for Premise 2: The author points out that you have a limited amount of time in college. The purpose of college is to take classes that will look good on your resume, so that you can get a job after you graduate. You waste your time by taking classes that won't advance your job prospects. So if philosophy won't help you get a job, then philosophy is a waste of time.

The argument is valid. We know it's valid because it's in the form of modus ponens. The weakest premise is premise 2. Just because philosophy won't help you get a job doesn't mean that it's a waste of time. The college experience is an opportunity for students to explore different fields of knowledge—including subjects that are not directly related to their majors. In fact, Springfield College has a general education curriculum under which students have to take a 'Spiritual and Ethical Dimensions' class, and philosophy classes fulfill this general education requirement. Furthermore, learning how to do philosophy is an important life skill that students can

use *outside* of their future careers. Even if philosopy will not help you get a job, that doesn't mean it's a waste of time. Premise 2 is false.

Appendix B: Some Logical Forms

Modus Ponens

1. P
2. If P, then Q.
3. Therefore, Q.

Multiple Modus Ponens

1. P
2. If P, then Q.
3. If Q, then R.
4. Therefore, R.

Modus Tollens

1. If P, then Q.
2. Not Q.
3. Therefore, not P.

Hypothetical Syllogism

1. If P, then Q.
2. If Q, then R.
3. Therefore, if P, then R.

Disjunctive Syllogism

1. P or Q.
2. Not P.
3. Therefore, Q.

Or-Out

1. P or Q.

2. If P, then R.

3. If Q, then R.

4. Therefore, R.

Appendix C: You Try

I have already presented and partially explained and evaluated the Cosmological Argument.

> *Cosmological Argument*
>
> 1. The universe began to exist.
>
> 2. Everything that begins to exist has a cause.
>
> 3. Therefore, something caused the universe to exist.

See if you can completely PEE this argument. Explain the rationales for both premises; define all the technical terms; come up with a different objecion in your evaluation.

Appendix D: Another Exercise

The following passage contains an argument. First, present the argument using numbered lines. Then, after you have presented the argument, each premise needs a rationale. Explain completely why someone might reasonably believe each premise to be true. Also, define any technical terms that appear in the argument or in your rationales. Finally, you must evaluate the argument. Say whether the argument is valid, and tell me what the form is. Then tell me what the weakest premise is, and completely explain an objection to the premise.

> Life is meaningless, and it's easy to see why. The universe is enormous. There are more stars in the universe than you can see in the night sky. Most of these stars have planets, all orbiting their suns just as Earth orbits ours. If the universe is enormous, then that makes human beings insignificant. Given the sheer size of the universe, don't think for a second that humans are important in the overall scheme of things! Of course, an insignificant existence is a meaningless one. If each human life is just an insignificant blip, then no life can ultimately amount to anything. There's simply no way to derive meaning from a pointless and insignificant existence. So I must accept a depressing conclusion: life is meaningless.

Example PEE: Epicurus's Argument

Instructions

The following passage contains an argument. First, present the argument using numbered lines. Then, after you have presented the argument, each premise needs a rationale. Explain completely why someone might reasonably believe each premise to be true. Also, define any technical terms that appear in the argument or in your rationales. Finally, you must evaluate the argument. Say whether the argument is valid, and tell me what the form is. Then tell me what the weakest premise is, and completely explain an objection to the premise.

> "Become accustomed to the belief that death is nothing to us. For all good and evil consists in sensation, but death is deprivation of sensation...So death, the most terrifying of ills, is nothing to us, since so long as we exist death is not with us; but when death comes, then we do not exist. It does not then concern either the living or the dead, since the former it is not, and the latter are no more...The wise man neither seeks to escape life nor fears the cessation of life, for neither does life offend him nor does the absence of life seem to be any evil..." – *Epicurus, excerpt from his 'Letter to Monoeceus'*