

How to Construct a Valid Main Argument

1. State your (tentative) conclusion.

Let's assume that you have chosen your topic and you have a sense of your position on it (though it can be refined as you develop your argument). Suppose, for example, that your topic is the use of elephants in circuses, and suppose you think that it is wrong. This (or some version of it) will be the conclusion of your argument.

We just need the premises to get to it. Here is where our argument stands:

P1: ?

P2: ?

C: It is wrong to use elephants in circuses.

2. Ask yourself *why* it is true. List that reason as a premise.

Next, ask yourself *why* it is wrong? It would not be a bad idea to do a little research at this point so that your reason is more informed. In our example, it might be that the elephants have to live their lives in confinement. This reason is a premise:

P1: Putting elephants in circuses requires them to live their lives in confinement.

C: Therefore, putting elephants in circuses is wrong.

3. Find another premise that links the premise to the conclusion.

We now need another premise to link the premises to the conclusion. In general, if your conclusion has this form:

P1: X is A

P2: ?

C: X is B

Then the simplest premise to add to make it valid is "All As are Bs."

Alternatively, if the argument has the form

P1: X is A

P2: ?

C: X is not B

Then the simplest missing premise is "No As are Bs."

4. Determine if the added premise is *true*. If it has exceptions then you will need to modify it so that it is true.

The simplest missing premise is not always the best one, but it is a good place to start. In our example, the simplest missing premise would be "Anything that requires elephants to live their lives in confinement is wrong." We now ask: Is this premise true? If so then your argument may be sound. Here it is:

P1: Putting elephants in circuses requires them to live their lives in confinement.

P2: Anything that requires elephants to live their lives in confinement is wrong.

C: Therefore, putting elephants in circuses is wrong.

However, in many cases, the universal statement “All As are Bs” is too general, and it has many exceptions. These exceptions may mean that the statement is false, so the argument would be unsound.

To fix it, it will not do simply to put in the word “usually.” The reason is that it will make the argument invalid. Suppose you put it in the premise, then we have to put it in the conclusion too:

P1: X is A

P2: As are *usually* B

C: X is *usually* B

The trouble is that the argument is still **invalid**. How do we know that the X is not one of the types of As that are *not* B? Here would be an example to show why it is invalid:

P1: People from Hungary are human.

P2: Humans do not usually speak Hungarian.

C: People from Hungary do not usually speak Hungarian.

That shows that the form is not valid. To avoid this problem, we may need something more specific than adding ‘usually.’ We have to figure out a *principle* that explains those circumstances in which the statement is true.

In our example, the premise “Anything that requires elephants to live their lives in confinement is wrong” would imply that zoos are wrong as well. Perhaps you feel that zoos *are* wrong as well. In that case you can stick with the premise as is and defend it against that potential objection. Another possibility is that you think that zoos are not wrong, but then you will have to come up with a difference between zoos and circuses that makes one acceptable but not the other.

One possible difference is that circuses require ‘extreme’ confinement because circus elephants spend the majority of their lives on a tiny chain, whereas good zoos give them more room to roam. In that case, you could change your premise to this one:

P1: Putting elephants in circuses requires them to live their lives in *extreme* confinement.

However, if we modify that premise alone, then the argument will be invalid because that premise no longer matches the second premise, which brings us to our next step:

5. Modify the other premises so that the wording matches the modification so that your argument is valid again.

In this case, a simple modification of P2, to match the change in P1 will do the trick:

P2: Anything that requires elephants to live their lives in *extreme* confinement is wrong.

C: Therefore, putting elephants in circuses is wrong.

Notice that the word ‘extreme’ has to be placed in *both* premises so that they match and lead logically to the conclusion. Premises of valid arguments form links in a chain that lead logically to the conclusion.

If you have a premise that says that X is A, B, and C, and you want that X is D, then you need a premise that links the exact wording of A, B, and C to D, as follows:

P1: X is A, B, and C
P2: Anything that is A, B, and C is D
C: Therefore, X is D

In this way, the link of the chain is solid, linked by the logical form of the argument.

There is yet another way to change the argument so that it is valid. Another possible difference between circuses and zoos is that you may feel that zoos serve an important purpose, whereas circuses do not. If that is the case, then your change to the moral premise might look like this:

P1: Putting elephants in circuses requires them to live their lives in confinement.
P2: Anything that requires elephants to live their lives in confinement is wrong unless it serves an important purpose.
C: Therefore, putting elephants in circuses is wrong.

This argument, however, is **invalid**. Do you see why?

6. Add any premises necessary to get logically to the conclusion in the new version.

We need another premise. We don't know that the conclusion is true unless we know that circuses do not serve an important purpose. Here would be the new argument:

P1: Putting elephants in circuses requires them to live their lives in confinement.
P2: Anything that requires elephants to live their lives in confinement is wrong unless it serves an important purpose.
P3: Putting elephants in circuses do not serve an important purpose.
C: Therefore, putting elephants in circuses is wrong.

7. Determine if all of the premises are true and if the argument is valid.

Are you satisfied with the argument? Carefully double check its validity and the truth of each premise. If there is a possible way to make the premises true and the conclusion false, then the argument is *invalid*. Return to step 3 and repeat the process. If there is a premise that is not quite true then the argument, even if valid, is *unsound*. Return to step 4 and repeat the process. This process can take quite a bit of versions to get an argument just right.

8. Consider possible objections to your argument and possible ways to strengthen it.

In our case, for example, the phrase "important purpose" is vague. One might consider the role of elephants in circuses to be an important purpose. This does not mean that our idea was wrong, only that it may need to be revised further.

Perhaps what the argument really meant is that the degree of suffering of the severely confined elephants is not justified by the added degree of pleasure to circus goers of seeing elephants there. This insight could be incorporated into the argument. An improved version of the argument then might look like this:

P1: Putting elephants in circuses requires them to live their lives in confinement.

P2: Anything that requires elephants to live their lives in confinement is wrong unless it serves a purpose that outweighs the suffering involved.

P3: Putting elephants in circuses do not serve a purpose that outweighs the suffering involved.

C: Therefore, putting elephants in circuses is wrong.

One could even go further and wonder why the argument is limited to elephants. Perhaps one could say the same about certain other species of animals as well. If one wanted to strengthen the argument, the premise 2 could be modified to include a broader class of 'highly intelligent animals', as follows:

P1: Putting elephants in circuses requires them to live their lives in confinement.

P2: Anything that requires highly intelligent animals to live their lives in confinement is wrong unless it serves a purpose that outweighs the suffering involved.

P3: Putting elephants in circuses do not serve a purpose that outweighs the suffering involved in their lives of confinement.

C: Therefore, putting elephants in circuses is wrong.

9. Triple check the soundness of the argument, and repeat the steps as many times as necessary to get it just right.

In this case, though premise 2 is stronger (entailing similar conclusions about dolphins, orcas, chimpanzees, and perhaps other types of animals as well), the argument has become technically **invalid**. Do you see why? To make it valid again, we simply need a new premise to connect the wording "highly intelligent" to elephants, resulting in:

P1: Putting elephants in circuses requires them to live their lives in confinement.

P2: Anything that requires highly intelligent animals to live their lives in confinement is wrong unless it serves a purpose that outweighs the suffering involved.

P3: Putting elephants in circuses do not serve a purpose that outweighs the suffering involved.

P4: Elephants are highly intelligent animals.

C: Therefore, putting elephants in circuses is wrong.

Perhaps the reader finds this to be an acceptable argument for use in paper. However, there will still be people who disagree. Think about some ways in which people might disagree and see if the argument can be further strengthened (while remaining logically valid). It is a very challenging process, but it is one that at the end can actually make you smarter!

Summary of the Steps

In summary, here are the steps to follow:

1. State your (tentative) conclusion.
2. Ask yourself *why* it is true. List that reason as a premise.
3. Find another premise that links the premise to the conclusion. Hint: If your premise is "X is A", and your conclusion is "X is wrong" then you could use "All As are wrong."
4. Determine if the added premise is *true*. If it has exceptions then you will need to modify it so that it is true. Hint: Do not merely add a word like "usually," but try to determine the *principle* that makes a difference between the cases that are wrong and that are not wrong (or whatever word you are employing). Add this principle to the premise so that it is true.

5. Modify the other premises so that the wording matches the modification (e.g. adding the word 'extreme' in the above example) of the moral premise and so that your argument is valid again.
6. Add any premises necessary to get logically to the conclusion in the new version (e.g. adding the premise that circuses don't serve an important purpose in the above example).
7. Determine if all of the premises are true and if the argument is valid. If not then return to step four and repeat the process until it is valid and has all true premises (true as far as you can tell).
8. Consider possible objections to your argument and possible ways to strengthen it. If you can make your argument stronger, while remaining sound then go for it. You are done (for now) when you have an argument that says what you want it to say, and has all true premises, and has a logically valid form of reasoning. Great work; you should feel smarter!
9. Triple check the soundness of the argument, and repeat the steps as many times as necessary to get it just right.

Note: This is not the *only* way to create valid arguments, however, this process is very effective for creating valid arguments with normative conclusions. For further instruction, see the supplemental document: Principles of valid arguments.

Examples:

Finally, here are some other examples of valid arguments that can result from such a process:

Any action in which all of the participants are voluntary and that does not violate anyone's rights is ethically permissible.

All of the participants in boxing are voluntary.

Boxing does not violate anyone's rights.

Therefore, boxing is ethically permissible

It is foolish to do things with one's money that have a known likelihood of leading to a net financial loss.

Gambling is something that people do with their money.

Gambling has a known likelihood of leading to a net financial loss.

Therefore, it is foolish to gamble.

The government should never do things that prevent people from becoming fully informed citizens, unless it is necessary for public security.

Banning books prevents people from becoming fully informed citizens.

Therefore, the government should never ban books unless it is necessary for public security.

Using illegal drugs is addictive and does not have long term benefits that outweigh the risks.

Things that are addictive have the potential to ruin one's life.

One should not do things that have the potential to ruin one's life unless they have long term benefits that outweigh their risks.

Therefore, one should not use illegal drugs.