Problems of Philosophy
Handout #1

Introduction to Arguments

I. Valid Arguments
An argument consists of premises and a conclusion. We call an argument **deductively valid** (or, for short, just "valid") when the truth of the premises guarantee the truth of the conclusion.

A Test: Look at the argument. Ask yourself: is it possible for the premises to be true and the conclusion false? If the answer is no – it's valid. If the answer is yes – it's invalid.

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.

II. Are the Following Arguments Valid?

A) (1) The Bible says that God exists.
   (2) Everything the bible says is true.
   _____
   (3) God exists

B) (1) There is at least one mouse who speaks English.
   (2) There is at least one mouse who writes poetry.
   _____
   (3) There is at least one mouse who both speaks English and writes poetry.

C) (1) Hydrogen and oxygen can't exist on the same planet.
   (2) Hydrogen exists on this planet.
   _____
   (3) Oxygen doesn't exist on this planet.

D) (1) I am an alien
   _____
   (2) 2+2 =4

E) (1) Mary has a higher GPA than Bob in math classes.
   (2) Mary has a higher GPA than Bob in English classes.
   (3) Math and English are the only classes that Mary and Bob have taken.
   _____
   Mary has a higher total GPA than Bob.

III. 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.

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.

IV. Extracting Arguments:

Premise Indicators: Since, Given that, As, Because, On the assumption that, From the fact that, For…
Conclusion Indicators: Thus, Therefore, Hence, We may conclude that, Entails that, We may deduce that, We may infer, So, It follows that, Implies that

Examples:
1. If theory T is correct, then result R should occur. But result R does not occur. Therefore, theory T is incorrect.
2. We can be quite sure that the universe was created by an all-knowing, all powerful, all-good Being. This fact is evident from the simplest observations we can make: the beauty of the natural world, the impeccable machinery of nature, and our ability to experience human love. It is clear that, unless such a being existed none of this would even be possible.
3. It's sometimes permissible to lie. If it weren't ever permissible to lie, then if there were a murderer looking for your roommate, knocking on your door asking whether she's home, then – if she is home – you'd have to tell the murderer the truth. But if you do this, you will have caused your roommate's death. And it's not permissible to kill your roommate.

V. Fun Stuff
1. Give an example of a valid argument with two premises and a conclusion where the premises are both false but the conclusion is true.

2. Give an example of a valid argument with two premises and a conclusion, where one of the premises is false, one of them is true, and the conclusion is true.
3. Give an example of an invalid argument with two premises and a conclusion, where the premises are both false but the conclusion is true.
4. Suppose you were presented with an argument that had more than one premise. If you knew that the argument is valid but the conclusion is in fact false, what must be true of at least one of the premises?

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