

WEEK 3

VALIDITY OF ARGUMENTS

- **Valid argument:** A deductive argument is valid if its conclusion is necessarily and logically drawn from the premises. The premises of a deductive argument guarantee the conclusion: so, if the premises are true then the conclusion must be true. Validity of an argument is determined by the relation between the premises and the conclusion. In as much as the conclusion is drawn from the premises, the argument remains valid.
- **Invalid argument:** An invalid argument is that which the conclusion does not follow from the premises. In other words, the premises do not guarantee the conclusion.

Arguments are in different forms, as there is a single premise argument so we have two or more premises arguments. Examples of a single premise argument are:

- i. Nigeria imports crude oil despite the fact she is an oil producing nation. Therefore from all indications, she is worse off with high pump price.
- ii. Ade beats his wife into coma last week. Therefore, Ade must be responsible for the death of his wife who passed on this morning.
- iii. Although by definition, the unconscious patient cannot tell you whether he perceives pain, available data suggest that he may; therefore, you cannot know that he doesn't

Examples of two premises arguments are:

All human beings are mortal
Socrates is a human being
Therefore, Socrates is mortal (valid)

All metals conduct electricity
Iron is a metal
Therefore, iron conducts electricity (valid)

All human beings are mortal
Socrates is a human being
Therefore, Socrates is wealthy (invalid)

All criminals are lawbreakers
Some politicians are lawbreakers
Therefore, all politicians are criminals (invalid)

Note: The order of premises and conclusion is not rigid, anyone may come first.

SOUND AND UNSOUND ARGUMENTS

- **Sound argument:** A sound argument in a deductive argument has its premises and conclusion true. The premises guarantee the conclusion and the conclusion is necessarily drawn from the premises. Every sound argument must be valid and has its premises and conclusion true. For example,

All human beings are mortal	(True)
Socrates is a human being	(True)
Therefore, Socrates is mortal	(True)

All philosophers are academia	(True)
All academia are educated	(True)
Therefore, all philosophers are educated	(True)

It is possible to have a valid argument with false premises and a true conclusion. For example,

All Nigerians are American	(False)
Obama is a Nigerian	(False)
Therefore, Obama is an American	(True)

It is also possible to have a valid argument with false premises and a false conclusion. For example,

All fish are mammals	(False)
All mammals are carnivorous	(False)
Therefore, all fish are carnivorous	(False)

However, it is not possible to have a valid argument with true premises and a false conclusion. Validity is related to soundness of an argument. An argument that guarantees truth is sound. An argument is sound if it is not only valid but its premises and conclusion are also true. Therefore, if an argument is valid and its premises are true, its conclusion must also be true.

- **Unsound argument:** An argument became unsound when its premises are true and conclusion false or when both the premises and conclusion are false. For example,

All human beings are mammal	(True)
All dogs are mammal	(True)
Therefore, all dogs are human beings	(False)

All women are liars	(False)
All men are liars	(False)
Therefore, all men are women	(False)

Test Questions:

1. What makes an argument valid or invalid?
2. How do you determine a sound argument?
3. What are the differences between sound and unsound arguments?
4. Can arguments with the same form carry different validity status?