

ALL ARGUMENTS CAN BE CLASSIFIED INTO TWO TYPES: VALID AND INVALID

(**Note:** This is a different schema than what is laid out in your textbook, pages 12-20 (12th ed.), but I think this schema is more illuminating and less confusing and avoids definitional contradictions found later in the book)

VALID ARGUMENTS

If an argument is valid, then it meets the following criteria:

If all the premises are true, then the conclusion *must* be true.

In other words, the truth of the conclusion is *guaranteed* if all the premises are true
OR

It is *impossible* to have a false conclusion if all the premises are true
OR

The premises of a valid argument *entail* the conclusion.

WE WILL SAY, that conclusions *deduced* from a set of premises make up a valid argument.

EXAMPLES:

If John makes this Field Goal, then the U of A will win the Game.

John makes the Field Goal

Therefore the U of A wins the Game

Either the starter is bad or the battery is bad.

The starter is not bad

Therefore the battery is bad

If John gets a raise he will buy a house

John did not buy a house

Therefore he did not get a raise

Whales are Mammals

Whales live in the Ocean

Therefore whales are mammals and live in the ocean

INVALID ARGUMENTS

If an argument is invalid, then it is possible for the conclusion to be false even if all the premises are true. This does not mean that the argument is useless, since invalid arguments may still provide support for their conclusions. Hence even though the truth of the conclusion is not guaranteed with invalid arguments, the conclusion can still be strongly or weakly inferred from the premises. Inductive arguments are a special case of invalid arguments - depending on the case, many inductive arguments have quite strong conclusions.

Another special case of invalid arguments are logical fallacies - in the case of a logical fallacy, the conclusion is logically independent (truth-functionally independent) of the premises. In other words, the truth or falsity of the premises make no difference at all to the truth or falsity of the conclusion. Logical fallacies are best seen as pseudo-arguments, since there is no truth functional connection between their premises and their conclusions.

WE WILL SAY that conclusion(s) arrived at by induction are *strongly or weakly inferred* from the premises.

The conclusions of logical fallacies do not follow from the premises. [*non-sequitor* is the Latin term used to describe conclusion(s) which do not follow from sets of premises!]

EXAMPLES:

I have played Poker for many years, and have never seen anyone legally dealt a royal flush.

Therefore no one at this table has been dealt a royal flush.

If John makes this Field Goal, then the U of A will win the Game.

John does not make the Field Goal

Therefore the U of A does not win the Game

Kathy is a terrible co-worker

Therefore she is also a bad mother

FOR VALID arguments, the addition of extra premises can not change the truth of the conclusion - as long as the new premises do not make the existing premises false.

FOR INVALID arguments, the addition of new premises can strengthen or weaken a given conclusion!