

You all better get an 'A' now that you can cheat sheet

Arguments

An argument is valid (or logical) if the conclusion is supported by the premises

An argument is deductively valid if the truth of the premises guarantee the truth of the conclusion (i.e. if it is impossible for the conclusion to be false if the premises are true)

An argument is inductively valid (or strong) if the truth of the premises make the conclusion more likely to be true than false.

An argument is well-founded if the premises are true or likely to be true.

An argument is sound if the premises are true and the argument is deductively valid

An argument is cogent if the premises are well-founded and the argument is strong.

Truth-Functional Logic

$\sim P$: P is not true ('not P')

$P \& Q$: P and Q are both true ('P and Q')

$P \vee Q$: either P is true or Q is true (or both) ('P or Q')

$P \rightarrow Q$: if P is true then Q is true ('If P then Q' or 'Q if P' or 'P only if Q')

$P \leftrightarrow Q$: P is true if and only if Q is true ('P if and only if Q' or 'if P then Q, and if Q then P')

$P \Leftrightarrow Q$: P is logically equivalent to Q

Valid truth-functional inference rules

Modus Ponens $P \rightarrow Q$ <u>P</u> Q	Modus Tollens $P \rightarrow Q$ <u>$\sim Q$</u> $\sim P$	Chain Argument $P \rightarrow Q$ <u>$Q \rightarrow R$</u> $P \rightarrow R$	Disjunctive Argument $P \vee Q$ <u>$\sim P$ (or $\sim Q$)</u> Q (or P)	Conditional Proof P : <u>Q</u> $P \rightarrow Q$
Simplification <u>$P \& Q$</u> P (or Q)	Conjunction P <u>Q</u> $P \& Q$	Double Negation $P \Leftrightarrow \sim \sim P$	DeMorgan $\sim(P \vee Q) \Leftrightarrow \sim P \& \sim Q$ $\sim(P \& Q) \Leftrightarrow \sim P \vee \sim Q$	Implication $P \rightarrow Q \Leftrightarrow \sim P \vee Q$

Invalid truth-functional inferences

Affirming the Consequent: If P then Q. Q. Therefore P.

Denying the Antecedent: If P then Q. Not P. Therefore, not Q.

Rhetorical Devices

Slanters

(Word or short phrase to put spin on a claim)

Euphemism
Dysphemism
Downplayer
Weaseler
Hyperbole
Proof Surrogate

Convention Abuses

(Taking advantage of implicit assumptions of language use)

Rhetorical Analogy / Comparison
Rhetorical Definition
Rhetorical Explanation
Loaded Question

Other

The Snort
The Scoff
The Sigh

Emotional Appeals

Appeal to Indignation (outrage, anger)
Appeal to Empathy (pity)
Appeal to Antipathy (envy, jealousy)
Appeal to Desire (wishful thinking, sex appeal)
Appeal to Aversion (fear, force, intimidation, scare tactics)
Appeal to the Herd (common practice, peer pressure, group think, popularity)
Appeal to Pride (apple polishing, vanity)
Appeal to Tradition
Appeal to Originality (novelty, uniqueness, distinguishedness)
Appeal to Guilt
Appeal to Vindication (Two Wrongs make a Right)
Appeal to Humor

Fallacies

Fallacies of Assumption

(bad premise)

Straw Man
Slippery Slope
False Dilemma
-Perfectionist Fallacy
-Line-Drawing Fallacy
Begging the Question

Fallacies of Relevance

(premises do not support conclusion)

Red Herring (smokescreen)
Appeal to Ignorance
Ad Hominem
-Personal Attack Ad Hominem (abusive ad hominem)
-Circumstantial Ad Hominem
-Inconsistency ad hominem (Pseudorefutation, Tu Quoque)