

Background

- How to analyse fallacies, especially the fallacy of equivocation.
- A classification and description of the structure of a fallacy.

Aristotle

- Book: “*Sophistical Refutations*”
- Since then, little progress.

Equivocation

- Aristotle's example:
 - *What is necessary is desirable*
 - *Evil is necessary*
 - *So evil is desirable*
- Better:
 - *No famine ever occurred in a democratic country*
 - *India is a democratic country*
 - *So no famine ever occurred in India*

Background Theory: Interpretation

- Because of ambiguity, one sentence can correspond to many propositions.
- We work out which proposition is the meaning by interpreting with charity.
- (Grice wrote paper in 1970 on the maxims of charitable interpretation.)

Background Theory: Criteria for a Good Argument

- Three criteria for a good deductive argument
 - Validity (impossible that premises be true and conclusion false).
 - Truth of premises
 - Relevance of conclusion

Definition

- *An expression is an equivocation if it has, for each criterion, an interpretation which satisfies that criterion, but has no interpretation which satisfies all three.*

Example Again

- *No famine ever occurred in a democratic country*
- *India is a democratic country*
- *So no famine ever occurred in India*
- **Validity requires that the first premise mean:**
 - *No famine ever occurred in a country that is now democratic.*
- **But truth requires that it means:**
 - *No famine ever occurred in a country at the time it was democratic.*

Extensions

- (A) This analysis applies not just to equivocation but to all deductive fallacies, including e.g. affirming the consequent.
 - *All Cretans are liars*
 - *All Cretans are fools*
 - *So, all liars are fools*
- (B) The logic of the analysis can be used to describe and categorise fallacies. (differently from the usual textbook categorisation).

Describing Fallacies

- Simplest: just say which two of the three criteria are in conflict, or if all three are.
- Further: make the interpretation of the expression a function of the interpretation of its parts, and look at interaction of the parts.

Aristotle's Example Again

- (1) *What is necessary is desirable*
- (2) *Evil is necessary*
- (3) *So evil is desirable*
- “necessary” means “inevitable” or “needful”.

		(1)	
		inevitable	needful
(2)	inevitable	<i>Valid</i> - <i>Conclusion</i>	- <i>Premises</i> <i>Conclusion</i>
	needful	- - <i>Conclusion</i>	<i>Valid</i> - <i>Conclusion</i>

More Complex Example

- (where this work started: idealist arguments)
 - *If an object is seen it is perceived*
 - *A perceived object is conceptualized*
 - *Something conceptualized is a mental entity*
 - *So everything seen is a mental entity*
- This has four ambiguous parts, two expressions:
 - “perceived” = object of perception or subject of perception.
 - “conceptualized” = object or subject.

- Means: even if you disambiguate one part, the fallacy still remains:
 - *If an object is seen it is an object of perception*
 - *An object of perception is conceptualized*
 - *Something conceptualized is a mental entity*
 - *So everything seen is a mental entity*

Formal Analysis

- Problem: this has been very informal.
- There are many other ambiguities that we have ignored. Is there a way of defining the “reduced form” structure of a fallacy?
- Start with entire space of interpretations: product of every possible interpretation of each expression-part.
- Need rules to reduce this space.

Reduction Rules

- **FIRST:** eliminate any expression-part interpretation that is strictly dominated.
- (theorem: this gets unique outcome).
- **SECOND:** combine any expression-part interpretations that satisfy the criteria in the same way.
- ...
- **PROFIT.**

END