

Basic Tools for Philosophy

A. Styles of Reasoning

1. **Deduction:** we can assess an argument by some strict set of formal rules of logic $[(\forall x(Mx \rightarrow Tx) \wedge Ma) \rightarrow Ta]$
2. **Analysis:** we can try to understand something by breaking it down into basic components
3. **Speculation:** we can explore possibilities imaginatively, and try to assess each of them
4. **Implications:** we can assess a proposal by exploring its implications, for coherence, or absurdities
5. **Methodological scepticism:** we can check our beliefs by systematically doubting each of them in turn
6. **Induction:** we can learn from experience, by seeing general truths in repeated similar observations
7. **Scientific method:** we can set up experiments, spot patterns, and then predict and explain
8. **Counterexamples:** we can disprove general claims by finding a case that doesn't fit
9. **Thought experiments:** we can test our intuitions by imagining unusual scenarios

B. Principles of reasoning

1. **Principle of sufficient reason:** assumption that there is a reason for everything
2. **Ockham's Razor:** if in doubt, prefer the simpler theory ('don't multiply entities beyond necessity')
3. **Bivalence:** only two truth values are available for a sentence – 'true' or 'false' (no 'true-ish', or 'undecidable')
4. **Laws of Thought:** traditionally, Identity, Non-Contradiction and Excluded Middle
 - a. **Identity:** $a = a$, and if $a = b$ then $b = a$, and if $a = b$ then everything true of a is true of b
 - b. **Non-contradiction:** no affirmative sentence can be both 'true' and 'not-true'
 - c. **Excluded middle:** every affirmative sentence has one of the two values, 'true' or 'false'
5. **Necessary truths:** truths which *have* to be true and can never be false ('what is done cannot be undone')
- Contingent truths:** truths which *happen* to be true and could be false ('England have a football team')
6. **A priori truths:** truths knowable just by thought, without experience ($a > b$, $b > c$, so $a > c$)
A posteriori truths: empirical truths - truths which need some experience to be known ('cats purr')
7. **Analytic truths:** sentences true because of word meaning ('bachelors are unmarried men')
- Synthetic truths:** sentences made true by something apart from word meaning ('bachelors drink too much')
8. **Axioms:** statements assumed without proof
9. **Modus ponens:** if one thing implies another, and the first thing is true, then so is the second ($Fx \rightarrow Gx$, Fx , so Gx)
10. **Reductio ad absurdum:** proving a sentence false, by showing it leads to absurdity
11. **Transcendental Arguments:** if you believe something, you must believe its presuppositions.
12. **Argument by analogy:** using the principle that similar things probably have similar explanations
13. **Foundations:** reasons tracking back to something primitive, or atomic, or unquestionable
14. **Empirical justification:** a belief is ultimately based on direct experience
Rationalist justification: a belief is ultimately based on what is self-evident to reason
Coherent justification: reasons hanging together in a mutually supporting way
15. **Intuition:** appeal to common sense or obviousness or instant understanding, which may not be quite rational
16. **Imagination:** essential for reasoning, to compare thoughts, and assess what is and is not possible

C. Failures of Reason

1. **Fallacy:** there is a catalogue of particular ways in which reasoning typically goes wrong
2. **Contradiction:** if reasoning concludes that something is true *and* not-true, its starting point was probably false
3. **Regress:** if some explanation needs further explanation then it is no use, especially if that goes on forever
4. **Question begging:** an answer is no good if it secretly assumes the think you were trying to prove
5. **Circularity:** reasoning is not much good if it just leads you back to your starting point (esp. if the circle is 'vicious')
6. **Ad hominem argument:** you can't disprove an argument by attacking the person who is proposing it
7. **Category mistake:** confusion results if you attach a property or a general truth to an inappropriate sort of thing
8. **Changing the subject:** you may think you have redefined something, but you have actually changed the subject
9. **Achilles paradox:** He must get to where the tortoise is now, but it's moving! Good reason produces absurdity.
10. **Liar paradox:** 'This sentence is false'. Some attempts at being rational just seem to be impossible.
11. **Vagueness:** Reason seems impossible with vague objects. Can losing one hair make you bald? (The 'Sorites')
12. **Aporiai and Antinomies:** Aristotle's puzzles of two equal opposed views; Kant's big dichotomies in our worldview
13. **Buridan's Ass:** if you *must* have a reason to act, then two exactly equally weighted reasons produce paralysis
14. **Values and presuppositions:** why think little humans can gain 'truth'? why place a high value on truth?

D. Scepticisms

1. **Dreams:** if you believe your dreams and they are false, how can waking experience guarantee its own truth?
2. **Demons:** if a force might be interfering with your mind, might *all* of your thoughts, or any one of them, be false?
3. **Physical objects:** because of 'dreams' and 'demons', might the objects in front of us not really exist? [*so what?*]
4. **Spiritual existence:** might there not be enough reason to believe in *anything* that isn't physical?
5. **Reason:** we smugly assume that simple reasoning is right, but can we say what *makes* reasoning work?
6. **Induction:** we make assumptions from regular experience, but maybe we always lack the bigger picture?
7. **Causation:** we think one event 'causes' the next, but do we ever see causation, or is it just events in succession?
8. **Memory:** steps in reasoning, and final results, depend on memory, but why should we trust memory?
9. **Language:** we like to think language is 'transparent', but do we ever all mean the same thing in what we say?
10. **Personal identity:** we take for granted that we are each a fixed person, but over long times, through traumas...?
11. **Mind:** we assume a traditional 'theatre of consciousness', but is that illusory and reduced to neuron events?
12. **Morality:** it is hard to find 'ultimate' grounds for right and wrong, so maybe it is all a big fiction? Why do we do it?
13. **Organised society:** maybe attempts to organise ourselves politically are doomed, and only anarchy is plausible?