Basic Tools for Philosophy

A. Styles of Reasoning
1. Deduction: we can assess an argument by some strict set of formal rules of logic \([\forall x(Mx \rightarrow Tx) \land Ma \rightarrow Ta]\)
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’)
6. A priori truths: truths knowable just by thought, without experience (\(a>b, b>c, so a>c\))
7. A posteriori truths: empirical truths - truths which need some experience to be known (‘cattos purr’)
8. Analytic truths: sentences true because of word meaning (‘bachelors are unmarried men’)
9. Synthetic truths: sentences made true by something apart from word meaning (‘bachelors drink too much’)
10. Axioms: assumptions assumed without proof
11. Modus ponens: if one thing implies another, and the first thing is true, then so is the second (\(Fx \rightarrow Gx, Fx, so Gx\))
12. Modus tollens: proving a sentence false, explanation than it is no use, especially if that goes on forever
13. Transcendental Arguments: if you believe something, you must believe its presuppositions.
14. Argument by analogy: using the principle that similar things probably have similar explanations
15. Foundations: reasons tracking back to something primitive, or atomic, or unquestionable
16. Empirical justification: a belief is ultimately based on direct experience
17. Rationalist justification: a belief is ultimately based on what is self-evident to reason
18. Coherent justification: reasons hanging together in a mutually supporting way
19. Intuition: appeal to common sense or obviousness or instant understanding, which may not be quite rational
20. 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 torture 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?

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