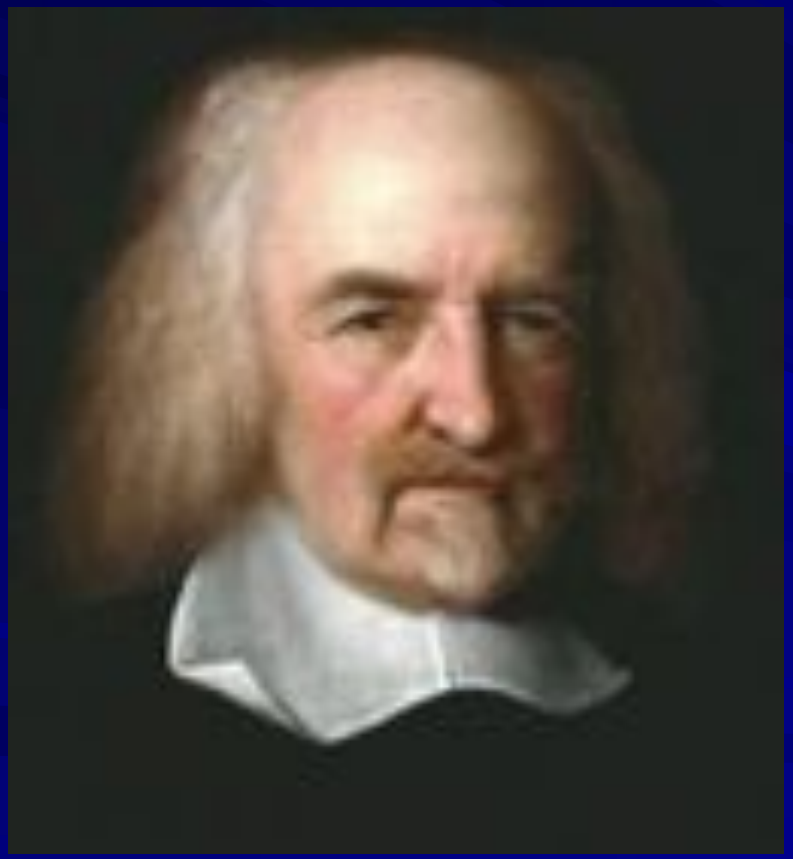
General Philosophy

Dr Peter Millican, Hertford College

Lecture 2: Historical Background Part 2

The Monster of Malmesbury
(and Magdalen Hall = Hertford College!)



- Hobbes denies
  - immaterial substance;
  - witchcraft;
  - reliance on revelation.
- Hobbes asserts
  - universal determinism;
  - obedience to sovereign in religion and morals.

Hobbes' Leviathan (1651)

- In the state of nature, the life of man is 'solitary, poore, nasty, brutish and short'.
- The only solution is *absolute* sovereignty.

Hobbes' Materialism

- Hobbes, like Descartes, is a plenist, but he recognises *only* material substance, and does so on logical grounds:

  "When men make a name of two Names, whose significations are contradictory and inconsistent", the result is "but insignificant sounds", "as this name, an *incorporeall body*, or (which is all one) an *incorporeall substance*". *Leviathan* ch. 4

- So Descartes' supposed mental "immaterial substance" is a contradiction in terms!

Hobbes' Compatibilism

- Hobbes is the first classic *compatibilist*, who takes *determinism* (i.e. all that happens is completely determined by causal laws) to be fully compatible with genuine free will.

  "LIBERTY, or FREEDOME, signifieth (properly) the absence of Opposition (by Opposition, I mean externall Impediments of motion;) … *A* FREE-MAN, *is he, that in those things, which by his strength and wit he is able to do, is not hindred to doe what he has a will to.*"

Materialism and Atheism

- Hence for Hobbes, all that exists is material, even God, and everything is determined.
- Many took Hobbes to be an atheist.
  - In 1666 Parliament cited his “atheism” as probable cause of the plague and fire of London!
  - His “Pernicious” books were publicly burned in Oxford in 1683, because of their “Damnable Doctrines … false, seditious, and impious, and most of them … also Heretical and Blasphemous … and destructive of all Government”.

The Evils of “Hobbism”

- In 1668, Daniel Scargill of Corpus Christi Cambridge was expelled. In his public recantation, he confessed:

  “I have lately vented and publickly asserted … divers wicked, blasphemous, and Atheistical positions … professing that I gloried to be an *Hobbist* and an *Atheist* … Agreeably unto which principles I have lived in great licentiousness, swearing rashly, drinking intemperately … corrupting others …”

Opposing Materialism

- The main *argument* against Hobbist materialism was to insist on the limited powers of "brute matter", which:
  - is necessarily *passive* or *inert* (as demonstrated by the phenomenon of inertia);
  - in particular, cannot possibly give rise to mental activity such as perception or thought.
- This point was pressed by Ward (1656), More (1659), Stillingfleet (1662), Tenison (1670), Cudworth (1678), Glanvill (1682), Locke (1690).

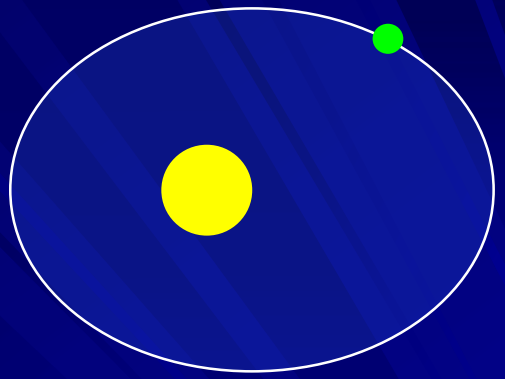
Boyle's Corpuscularianism

- Though Hobbist materialism was anathema, *physical* mechanism thrived in England:
  - Robert Boyle, with an interest in chemistry and based in Oxford, speculated that material substances are composed of imperceptible "corpuscles" made of "universal matter". His term "corpuscularianism" conveniently avoided the atheistic associations of ancient "atomism"

Atoms and the Void

- Boyle's universal matter is both extended and *impenetrable*, so unlike Descartes he can draw a distinction between:
  - impenetrable extension (i.e. matter)
  - penetrable extension (i.e. empty space)
- He retains Descartes' primary-secondary quality distinction: observable "secondary" qualities of substances flow from how the corpuscles are physically arranged.

Meanwhile, in the Heavens …



- In 1627 Johannes Kepler published tables enabling the calculation of planetary positions to an accuracy which turned out to be over 1000 times better than any previous method.
- Kepler's method is based on the hypothesis that each planet moves in an *ellipse* around the Sun (which is at one "focus" of the ellipse).
- The method's sheer accuracy led over time to general acceptance of that hypothesis.

Newtonian Physics

- Isaac Newton took Descartes' concept of inertia, and Boyle's theory of "atoms and the void", but postulated a force of gravity acting through it.
  - If gravity acts in inverse proportion to the square of the distance between two objects, and bodies accelerate in proportion to the total force acting on them, then the elliptical motion of the planets around the Sun can be elegantly explained.

Refuting Aristotle and Descartes

- Newton's theory could also predict – using the very same equations – the motion of cannonballs etc. on Earth.
  - Another nail in the coffin of the Aristotelian supposition that heavenly bodies act differently.
- In his *Philosophiae Naturalis Principia Mathematica* (1687), Newton also proved mathematical results indicating that a vortex could not possibly generate elliptical motion.
  - Descartes' theory was thereby discredited.

Gravitation and Intelligibility

- Newtonian gravity acts at a distance with no intermediate mechanical connexion.
  - But this is deeply “unintelligible”.
  - Descartes had objected to the idea of gravity as “occult”: one body would have to “know” where the other was to move towards it.
  - Many Newtonians took the operation of gravity to be proof of divine action, a new resource against Hobbist materialism.
  - Newton took a more *instrumentalist* attitude.

Newton's Methodological Instrumentalism

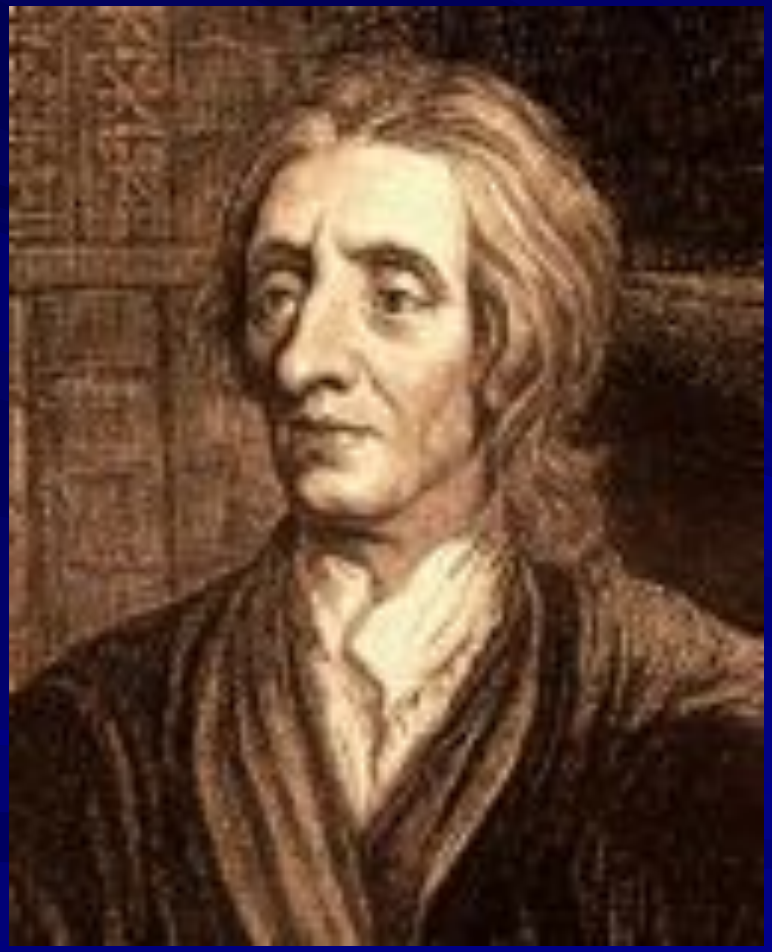
- Newton's public response to the objection:

  "Hypotheses non fingo"

  – "I feign no hypotheses"; there's no obligation to invent speculations about how gravity operates (at least until more evidence comes to light giving a basis for more than *mere* hypothesis).

  – If the gravitational equations (etc.) correctly describe the observed behaviour of objects, then that theory should be accepted whatever the unperceived underlying reality might be.

John Locke



- Established “British Empiricist” tradition;
- Hugely influential also in political philosophy;
- Christ Church, 1652-84;
- *Essay concerning Human Understanding* and *Two Treatises of Government*, 1690.

Locke and Corpuscularianism

- Locke's *Essay* took Boyle's "corpuscularian hypothesis" as the best available:
  - Boyle's "universal matter" becomes "substance in general"; "impenetrability" becomes "solidity".
  - Underlying substance has *primary qualities*: shape, size, movement etc., texture, solidity.
  - *Secondary qualities* (e.g. colour, smell, taste) are *powers* to cause ideas in us.
  - Primary qualities in objects *resemble* our ideas of them; secondary qualities do not.

Empiricism and Essences

- Locke is *empiricist*, and modest …
  - All our ideas are derived from experience, so we can't rely on Cartesian "innate ideas".
  - (Virtually) all knowledge of the world comes from experience, and hence must be tentative.
  - We presume a "real essence": an underlying structure giving rise to the observed properties of substances, and their similarity.
  - However we have to make do with relying on "nominal essence": the observable properties by which we identify and sort things.

Locke's Probabilism

- Reason is a *perceptual* faculty: rational argument involves *perceiving* truths and inferential connexions.
  - *Demonstration* is when a sequence of *intuitive* connexions leads from premise to conclusion.
- But reason does not operate only through logical demonstration, yielding certainty:
  - Reason can also perceive *probable* connexions, which can be sequenced together to generate *probable reasoning*.

Locke's Rationalism

- Despite his epistemological modesty, Locke seems committed to an ideal of intelligibility:
  - "if we could discover the … Texture [etc.] … of the minute Constituent parts of … Bodies, we should know without Trial several of their Operations …" (*Essay* IV iii 25)
  - The existence of God is provable with certainty, since "it is as impossible that incogitative Matter should produce a cogitative Being, as that nothing … should produce … Matter." (IV x 11)

Thinking Matter and Inertness

- But Locke speculated that God could, if he wished, “superadd” thought to matter.
  - Provoked great hostility, opponents arguing that thought is an “active” power, requiring an immaterial soul rather than brute matter.
  - Matter only has primary qualities and what directly flows from them.
  - Matter is clearly “passive” or “inert”, as indicated by phenomenon of *inertia*.
  - If matter could think, what of immortality?

Locke on Personal Identity

- Agnosticism about substances gave Locke a particular problem with personal identity.
  - Our experience gives us no insight into the nature of mental “substance”, only its activity.
  - Analogy with plants suggests an organism’s identity is not tied to its constituent substance.
  - The notion of personal identity is “forensic”: vital in issues of morality and responsibility.
- Locke attempts to ground this vital notion in consciousness and memory.

The Powers of Matter

- Most were deeply unhappy with a view of man that was compatible with materialism, which they saw as atheistical and *mortalist.*
- Again, their main argument was that matter is passive and inert, so it cannot *perceive* or *think* (Descartes, Cudworth etc.), or *attract gravitat-ionally* (various Newtonians); hence there must be a non-material substance with these effects.
- *Occasionalism* and *Immaterialism* pushed this line of thought much further …

Nicolas Malebranche

- The leading Cartesian of the late 17th century.
- Often now ignored, but influential in England as well as his native France.
- Built on the claim of matter's inertness, developing the theory of *occasionalism*.
- Though considered a "rationalist", he was a major influence on the "empiricist" Berkeley.

Malebranche and Causation

- Matter is inert, and has no causal impact on the world; the only cause is God.
  - A real cause must *necessitate* its effect, but we can conceive any physical "cause" occurring without its "effect", so it can't be a real cause.
  - Only the will of an omnipotent Being can truly necessitate an effect in this sense.
  - God sustains the world, in effect re-creating it from moment to moment (as Descartes taught), hence again He brings everything about.

Malebranche's Occasionalism

- Malebranche's theory implies that physical objects are not real causes.
  - Instead they are "occasional" causes: when one billiard ball hits another, this provides the *occasion* for God to cause the second to move (by re-creating it in a sequence of positions).
  - God also creates the visual perceptions in our mind corresponding to this physical reality.
  - But then why not do away with the physical reality entirely, as it seems to play no role?

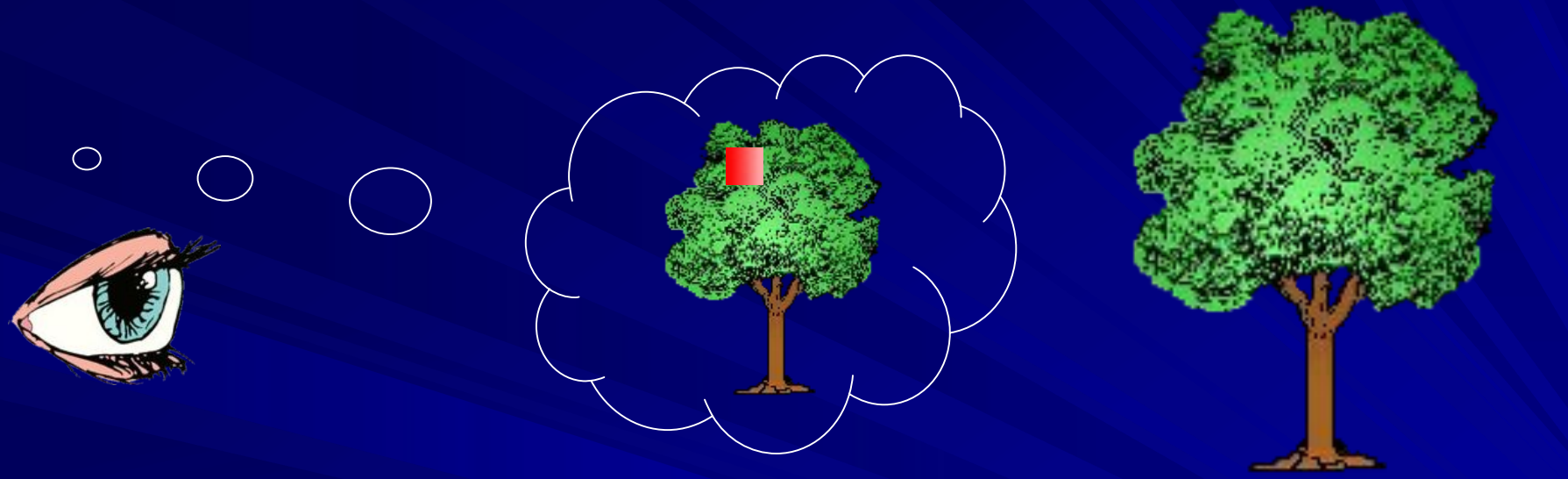
George Berkeley

- Irish Anglican, 1685-1753, buried in Christ Church.
- “British empiricist”, but closer to Malebranche than to either Locke or Hume.
- *Immaterialism*: the only things that exist are (active) spirits and (passive) “ideas”.
- God orchestrates our ideas, so objects in the world appear in an orderly fashion.

Berkeley's Immaterialism

- Berkeley's immaterialism is essentially occasionalism without the material world. But he uses a different set of arguments, appealing to perception and meaning-empiricism rather than to metaphysics:
  - Combines Lockean principle that only ideas are immediately perceived, with plain man's belief that trees etc. are immediately perceived;
  - Denies intelligibility of perceived objects (or anything resembling them) existing unperceived.

Perception According to Locke

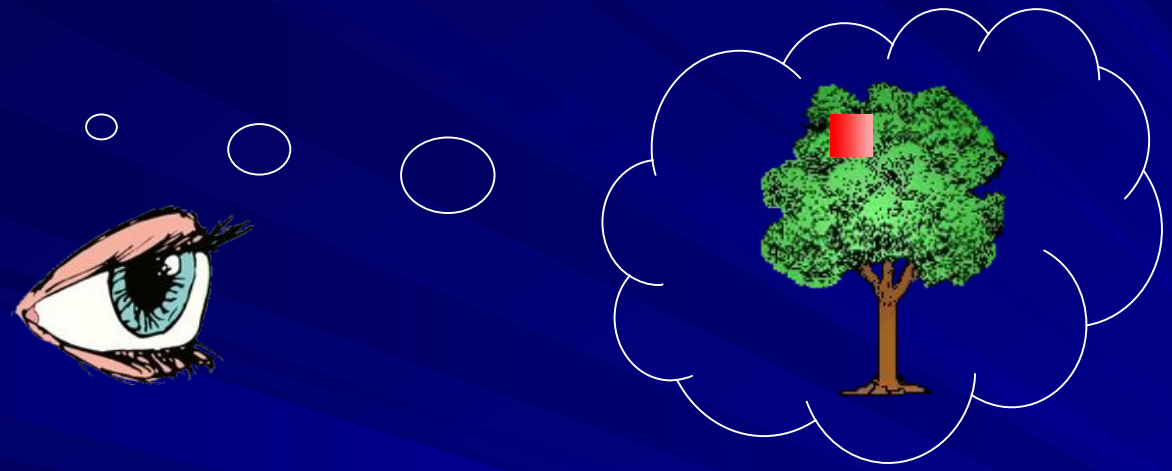


Idea in the mind
(directly perceived)

Material object
(cause of the idea)

- The “Veil of perception” problem: how can we know whether there *is* a real material object?

Perception According to Berkeley



Idea in the mind = the tree
(directly perceived; caused by God)

- No veil of perception problem, because what we directly perceive (i.e. the idea) *is* the tree.

Berkeley on Primary and Secondary Qualities

- We can be mistaken about PQs just as about SQs: they too are *in the mind*.
- All ideas are derived from experience, hence our ideas of PQs (e.g. shape) are infused with those of the sensory SQs by which we perceive them (e.g. a colour that fills the space). PQs without SQs are *inconceivable*.
- We cannot make any sense of something non-mental *resembling* an idea.

Berkeley's Instrumentalism

- Immaterialism might seem to undermine physical science, but Berkeley (following Newton) advocated instrumentalism:
  - The aim of science is to discover "laws" that generate true predictions about phenomena.
  - It is irrelevant whether the theoretical entities (e.g. forces) invoked have any real existence.
  - God benevolently arranges the observed phenomena to follow these patterns, as "signs" to enable us to direct our lives.

David Hume, The Great Infidel

- Scottish, 1711-76
- *Treatise of Human Nature 1739*
- *Essays* (various) 1741-
- *Enquiries concerning Human Understanding* 1748, *and Principles of Morals* 1751
- *Dialogues Concerning Natural Religion* 1779

Building on Newton and Locke

- Newtonianism
  - Newton provides a model of good science, modestly aiming “to reduce the principles, productive of natural phenomena, to a greater simplicity, and to resolve the many particular effects into a few general causes”. (*E* 30)
- Probabilism
  - Locke is right to emphasise *probability* rather than *demonstration* as the basis for our discovery of truths about the world. BUT …

Hume on Mechanical Causation

- Suppose we see a white billiard ball moving towards a red one and colliding with it. Why do we expect the red one to move?
- Imagine Adam, newly created by God, trying to envisage what would happen: how could be possibly have any idea at all in advance of experience?
- The “intelligibility” of mechanical causation is just an illusion, engendered by familiarity.

Science and Intelligibility

- Methodological Instrumentalism
  - *All* causation is "unintelligible": we don't really *understand* why *anything* causes *anything*.
  - Malebranche and Berkeley had the right idea about natural causes: there is no intelligible connexion between cause and effect, so we must view *all* "natural laws" instrumentally (and not just Newton's law of gravitation).
  - But in Hume's universe there's no role for God: it's a sort of atheistic occasionalism!

Hume on Induction

- Does *experience* of impacting billiard balls give me a good reason for expecting the red ball to move after the collision?
- If so, I must have a good reason for taking my past experience as a guide to the future.
- But resemblance of the future to the past isn't self-evident, and I can't know it through the senses. Nor can it be proved logically, while appealing to experience to support it would be "begging the question": arguing in a circle.

Humean “Reason”

- Against *Lockean* “Rationalistic Probabilism”
  - Lack of “intelligibility” does not merely imply that our judgements about the world are *uncertain*; we cannot even claim to have any rational grasp of, or insight into, *probable* connexions.
- The Foundation of Induction
  - Scientific (like all empirical) reasoning is founded not on insight, but on a brute assumption *that the future will resemble the past*, for which no solid basis can be given.

Man's Place in Nature

- Not "Made in God's Image"
  - Our Reason is a natural faculty (rather than any sort of godlike insight). There's no basis for thinking of man as supernaturally privileged; instead, he should be viewed as part of the natural world, alongside the beasts.
- A Subject of Empirical Study
  - The human world, like the natural world, can be known only through observation, experiment, systematisation and generalisation.

Hume on Free Will

- Hume, like Hobbes, is a *compatibilist*, seeing moral freedom as compatible with determinism.
- Human actions are *necessary* in the same sense as material interactions (indeed we can only understand necessity in one way, based on our own habits of prediction).
- Free will is simply having the power to act as our will dictates.
- This doesn't undermine moral responsibility because morality is based on *sentiment*.

The Elephant in the Room

- Theological concerns underlie most philosophy over this period.
- In the Medieval picture, things operate through “natures” and purposes laid down by God. Moving from an Aristotelian to a mechanical model of nature removes the purposes, and threatens an atheistic universe.
- Religious disagreement also undermines appeal to traditional authority – encouraging a search for something to take its place.

A (Very Simplistic) “Big Picture”

	Physics	*Morals*	*Politics*
Medieval	Governed by natural motions	Revealed truth and natural law	King is divinely ordained
Early Modern	Inert matter, mechanical causation, forces	Revelation? Reason? Moral sense? Feeling?	Natural right? Reason? Contract? Raw power?

In the Wake of Mechanistic Science

- The world differs radically from how it appears: our best theory attributes *primary qualities* to bodies, with *secondary qualities* explained through a *representative theory of perception*.
- This invites *scepticism*: if we can't trust our natural faculties to yield truth directly, then how can we know what things are really like?
- If the actions of *body* are explained mechanically, then how can *mind* fit in? The relation between them seems completely mysterious.

- Moreover a completely mechanical account of the actions of body implies that our behaviour is determined. What then of *free will*, and how can divine punishment be justified?
- Reward or punishment relies on the premise of *personal identity* over time, and the afterlife requires this to withstand bodily dissolution. How can we make sense of this, so as to safeguard both religion and morality?
- If Hume is right, we can't. And our attempts to make sense of the world are anyway doomed by the limits of our faculties, as shown by our inability to justify even basic *induction*.

Immanuel Kant (1783)

- Hume *has to be* wrong, because we have clear examples of "synthetic *a priori*" knowledge: truths about the world knowable independently of experience, that we see *had to be* that way:
  - Metaphysical principles (e.g. universal causation)
  - Euclidean geometry (e.g. Pythagoras' theorem)
  - Newtonian mechanics (e.g. conservation of momentum).

Hume's Triumph!

- Darwin's *On the Origin of Species* (1859)
  - We are evolved from animals, part of nature.
- Einstein's General Relativity (1915)
  - Space is gravitationally "curved".
  - So Euclid's axioms probably aren't true, and they're certainly not knowable *a priori*.
- Quantum Mechanics (1925)
  - Fundamental particles don't work at all as we (or Newton) would have expected: their behaviour is *describable*, but not "intelligible".

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