

## The Significance of David Hume



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## The Dominance of Scholasticism

- Ancient thought suppressed
  - Roman Empire became Christianised:
    - Pagan temples and libraries destroyed 391 AD;
    - Non-Christian 'schools' closed down 529 AD.
- Plato and Aristotle adopted
  - Platonic elements soon incorporated into Christian thought (e.g. Augustine 354-430).
  - Christian Aristotelianism became dominant after Aquinas (1225-74): 'Scholasticism'.

## Rediscovery of the Classics

- 'Atheistical' texts (e.g. by the sceptics and atomists) survived in the Eastern Empire, or in the Arabic world.
  - Many manuscripts were brought West when the Turks attacked (Constantinople fell 1453).
  - Fostered development of Humanism in Renaissance Italy;
  - Printing (invented 1450) gave them much wider circulation.

## Upheaval and Instability

- Many factors contributed to Western instability in the period 1500-1650, e.g.:
  - growth of population and trade;
  - discovery of the New World (America etc.);
  - consequent economic disruption;
  - realisation that ancient maps etc. were wrong;
  - suggestions of cultural relativity;
  - technology of gunpowder and consequent centralisation of power.

## The Reformation (from 1517)

- Savage religious wars throughout Europe:
  - Thirty Years' War 1618-48;
  - English Civil War 1639-51.
- 'Peace of exhaustion' at Westphalia (1648) leads to greater toleration.
- The Problem of the Criterion:  
*How can any criterion of reliable knowledge be chosen, unless we already have some reliable criterion for making that choice?*

## Aristotelian Science

- Elements and Natural Motions
  - Four elements: fire, water, earth, and air.
  - Fire/air naturally move upwards, water/earth downwards, each seeking its natural place.
- A Teleological Physics
  - Strivings, horror of a vacuum etc.
  - Everything strives towards the eternal, hence heavenly bodies move in circles, and must be made of a fifth element, *aether*.

## Intelligibility of Nature, or Empty 'Explanation'?

- 'Why does water rise up a siphon pipe?'  
'Because Nature abhors a vacuum, so the water must rise to fill the space left by the flow from the other end of the pipe'.
- 'Why does opium make one sleep?'  
'Because opium has a *dormitive virtue*, whose nature is to stupefy the senses'.

Molière(1673)

## Galileo's Experiments

- Aristotelian mechanics couldn't explain:
  - the flight of a cannonball;
  - the motion of a sledge on flat ice;
  - dripping of water from a gutter.
- Galileo suggested (and claimed to have carried out) another critical experiment:
  - dropping a heavy and a light ball together from the Leaning Tower of Pisa.

## Galileo's Telescope

- Galileo made his own telescope in 1609, discovering that Aristotle's account of the heavens was badly wrong:
  - Mountains and valleys on the moon, casting shadows by which they could be measured;
  - Four moons orbiting around Jupiter;
  - Phases of Venus implying that it is sometimes on the opposite side of the Sun;
  - Innumerable stars too dim for the naked eye.

## From Final to Efficient Causes

- Aristotelian science was based on purposes, or 'final' causation:
  - Things *strive* to reach their natural place, or to avoid abhorrent situations (e.g. a vacuum);
  - 'Occult qualities' (e.g. dormitive virtue) *strive* towards certain results.
- Galileo preferred 'efficient' causation:
  - The outcome depends on where the causal sequence happens to lead.

## The 'Mechanical Philosophy'

- The paradigm of efficient causation was via *mechanical* contact:
  - Interaction between contiguous particles of matter by pressure and impact.
- Compared with the pseudo-explanations involving occult qualities, this seemed:
  - genuinely explanatory;
  - genuinely *intelligible*.

## Descartes and Essences

- The properties of matter follow from its essence, simple geometrical *extension*.
  - Laws are mathematically expressible.
  - Bodies are *passive*, remaining in the same state (*inertia*) until a force is applied.
- Mind is a distinct, *active immaterial* substance, whose essence is *thinking*.
  - 'Secondary qualities', perceived by the senses, are observer-dependent.

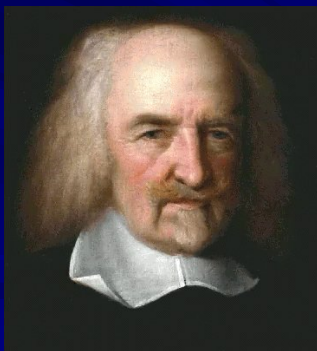
## Cartesian Physics

- If the essence of matter is *extension*, then extended empty space is impossible:
  - The physical world is a *plenum* (no vacuum), but divided into particles that move together.
  - All motion must take the form of *circuits* of these particles of matter within the plenum, hence *vortices* can be expected to arise.
  - A vortex can explain why the planets orbit the Sun without shooting off under inertia.

## Hobbes' Materialism

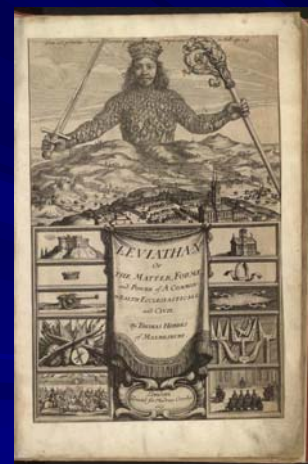
- Hobbes' position is rather like Descartes' (e.g. he is a plenist), except that he recognises *only* material substance:
  - 'When men make a name of two Names, whose significations are contradictory and inconsistent', the result is 'but insignificant sounds', 'as this name, an *incorporeall body*, or (which is all one) an *incorporeall substance*'.

## The Monster of Malmesbury



*Anthropomorphist, Sabellian, Nestorian, Sadducean, Arabian, Tacian, Manichee, Mohammedan, Cerinthian, Tertullianist, Audean, Montanist, Aetian, Priscillianist, Luciferian, Originist, Socinian, and Jew (!)*

Alexander Ross (1653)



## 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.

## Robotham on Hobbes (1673)

'Who is this Colossus lying stretched out in the sea ... his dreadful jaws gaping fiercely, and with obscene regurgitations belching forth abominable dogma which befools the British coastlines?' He is 'The Malmesburian Hydra, the enormous Leviathan, ... the hideous monstrosity ... the Propagator of execrable doctrines ... the Insipid Venerator of a Material God ... the Nonsensical roguish vendor of falsifications, a strenuous hoer of weeds and producer of deceits ...'

## Hobbes' Monstrous Views

- Materialism and denial of spirit.
- Denial of witchcraft.
- Pessimistic, selfish view of man.
- Erastianism: sovereign can legitimately command obedience in religion.
- Likewise in morality, hence moral relativism.
- Rationalist Biblical criticism.

## Materialism and Atheism

### ■ Materialism is:

'a dangerous Prelude to Atheism itself, or else a more close and crafty Profession and insinuation of it. For assuredly that Saying is not more true in Politick, *No Bishop, no King*; than this is in Metaphysick, *No Spirit, No God*'.

Henry More, 1653

- In 1666 Parliament cited Hobbes' atheism as probable cause of the plague and fire!

## Hobbes in Oxford

- In 1683, *Leviathan* and *De Cive* were banned in Oxford, and publicly burnt.

'Pernicious Books and Damnable Doctrines ... false, seditious, and impious; and most of them ... also Heretical and Blasphemous, infamous to Christian Religion, and destructive of all Government in Church and State.'

## Hobbes in Cambridge

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

'I have lately vented and publicly 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 that mere matter would be unable to produce thought, e.g.:

'it is as impossible that incogitative Matter should produce a cogitative Being, as that nothing ... should produce ... Matter.'

Locke, *Essay* (1690), IV x 11

- Locke, like others, appealed to this principle to prove God's existence.

## Religion and Intelligibility

- The idea that matter's operations are intelligible thus had great religious import:
  - If matter's powers are purely mechanical, then anything not explicable mechanically must have an immaterial cause.
- Locke's suggestion that God could, if He wished, 'superadd' thought to matter thus provoked intense hostility:
  - If matter could think, what of immortality?

## Reason as the Image of God

- Our insight into the powers of matter also confirms our Godlike nature.
  - Reason is what elevates us above the beasts.
  - Sensation and imagination, unlike pure Reason, are contaminated by bodily input.
  - Even if animals are more than Cartesian automata, they do not have Reason.
- Science, revealing the handiwork of God, is the ultimate triumph of Reason.

## Newtonian Physics

- Newton followed Robert Boyle in adopting an Epicurean theory of 'atoms and the void', postulating gravity acting through it.
  - If gravity acts in inverse proportion to the square of the distance between two objects, then the elliptical motion of the planets around the Sun can be elegantly explained.
  - Also the motion of cannonballs etc. on Earth, using *the very same laws* (*contra* Aristotle).

## 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 an *instrumentalist* attitude.

## The Great Infidel



- Born 1711
- *Treatise of Human Nature* 1739
- *Enquiries Concerning Human Understanding* 1748, *the Principles of Morals* 1751
- Died 1776
- *Dialogues Concerning Natural Religion* 1779

## Factual Inference

- Suppose we see *A* followed by *B* again and again. When we next see an *A*, we naturally infer a *B*. But why?
  - *A Priori* insight? No: *a priori*, we can know nothing whatever about what causal effects *A* will have. 'Intelligibility' is just an illusion.
- Such factual inference is clearly based on *extrapolating* into the future the associations that we have observed.

## Inferring Uniformity

- What ground can we give for extrapolating from observed to unobserved?
  - Logical intuition? No.
  - Deductive reasoning? No: neither of these, because it's clear that extrapolation *could* fail, so it can't be a matter of pure logic.
  - Sensory knowledge? No: what we perceive of objects gives us no insight into the basis of their powers, hence no reason to extrapolate.
  - Experience? No: that would be circular.

## The Basis of Factual 'Reason'

- Our 'Reason' is fundamentally based on a brute assumption of uniformity, rather than any insight into the nature of things.
  - Hence human reason differs from animal reason only in *degree*.
  - We deceive ourselves in thinking that *any* causal interactions (even the mechanical impacts of billiard balls) are really *intelligible*: it's an illusion generated by familiarity.

## Implications for Science

- Systematisation rather than Intelligibility
  - ‘the utmost effort of human reason is, to reduce the principles, productive of natural phenomena, to a greater simplicity, and to resolve the many particular effects into a few general causes ... But as to the causes of these general causes, we should in vain attempt their discovery.’
- Instrumentalism
  - Newton’s instrumentalist attitude to gravitation thus provides a model of good science.

## Attacking Christianity

- Conventional Targets
  - Superstition is symptomatic of an over-active imagination, and ‘enthusiasm’ tends to be dogmatic, fanatical, and dangerous.
- Deeper Targets
  - But Hume also attacks Miracles, the Design Argument, and the belief in immortality, and gives a non-flattering naturalistic account of how people come to hold superstitious beliefs, then inflate them into full-blown theism.

## The Big Problem for Hume

- Religious belief is founded on ‘whimsies and prejudices’ of the imagination.
- Science is founded on the instinctive, non-rational belief in uniformity.
- So what right has Hume to prefer ‘science’ over ‘superstition’? Is there a consistent position to be had here?
  - For discussion on this and related issues, see Millican (various) ... !

## The True Basis of Morality

- No Religious Basis
  - Morality cannot be founded on religious beliefs, as these are themselves so badly grounded.
- No Basis in Reason
  - Morality cannot be founded on rational insight: attempts to do so fail (the ‘is/ought’ gap).
- Based on Sympathy
  - The true foundation of morality is a natural instinct, *sympathy*, which leads us to care about others (something that pure Reason cannot do).

## Rejecting Religious Ethics

‘Celibacy, fasting, penance, mortification, self-denial, humility, silence, solitude, and the whole train of monkish virtues; for what reason are they everywhere rejected by men of sense, but because they serve to no manner of purpose; neither advance a man’s fortune in the world, nor render him a more valuable member of society; neither qualify him for the entertainment of company, nor increase he power of self-enjoyment?’

## Man’s Place in Nature

- Not ‘Made in God’s Image’
  - If the Christian story is wrong, there’s no reason to think of man as privileged and godlike; instead, he should be viewed as part of the natural world, alongside the beasts.
- Reason
  - In particular, our Reason is a natural faculty (rather than a godlike insight), whose operations can be studied empirically.