18. The Cambridge Platonists

<u>Mid-17th century University of Cambridge</u>

- Reaction against Cartesianism: seen as reestablishing atheism of ancient atomists.
- A return to Neoplatonic *active principles*.
- *Very* influential to Newton:
 - Read Cudworth and took many notes.
 - Deeply influenced by More's critique of Descartes.





1. Cudworth 2. More

Ralph Cudworth (1617-1688)

Henry More (1614-1687)





Explicit Appeal to "Prisca" Doctrines: Three Variants

- 1. *Hermes/Thoth*: precursor of Greeks and Christianity (slightly risky).
- 2. *Mosaic revelation*: precursor of Greeks and pagan wisdom (safer).
- 3. *Moschus the Phoenician*: originator of atomism; follower of Hermes; pre-Trojan war; identified by some authors with Moses.

1. Ralph Cudworth

The True Intellectual System of the Universe (1678)

• <u>Goal</u>:



"But because many seem to be so strongly possessed with this prejudice, as if atheism were a natural and necessary appendix to atomism, and therefore will conclude, that the same persons could not possibly be Atomists and Incorporealists or Theists, we shall further make it evident, that there is not only no inconsistency betwixt the atomical physiology and theology, but also that there is, on the contrary, a most natural cognation between them."



"And this we shall do two manner of ways; first, by inquiring into the origin of this philosophy, and considering what grounds or principles of reason they were, which first led the ancients into this atomical or mechanical way of physiologizing. And secondly, by making it appear, that the intrinsical constitution of this physiology is such, that whosoever entertains it, if he do but thoroughly understand it, must of necessity acknowledge, that there is something else in the world besides body."



• On the Moschus doctrine:



"...the first inventor of this atomical philosophy was one Moschus a Phoenician, who, as Strabo also notes, lived before the Trojan wars... Mochus or Moschus is plainly a Phoenician name, and there is one Mochus a Phoenician writer cited in Athenaeus, whom the Latin translator calls Mochus; and Mr. Selden approves of the conjecture of Arcerius, the publisher of Iamblichus, that this Mochus was no other than the celebrated Moses of the Jews..."

• On Casaubon's dating of the Hermetic Corpus:

"But it does not at all follow, that, because some of these Hermaic or Trismegistic books now extant were counterfeit or suppositious, that therefore all of them must needs be such; and not only so, but those also that are mentioned in the writings of ancient fathers, which are now lost. Wherefore, the learned Casaubon seems not to have reckoned or concluded well, when from the detection of forgery in two or three of those Trismegistic books at most, he pronounces of them all universally, that they were nothing but Christian cheats and impostures... [T]here was no shadow of reason why the Asclepius should have fallen under the same condemnation... Much less ought those Trismegistic books cited by the fathers, and now lost, to have been condemned also unseen."



- True atomism includes *active principles*.
 - Atomism of ancient Greeks is a corrupt form.

"So that there have been two sorts of Atomists in the world, the one atheistical, the other religious. The first and most ancient Atomists holding incorporeal substance, used that physiology in a way of subordination to theology and metaphysics. The other, allowing no other substance but body, made senseless atoms and figures without any mind and understanding (i.e. without any God) to be the original of all things; which latter is that, that was vulgarly known by the name of atomical philosophy, of which Democritus and Leucippus were the source."



• *Thus*: Descartes' mechanical philosophy, as embellished with atomism...





2. Henry More

The Immortality of the Soul (1659)





So farre forth as it is demonstrable from the Knowledge of N A T U R E and the Light of R E ASON.





- Averts threat of atomism.
- Sterile Cartesian physics made whole.
- Reinvestment of Nature with active principles.

(a) More's Critique of Descartes

Letters to Descartes (1648)

(i) Is body the only extended substance?

"I believe it to be clear that God is extended in His manner just because he is omipresent and occupies intimately the whole machine of the world as well as its singular particles. How indeed could He communicate motion to matter, which He did once, and which, according to you, He does even now, if He did not touch thematter of the universe in practically the closest manner, or at least had not touched it at a certain time?"



- *<u>Claim</u>*: In order to interact with bodies, minds/spirits must also be extended.
 - *So:* Extension cannot be the essential definition of body since it must apply to all things.
 - Must amend Descartes' definition to: *body* = extended, impenetrable substance.

(ii) Can a vacuum exist?

- <u>Descartes</u>: Remove all matter inside a container and the walls must by logical necessity come together.
 - *Why*? To be separated by nothing is contradictory.
 - To attribute dimensions to a void is to attribute properties to *nothing*.

"...if it be asked what would happen were God to remove from a vessel all the body contained in it, without permitting another body to occupy its place, the answer must be that the sides of the vessel would thus come into proximity with each other. For two bodies must touch each other when there is nothing between them, and it is manifestly contradictory for two bodies to be apart, in other words, that there should be a distance between them, and this distance yet be nothing; for all distance is a mode of extension, and cannot therefore exist without an extended substance." (*Principles of Philosophy*, part ii, art. xviii)



- <u>More's Response</u>: Walls may collapse due to external pressure, but this is due to *physical* necessity (natural causes) and not *logical* necessity.
 - *Logically*, a void can exist and still be something (i.e., the extension of a mind/spirit).

(iii) Are atoms possible?

- *Descartes*: Indivisible atoms are not possible.
 - <u>Why</u>? If indivisible atoms existed, then God would not be omnipotent (He would not be able to divide them).
 - *Thus*: Only infinitely divisible corpuscles exist.

"...and although we should even suppose that God had reduced any particle of matter to a smallness so extreme that it did not admit of being further divided, it would nevertheless be improperly styled indivisible, for though God had rendered the particle so small that it was not in the power of any creature to divide it, he could not however deprive himself of the ability to do so, since it is absolutely impossible for him to lessen his own omnipotence, as was before observed. Wherefore, absolutely speaking, the smallest extended particle is always divisible, since it is such of its very nature." (*Principles of Philosophy*, part ii, art. xx)



- *<u>More's Response</u>*: Atoms are indivisible by any *created* power.
 - If God wanted to, He *could* split 'em.
 - *Fundamental debate*: Is God constrained by physical/logical necessity?

(iv) Is the world infinite, or indefinitely extended?

- *Descartes*: God alone is infinite.
 - The world and its parts (corpusles, *etc*) are "indefinitely extended". They may or may not be infinite ("I confess not to know").
 - Indefinitely extended = "nothing external to".

"We further discover that this world or the whole (*universitas*) of corporeal substance, is extended without limit, for wherever we fix a limit, we still not only imagine beyond it spaces indefinitely extended, but perceive these to be truly imaginable, in other words, to be in reality such as we imagine them; so that they contain in them corporeal substance indefinitely extended, for, as has been already shown at length, the idea of extension which we conceive in any space whatever is plainly identical with the idea of corporeal substance." (*Principles of Philosophy*, part ii, art. xxi)



- *More's Response*: There must be an infinite aspect to the world.
 - A finite world cannot accomodate an infinitely extended God.
 - The aspect that is infinite = space = infinite extension of God.

The world = matter (possibly finite, possibly infinite) contained in infinite space (God's extension).

Koyre (1957): The "fundamental principle of the new ontology".

- Matter is mobile in space, and occupies space.
- Space is immobile and unaffected by matter.
- No matter without space.
- *But*: There can be space without matter.

<u>Contrast with Descartes</u>:

- Matter = extension = space
- *So*: No matter without space and no space without matter.

i.e., Newton's

ontoloa

(b) More on Mind/Spirit

Immortality of the Soul (1659)

- Matter = extended, impenetrable, divisible substance.
- Characteristics of mind/spirit:
 - extended
 - penetrable
 - indivisible
 - contractible/dilatable (can extend itself without loss of continuity into smaller or larger spaces)

Similar physical quantities in 17th-19th cent natural philosophy

"discerpible"

"essential spissitude" of spirit

- Light

- Immaterial, incorporeal, extended in space, acts on matter, can coexist with matter in same space (transparent bodies).
- Magnetic forces, gravity
 - Pass through bodies, immaterial, etc.
- Aether
 - Medium for electromagnetic waves.

- Incompressible, mechanical, immaterial, incorporeal, etc.

11

19th cent research

project: What sort

of elastic solid has such properties?

19th cent mechanical models of electrodynamic aether*



Maxwell's (1852) vortex model



Lodge's (1887) string-and-button model



FitzGerald's (1885) wheel-and-band model



Can electrodynamic phenomena be explained in purely mechanical terms?

(c) More on Gravity

- Cannot be explained mechanically:
 - Not an essential property or a tendancy of objects.
 - Descartes' Laws of Nature entail objects should recede from Earth if left to their own devices.
- Must be an effect of non-mechanical "Spirit of Nature".
- Pervades entire universe (universal spirit).
 - Acts on all things to keep them together.
- Space = extension of "Spirit of Nature" (God).

Absolute space (extension of God)

- Infinite, immovable, homogeneous, indivisible, unique.
- Reflects badly on Descartes:
 - Descartes denies void, spiritual extension, so excludes God, souls, spirits from physical world.
 - Can't explain gravity and other similar phenomenon.