

# Mechanistic Philosophy and the old Religion

## The problem

Mechanistic natural philosophy is:

- atheistic (it leaves God no role to play in ongoing natural events)
- deterministic (it denies freedom of will and so questions the justice of the final judgment and damnation to hell, where neither reform nor deterrence is intended and punishment is purely retributive)
- an innovation, opposed to the accepted natural philosophy of Aristotle

## Advantages of being a mechanist in a Protestant country

- religious belief is not taken to be a “work” done by submission to authority or reasoned inference from the evidence of God’s role in nature; it is instead the product of inspiration arbitrarily dispensed to those elected for salvation
- Protestant (Augustinian, Calvinist) theology is itself deterministic, insisting on predestination
- the view that religious belief arises as a product of inspiration inspires a disrespect for authority and received wisdom and an openness to innovation

## Disadvantages of being a mechanist in a Catholic country

The Catholics were more inclined

- to believe that God continues to intervene miraculously in the course of nature
- to believe that salvation or damnation is not predestined but can be earned by good works or lost by wilful wickedness
- to view any attack on the philosophy of Aristotle as an attack on their form of Christianity

## Descartes's Challenge

Make mechanistic natural philosophy acceptable to those in Catholic countries.

## Descartes's Solution

Part I:

Maintain that there are two kinds of being

- bodies
- spirits (minds)

Mechanistic natural philosophy is true of the world of bodies, ...

... which are built up of particles that are all alike except for shape, size, position and motion

and which act only in contact

But spirits are immaterial agents free of determination by natural laws and

- capable of having experiences of things that do not exist in the world of bodies (pains, colours, tastes, etc.)
- capable of spontaneous and rational choice

## Descartes's Solution

Part II:

Be careful to only provide arguments for these conclusions while denying any intention to be an innovator or reformer.

Descartes to Mersenne:

*and I can tell you that these six Meditations contain all the fundamentals of my physics. But this should not be broadcast, please, because those who favour Aristotle might then have difficulty in approving of them, whereas I hope all who read them will become insensibly accustomed to my principles and recognize the truth of them before they discover that they destroy the principles of Aristotle.*

Descartes to Regius

*Sir,  
I have had here all afternoon a distinguished visitor, M. Alphonse, who discussed the Utrecht affair at length in a friendly and prudent manner. I agree with him entirely that you should refrain from public disputations for some time, and should be extremely careful not to annoy people by hard words. I should like it best if you never put forward any new opinions, but retained all the old ones in name,*

*and merely brought forward new arguments. This is a course of action to which nobody could take exception, and yet those who understood your arguments would spontaneously draw from them the conclusions you had in mind. For instance, why did you openly reject substantial forms and real qualities? Do you not remember that on p.164 of the French edition of my Meteors, I expressly said that I did not at all reject or deny them, but simply found them unnecessary in setting out my explanations? If you had taken this course, everybody in your audience would have rejected them as soon as they saw they were useless, but you would not have become so unpopular with your colleagues.*

## A principal argument for the solution: Versatility

Machines can only react in pre-determined ways to specific types of impacts on their parts (those they were designed to be sensitive to and respond to).

But human beings are able to respond in appropriate ways to an arbitrarily large number of circumstances.

This is evidenced in the way we use language.

As well as in the study of how we perform at tasks (we can do an indeterminately large number of things with some proficiency rather than a few things perfectly)



## A background presupposition

Reason is a “universal instrument” that makes versatility possible.

And versatility is a feature that cannot be captured by any machine.

As we now know, it is false that machines cannot be designed in such a way as to be able to modify their own designs and their own manners of operation.

However, Descartes was likely thinking of machines like clocks, mills, looms, and printing presses.

With those sorts of examples in mind, it would have seemed to him impossible that a machine should be built that would be able to take itself apart and modify its own mechanism.

## A further consequence of Descartes's view

Animals are not capable of reasoning.

It is possible to design machines that look like  
animals

and that cannot be distinguished from animals by  
observing their operations

But it would always be possible to distinguish a human  
being from a machine just by talking to it or observing its  
behaviour for a while.

## Background presuppositions

What makes us more than machines is that we are endowed with consciousness.

Consciousness makes us aware of things that do not exist in the material world

sensible qualities  
pleasure and pain  
passions  
thoughts

Thought involves an ability to form abstract ideas of groups or types of things,

to form general rules and principles,

and to draw inferences from general rules and principles

Language is simply the outward expression of the occurrence of thought

So any being that thinks should use language.

## Background presuppositions, cont.'d

In nature we observe a “great chain of being”

Between any two species, we can always find an intermediate species

So all the variations in forms of life, and even in minerals, are continuous and shade off into one another in multiple different dimensions

But there are no species of animals that exhibit intermediate degrees of linguistic behaviour,

and no humans who do not possess linguistic abilities to perfection

(cf. the opening remarks about the universal possession of an equal degree of good sense and reason)

This radical discontinuity suggests that linguistic ability is indicative of the possession of something that is more than an effect of bodily organization

something capable of consciousness and reasoning

## A further aspect of Descartes's solution: A new theory of knowledge

There are three sources of knowledge:

- established authority
- experience (the “book of the world”)
- pure reasoning (looking within oneself)

The disputes among the most learned people about all things,

and the recent success of sceptics in challenging all knowledge claims

mean that, like it or not, we must seek to establish our beliefs on a new and more certain foundation.

But the disputes among authorities are reflected in divergences among common peoples of all nations.

We have no choice but to look within

## What does it mean to look within?

Since we all have equally powerful reasoning powers,  
and yet disagree with one another

experience alone must be incapable of leading us all  
in the direction where truth lies

such differences as there are between us must be  
due to the way we employ our reasoning powers (to  
our method)

The best method to follow is most likely to turn out to be  
that of the sciences that have made most progress up  
until now:

logic  
geometry  
algebra

This method is the deductive method

## The Deductive Method

- start from obviously true first principles
- identify simple, component parts of the things we mean to deal with
- arrive at knowledge of complex things by applying the principles to the simple things to deduce truths
- make frequent reviews



## Notes

- our first principles cannot be arbitrarily selected (as they are in logic, algebra, and geometry)
- neither can they be arrived at by induction from experience (as they are for Bacon)
- neither can they be arrived at by analysis of experience and stipulative definition employing simple concepts learned from experience (as they are for Hobbes — this reverses the order of the first and second points)
- they are discovered “by looking within” (through a kind of intellectual intuition — seeing with the eyes of the mind)
- this puts us in a position to trust what we learn from them, even if it is contrary to sensory experience.