Introduction to Materialism

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1.0 Why Materialism?

1.1 Motivations for Materialism

1.1.1 Two Theses:

(1) We all have minds, and our behaviour is a reflection of the activity in our minds.

(2) We are organisms that inhabit an environment, and science tells us that organisms are made up of matter.

These two theses appear to imply:

(3) That our minds are matter.

1.1.2 Commonsense

Stick a pin in your finger. This is a physical event. But you also feel pain. That is a mental event. The link between the physical event and the resultant mental event is so tight, that it is ludicrous to think that they are not intimately related. What about other mental states - when I feel angry, my blood pressure rises, my face gets flushed. When I am stressed, the little vein on the side of my head pulses. When I desire coffee, my arm moves in such a way that coffee ends up in my mouth.

Example:
The soul and the body fall asleep together… Is the circulation too quick? The soul can not sleep. Is the soul too much excited? The blood gallops through the veins with an audible murmur… Opium… makes a man happy in a state which would seemingly be the tomb of feeling, as it is the image of death. Opium even alters the will, forcing the soul which wished to wake and enjoy life, to sleep in spite of itself. Coffee… by scourging the imagination, cures our headaches and scatters our cares without laying up for us, as wine does, other headaches for the morrow…. Without food, the soul pines away, goes mad, and dies exhausted… The soul follows the progress of the body… Thus, the diverse states of the soul are always correlative with those of the body.

-- de la Mettrie, Man a Machine (1748)

2.0 Why Not Materialism?

2.1 Motivations for Dualism

Note that the following are motivations, not arguments for Dualism. The arguments come later. The two theses with which I opened this lecture may well be considered motivations for materialism.

2.1.1 Theology

Consider the two following Lists:
• I once was very small
  • Barring accident or bad luck, I will become old.
  • When I get old, I may lose some mental capacity
  • If I prick my finger, I may feel pain.
  • If I am in a serious accident, I may lose some mental capacity.
  • If I ingest certain substances, such as coffee, my mental life changes.
  • When I desire something, such as coffee, my arm moves in such a way that coffee ends up in my mouth.

• I might have been born at a different time or place
  • I might survive bodily death, and live another kind of life as a spirit.
  • I might have been blessed or cursed with a different body.
  • I might have been blessed or cursed with different mental capacities – or a different mind.
  • I might be the reincarnation of some historical person.
  • I might have to live life again, e.g. as a dog, unless I behave correctly.

The first list is compatible with the two theses cited above: that what I am is a biological organism. The second list assumes, at some level, that I am something above and beyond my biology.

2.1.2 The Limited Domain of Physics

Descartes boasts in the Principles that “there is no phenomenon of nature that has been omitted from this treatise” (AT VIII-1323)

And by his own admission, his account of the movement of bodies did not surpass the level reflex action.

2.2 Alternatives to materialism:

2.2.1 Substance Dualism

our bodies are one substance (physical / physiological substance), and our souls (minds) are another. This special substance is totally distinct from our bodies, obeys its own laws (i.e. the laws of physics and science do not apply), and its nature wholly determines our mental lives. Furthermore, most substance dualists hold that we are identical with our souls, not our bodies.

Example

I am therefore precisely nothing by a thinking thing; that is, a mind, or intellect, or understanding, or reason… What else am I? I will set my imagination in motion. I am not that concatenation of members we call the human body. Neither am I even some subtle air infused into these members, nor a wind, nor a fire, nor a vapour, nor a breath, nor anything I devise for myself. For I have supposed these things to be nothing. The assumption still stands; yet nevertheless I am something… But what
then am I? A thing that thinks. What is that? A thing that doubts, understands, affirms, denies, wills, refuses, and that also imagines and senses. (Italics mine)

-- Descartes Meditation II, AT VII 27

I have… often distinctly showed that the mind can operate independently of the brain; for certainly the brain can be of no use to pure understanding, but only to imagination or sensing. (Italics mine)

-- Descartes Response to Gassendi AT VII, 358

Descartes is unique (at least amongst his contemporaries) in denying both the possibility that thought inheres in physical substance, and some form of mind-body parallelism. Even Locke claims that Materialism is within the realm of possibility:

“we have the ideas of matter and thinking, but possibly shall never be able to know whether [any material being] thinks or no; it being impossible for us, by the contemplation of our own ideas, without revelation, to discover whether Omnipotence has not given to some systems of matter, fitly disposed, a power to perceive and think, or else joined and fixed to matter, so disposed, a thinking immaterial substance; it being, in respect of our notions, not much more remote from our comprehension to conceive that GOD can, if he pleases, superadd to matter a faculty of thinking, than that he should superadd to it another substance with a faculty of thinking; since we know not wherein thinking consists, nor to what sort of substances the Almighty has been pleased to give that power, which cannot be in any created being, by merely by the good pleasure and bounty of the Creator.

-- Locke, Essay, vol 2. Bk. 4, Ch. III, §6

2.2.2 Attribute Dualism

On this view, mental states are attributes or properties of physiological states in our brains, but they are properties that are not reducible to, or identical with, any physiological states. They are purely mental, possibly spiritual, states which “emerge” from physical states without being identical with them. They have a special metaphysical status, and are unique in nature - i.e. there is no problem for the free will argument, as they are not determined by the physical states from which they emerge.

On the other hand, they have a very unattractive consequence: epiphenomenalism. But that will be left to another class.

2.3 Reasons for Dualism

2.3.1 Mechanistic Physics + belief that mechanisms cannot account for behavior.

Descartes’ physics was mechanistic: the world is determinate. Every event is wholly determined by those events causally responsible for that event.

BUT, human behaviour is not deterministic, we have (or appear to have) free will.

This leads us to three *modern* incarnations of Descartes’ worries – they are so prevalent today that they were addressed even by Alan Turing, in his Seminal “Computing machinery and intelligence” Mind, 59, vol. 236, 433-460:
2.3.1.1 Argument from Creativity (i.e. The Productivity of Language)

Descartes, e.g.

[Machines] could never use words or other signs in composing them as we do to declare our thoughts to others. For we can easily conceive a machine’s being constituted so that it utters words, and even that it utters words appropriate to its corporeal actions, which cause some change in its organs; for instance, if it is touched in a certain place it will ask what we wish to say to it; if in another place it will exclaim that it is being hurt, and so on; but not that it arranges words differently to reply to the sense of all that is said in its presence, as even the most moronic man can do.

-- Descartes, Discourse AT VI, 56-7

2.3.1.2 Argument from Various Disabilities

Machines will never do _____ like humans can, and therefore, they are not intelligent.

In Descartes:

And… although [machines] can do certain things as well as or perhaps better than any of us, they infallibly fall short in certain others, by which we may discover that they did not act from knowledge, but only from the dispositions of their organs. For while reason is a universal instrument which can serve for all sorts of occasions, these organs have need of some particular disposition for each particular action

-- Descartes Discourse AT VI, 57

An Example:

It is… a very remarkable fact that although there are many animals which exhibit more skill than we do in some of their actions, we at the same time observe that they do not manifest any at all in many others. Hence the fact that they do between than we do, does not prove that they are endowed with mind, for in this case they would have more than any of us, and would do better in all other things. It rather shows that they have none at all, and that it is nature which acts in them according to the disposition of their organs.

-- Descartes Discourse, AT VI 58-9

This idea goes way beyond Descartes. Here is an example from Aristotle:

It is absurd to hold that a man ought to be ashamed of being unable to defend himself with his limbs, but not of being unable to defend himself with rational speech, when the use of rational speech is more distinctive of a human being than the use of his limbs.

-- Aristotle Rhetoric, Book I, Ch 1, 1355b1

One of the important features of these arguments is their reliance on language – particularly the meaning behind language. We will see (throughout the course) a number of arguments that turn on this notion. By the way the problem is not just for computers, it is also for other creatures – when I asked Robert Brandom about the color
vision of other creatures, he said that when I say “this is red” I can be aware of the meaning of my term ‘red’, but honeybees cannot. Does this mean that honeybees cannot see ‘red’? Well, it depends on what you mean by ‘see’. We’ll come back to this.

2.3.1.3 Argument from Originality (Lady Lovelace’s objection)

The Analytic Engine [Babbage’s adding machine - considered the precursor to the computer] has no pretensions to originate anything. It can do whatever we know how to order it to perform”

-- Lovelace, quoted in Turing, 1950

One possible rejoinder: (from Turing) creativity is really a form of fallacious reasoning. Humans are very good at assimilating huge amounts of information very quickly, and jumping to a conclusion from that information. Turing would argue that this is precisely the act of creativity. We should not punish a computer because it takes the time to do the actual reasoning which we jump over.

Others: this is actually a very hot topic in the ‘pop’ press. Ray Kurzweil The Age of Spiritual Machine cites several different examples of computer programs which generate “art” in a random fashion. If these items are art, and art is the result of the creative process, computers are creative, and Lady Lovelace’s objection is mute.

2.3.2 Arguments for Dualism

Argument from Doubt (usually characterized as Descartes primary argument for Dualism) (Meditation II)

(1) I can doubt that I am / have a body
(2) I cannot doubt that I am / have a mind
(3) Therefore, my body has a property (being doubtable) that my mind does not.
(4) Therefore, my mind is not identical with my body (by Leibniz’s law)

Consider a substitution instance:

(5) I cannot doubt that the masked person in front of me exists.
(6) I can doubt that movie star R.R. exists (as he may have died)
(7) Therefore, the movie star R.R. has a property (being doubtable) that the masked person in front of me does not.
(8) Therefore, the masked person in front of me is not movie star R.R.

2.3.3 Stronger (Med. VI)

Meditation VI

First, I know that all the things that I clearly and distinctly understand can be made by God such as I understand them. For this reason, my ability clearly and distinctly to understand one thing without another suffices to make me certain that the one
thing is different from the other, since they can be separated from each other, at least by God. The question as to the sort of power that might effect such a separation is not relevant to their being thought to be different. For this reason, from the fact that I know that I exist, and that the same time I judge that obviously nothing else belongs to my nature or essence consists entirely in my being a thinking thing. And although perhaps (or rather as I shall soon say, assuredly, I have a body that is very closely joined to me, nevertheless, because on the one hand I have a clear and distinct idea of my myself, insofar as I am merely a thinking thing and not an extended thing, and because on the other hand I have a distinct idea of a body, insofar as it is merely an extended thing and not a thinking thing, it is certain that I am really distinct from my body, and can exist without it.

-- Descartes Meditation VI AT VII, 78

Formalized:

(1) If A can exist apart from B and vice versa, A is really distinct from B and B from A.
(2) Whatever I clearly and distinctly understand to be possible can be brought about by God.
(3) If I clearly and distinctly understand the possibility that A exists apart from B, and B apart from A, then God can bring it about that A and B do exist in separation.
(4) If God can bring it about that A and B exist in separation, then A and B can exist apart and hence, by (1) they are distinct.
(5) I can clearly and distinctly understand the possibility of A and B existing apart from gathered, if: there are attributes ? and ?, such that I clearly and distinctly understand that p belongs to the nature of A and that ? belong to the nature of B (and that ? ? ? ) and I clearly and distinctly understand that something can be a complete thing if it has ? even if it lacks ? (or has ? and lacks ? )
(6) Where A is myself and B my body, thought and extension satisfy the conditions of ? and ? respectively.
(7) Therefore, I am really distinct from my body and can exist without it.

-- Wilson, Descartes, p. 198.

2.4 The HUGE Problem for Dualism
The Shadow Cast by Neurophysiology:

(1) Mental Events and properties are not reducible to or explicable in terms of physical events and properties (Descartes)
(2) Mental Events and properties are involved in causal explanations of other mental states and physical events (commonsense)
(3) The physical is causally and explanatorily closed (the shadow cast by neurophysiology).
(4) Either the mental is causally irrelevant (epiphenomenalism – violating commonsense), or physical events are overdetermined.

2.4.1 Descartes’ response: the pineal gland

The nerves, according to Descartes (as well as Malebranche) are minute channels or funnels through which pass ‘animal spirits’. When an external object acts on the sense-organ, the peripheral surface of the nerves is set in motion and the animal spirits transmit this impression to the brain. There then takes place the psychic element in sensation, which belongs to the soul alone. This is not to say that physical element is irrelevant - Descartes held that the physiological process imprints ‘traces’ on the brain by the animal-spirits. If these animal-spirits are set in motion by something other than the presence of an external object, these ‘traces’ will be affected, and a psychic image may result (i.e. hallucinations). The problem, then, is where and how the physiological process meets the psychical process. For Descartes (and Malebranche following him) this is in the pineal gland:

The conarium resembles a gland, since the principle office of all the glands is to receive the subtlest parts of the blood emitted by the surrounding vessels, and its office is to receive the animal spirits in the same way. And since there is no solid part in the whole brain that is single, it follows necessarily that it is the seat of common sense, that is to say, of thought, and consequently the soul. For the one cannot be separated from the other.

Remember that Descartes held an ‘instantaneous’ view of causation: that causation occurred at the moment of contact. Thus, he hypothesized that the Pineal gland was the point of contact.

But this doesn’t really solve the problem, it only localizes it:

If the most complete causal explanation of a physical event is only in physical terms, and if mental events are not physical events, then mental events cannot play a role in the causal explanation of physical events – regardless of the putative properties of the famed pineal gland.
2.4.1.1 Other Theories:
The parapsychologist Serena Roney-Dougal has since 1978 been studying the pineal gland and its significance for the appearance of psychic phenomena. She has, amongst other things, found that it produces a substance that is virtually identical with the active principle in ayahuasca, a drink that is used by several South American native people. They use it to be able to leave the body and obtain contact with the psychic world.

While the physiological function of the pineal gland has been unknown until recent times, mystical traditions and esoteric schools have long known this area in the middle of the brain to be the connecting link between the physical and spiritual worlds. Considered the most powerful and highest source of ethereal energy available to humans, the pineal gland has always been important in initiating supernatural powers. Development of psychic talents has been closely associated with this organ of higher vision.

There is a cell tissue based “organ of morality” in the brain. By “organ of morality” I mean that evolutionary propensities have created an innate moral capacity in the human species. When this organ is at its height of productivity, it very effectively guides each person through difficult intellectual and moral dilemmas. Outcomes are the speciality of this gland's function with the “moral” outcome being that which will produce the most value for the human race as a whole. The human
race has been steadily moving away from its race-wide value producing capabilities as this organ's vitality wanes.

When we are not experiencing physical pain we, as individuals, call this condition comfort or happiness. We have acquired the habit of acknowledging mental distress as a necessary evil and, too often, assume a “this too shall pass” stance. But, even if we do not show external signs of physical damage, the assault on that area of the brain designed to lighten our mental loads becomes apparent through the decline of value producing decisions made by individual members of the human race.

The pineal gland is the real secret ruler of the human system working sublely (sic) to integrate the functions of the glands and to control the action of light upon the body. It is made of the same tissue as the eyes. The pineal at its best is able to work in tandem with the pituitary gland (which is made of the same tissue as the thyroid in the throat) and works with it through speech and body language to create active expression.

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2.4.2 Leibniz’ critique and response:

While Descartes identified the site of interaction between the physiological and psychological, he did nothing to explain it. In short, it was nothing short of miraculous. The Cartesians (not Descartes himself) addressed the issue, but do not appear to be bothered - they merely say that God insures those miraculous interactions, and since God is omnipotent, it isn’t a problem.

Leibniz was unhappy. He sought to “explain naturally what they [the Cartesians] explain by perpetual miracles, and I tried to account only for the phenomena, that is, for the relation that is perceived between soul and body.” (Remark of the Author... Hackett edition, 197)

One Leibniz’ account, the soul and body are distinct, and the soul is created in such a way that everything in it arises from “its own depth”, through a perfect “spontaneity” to itself, and yet with a perfect “conformity” to external things.

So - the soul is spontaneous (read, self-caused), but it also just happens to be that when ever the soul spontaneously creates the sensation of coffee in my mouth, there is actually coffee in my mouth. Why? Because God created the universe in such a way that the soul and body exist in perfect “preestablished harmony”.

We must say that God originally created the soul (and any other real unity) in such a way that everything must arise for it from its own depths [fonds], through a perfect spontaneity relative to itself, and yet with a perfect conformity relative to external things. And thus, since our internal sensations (meaning those in the soul itself, and not those in the brain or in other subtle parts of the body) are merely phenomena which follow upon external beings, or better, they are true appearances and like well-
ordered dreams, these internal perceptions in the soul itself must arise because of its own original constitution, that is, they must arise through the representative nature (capable of expressing external things as they relate to its organs) given to the soul from its creation, which constitutes its individual character. ...There will be a perfect agreement among all the substances, producing the same effect that would be noticed if they communicated through the transmission of species or qualities, as the common philosophers imagine they do. In addition, the organized mass, in which the point of view of the soul lies, being expressed more closely by the soul, is in turn ready to act by itself, following the laws of the corporeal machine, at the moment when the soul wills it to act, without disturbing the laws of the other—the spirits and blood then having exactly the motions that they need to respond to the passions and perceptions of the motions that they need to respond to the passions and perceptions of the soul. It is this mutual relation, regulated in advance in each substance of the universe, which produces what we call their communication, and which alone brings about the union of soul and body.

-- Leibniz, Philosophic Essays, 143-144 (Hackett Edition)

3.0 Outline of the Course

3.1 What, exactly, is the materialist thesis?
3.2 What, exactly, is the best materialist position?
   3.2.1 Behaviorism
   3.2.2 Functionalism
      3.2.2.1 Commonsense
      3.2.2.2 Empirical
      3.2.2.3 Challenges to functionalism
   3.2.3 Identity Theory
   3.2.4 Language of Thought (computationalism)
   3.2.5 Mental Content
   3.2.6 Theories of Consciousness
   3.2.7 Eliminative Materialism
   3.2.8 Qualia
   3.2.9 Inverted Spectra
   3.2.10 The Knowledge Argument
   3.2.11 The Explanatory Gap

3.3 Definitional Matters:
   3.3.1 Mind: the organ of cognitive activity and experience
   3.3.2 Mental states – what do they share, in virtue of which they are mental?
      3.3.2.1 That’s a good question, here’s a list:
Memory
Thoughts
Desires
Acts of will
Intentions
Experiences
  Perceptual
  Emotions
  Bodily sensations

The cognitive sensory distinction can be drawn w/ respect to intentional and qualia matters – the sensory states have a quale, the cognitive states have an intentional content.

Body: a organized cluster of matter: uncontroversially, the body is studied by physiology, and thus is composed of matter.