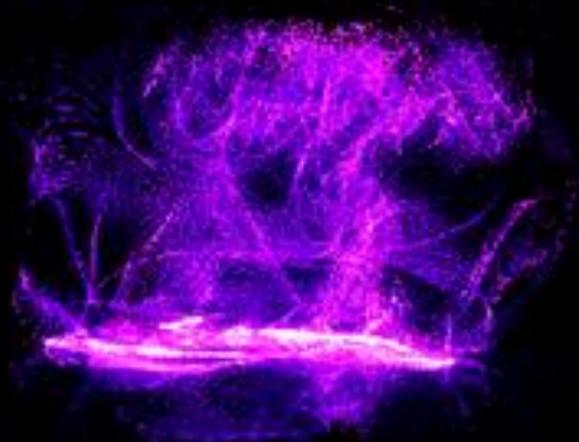


Cartesian Dualism



I am not my body

- Dualism = *two*-ism
- Concerning human beings, a (substance) dualist says that the mind and body are two different “substances” (things).
- The brain is made of matter, and part of the body. The mind is a separate, non-material thing.



Cartesian substance dualism

Motivations for dualism

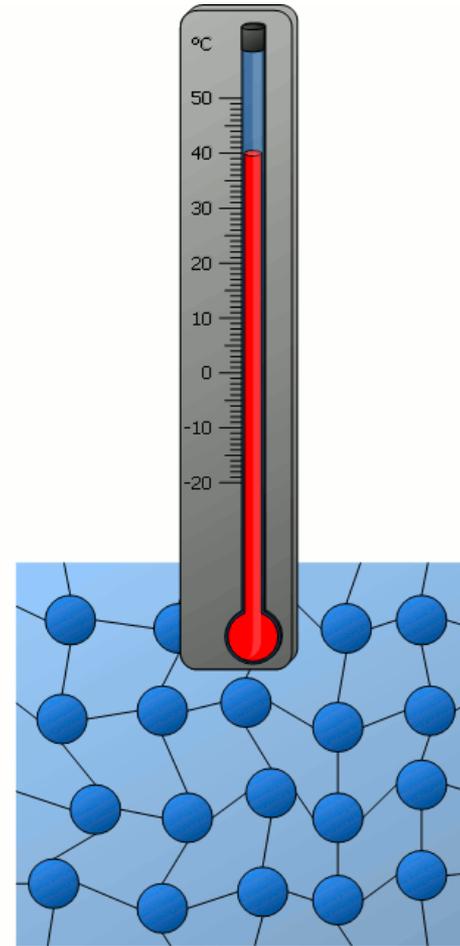
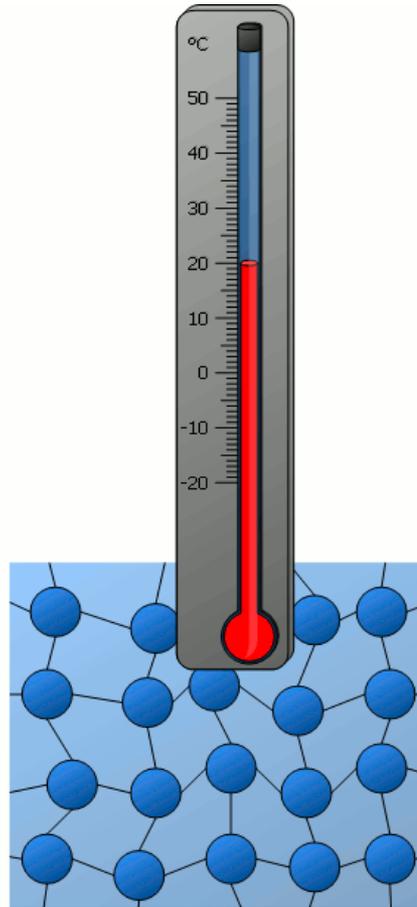
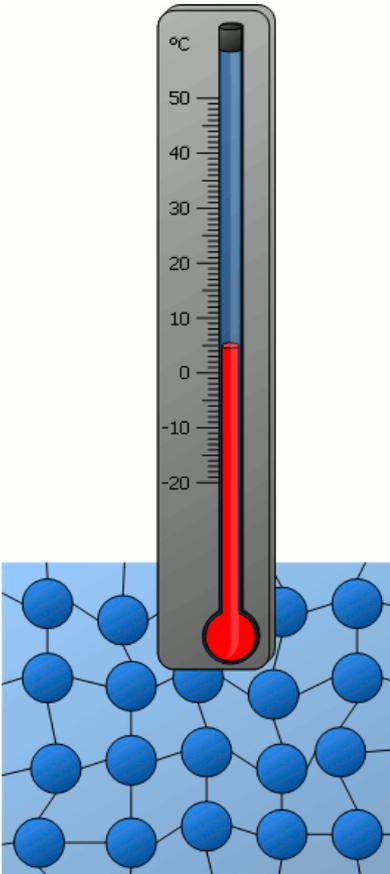
It's the simplest solution to the problem created by the *mechanical philosophy*, of which Descartes was one of the chief proponents. According to this view, the human *body* is just a collection of material particles – a machine.

1. **Free will.** The actions of a machine are all determined by the laws of physics, but a soul is free of those laws.
2. **Life after death.** The soul can survive the death of the body. This allows either a disembodied continued existence, reincarnation, or a future resurrection.
3. **Sharp distinction between humans and animals.** (The second of the two greatest errors is to say that “the soul of the brutes is of the same nature with our own”.)

Where does the mind *fit* into a mechanical world?

- According to the mechanical/corpuscular philosophy, the material world consists of particles in motion. The positions are fully describable using Cartesian coordinates, and the motions as functions from time to (x, y, z) .
- E.g. in a hot gas, the particles are simply *moving faster* than in a cold gas.
- What about thoughts and sensory experiences? Are they describable in terms of particles in motion? Is the experience of red a certain configuration of atoms?

temperature



What's wrong with materialism?

- If the mind is the brain, then we have the problem of qualia/secondary qualities.
- What's the mathematical definition of the colour red? What shape is it? This is nonsense.
- Similarly, what's the geometrical definition of pain? The geometrical mode of description seems utterly incapable of representing conscious states such as sensations (qualia).
- What are *beliefs*, according to materialism? Just certain configurations of particles in the brain?

Biologist J.B.S. Haldane on materialism

“It seems to me immensely unlikely that mind is a mere by-product of matter. For if my mental processes are determined wholly by the motions of atoms in my brain I have no reason to suppose that my beliefs are true. They may be sound chemically, but that does not make them sound logically. And hence I have no reason for supposing my brain to be composed of atoms.”

"When I am dead," in *Possible Worlds: And Other Essays* [1927], Chatto and Windus: London, 1932, reprint, p.209.

Mathematician Blaise Pascal, *Pensées*, #72 (written around 1660)

"It is impossible that our rational part should be other than spiritual; and if any one maintain that we are simply corporeal, this would far more exclude us from the knowledge of things, there being nothing so inconceivable as to say that matter knows itself. It is impossible to imagine how it should know itself."

Leibniz

... perception, and what depends upon it, is inexplicable in terms of mechanical reasons, that is through shapes, size and motions. If we imagine that there is a machine whose structure makes it think, sense, and have perceptions, we could conceive it enlarged, keeping the same proportions, so that we could enter into it, as one enters a mill. Assuming that, when inspecting its interior, we will find only parts that push one another, and we will never find anything to explain a perception.

(Monadology, 1714, Sec. 17)

Nagel/Jackson ‘knowledge argument’



Mary's black-and-white neuroscience lab
(Nagel 1974, Jackson 1982)

Nagel/Jackson ‘knowledge argument’



A



B

- Then Mary is shown the two coloured cards above, and is told that *one is red and the other green*.
- Mary knows all about red and green colour experiences, from a physical perspective. But can she say *which sample is red, and which is green?*

The knowledge argument

1. Physicalism is the view that “all information is physical information”.
 - (It is possible to describe all mental processes, *completely*, in purely physical terms.)
2. Mary has complete *physical* information about the neuroscience of human colour perception.
3. But Mary doesn't know (e.g.) red *looks like*. (She doesn't know which card, A or B, is red.)

∴ Some information cannot be expressed in physical terms. (So physicalism is false.)

Descartes' Solution

- Unable to find a place for thought in the material world, *Descartes put it into another world.*
- In other words, Descartes divided the universe into two parts, the *res extensa* (“world of extension”, i.e. physical world) and the *res cogitans* (world of thought, or consciousness).
- Later on, materialists basically kept the *res extensa* and discarded the *res cogitans*, placing conscious experiences in the physical world instead.

- (But maybe the res extensa, and the mechanical philosophy, were bad ideas to begin with?)
- Get rid of them? (See Anne Conway below.)

- What is the *brain*, in Descartes' picture? He says the brain is a mechanical object.
 - It's made of atoms
 - It has shape, size, mass.
 - Its volume is about 1.4 litres, and it weighs about 1.4 kg.
 - It's mostly composed of carbon, hydrogen, oxygen and nitrogen.

“Such persons will look upon this body as a machine made by the hands of God, which is incomparably better arranged, and adequate to movements more admirable than is any machine of human invention ...”
(p. 288)

Interactive substance dualism

- The mind obviously isn't the brain. So it's a separate object (substance), one which must be non-physical. It's not describable in geometrical terms.
- The mind *interacts with* the brain. [How do we know this?]
 - Do thoughts and feelings ever cause material events in the body?
 - Do material events in the body ever cause thoughts and feelings?



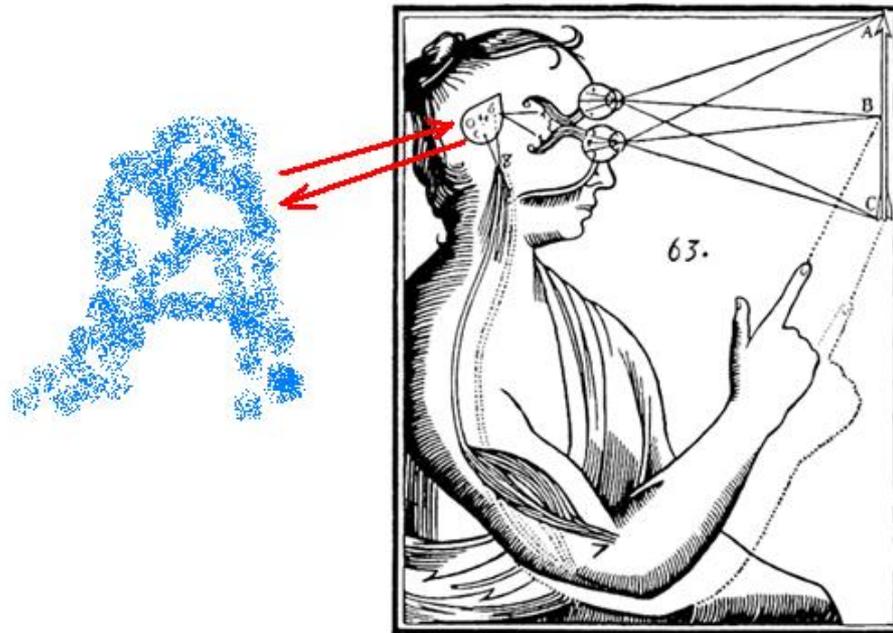
Mind-body interaction

Physical event → mental event



Mental event →
physical event

“34. Let us then conceive here that the soul has its principal seat in the little gland which exists in the middle of the brain. For, from this spot it radiates forth through all the remainder of the body...”



Part 2

Descartes argues for dualism

Descartes' 1st argument

1. I can pretend that my body doesn't exist
2. I cannot pretend that I don't exist.

- ∴ I am *essentially* a thinking substance
- ∴ My mind needs no place or matter
- ∴ My mind isn't identical to my body

“Then I looked carefully into what I was. I saw that while I could pretend that I had no body and that there was no world and no place for me to be in, I still couldn’t pretend that I didn’t exist. ...

This taught me that I was a substance whose whole essence or nature is simply to think, and which doesn’t need any place, or depend on any material thing, in order to exist. Accordingly this me—this soul that makes me what I am—is entirely distinct from the body...”

- *Discourse on Method*, Part 4 – (p. 2 in the iweb reading)

Alvin Plantinga, 1932 -



Plantinga's version

1. I can conceive that my body doesn't exist
2. I cannot conceive that my mind doesn't exist.
3. If $a = b$, i.e. a and b are one and the same object, then a and b have exactly the same properties. (Leibniz's Law)
4. What's conceivable is also possible.

- \therefore 5. My mind has a property that my body doesn't, namely *possibly existing while my body does not*.
(From 1 and 2)
- \therefore 6. My mind isn't identical to my body. (From 3 and 4)

Subjective and Objective possibility

- Plantinga's (and maybe Descartes') argument seems to commit the fallacy of confusing *objective* possibilities with *subjective* ones.
- E.g. Lois Lane can *conceive of* Clark Kent being sick while Superman remains healthy. Does it follow that Superman and Clark Kent are *actually* two different people?

Lois Lane's argument?

1. I can conceive of Clark Kent being sick while Superman is healthy.
2. I cannot conceive of Clark Kent being sick while Clark Kent is healthy.
3. If $a = b$, i.e. a and b are one and the same object, then a and b have exactly the same properties.

- ∴ 4. Superman has a property that Clark Kent doesn't, namely *possibly being healthy while Clark Kent is sick*. (From 1 and 2)
- ∴ 5. Superman isn't identical to Clark Kent. (3 and 4)

- This is obviously mistaken.
- Premise 3, a logical principle called **Leibniz's Law** (of the indiscernibility of identicals) doesn't apply to *all* properties.
- It doesn't apply to 'subjective' properties, i.e. those involving what is *believed* or *known* to be the case.

Modes of presentation

- A single object can appear to us under two different guises, or “modes of presentation”.
- It may not be obvious that it’s the same object twice.
- We can then *conceive* of the objects being non-identical, but it’s not *objectively possible* for them (it) to be non-identical.
- Why does Plantinga move from *conceivably* to *possibly*? I’m not sure.

E.g. pain and C-fibres

- Some materialists (called ‘identity theorists’) say that each type of mental state is identical to a certain type of physical state.
- E.g. the state of being in pain is perhaps the same as a state in which your C-fibres are stimulated.
- Can we disprove this, simply by noting that, after stubbing a toe, I *know* that I feel pain but I *don't know* that my C-fibres are being stimulated?

(Sixth Meditation argument)

First, I know that if I have a vivid and clear thought of something, God **could** have created it in a way that exactly corresponds to my thought. So the fact that I can vividly and clearly think of one thing apart from another assures me that the two things **are** distinct from one another, since they **can** be separated by God. Never mind how they could be separated; that does not affect the judgment that they are distinct. So my mind is a distinct thing from my body.

Descartes' conversation argument

(Related to the 'Turing test' of intelligence.)

“... [machines] could never use words or other constructed signs, as we do to declare our thoughts to others. We can easily conceive of a machine so constructed that it utters words, and even utters words that correspond to bodily actions that will cause a change in its organs (touch it in one spot and it asks ‘What do you mean?’, touch it in another and it cries out ‘That hurts!’, and so on); but not that such a machine should produce different sequences of words so as to give an appropriately meaningful answer to whatever is said in its presence—which is something that the dullest of men can do.” (*Discourse on the Method*, Part 5)

- Can machines hold intelligent conversation?
(Could they ever?)
- E.g. Eliza, Elbot, Cleverbot

- Descartes says that humans differ in *kind* from animals, not just in *degree*. For the stupidest human can still speak, whereas even the most intelligent animal cannot (even if they can make the sounds). Brutes have no reason at all, as very little is required to speak.
- “This doesn’t show merely that the beasts have less reason than men; it shows that they don’t have reason at all.” (Discourse, Part 5)
- So animals have no reason, and therefore no immaterial soul. Hence they are just machines. (Pass the *pâté de fois gras*!)

Dissect live animals? No problem

“In his physiological studies, he dissected animal bodies to show how their parts move. He argued that, because animals have no souls, they do not think or feel; thus, vivisection [dissection of live animals], which Descartes practiced, is permitted.”

(Encyclopedia Britannica)

Part 3

More modest versions of dualism

Anne Conway (1631-1678)



- Conway was an interactive substance dualist (like Descartes).
- However, she found *Cartesian* dualism implausible, due to the extreme difference in nature between mind and body on his account.
- Conway therefore rejected the *res extensa*. She held that the brain is more than a mere machine, or a collection of particles. (In fact even inanimate objects are more than that.)

Anne Conway (1631-1678)

- Conway criticises Descartes for saying (in effect) that the body is always dead meat, even when the person is alive.

“... this [Cartesian philosophy] says that every body is a mere dead mass, not only void of all kind of life and sense, but utterly incapable thereof to all eternity.”

Vitalism

- A living body, Conway claims, has “a vital principle of motion”, and so is “far more sublime than a mere mechanism, or mechanical motion”.
- This is *vitalism*, the idea that life is constituted by some kind of non-mechanical “life force”.

- In other words, Conway denied the very existence of Descartes' *res extensa*, or purely physical world.
- (Contemporary dualists who want to avoid the problems of Cartesian dualism often follow a similar route.)

4th argument: What is the *connection*?

- Conway says that, for mind and body to interact, there must be a connection, or ‘vital agreement’, between them.
- **Problem:** If the mind and body are so fundamentally dissimilar, *sharing no common properties*, then there can be no ‘agreement’ between them.

Can souls and bodies collide?

- Descartes says that a key feature of bodies is that they are mutually *impenetrable* – they cannot occupy the same physical space.
 - That’s why bodies bounce off each other when they come into contact.
- Souls don’t have this physical property (or any other physical property). So souls/minds can penetrate matter. (Like a ghost passing through a wall?)
 - (Is this what Descartes said?)

“... how a spirit move its body ... if a spirit (as they affirm) is of such a nature that no part of its body can in the least resist it, even as one body is wont to resist another, when it is moved by it, by reason of its impenetrability?”

- Conway makes an analogy with a sailboat whose sails are made of netting. The wind blows right through, and cannot push the boat along.

“...if body and spirit were not mutually impenetrable, a spirit couldn't cause any body to move.”

Similarity is needed for interaction

- Conway argues that bodies are able to interact with each other due to their *similar properties*, i.e. “that true agreement that one has with another in its own nature”.
- So, since mind and body can also interact, they too must have some overlapping properties, i.e.:

“spirit and body differ not in essence but only in degree”

5th argument: spontaneous generation

- Conway argues that ordinary bodies like earth and water are also spiritual, since they produce life from themselves.
 - At that time (1692) Aristotle's spontaneous generation theory was still accepted. (Pasteur refuted it in the 1860s.)
- “For earth and water continually produce animals, as they have done from the beginning, so that a pool filled with water may produce fishes though none were ever put there to increase or breed.”

Why is Conway a substance dualist?

- We have seen that, for Conway, a living body is

“far more sublime than a mere mechanism, or mechanical motion”.

- So why can't (e.g.) conscious experiences be functions of the *body*? There seems to be no need for a separate mind.
 - (Unless it's to allow for the same person to be resurrected in a new body?)

Property dualism

- There are a range of ‘dualist’ views that differ from the substance dualism of Conway and Descartes. These include:
 - Property dualism
 - Russellian monism
- What unites these views is the claim that, while mind and body are the same *substance*, the mind/brain has non-physical properties in addition to its physical properties.

Varieties of Dualism



materialism



Cartesian substance dualism



property dualism
(Russellian monism)



Conway's substance dualism

- Believing that mind=brain doesn't make you a materialist.
- These newer versions of 'dualism' agree with the materialists that the mind is the brain.
 - E.g. Michael Tooley

“in addition to the stuff of physics there's also consciousness ... qualitative properties: colours, tastes, smells are so on ... that aren't reducible to the physical world”

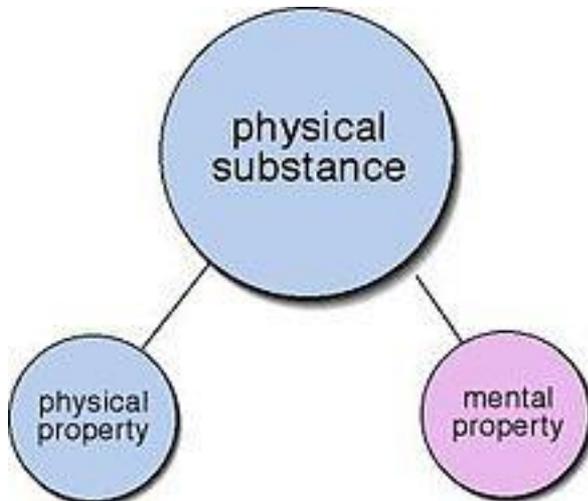


Michael Tooley on property dualism



(Beware of Wikipedia!)

Property dualism describes a category of positions in the **philosophy of mind** which hold that, although the world is composed of just one kind of **substance**—the physical kind—there exist two distinct kinds of properties: **physical properties** and **mental properties**. In other words, it is the view that non-physical, mental properties (such as thoughts, imagination and memories) exist in, or naturally supervene upon, certain physical substances (namely **brains**).



If the brain has non-physical properties, then in what sense is it a *physical* substance???

vs. Stanford Encyclopedia of Philosophy

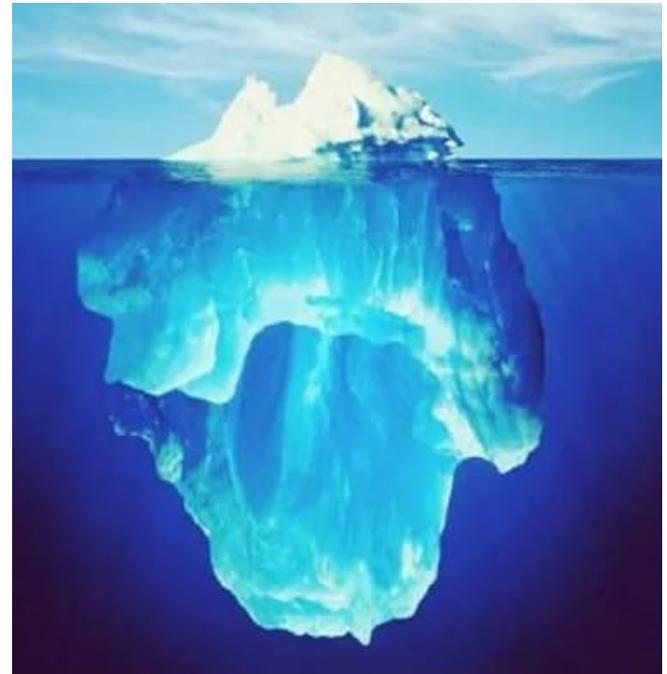
(entry on Dualism)

“...property dualism occurs when, even at the individual level, the ontology of physics is not sufficient to constitute what is there. The irreducible language is not just another way of describing what there is, it requires that there be something more there than was allowed for in the initial ontology.”

Correct, but harder to read

Russellian monism \approx property dualism

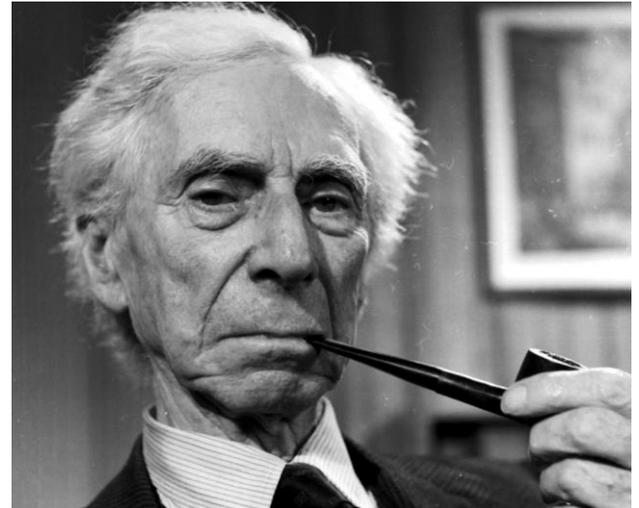
- Russellian monism says that the maximal physical description of a system is like the tip of an iceberg: it doesn't describe the whole system, but *just the part that we can describe abstractly*.
- There's a lot more going on in the brain than what we can see on brain scans, describe in scientific terms, etc.



Thought and consciousness are part of the inscrutable properties of the brain.

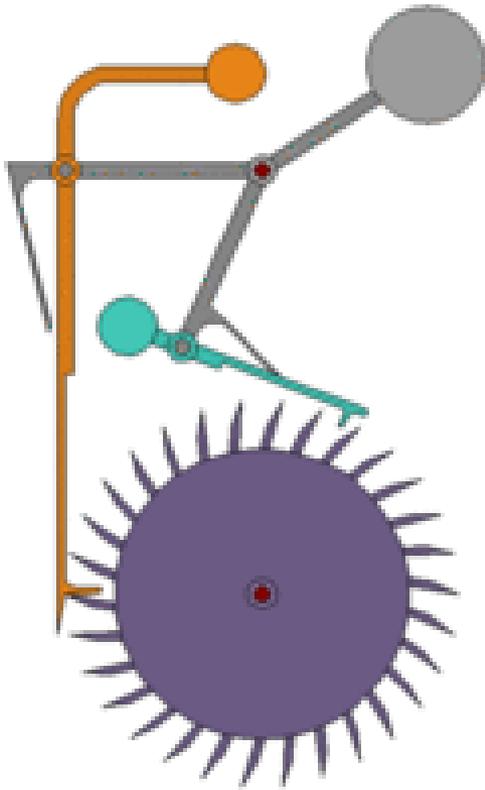
Are mathematical models of reality ever complete?

“Physics is mathematical, not because we know so much about the ‘physical world’ but because we know so little: **it is only its mathematical properties that we can discover.** For the rest, our knowledge is negative ... The physical world is only known as regards certain abstract features of its space-time structure ...”



Bertrand Russell, *An Outline of Philosophy*, pp. 125-6.

Abstract vs. real systems



- Physics describes abstract (mathematical) structures.
- Physics specifies what electrons *do*, but not what they *are*, or what they're *made of*, or *why* they do those things.
- So physics equations fail to describe the whole of reality.
- (Perhaps the 'inscrutable' properties, the ones left out, **include the mental properties?**)