Physicalism

MATERIALISM
According to a traditional metaphysics, a substance is an entity, a thing, that does not depend on another entity for its continued existence. It has ‘ontological independence’. For example, this handout is a (physical) substance.

1. Substances are also understood by contrast with properties.
2. Substances are what possess properties. The chair (substance) is solid (property). Properties can’t exist without substances - they depend on substances to exist. Solidity depends on things being solid; the property ‘being 1 metre long’ depends on something being that long; and, Descartes claimed, thoughts can’t exist without a thinker.
3. Substances persist through changes in properties - something can change from being 1 metre long to being 1.1 metres long, e.g. by growing. Obviously, the property ‘being 1 metre long’ does not persist through this change. Or again, a thinker can think a series of thoughts - the thinker persists, the thoughts do not.

A central question in philosophy of mind is ‘is the mind a substance?’ Materialism is the view that there is only one kind of substance, which is matter. Thus the mind is not a distinct substance; it is not ‘ontologically distinct’ from what is material, but dependent upon it for its existence.

PHYSICALISM
In recent years, materialism has been supplanted by ‘physicalism’, and so from now on, I shall talk about physicalism, not materialism. The most important reason for this is that physics has shown that ‘matter’ is too crude an identification of the most basic substance that exists, e.g. matter can be changed into energy.

As a first attempt, we could define physicalism as the view that everything that exists is physical, or depends upon something that is physical. ‘Physical’ means something that comes under the laws and investigations of physics, and whose essential properties are identified and described by physics.

But we should be more precise. Physicalism claims that what is physical is metaphysically fundamental. It is not enough that the only substance is physical. The fundamental nature of the universe is physical, and this covers events and properties as well. So physicalism says:

1. the properties identified by physics form the fundamental nature of the universe;
2. physical laws govern all objects and events in space-time;
3. every physical event has a physical cause that brings it about in accordance with the laws of physics. (This is known as the ‘completeness of physics’ or
‘causal closure’.

It is worth saying more about the first and third claims.

The third claim states that all physical events have sufficient physical causes. Of any event involving a change in physical properties, e.g. every movement of your body, that event can be brought about by something physical alone. No other, non-physical causes are necessary. So if there are non-physical causes, they don’t contribute anything in addition to physical causes to the way the physical world changes over time.

The first claim states that the properties identified by physics are ontologically ‘basic’. Other properties, in particular mental properties, are ontologically dependent on the properties identified by physics (or more broadly, the natural sciences). Mental properties, therefore, if they exist at all, are not part of the fundamental nature of the universe, but ontologically dependent on other properties.

There are different ways of understanding the relation between mental and physical properties, different types of physicalism.

1. Elimination: eliminative materialism claims that there are no mental properties. Our concepts of mental properties are fundamentally mistaken - these concepts don’t refer to anything that exists.

2. Reduction (identity): mind-brain type identity theory claims that mental properties are identical to certain physical properties. This is known as ‘reductive’ physicalism. An ‘ontological reduction’ involves the claim that the things in one domain (e.g. mental things) are identical with some of the things in another domain (e.g. physical things). There are many different types of physical property, e.g. size, shape, motion, mass, various forms of energy, chemical properties such as molecular structure, biological properties such as genetic code, and many others. Mental properties, type identity theory argues, are yet another subset of physical properties. The identity claim is a reduction because we have ‘reduced’ mental properties - which we might have thought were a different kind of thing - to physical properties. I.e. there is nothing more to mental properties than being a certain kind of physical property. For example, perhaps to think about snow just is for certain neurons to fire in one’s brain.

3. Non-reductive dependency: logical behaviourism and functionalism are both types of ‘non-reductive’ physicalism. They both argue that mental properties cannot be reduced to physical properties. However, functionalism claims that mental properties can be reduced to functional properties and some forms of logical behaviourism claim that mental properties can be reduced to behavioural dispositions. So (in some forms) both these theories are reductive, but in a different sense to reductive physicalism (type identity theory). They are both physicalist because functional properties and behavioural dispositions depend upon physical properties.

SUPERVENIENCE

But what is it to say that mental properties ‘depend’ upon physical properties, if they are not reducible to them? Philosophers spell this out in terms of the idea of ‘supervenience’. The essence of supervenience is this: properties of type A supervene on properties of type B just in case any two things that are exactly alike
in their $B$ properties cannot have different $A$ properties.

For example, a painting has various aesthetic properties, such as being elegant or balanced. It also has various physical properties, such as the distribution of paint on the canvas. The aesthetic properties supervene on the physical ones. We cannot change the painting’s being elegant or balanced without changing the distribution of paint on the canvas. There can be no change in aesthetic properties without a change in physical properties. And two paintings exactly alike in their physical properties (i.e. duplicates) will have the same aesthetic properties. If two paintings are completely identical in terms of how the paint is arranged, if they look exactly the same, then they must also be identical in terms of their aesthetic properties. Of two physically identical paintings, one can’t be graceful while the other is awkward. Any differences in their aesthetic properties entails that there is a difference in their physical properties.

We need to notice the strength of this claim. It is not enough to say that if the paintings are physically identical, then they are aesthetically identical. Suppose we say simply that in this case, as it happens, they are both graceful. This allows that in another case, one could be graceful and one not. But saying that allows that the physical properties don’t fix the aesthetic properties. The aesthetic properties would be able to vary even as the physical properties remained the same.

This isn’t right. We want to say that if the paintings are physically identical, then they must be aesthetically identical. It is not merely false but impossible that one is graceful while the other is awkward, if they both look exactly the same. Put another way, once the physical properties of a painting are finalized - when the painting is finished - there is no further work to be done to ‘add’ the aesthetic properties. They are already part of the painting. To change the aesthetic qualities, you must change the physical properties.

According to physicalism, physical properties ‘fixed’ all the other properties in such a way that it is not possible for the other properties to change without changing the physical properties.