PHYSICALIST VIEWS OF THE MIND

WHAT IS PHYSICALISM?
- Materialism has always been used to refer to the denial of dualism or of a spiritual world.
- Naturalism is a broad term used to deny that there is anything beyond nature, or ‘supernatural’.
- Physicalism is normally used to mean that all of reality is made of the stuff physicists discuss (i.e. that not only is there no supernatural, but also that physical matter has no mysterious further dimensions to it).

ATTRACTION: WHY PREFER PHYSICALISM?

Rejection of dualism:
- Brain mapping is showing every function is located
- Dualists can only define the mind negatively
- Dualism is based on an ancient theory of substances
- It leaves some brain events without visible cause or effect

Rejection of behaviourism:
- Beliefs are not realised in any particular behaviour
- Superspartans and quadriplegics might lack behaviour
- Superactors & brainwashed might have empty behaviour
- A mental state like grief has many different behaviours

Rejection of functionalism:
- Functions don’t explain truth, which logic needs
- Meaning may be partly external to the functions
- Why only one function for each belief?
- If we are computers, we need a user
- Intrinsic properties cause functions, so can’t be functions

Closure of physics:
- Mysteries get explained
- Thunderbolts, eclipses, magnets, reproduction
- Life (urea, evolution, vitalism, DNA)

FIRST ATTEMPT: THE IDENTIFICATION THESIS

The Theory:
- Democritus and Hobbes had said thought was just movement of atoms
- Smart and others propose that thought is just physical, calling the theory Central State Materialism (mind is central brain events)
- Pain is contingently identical with C-fibre firing; it could have been some other physical event, but it isn’t
- The theory is now known as Type-Type Identity Theory: pain is said to be a particular type of physical event
- The brain only has one set of properties, but they are described by two different families of concepts and vocabularies
- The identity is like ‘lightning is electrical discharge’; there is one underlying physics, but two different ways of seeing it

Problems:
- Physical events can’t explain morality, reason, spirituality, immortality, imagination, emotion, free will, qualia, or understanding
- We discovered that the Morning Star is identical to the Evening Star (Venus), but such an identity is necessary, not contingent
- The theory involves human chauvinism, because it says only a human brain can realise routine thoughts and experiences
- Pain, or the thought ‘it is sunrise’, must be multiply realisable, by different people, animals, robots and aliens
- A Zombie Twin seems possible (identical behaviour, no experience), and inverted qualia (same brain event, different experience)

First Defence:
- It must be conceded that if two things are physically identical, then that identity will be necessary
- The possibility of a true Zombie can be denied, and inverted qualia must involve a physical change, like cross-wiring
- The new slogan is “the physical entails the mental” – meaning a given brain event will necessarily have its mental properties
- Maybe animals/aliens don’t have our phenomenal states, but they do end up with the same intentional states and behaviour as us

RESISTANCE: THE HARD QUESTION
- Chalmers says physicalism can’t answer the Hard Question: we may explain information processing, but why do we experience it?
- Nagel says the defining feature of a mind (its subjectivity, its what’s-it-like-to-be?) isn’t explained
- Jackson says (in his case of ‘Mary’) that over and above the physical facts of mental life, there is the new knowledge of experience
- Davidson, although he is a monist, says mental events are anomalies, because no physical laws will connect them to behaviour
- Davidson also says that human behaviour is caused by reasons, and that these could never be simple physical events
**COMPROMISE:** PROPERTY DUALISM

**New Proposal:**
- The key question seemed to be whether mind is reducible to physical events or properties, and the Hard Questions suggested it isn’t.
- The new view replaced type-identity with token-token identity and property dualism
- **Token-token identity** only says that some physical event corresponds to each mental event, but it could be of many physical types
- **Property dualism** says there is one object (a brain) which has two different groups of properties that don’t reduce to one another
- Davidson suggests the word ‘supervenience’, which means the mind depends on the brain, but has its own independent laws
- The theory rejects dualism, because it only has one substance, but leaves room for qualia, free will, reason etc.
- Reduction is held to be impossible, because mental events have **causal powers** impossible for brains (e.g. proof, rule-making)
- Properties can be multiply realisable, just as berries and fire can give off the right wavelength for red

**Objections:**
- Perry labels the new view **neo-dualism**, implying that it is cheating by trying to keep dualism in a physical framework
- It may be that reductive psycho-physical laws do exist, but are simply too complicated to comprehend clearly (like ecology)
- If the brain really has about $3 \times 10^{14}$ synaptic connections, we must expect surprising physical properties to be produced
- Experience seems a mystery, but this diminishes when we think of the speed and complexity of the brain’s information processes
- Given that you are *not* a bat, it is not surprising that you cannot share its experiences – but you might explain them physically
- If mental properties have no causal link to the physical properties, this seems to point to an unsatisfactory *epiphenomenalism*
- We talk of something being green and square without talking of property dualism or seeing a anomaly
- It may be that if you look carefully at the physics of **properties**, such as colour, weight, hardness, they turn out to be processes
- If we talk of properties being **emergent** (in some grand way) we are claiming something which evolution could not produce

**FIGHT BACK:** REDUCTIONISM

- **Traditional folk psychology** is attacked by eliminativists like the Churchlands as false (like folk physics and logic)
- The most ruthless approach is **eliminativist** about consciousness, saying there is (strictly) no such thing (like pixels on a screen)
- Dennett proposes an **instrumentalist** view of phenomena such as consciousness, free will and personal identity (useful fictions)
- Dennett has also strongly emphasised the fact that our commitment to **evolution** must include the mind, built up by small steps
- Searle argues strongly for the view that mind is a **property**, and compares it to the liquidity or transparency of water
- Edelman, an eminent neuro-scientist, says the mind appears to be a high-speed **process**, rather than a property or a substance
- Fans of computer neural networks and Hume’s theory of associations have developed the **connectionist** theory of mind
  - Many mental events have been modelled successfully in connectionist systems, which are networks of links fluctuating in strength
  - Connectionist systems are good at pattern recognition and high-speed perception, and show characteristic human irrationality and ‘graceful degradation’
- Actual physical representations of geometric shapes have been observed in the brain of a monkey
- Simple creatures like worms are completely understood in physical terms, but they respond rapidly to their environment
- Every few months a new part of the brain is linked to one of our ‘higher’ activities, such as religion, or falling in love
- You reduce one thing to another either by identity (lightning to electrical discharge), or by bridging laws (chemistry to physics)
- If reduction is by **identity**, this seems to point towards eliminativism; **bridge laws** may exist, but of incredible complexity
- We must not expect a complete reductionist account of the mind, as it is a different level of description
- Perhaps we should talk of ‘**Conceptual Dualism**’; there is one substance, but we have developed two different languages for it
- You cannot simply reduce a forest to its trees, because at the level of trees you can’t see the forest, or its parts, or its effects
- One proposal is the **Constitution View**, that a brain constitutes a mind, as stone does a statue, though statues have their own laws
- We might deny free will entirely, reduce reason to meta-thought, see the ego as physical, and explain morality through functions

**RESIDUE:** CURRENT PROBLEMS

- No theory gives any account of how qualia are produced, though there are candidates for the Neural Correlate of Consciousness
- The Twin Earth problem (does ‘water’ here refer to ‘XYZ’ there?) has encouraged **externalism** about the mind
- If the mind can only be explained in connection with the external world, a simple physical account looks unpromising
- Everyone agrees that there is no reason why a functional system would be conscious, but a brain looks an equally unlikely candidate
- My brain doesn’t turn orange when I look at an orange, so the content of thought is deeply interior and **private** (Leibniz’s Mill)
- We have a strong sense of **personal identity**, in ourselves and others, but it unclear how a physical organ could sustain that
- McGinn has responded with his pessimistic **mysticism**, since we can’t reach mind through brain, or brain through mind.
- Neuro-scientists are perplexed by the **binding problem** – how diverse events in the brain can unite into a single field of experience
- Some thinkers are also struck by the **grain problem** – that consciousness seems perfectly smooth, while brains are granular
- It is hard to see how an account of the reference, meaning and truth found in a **language** can be explained physically
- If we embrace physicalism we seem to have to give up nearly all our traditional beliefs in free will, religion, morality, integrity etc.
- If mental properties have their own causal powers, that leaves us with the problem of **double causation** of our behaviour
- It appears that philosophers, who are obsessed with theory, are much more puzzled than scientists who work with the brain
- It still seems difficult to explain the richness of human behaviour by events inside a piece of meat