

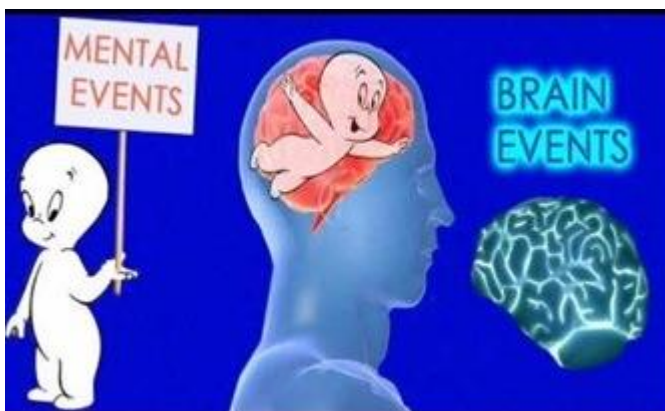
## Classic Text 06 – Philosophy of Mind: Dualism

This is the first in a series of study units concerning the philosophy mind. One fundamental question that we all ought to ask ourselves at some point, given that we all appear to have one, is:

“What is a mind?” Very few people will have a positive answer at the ready, however about 90%, if pressed, will come up with something negative, such as: “Well, it’s not the body” or “It’s

immaterial or non-physical” or “It’s not of this world.” **Cartesian dualism** in this context is the belief that the mind and

matter are separate substances. Thus, while the body might be composed of matter (atoms and molecules *etc.*) the mind, which inhabits it, comprises of some other ethereal substance – a view which Gilbert Ryle characterised as “the ghost in the machine.”



*A Characature of Dualism: A Ghostley Entity (Casper) Interats with a Physical Brain to Mediate Mental Events*

We have already met two towering figures in Philosophy who were dualists: Plato and Descartes, therefore their texts, reproduced in earlier study units, will again form the basis of this one. Please re-read the extract from The Republic about Plato’s Cave as well as the extracts from the Meditations by Descartes, however this time pay particular attention to what the authors have to say about the nature of the mind. You might also want to rent a copy of The Matrix to watch again. Recall that the mental events of the vast majority of the denizens of the Matrix are decoupled from their actual bodies – a functionally dualistic fiction.

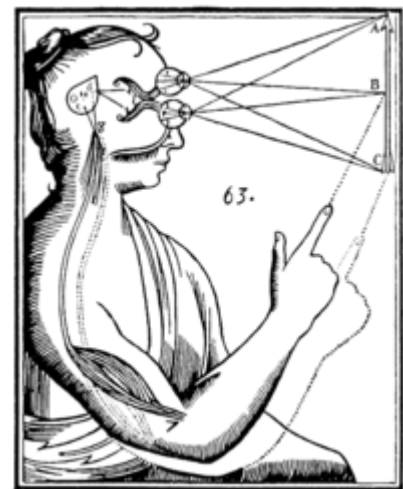
A note on nomenclature: The words “soul” or “psyche” (Greek: ψυχή *psychē*), “mind” (Latin: *anima*), “spirit” (Latin: *spiritus*) and even the obsolete “ghost” (Old English: *gāst*) are used interchangeably when speaking colloquially, such as: “He gave up the ghost,” or “His soul departed.” Their technical meanings however are quite distinct and derive from different philosophical traditions, millennia apart. Even the understanding of the soul among contemporaries such a Plato and Aristotle differed so considerably that today we regard Plato as a dualist but not Aristotle. Therefore, unless otherwise stated, we will confine the following discussion to the meaning of the word “mind” as conceived by Descartes.

Descartes implicitly relies on one identity theorem that states: identical entities have identical properties. In his second meditation Descartes supposes if “... I possess no senses; I believe that body, figure, extension, motion, and place are merely fictions of my mind...” and yet, “this proposition: *I am, I exist*, is necessarily true each time it is expressed by me, or conceived in my mind... I am therefore, precisely speaking; only a thinking thing (*res cogitans*), that is, a mind, understanding, or reason...” That much alone violates the terms of identity. If the mind and the body (or part of the body, such as the brain,) were identical then their properties would not be different, therefore the mind and the body must be different entities. Indeed Descartes believed them to be so different: the body, physical and extended in space, and the mind purely rational, that they must be

composed of separate substances, physical and non-physical respectively. This variety of dualism is known as **substance dualism**. **Property dualism**, on the other hand, merely implies that properties of mental states are separate from properties of physical states.

For Descartes and modern dualists, at least, there are strong grounds for believing that if property dualism is true then so is substance dualism. If we were to draw up a short list of mental vs. physical attributes, most people would be persuaded that no mental property could belong to the physical category and *vice versa*. For example, bodies comprise of atoms, molecules, cells and so on which lack consciousness or even awareness, whereas minds are capable of rational thoughts. So the mind must comprise of something other than mere matter and anything other than matter must comprise of a separate substance. And since humans are rational beings they must possess an immaterial mind, separate from their otherwise mindless physical bodies.

One difficulty that immediately presents itself to substance dualism is how to account for the causal links between non-physical mental states, such as beliefs and desires on the one hand, and physical bodily states on the other. For Descartes (see diagram at right,) physical inputs from the body are relayed via the sensory nerves to the pineal gland in the centre of the brain, where they are passed on to the non-physical mind and outward again from the pineal gland to the motor nerves and ultimately the muscles, resulting in physical action.



*An illustration by Descartes depicting the interaction of the mind and body via the pineal gland.*

Although Descartes was just plain wrong about the role of the pineal gland in mediation sensation and motor output (its actual

function is to regulate our circadian rhythm – cycles of seep and wakefulness via the hormone melatonin,) had he chosen any other part of our anatomy he would not have been able to explain how a non-physical entity can cause physical effects either.

Although we want to hold onto the very intuitive idea that mental events cause physical events and *vice versa* (**interactionism** under dualism,) neither substance nor property dualism affords such a mechanism. Giving up on any intuitive sense of interactionism however places us in a very curious predicament akin to that of the denizens of *The Matrix*. They can perform any action they wish while trapped in the matrix, but because they are part of a computer simulation, their bodies will be unmoved because they are external to the simulation. David Chalmers has posted a stimulating online article entitled, “The Matrix as Metaphysics,” in which he explores *The Matrix* as a variant on the thought experiment of the brain-in-a-vat, however unless we are so roundly deceived as in *The Matrix* or as prisoners in Plato’s cave or by Descartes demon, we must hold interactionism to be incompatible with dualism.

#### *Other arguments in favour of dualism*

The **argument from subjectivity** relies on the observation that there is some subjective quality to internal mental states, call them “raw feels” or “**qualia**” (singular: “qualon,”) that mere physical phenomena appear to lack. Thus there is something *that it is like* to see the sky as blue or to feel the

pain of a naked flame *that is unlike* the mere physical properties of blueness or combustion respectively. So it appears that qualia, which are involved in mental states, do not reduce to anything physical, thus opening the door to dualism. A case in point is Frank Jackson's (1977) example of Mary's Room:

Mary has spent her entire life in a room without colour – The TV is black and white, so is her computer monitor, so are all her clothes and all the furniture. Despite never having seen a colour Mary is curious to learn everything there is to know about colour because there is so much discussion of the topic on her black and white TV. Using her internet connection and her love of learning Mary qualifies as a neuroscientist and soon becomes a world authority on colour, knowing everything there is possible to know on the subject. One day Mary breaks free from her colourless room and gazes up at the magnificent sky. Finally, Mary gains the knowledge of what it is like to see colour for the first time. However it would now seem that Mary has gained something non-physical because she already knew everything that it was possible to know about colour from an objective, physical perspective as a neuroscientist.

Mary's Room has been taken to demonstrate that there is some irreducible, non-physical quality to the experience of mental events, Jackson however later rejected his original argument, noting that what had changed was not Mary's objective knowledge of colour but a change in her mental state of actually *seeing colour*. This would have been accompanied by physical changes in her brain, perhaps causing her to exclaim: "Wow, blue!" – a physical action.

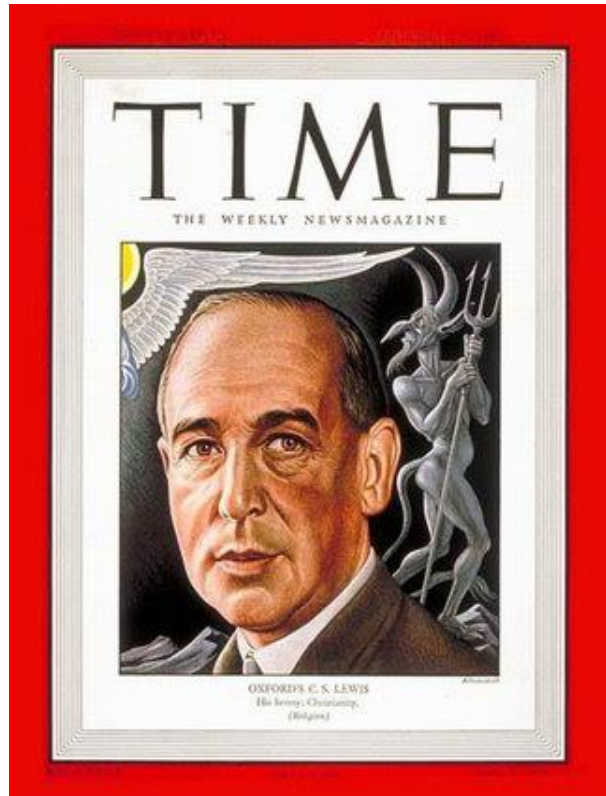
According to the **zombie argument**, it is at least conceivable that one could have a fully functioning human body that yet lacked consciousness or any other mental states usually associated with it. Such a description seems to fit what we in popular culture call a zombie. Tales of zombies are supposedly scary for the opposite reason that tales of ghosts are: zombies are mindless bodies, whereas ghosts are disembodied minds. According to David Chalmers, all and only those things that comprise of a human being are those that the Physical Sciences describe. But the Physical Sciences make no reference to consciousness, qualia or any other mental phenomena. However, the Physical Sciences would have no trouble describing any physical body, whether or not it lacked consciousness; the implication being that consciousness seems to slip through the net of what the Physical Sciences can adequately describe. This seemingly invites a dualistic interpretation: either minds are substantively different from bodies (substance dualism) or mental properties are irreducible to physical ones (property dualism.)

Several objections have been raised to the zombie argument, chiefly that it is incoherent. Is it really conceivable that one conscious body could be identical in every physical respect to a zombie counterpart? How could you tell, if they all walked and talked the same? The very idea of zombies is that they behave as if they are mindless. If you couldn't tell them apart then we might as well all be consciously behaving zombies and if we might conceivably all be so, then term "zombie" fails to pick out any useful class of thing. Chalmers himself has made some concessions, such as that living beings seem to require some level of consciousness to exist, whereas one day robots built to simulate human being might become the first zombies. But then how would you know? Chalmers half-jokingly calls for the building of some sort of "consciousness meter" by which to decide whether a given entity, robot or a human, were consciousness or not. However handing the problem over to a "consciousness meter" (even a hypothetical one,) is simply begging the question: "What is a

conscious mental state?" or any mental state for that matter. So it seems that by now the zombie argument is just going round in circles.

The **argument from reason** was famously first published in C.S. Lewis' book *Miracles* (1947) however, the following extract from an earlier lecture by Lewis to the Oxford Socratic Club entitled, "Is Theology Poetry?" succinctly expresses both his concern and his line of reasoning.

One absolutely central inconsistency ruins [the popular scientific philosophy]. The whole picture professes to depend on inferences from observed facts. Unless inference is valid, the whole picture disappears... unless Reason is an absolute[,] all is in ruins. Yet those who ask me to believe this world picture also ask me to believe that Reason is simply the unforeseen and unintended by-product of mindless matter at one stage of its endless and aimless becoming. Here is flat contradiction. They ask me at the same moment to accept a conclusion and to discredit the only testimony on which that conclusion can be based.



*C.S. Lewis (1898 – 1963) featured on the cover of Time magazine, Sept. 8, 1947. The article was entitled, "His heresy: Christianity."*

The argument from reason was actually another argument for the existence of God, however one of its sub-conclusions is that of dualism, therefore for present purposes we will pursue it up to that point. Firstly we should note that the argument as it appears in the extract above is an enthymeme: it contains implied or unstated premises and steps of logical inference. For clarity's sake therefore we set out a generic form as a numbered argument, thus:

1. No belief is rationally inferred if it can be fully explained in terms of irrational causes.
2. If **naturalism** is true, then all beliefs can be explained in terms of natural causes *i.e.* the forces of nature (be they physical, chemical, biological etc.)
3. ∴ If naturalism is true, then no belief is rationally inferred.
4. If any thesis entails the conclusion that no belief is rationally inferred, then it should be rejected and its negation accepted.
5. ∴ Naturalism should be rejected and its negation accepted.
6. Any being requires rationalism to be convinced by an argument.
7. ∴ If human beings are to be convinced by an argument, their reasoning must stem from a rational source.
8. ∴ By 2 above, if humans are to be convinced by an argument their reasoning must stem from a non-physical source.

Let us try and unpack this:

1. Suppose a child believes all dogs to be vicious because he was once bitten by one whose tail he had been pulling. We would say that his belief is irrational because we can potentially uncover a causal chain of events stretching back to the day he was bitten that fully explains his present phobia. If his mother however, believes a particular breed of dog to be vicious because they have been artificially selected as pit fighters, we would be inclined to judge her belief as rational because it is the product of deliberation, rather than mere association. Accordingly we tend to discount beliefs as irrational when they can be explained in terms of mere irrational causes. That we do seems to be uncontroversial.
2. **Naturalism** is the philosophical belief that *only* natural (and not supernatural or spiritual,) laws or forces operate in the world, so that if beliefs are to be explained, then they must be explained in terms of natural causes, be they physical, chemical, biological *etc.* and not supernatural. That much flows from the very meaning of naturalism; so we can say that 2 is true by definition.
3. If 1 and 2 above are true then we are compelled to accept 3. However very few to no proponents of naturalism would be prepared concede such a point, if only because it entails *inter alia* that belief in naturalism is irrational too. So unless naturalism *is* untrue, either 1 is false or there is something structurally wrong with the sub-argument as it stands. But since our present task is to unpack the argument rather than evaluate it just yet, we ought simply to proceed, provisionally, to the next premise.
4. No one except a **nihilist** (someone who believes that nothing or no values or meanings exist,) would seriously or knowingly entertain any thesis that no belief is rational, if only because to do so would be self-contradictory, though whether or how we ought to embrace its negation is unclear. See 5.
5. If naturalism really did entail the conclusion that no belief is rational, then we honestly should reject it, but then what is the negation that we ought to embrace? Anti-naturalism or supernaturalism? To be charitable, Lewis probably just wanted to challenge the inclusion of the word "only" in the definition of naturalism so as to preserve naturalism for the realm of nature but to admit of supernatural or spiritual forces for a separate yet intermingling realm of reason.
6. This is a truism. It is in the nature of rational beings that they that they are amenable to cogent arguments, whereas children in the throes of a tantrum or those in a state of psychosis are not: children because they are yet to mature as rational beings and psychotics because they no longer or never did command executive sway over that faculty.
7. This sub-conclusion would be acceptable to both naturalists and super-naturalists alike, however naturalists would look to the natural world, with its laws of nature and physical forces, while the latter would look to a world apart or beyond.
8. The final conclusion is possible under naturalism only if the word "only" is removed from its definition, but then we would no longer be dealing with naturalism but dualism; however for Lewis that would be just the point at 5 above, namely that naturalism is untenable.

## Critique of the argument from reason

Since the whole argument turns on the veracity of the first premise, this is one we had better get right:

Elisabeth Anscombe, who was present at the meeting of the Socratic Club, is often cited as the most significant critic of the argument from reason in its earliest form. As an orthodox Catholic philosopher herself, her critique carries peculiar weight because she was arguing neither for naturalism nor against rational inference. Anscombe's first objection concerns the use of the terms "irrational" vs.

"rational" to describe physically caused events.

Irrational beliefs (and desires) stem from conflicts with reason, such as fallacious arguments or **magical thinking**, (the belief that one's thoughts alone can bring about effects in the world.) However a belief (or

desire) that stems from a non-rational cause need not be irrational if it does not conflict with reason. *E.g.* The belief that one is going to get wet, caused by a non-rational physical event such as a shower of rain, is entirely justified. So it would seem that there are no irrational *causes* out there, only irrational *means* of arriving at such beliefs (or desires.)

Lewis did take Anscombe's objection to heart, revising his argument in chapter 3 of *Miracles: "The Cardinal Difficulty of Naturalism,"* replacing the word "irrational" with "non-rational." What is not clear is how the rewording fortifies his original argument, other than nimbly sidestepping the objection.

Anscombe's second objection takes issue with Lewis' original argument that if naturalism were true, then reasoning would not be valid. The problem is that we can ask whether a *particular* argument is valid but it does not make sense to ask whether reasoning itself is invalid. Doing so would involve contrasting an argument that some kind of reasoning is invalid with another that it is valid and then using reason to decide. So asking whether reasoning itself is invalid is a meaningless question.

Anscombe's third objection concerns the ambiguity of the use of "why," "because" and "explanation." According to her there are at least four types of explanation involved.

1. Naturalistic causal explanations, typically subsuming an event under some physical law
2. Logical explanations that demonstrate the logical relation between premises and conclusion
3. Psychological explanations, explaining why we believe what we do, and
4. Personal history explanations, explaining how, given our personal history, how we came to believe what we do.

Lewis was careful to draw such distinctions in *The Cardinal Difficulty of Naturalism*, however that does not mean, as Anscombe had pointed out, that different types of explanation might be compatible with one another such as the naturalistic causal explanation of how we might have come to believe what we do, while that explanation might, in turn, be compatible with another type of explanation.



*G.E.M. Anscombe (1919 - 2001) British Analytic Philosopher, Pupil of Wittgenstein and Professor of Philosophy at the University of Cambridge*

Although we could continue to pick apart the argument from reason as conceived by Lewis, others such as Alvin Plantinga, William Hasker and most recently Victor Reppert (2003) have advanced the argument along different lines. However it is sufficient for present purposes that we have given the argument from reason, in its early forms, a charitable exposition together with any glaring deficiencies. Those who would like to pursue the argument further are directed to Reppert (2003) and his more recent blogs on the subject. Also the full text of Lewis' chapter 3 from *Miracles* is available for download via a link in the references below. For now we turn to arguments specifically against dualism.

### *Arguments against dualism*

The **problem of causal interaction** is especially vexing for dualism, which holds the (conscious) mind to be wholly independent of the physical body (brain) because it fails to explain how mental events, which have no physical properties, could ever interact with something that is wholly physical to bring about physical effects. See Casper above. No one has yet been able to resolve the problem of causal interaction, though several 20<sup>th</sup> century philosophers and physicists have sought answers from among theories of quantum mechanics because they introduce an element of indeterminacy and unpredictability into the behaviour of matter at very small scales. Although ordinary macroscopic objects are composed of particles which behave very differently at the quantum scale, the effects do not appear to scale up to the macroscopic level which bodies (with their brains and neurons *etc.*) occupy. Moreover such efforts appear to be misguided purely on philosophical grounds: Primarily because they try to explain the obscure by the more obscure (**obscurum per obscurius**), going something like this: "Consciousness is a very obscure phenomenon. All matter depends on quantum mechanical phenomena (which are even more obscure.) Therefore consciousness can be explained by quantum mechanics." Secondly, anyone who *has* actually studied quantum mechanics would know that the equations governing such phenomena are absolutely deterministic. It is only when we try to normalise them that we are forced to treat them probabilistically, *not* randomly. Even then it is not clear why simply injecting an element of 20<sup>th</sup> century randomness into a millennia old philosophical problem would make it go away. In general, any appeal to Science on the matter is necessarily bound to fail because for dualism, the mind is non-physical by definition and thus beyond the scope of Science. In particular, if dualism were true it would violate even the most basic tenants of Physics, such as the conservation of energy. Suppose a non-physical mental event, such as the desire for a cup of coffee, were to cause a cascade of neuronal firing that led to the complex, coordinated bodily movements required to actually make a cup of coffee. If nothing physical caused the neurons to fire, but under dualism they were caused to fire anyway by a non-physical entity, where did that energy come from? If dualism's answer is: from somewhere, not of this world or that human brains are somehow exempt from the law of conservation of energy, then another axiom Science will have been violated, namely the causal closure of the universe. How much hard-won fundamental Science has to be sacrificed just to make dualism not inconsistent with what we already know?

The **argument from brain damage** observes that instances of brain damage by trauma, disease or toxicity always result in changes or compromised function to the mental character or properties of a person. Indeed injuries to specific parts of the brain result in specific, highly predictable perceptual, cognitive or motor deficits. If the mind were a separate entity such correlations would not exist.

The **argument from psychopharmacology** observes that specific classes of psychoactive chemicals are used to treat specific clusters mental disorders such as major depression, schizophrenia, bipolar disorder, anxiety disorders and the like. Most of the chemical agents used have been shown to work by binding to specific receptors or ion channels on the surface of neurons within the brain. The fact that all registered psychopharmacological treatments have to be proven, in clinical trials, to be more effective than **placebos** (sham treatments) attests to the underlying biochemical nature of such disorders, which is not to deny that they have very real social and existential dimensions as well. However, if dualism were true and mental disorders were somehow immaterial in origin, we wouldn't need chemicals to treat them and any chemicals that we might use would be ineffective.

The **broken radio analogy** is an attempt by some dualists to meet the argument from brain damage but it might as well oppose the argument from psychopharmacology too. Suppose that the brain is like a radio, receiving radio waves and converting them to sound. Then the mind would be like an immaterial entity broadcasting thoughts to the physical brain which would then convert them into bodily actions. So just as if you damage a radio, so that it no longer works properly, so a damaged brain produces dysfunctional actions, not because the mind is damaged but because the brain can no longer receive and transform thoughts emanating from the immaterial mind into physical behaviour. At first blush this sounds quite plausible; let us set it out formally.

non-physical minds : physical brains : : radio waves : radio receivers

Recall that from Critical Reasoning Unit 03 that the colons “:” read “are to” or “is to” and that the double colon “: :” reads “as.” Also recall from the same study unit, that for analogies to successfully carry over information from a particular source to another particular target, what we are comparing have to be similar in all relevant respects. What we have on the left above is something that is non-physical relative to something that is also physical. What we have on the right however is something physical relative to something else that is physical. It is all too easy to forget, just because we can't sense them, that radio waves are part of the ordinary furniture of the physical world around us. Indeed we use them almost every waking hour of our lives, making calls on our cell phones, hooking up Wi-Fi connections, watching satellite broadcasts and of course, listening to the radio. So the broken radio “analogy” falls at the first hurdle for not even being analogous.

According to Gilbert Ryle's (1949) *The Concept of Mind*, Cartesian dualism "...is entirely false, and false not in detail but in principle. It is not merely an assemblage of particular mistakes. It is one big mistake and a mistake of a special kind. It is, namely, a **category mistake**." We have already encountered three examples of fallacies arising from category mistakes in the preceding critical reasoning units but just in case you missed them here is one more owing to Ryle. Suppose a child is witnessing the march-past of a division of soldiers. After having had battalions, batteries, squadrons, etc. pointed out to him, the child asks "But when is the



*Gilbert Ryle (1900 – 1976) British Philosopher Best Known for his Critique of Cartesian Dualism as "the Ghost in the Machine."*



division going to appear?” According to Ryle “The march-past was not a parade of battalions, batteries, squadrons *and* a division; it was a parade of the battalions, batteries and squadrons *of* a division.” (Original emphasis) Similarly dualism (of the type espoused by Descartes,) rests on one massive category mistake by attempting to analyse the relation between “mind” and “body” as if they belonged to the same logical category. The solution is not to try and collapse one category into another as **idealism** (see below) and radical **materialism** do but simply to guard against making such mistakes in the first place. We all know when not to confuse the wood (forest) for the trees in everyday discourse but somehow when it comes to matters of the mind we are less discerning.

#### References

CHARMERS, D. *The Matrix as Metaphysics* at <http://consc.net/papers/matrix.html>

JACKSON, F. (1977) *Perception: A Representative Theory*. Cambridge University Press : Cambridge

LEWIS, C.S. (1947) *Miracles*. Collins/Fontana: London & Glasgow. Revised 1960. The full text of Chapter 3: *The Cardinal Difficulty of Naturalism* is available at [http://philosophy.org.za/uploads\\_other/Lewis\\_\(1947\)\\_Ch3.pdf](http://philosophy.org.za/uploads_other/Lewis_(1947)_Ch3.pdf)

REPPERT, V. (2003) *Dangerous Idea*. InterVarsity Press : Downers Grove, Illinois

RYLE, G. (1949) *The Concept of Mind*. Hutchinson & The University of Chicago Press. The full text of the 60<sup>th</sup> anniversary edition of which is available at

[http://s-f-walker.org.uk/pubsebooks/pdfs/Gilbert\\_Ryle\\_The\\_Concept\\_of\\_Mind.pdf](http://s-f-walker.org.uk/pubsebooks/pdfs/Gilbert_Ryle_The_Concept_of_Mind.pdf)

#### Understanding

1. What is interactionism and why does it present a problem for dualism?
2. About 90% of people believe in dualism, whether or not they know it. What do you think is the continued attraction of dualism despite its difficulties?
3. Can dualism or its opposite (monism) ever be proved beyond a shadow of a doubt? If not, to what standard should we hold philosophical theories of the mind?
4. Descartes took a great deal of interest in the work of the early anatomists of his day, producing numerous sketches and philosophical musings about dissections which had only just become legal. Do you think he would be differently persuaded by today’s brain scans and other neuroimaging techniques? Motivate your answer.
5. Was Gilbert Ryle right? Has most of humanity been going about their business labouring under the delusion of one massive category mistake? Given that we don’t easily fall for category mistakes in other spheres of our lives, do you think that there is something different about the way people think about the mind that might influence them one way or another?

#### Feedback

1. Interactionism is technically a dualistic theory according to which distinct and independent mind and matter exert causal effects on one another. However interactionism need not be dualistic because we all take for granted that mental events cause physical events and *vice*

*versa* irrespective of how we feel about dualism. *E.g.* A child bangs his finger in a door (physical event,) which causes him intense pain (mental event,) which causes him to cry out (physical event,) which causes his parents to hear him (mental events in other minds,) which cause them to come running to his aid (physical events in other bodies... and so on.)

However because dualists regard such states as utterly separate, either because their properties are different (property dualism) or because they are different in substance *i.e.* physical vs. non-physical (substance dualism,) the onus is on them to explain how something with no physical properties, that is wholly non-physical, could ever effect something that is entirely physical and *vice versa*.

2. Most of the world's religions are dualist or idealist. (**Idealism** is the belief that all of reality is either mental or some kind of mental construct.) Most of them in turn identify the rational, vital self with a non-physical spirit. Since non-physical entities are causally isolated from physical decay and bodily death, this allows them to believe in such notions as life after death and re-incarnation. However they can't have it both ways: either the spirit is causally isolated from the physical body and escapes death *and* interactionism is false or it is causally dependent on the body *and* immortality is false. Notwithstanding, most people would rather, uncritically believe something that does not contradict their belief that they will never die.
3. No, nothing not even mathematical and logical theorems can be proven beyond a shadow of doubt. Every system must begin with some assumptions which are held to be self-evidently true in all possible worlds but may turn out not to be. However that does not mean that we have no standards for evidence and belief. For example, we demand the maximum stand of evidence and belief in legal and pharmaceutical trials in which life and limb may literally be at stake. We demand a somewhat less rigorous standard towards most scientific theories. Most scientific journals are typically satisfied to publish studies with a confidence level of 95% or even 66% for some of the Social Sciences. So what we need to ask ourselves is how seriously we take philosophical theories of the mind. If someone gets such a theory wrong no one is going to lose a life or a limb, so perhaps that standard of evidence and belief is inappropriate. However since we *do* base our major belief systems and world view upon our native theory of mind, there is the distinct possibility that we might be wrong and so should want to guard against the prospect of passing our days in a state of misbelief. To the extent that such a prospect is worrisome we'd want to place a fairly high premium on the veracity of any theory of mind, philosophical or otherwise.
4. Descartes was as much motivated by scientific enquiry as he was by religious devotion. As a devout Catholic, his *Meditations* can be seen as an attempt to reconcile such beliefs. Many, though increasingly few, in academic medicine today continue to believe in life after death in the form of an immortal spirit apart from what they regard as biological machine that is the mortal body. On the other hand Descartes would be astounded by the intricate detail in which we have mapped, recorded responses and even directly stimulated the brain to elicit highly specific responses from visual to olfactory recall to complex motor responses. From what we can tell in the *Meditations*, Descartes believed passionately in what he wrote, so however he might be persuaded, we can be confident it would be an honest assessment.
5. Most people, when confronted with Ryle's description of category mistakes would concede that he is right that we should not be forcing talk about the mental into to same logical category as that of the physical. Nor should we conclude on the basis of doing so that the

mind is somehow an add-on to the physical body as if it were a ghost in a biological machine. Although almost all of us do recognise a category mistakes in ordinary discourse, we have difficulty transferring that aptitude to abstract contexts. Typically we rely on abstract metaphors to carry over meaning. The problem however is that the metaphors that are within our customary grasp are themselves dualistic in form. (*E.g.* He let his mind wonder. Till we shuffle off this mortal coil. Her heart said yes but her mind was telling her no.) It is not that people have been deluded in believing in dualism, besides the neurophysiological evidence, what we have also lacked until 20<sup>th</sup> century is the ordinary language skills by which to adequately articulate such abstract concepts, especially as they relate to the mind.