sented argumentation. He indicates that the model he supports has not been justified fully from neither a scientific nor theological standpoint.

The key may be perhaps, to borrow an idiom from a friend⁷ who has recently written a manuscript on evolution (which I have yet to complete) is to break the deadlock, so to speak, between "Darwin" and "Design" as a broad categorization of the heart of the "dilemma."

Rau's book is an indispensable resource in understanding the logic and structure of other models that one may disagree with. It also provides a wealth of resources for further reading and research. It is an original and erudite contribution to the science and theology dialogue. It also serves well to outline several of the philosophical assumptions that function as a mediator between the two. I know of no other text that explores such a vast amount of material dealing specifically with origins in such a tightly knit package. I highly recommend this work to not only philosophers, scientists and theologians but to anyone interested in the debates revolving around origins.

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Richard M. RESTAK, **The Big Questions: Mind**. London, Quercus Editions Ltd, 2012, 14.48 × 21.08 cm, 208 p., ISBN 978-1-84866-206-3.

Richard Restak is a neurologist and the former president of the American Neuropsychiatric Association. He has authored several *New York Times* best sellers.

This book is part of a series titled *The Big Questions* edited by University of Cambridge philosophy professor, Simon Blackburn. Within the series, in each of these titles, a world renowned expert within their respective field provides responses to difficult questions pertaining to a specific subject. Richard Restak tackles twenty different questions concerning mind. Despite the title, Restak examines many questions related not only to the mind but to the brain and its inner functioning and how it relates to the concept of the mind. This review will focus on what I consider to be the most fascinating and difficult question that Restak wrestles with, as opposed to offering brief remarks on each of the twenty questions (which would be difficult to contain within the allotted space).

In the introduction, Restak, properly recognizes that when dealing with important questions regarding the mind, it is impossible to completely remove oneself from such an endeavour (pp. 6-7). In other words, the "I" is fundamental to any such inquiry. This is something Jerry Fodor, a philosopher of mind and cognitive scientist,

^{7.} Perry MARSHALL, a manuscript of his forthcoming book: Evolution 2.0: Breaking the Deadlock between Darwin and Design. Perry has taken a stab at reconciling the two through scientific means in a highly innovative fashion. His work, from what I have read so far, shares a semblance to Mike Gene's The Design Matrix: A Consilience of Clues.

has proposed, i.e., the approach of methodological solipsism whereby the "I" is the sole possible starting point for both philosophical and scientific construction and reflection.¹ This is something that Restak seems to initially and implicitly acknowledge although he then proceeds to intimate a somewhat contrary position when he states:

However, in tackling such questions there is a choice: whether to regard it as primarily a philosophical enquiry or whether it is a scientific enquiry. My approach is to tend towards the latter. In the 21st century few would argue that memories and emotions, words and ideas, dreams and imagination, perceptions and thoughts, and a sense of self and of the outside world are not activities of the brain. And today we are not simply relying on our own self-referring minds to consider these issues—brain imaging, cognitive studies, precise anatomical studies, chemistry and many other investigative modes are playing a role. To put it another way, while, philosophically, the 'self-referential' paradox remains, there are practical ways in which we can step outside of ourselves to help tackle the Big Question. (p. 7)

It seems as though Restak is diminishing the role of philosophy in scientific inquiry, as though the two can be bifurcated. It is important to note that science can never extricate itself from philosophy. For example, there are several presuppositions necessary at both the global and local level regarding scientific inquiry.² For instance, logic and mathematics are presupposed within scientific inquiry including the cognitive sciences. Now with respect to global presuppositions we must acknowledge that there is a physical world outside of our mind and that our senses are reliable. As for a local presupposition we acknowledge the coherency of hypotheses determined by evidence. It is also worth noting that scientists possess certain beliefs that can shape how they view science, so complete objectivity of a scientist is not possible. These and other philosophical issues are either ignored or downplayed by Restak. Nonetheless, it is important for those who are not an expert in a particular scientific field to be aware of this. Expertise in a given field does not give one carte blanche to make conclusions beyond their domain of proficiency, claims must always be decided by reason and evidence.

The very first question(s) Restak seeks to answer are: "Can we have a mind without a body? Are we creatures of pure thought?" (p. 8). Here Restak dives right into a classical philosophical problem, the mind/body debate, one that has challenged the greatest thinkers of history. Restak, rightfully, demonstrates that when one endures an illness such as the flu it negatively influences our ability to concentrate on a task such as studying or reading (p. 8). As he states: "In such a state, you would be unlikely to believe that the mind can be considered separate from the body – the flu was affecting both your mind and your body" (p. 8). He then makes an amusing statement which is more of a caricature than anything towards René Descartes and his belief in substance dualism, by stating: "Apparently, Descartes never suffered a case of the

^{1.} Cf. Jerry FODOR, "Methodological Solipsism Considered as a Research Strategy in Cognitive Science," *Behavioral and Brain Sciences*, 3 (1980), pp. 63-73.

^{2.} See above my review of Gerald Rau's Mapping the Origins Debate.

flu." (p. 9) More will be said on Descartes' view of dualism and substance dualism in general, after we delve into the bulk of this chapter.

Restak provides interesting examples of "bodily illusions" where experiments are performed on individuals whereby they perceive a different body as their own as opposed to their *actual* one and this alters their perception of the world, i.e., someone perceiving a small baby like body will perceive the world as much larger than one who perceives themselves having a giant's body (p. 10).

Restak also considers the relationship of body movement with the mind. He distinguishes between body movements that are immediate and subconscious from those that are the product of conscious intention (p. 10).

Restak goes on to point out that "the presence of movement doesn't necessarily imply a mind" through using the example of automatic doors noting that "minds aren't involved beyond the design, construction, installation and maintenance of the door." This is all true but mind is a fundamental component to even have the possibility of such movement, if anything the information needed to produce such movements is implanted in the system by a mind which presupposes the existence of both the structure of physical components and its movement. The hardware of an automatic door and the informational component, i.e., the instructions that direct such movement of the door whether in mechanical form or not, transcends the physical medium. If anything it serves to demonstrate that the informational content operates together with the physical even though not necessarily bounded by it. Restak demonstrates that through technology we have weakened the links between the mind and body through a "created disembodiment" (p. 11).

Restak continues his discussion on disembodied minds through providing the example of the horrifying *locked-in syndrome* whereby an individual "is aware, awake and cognitively intact but cannot move or verbally communicate because of paralysis of all of the voluntary muscles of the body with the exception of the eyes" (p. 11) even more dreadful is the *total locked-in syndrome* the paralysis of the eyes are also included. Restak also gives the example of the program DOCTOR which was created in the mid-1960s by Joseph Weizenbaum where the program analyzed language and was able to respond to a particular script (p. 12). Computer programs in general indicate that mind can exist without a body (p. 13), although a material form is necessary for the informational processing capacities but not reducible to such. One can simply think about the various forms that information can be recorded; from a hard-drive, to a DVD, to a book, to a mind, to verbal communication of minds etc...

In an intriguing part of this section, Restak discusses how the formation of a mind is not always necessarily a top-down process, i.e., "when the nervous system reaches a certain degree of complexity, mind emerges" (p. 14). Restak, shows that the exact opposite is true that "mind emerges from the body's interaction with its environment" (p. 14) through the example of the octopus. The octopus demonstrates complex and "intelligent" behaviour but is classified as a mollusc and as Restak states "[a] close cousin to the snail, one of the dumbest creatures on Earth" (p. 14). Restak also points to the many differences between an octopus and a snail including the possession of eight powerful legs, all-seeing eyes and its complex engagement with the environment (p. 14). The central point made by Restak is that "the mind of an octopus emerges not from a central brain but from the action of its tentacles, eyes

and body shape. Thus, the mind of an octopus is embodied and can be properly understood only by taking its body configuration into account" (p. 14). This still raises questions as to whether this is a consistent occurrence throughout nature? And can movement and dexterity be an accurate indicator of the power of the mind? Restak, fails to mention that the octopus possesses the greatest brain to body mass ratio among all invertebrates which is taken as a way to hypothesize levels of intelligence among animals. The existence of a strong correlation seems highly indicative but it seems such conclusions should nonetheless be tentative since we currently do not fully understand such correlations.

Restak then poses the following questions: "does the mind exist apart from the brain? And where does the soul stand in all of this?" (p. 15). Restak then returns to Descartes, arguing that Descartes added much to the confusion between blurring the lines of philosophy, theology and science (p. 16). However, one could ask, are such boundaries meant to be neatly segregated? It turns out that the science-theology interaction suggests the opposite. There are many complex interactions between the three great fields of inquiry that are heavily intertwined, so one should not be surprised to expect such blurring of lines. Restak, correctly, draws attention to the problematic notion Descartes brought about by suggesting that the pineal gland is a go-between the mind and the brain, as illuminated by his student, Princess Elisabeth of Bohemia (p. 16). What she touches upon is how one can explain the interaction between the immaterial and the material, i.e., the mind and the brain - how can something immaterial move the material? (pp. 16-17). There are several things worth pointing out here. First, it could be that we have no explanation as to how the immaterial interacts with the material but nonetheless such could be the case. Second, we have examples of the immaterial interacting with the material, think of computer software and hardware. Or another way of putting it, information transcends the material medium. Third, this seems to also touch upon how one interprets reality in an overarching metaphysical framework which is strongly related to the question of God. Do we have warrant to assume that such an interaction is not plausible or even possible? If one assumes naturalism, it seems it is difficult to affirm. However, if God exists, an ultimate disembodied mind (among many other attributes), responsible for material reality, one would expect interactions between the immaterial and material but if such a being like God does not exist then one would conclude that such a notion is puzzling. I would maintain that a thing such as mind or information is a conundrum in a purely physical universe but something to be expected if the universe emanated from a Divine mind. Nonetheless, metaphysical assumptions play a large role in scientific understanding, despite Restak's diminishment of the role of philosophy in scientific endeavours.

To his credit, Restak, acknowledges that often times neuroscientists "make claims about the brain they can't prove" and suggests that "it is not at all self-evident – as some neuroscientists claim – that we can do away with the concept of a mind altogether and simple speak of the brain" (p. 17). Restak, makes reference to a letter he received from Sir John Eccles who was a substance dualist and won the Nobel Prize in 1963. In this letter, Eccles calls Restak a "promissory materialist" precisely because of his unwillingness to completely discard the concept of mind (p. 17). Restak also, rightly demonstrates that to equate the mind with the brain is a *category mistake* using the thought of philosopher Gilbert Ryle (p. 17). It would be akin to asking what a musical note tastes like or what texture a certain smell has. A neuroscientist cannot gage at the content of a thought by the observation of a neuro firing. One cannot discern the subjectivity of an individual's thought because of the physiological changes or occurrences within the brain. Restak, in a similar vein, notes that "[m] ind is not a physical structure like the brain; it is not a 'thing.' Mind has no visible form, no aroma, no taste; it can't be held in the hand like the brain. Thoughts, the products of the mind, do not require physicality to exist. Thoughts, however, are meaningless without minds that can think and interpret them" (p. 18).

Restak in the end, admits there is no final answer to whether we can have a mind without a brain. One thing we can expect is a deepening understanding of the mind and the brain whether a mind can exist without a body. It seems he may be correct, at least from a scientific perspective that the mind-body problem (the "world-knot" as Arthur Schopenhauer referred to it (p. 18)) will continue to be difficult to "unravel" (p.18). But I would suggest that it is ultimately a philosophical issue even though neuroscience is extremely important to understand how the brain functions but questions regarding consciousness, the soul and mind involve answers that supersede scientific investigation. What is important to note in all these discussions is that physicalism and dualism are actually empirically equivalent. Neuroscience can only demonstrate correlations between mind and the brain, not that they are identical.

Restak considers nineteen other intriguing and difficult questions revolving around the brain and mind including: "how do brains come to exist?," "what is this thing called love?," "what is the 'I' in our brain?," "is free will an illusion," "what is thinking?" and "what does a brain do when it is doing nothing?" Restak provides many valuable insights through his thoughtful responses to all twenty questions. Although Restak through his introductory comments gives the impression that he seeks to diminish the role of philosophy in light of the neurosciences to tackle the mind/body problem, he nonetheless leaves much room for philosophical reflection. It is a worthwhile read for those wanting to expand their knowledge concerning the brain and mind.

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Mohamed Aziz Lahbabi, La personne en islam³, coll. «L'Autre et les autres»; introduction de Markus Kneer. Namur, Éditions Lessius, 2015, 13 × 21 cm, 136 p., 14 €, ISBN 97-2-87299-8.

Il s'agit de la nouvelle édition, nous dit-on dans la feuille de présentation, «revue et corrigée à partir de la dernière édition en arabe, d'un ouvrage publié en français en 1964», aux P.U.F., sous le titre *Le personnalisme musulman*, mais les éditeurs font savoir (p. 21) que «nous nous basons sur sa seconde édition (française) de 1967. L'intérêt réside dans une longue *Introduction* (p. 5-20) de Markus Kneer, théologien