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Abstract

Over the past decades, reductive materialism has made a recipe for philosophy of mind to explore the subtle nature of the human mind. By and large, many identity theorists were likely to argue that mental states can be found in cognitive faculties of the brain so that the mind, if not most, associates with discoverable phenomena with no burden of proof. To put this bluntly, reductive materialism is typically defined by its very nature: all mental states are neurological states of the brain; *ergo*, it is implausible to make room for the substance dualism thereto.

In response to this naturalist stance, aka reductive materialism, this article, thereby, contends that reductive materialism cannot be placed in a defensible position in philosophy of mind *vis-à-vis* the Kripkean modality; accordingly, this brief

survey has identified several barnstorming findings in support of the thesis: the necessity and contingency, the core plank of possibility, rigid and non-rigid designators, and conceivability and possibility.

In spite of its limitations, the study certainly adds to our understanding of the so-called reductive materialism in philosophy of mind. Nevertheless, a full discussion of naturalism lies beyond the scope of this study. Further work is, therefore, needed to fully digest the implications of reductive materialism and Kripke's modal argument.

Keywords: *Conceivability and possibility, Modality, Necessity and contingency, Reductive materialism, Rigid and non-rigid designators*

INTRODUCTION

There is a growing body of literature that significantly throws light on the multiple strands of reductive materialism that echoed through the ages. In effect, reductive materialism has been connoted, viz., ‘mind-brain identity theory’, ‘type-identity theory’, ‘psycho-neural reductionism’, and ‘central-state materialism’ (Mandik, 2014, p. 77). Then, as Kim (2011, pp. 91-92) and Braddon-Mitchell with Jackson (2007, p. 97) explore, type identity theorists were prone to investigate the physical nature of mental states, which are observable phenomena with empirical evidence, rather than a priori claims - and, put forward that a variety of mental states can be found in neural states of the brain by striking a blow against the substance and property dualism.

In general, the central plank of reductive materialism is clearly manifested in itself: ‘mental states are physical states of the brain’ (Churchland, 2013, p. 40). In response to this formidable debate carried by naturalists such as J J C Smart, U T Place, D M Armstrong, D Lewis, and D Davidson, there are several counterfactual arguments raised by S Kripke, T Nagel, and F Jackson in virtue of the distinctive nature of mind-brain correlations (Cynthia, 1989, p. 3), for instance, the zombie argument, the multiple realizability argument, Max Black’s distinct property argument, etc. However, in this scrutiny, I intend to examine that reductive materialism is not a defensible philosophy of mind with reference to Kripke’s modal argument; *ergo*, the article begins by the fundamental view of reductive materialism, and it will then go on to the Kripkean rebuttal.

CONTENTS

The Fundamental View of Reductive Materialism

Preliminarily, in the eyes of reductive materialism, mental states are disposed to be either fully equivalent or entirely reduced to physical entities in the brain. In this respect, it is worth knowing how philosophers traditionally looked at this hypothesis. According to Hannan (1994, pp. 15-18), there are mainly a couple of mental states called ‘qualitative states’ and ‘propositional attitudes’ on a par with peculiar contents for each: sequentially, feelings of pain and private sensations of happiness like qualia - fears, beliefs, doubts, and desires. Additionally, having taken the cognisance of type-type identity theories as opposed to token-token identity theories would be a crucial matter of fact that makes less hurdles of this dilemma. As Lowe (2000, pp. 48-49) recounts, type-identity theories are denoted by those in which every type of mental state of affairs aforementioned can be completely determined with some type of physical conditions.

For example, there is a ‘chair’, which refers to a category of physical entities that have no individual possession; it is, *ipso facto*, in the right ballpark that is the stance of a posteriori truth as for reductive materialism. On the contrary, only every token of mental state of affairs can be determined with some token of physical conditions. For example, there is a ‘chair’, which refers to be mine, not others; this, *eo ipso*, differs from the focal characteristics of reductionism, owing to the a priori truth as for non-reductive materialism. In brief, this prima facie understanding might help get down to brass tacks on reductive materialism in a wider scenario.

The psycho-physical identity thesis is bound up with a vast number of scientific experiments, whereby type-identity theorists could play a vital role. In accord with Smart (1991, pp. 169-171), who would be the champion of the type-identity theory in the twentieth century, there is no sensation in the mind over the brain neurological process; in fact, this turns out to be a spectacular

business in which the mind-brain identity theory straightforwardly deals with. Hence, more to the point:

‘It seems to me that science is increasingly giving us a viewpoint whereby organisms are able to be seen as physicochemical mechanisms: it seems that even the behaviour of man himself will one day be explicable in mechanistic terms. There does seem to be. So far as science is concerned, nothing in the world but increasingly complex arrangements of physical constituents. All except for one place: in consciousness. That is for a full description of what is going on in a man you would have to mention not only physical processes in his tissues, glands, nervous system, and so forth, but also his mental states of consciousness: his visual, auditory, and tactual sensations, his aches and pains’ (Smart, 1991, p. 169).

In conjunction with the following discovery, it could be clear enough to surmise that conscious mental states can be identified with physical parts of the brain so that there is no truck with mental entities for physical constitutions - but the sense of strict identity twists them; it, in turn, lays out an exclusive presence of uniformity or oneness or similitude among the properties of the mind and substances of the brain, rather than criss-crossing correlations or intermingled aspects in Cartesian dualism. *Ergo*, this voice is bluntly fleshed out by cutting off the demarcation between the non-physical realm of the mind and composites of the material world. Likewise, Place (2008, pp. 25-26) is also keen to espouse this view; as the above scientific hypothesis should be a reasonable fact of which consciousness is being part of the brain process, undeniably - then, in support of the thesis, there are some noteworthy sweeping statements driven by scientific experiments:

- a. ‘Pain is identical to C-fibre firing’.
- b. ‘H₂O is identical to water’.
- c. ‘Light is identical to electromagnetic waves.’
- d. ‘Temperature is identical to molecular kinetic energy’.

With reference to Kirk (2014, p. 50), Cynthia (1989, p. 17), Churchland (2013, p. 41), and Hannan (1994, p. 21), these scientific assumptions, which are exhibited on the strength of strict identity of sensation and organism of the brain process, make no clear and distinctive disparity amongst the relevant entities. For example, there is no observable difference in-between pain and C-fibre firing, because C-fibre firing is part of the neurological process of the brain, nothing more than else herewith. Furthermore, there is no essential dissimilarity in-between heat and molecular kinetic energy since heat is the vibrancy of molecules, nothing else. Therefore, along with many scientific inspections, there is a thumbnail sketch of reductive materialism that draws upon the exact identity of mental and physical states.

Kripke’s Modal Argument against Reductive Materialism

The Kripkean gist of modality initially encompasses the notion of necessity and contingency *vis-à-vis* the prime creed of possible worlds. Kripke’s modal dispute emphatically refers to the original text of *Naming and Necessity* with the aid of rigid and non-rigid designators that is against the description theory (Noonan, 2014, pp. 65-66). In corresponding to this critical grain of thought, type-identity statements are, seemingly, contingent propositions even though those scientific premises are, more often than not, supposed to be necessary truth conditions, for instance, pain=

C-fibre stimulation (Kirk, 2014, p. 51; Kim, 2011, p. 119). To put forward a clear-cut view of this phenomenal contention voiced by Kripke, the following explanation might be strong enough:

‘His objection to type-type identity theories of the mental and the physical stems from his more general semantical views; in particular, from the view that identity statements involving rigid designators are, if true, necessarily true (a designator being rigid just in case it names whatever it does not only in this world but is every possible world in which that object exists). In his contention that mental terms such as ‘pain’ (more generally, any natural kind term such as ‘water’, ‘tiger’, ‘heat’, etc.) are such designators; and that consequently, any identity statements expressed by means of them is, if true, necessarily true’ (Cynthia, 1989, pp. 28-29).

In re this lucid overlook, it is logically valid to contend that pain is necessary to be the C-fibre firing and similarly, it could not have been otherwise. Additionally, it seems that in order for more consistency and clarity, this provocative argument is associated with the twisted connection between conceivability and possibility, so it will sensibly convince why it is arguable that pain cannot be the C-fibre firing and *vice versa*. Then, while keeping this clearer, I would, henceforth, attempt to bear up with the economy of Kripke’s gut feeling of modality, the extent to which it can dramatically attack reductive materialism.

At first glance, it is essential to scrutinise how the Kripkean core notions of necessity and contingency work out on the grounds of possibility - since it is meant to be a more influential background to this thought-provoking breakthrough. Presumably, on the one hand, there are some sorts of truths, which are unable to be present at otherwise, for example, $1 + 1 = 2$ and ‘all bachelors are unmarried’ so that these logical propositions are inevitably necessary truths. On the other hand, owing to the contingent identity of truth, the vast majority of truth premises does not have to be necessarily true, but those appear to be true, whereby it could have been otherwise, for instance, ‘Barack Obama is the forty-fourth president of the United States’ (Kim, 2011, p. 119): in the face of identity of this statement, although it is likely to be true, it may not have been true - because there are some possible worlds, where the firm identity of this statement does not exist as equivalent to the actual world.

To put this bluntly, ordinary proper names like ‘Barack Obama’ can be loyally referred to the same person in every possible world even though ‘the forty-fourth president of the United States’ would be radically referred to distinctive things in distinctive possible worlds - since there are some possible worlds, where someone else could have been the president. Consequently, Kripke now turns out to underpin the hypothesis of rigidity and non-rigidity that coherently brings out the necessary and contingent truths by means of the possible worlds.

Furthermore, in connection with the rigid and non-rigid designators, it is worth differentiating Kripke’s standpoint of necessary and contingent propositions *de re* the type-theory identities. In accordance with Kim (2011, p. 118), there are some properties in which these are different in multiple possible worlds called non-rigid designators, for example, ‘Magnus Carlsen is the winner of the world chess championship in 2021’; *de facto*, although ‘Magnus’ can be corresponded to the same person in all possible worlds, ‘the winner of the world chess championship’ cannot be corresponded to the same person - as there are some worlds of where someone else might have been the winner, so it would refer to different things in different possible worlds; hence, this proposition would be a contingent truth.

In spite of this, as Kripke suggests (1998, p. 143), there are some properties called rigid designators, which are omnipresent in every possible world as same as the actual world - for instance, 'mathematical conjecture' resembles all facets as equal as the real world in every possible world: $2+2=4$; thus, this proposition would be a necessary truth. Accordingly, it gradually recapitulates the all-important themes of the Kripkean modality: rigid designators of which individual terms refer to the same thing in every possible world as similar to the real, aka actual world.

On the contrary, non-rigid designators of which individual terms refer to distinctive things in distinctive possible worlds. As a result, the contingent truth defined by the identity statements could have been false in some possible worlds, whilst the necessary truth expounded by the identity statements could have been true in all possible worlds. In short, the Kripkean denotation of modality is as much as littered with the radical semantics of necessity in lieu of contingency scratched around for reductive materialism.

Next, it is now a bit closer to the pertinent point: how this goes parallel with the scientific identity claims mentioned earlier. Kripke (1980, pp.128-129) first withstands the general contingency of type-identity statements by employing the nature of necessity of those scientific propositions: '... that water is H_2O . It certainly represents a discovery that water is H_2O . We identified water originally by its characteristic feel, appearance, and perhaps taste, ... If there were a substance, even actually, which had a completely different atomic structure from that of water, but resembled water in these respects, would we say that some water wasn't H_2O ? I think not' (Kripke, 1980, p. 128).

In effect, it could be clearer that if 'water' is a rigid designator, and ' H_2O ' is a rigid designator, then, 'water' and ' H_2O ' would always refer to the exact same thing; therefore, 'water' is fully tantamount to ' H_2O ' will be necessarily true; thereby, Kripke's perspective of modality is eager to defend the identity of necessity, instead of the contingency of truth conditions. In the same vein, it is fair enough to presume that all other scientific experiments considered before are also necessary truths in which those have to be certainly identified as truth premises: 'pain is C-fibre firing', 'light is electromagnetic waves', 'temperature is molecular kinetic energy'. *Ergo*, these scientific phenomena are impossible to be otherwise in other possible worlds, so no wonder arises with these natural kinds of entities in this actual world. It is, *ipso facto*, evident that this foregoing quarrel tends to argue that scientific identity propositions are necessary truth values since those are related to rigid designators set against the contingent truth values supplemented by non-rigid designators.

Moreover, on this score, it is now directed to the compelling idea: to what criteria this rationale refutes the mind-brain identity theory in virtue of conceivability and possibility. On a par with Kripkean thoughts, possibility is embodied by conceivability, so the identity statement of 'pain = C-fibre firing' should be necessarily true - then, according to Kripke's (1980, pp. 148-149) scientific discovery, pain must be analogous to the C-fibre firing (Pain = C-fibre firing) that is, assumingly, a crucial outgrowth of the necessity of rigid designators: 'So far the analogy between the identification of heat with molecular motion and pain with the stimulation of C-fibres has not failed; it has merely turned out to be the opposite of what is usually thought - both, if true, must be necessary' (Kripke, 1980, p. 149).

Correspondingly, it is, indeed, possible for someone to be in pain while in the absence of C-fibre firing - because more simply, conceivability entails in possibility; thus, one can conceive of pain in itself even without C-fibre firing. Similarly, it is possible to conceive of temperature not having molecular kinetic energy, and so forth. Hence, there is no further need of either C-fibre firing or molecular kinetic energy, whereby mental properties are reduced to the physical brain in order to perceive pain and heat - as it is being done through as such - which means that these premises are independently plausible (Kallestrup, 2008, pp. 1255-1256). For these reasons, as this is possible *ens per se*, the statement, 'pain = C-fibre firing' is not necessarily true in what way reductive materialism is committed to and is undermined by Kripke's modal argument inch by inch.

CONCLUSION AND RECOMMENDATIONS

All in all, the purpose of the current study was to demonstrate that reductive materialism would not be a defensible philosophy of mind in the light of Kripke's counter-factual argument of modality. In regard to this prominent debate, I have shown several overriding findings that vigorously pale in comparison with the mind-brain identity theory: reductive materialism plainly falls into the position of which the contents of the mind are explicitly reduced to the neurological properties of the brain, so there is no mind over brain. Nevertheless, the Kripkean modality grappled with the reductive milieu of the mind-brain identity: in terms of rigid designators, scientific statements like 'water is H₂O' are necessary truth conditions, but not contingent as postulated before - because those are inevitably occurring in all possible worlds.

In the face of this prevailing speculation, 'water' is fully symmetrical with 'H₂O'; thereby, it is possible to conceive of 'water' even without 'H₂O', so if this is possible, 'water is H₂O' would not be necessarily true. Generally, this is the elegant way of where the mind-brain identity theory was threatened by the Kripkean prospect of modality. Into the bargain, reductive materialism does not remain further as a defensible philosophy of mind. However, more experimental and scientific information on reductive materialism and Kripke's modal argument would help us to establish a greater degree of clarity and accuracy on this matter.

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Conflict of Interest

I declare that there is no conflict of interest regarding the publication of this paper. I, corresponding author, hereby clarify that the information given in this disclosure is true and complete to the best of my knowledge and belief.

Bibliography

- Braddon-Mitchell, D. and Jackson, F. (2007) *The Philosophy of Mind and Cognition: An Introduction*. Oxford: Blackwell.
- Churchland, P. M. (2013) *Matter and Consciousness*. 3rd ed. Cambridge: The MIT Press
- Cynthia, M. (1989) *Mind-Body Identity Theories*. London and New York: Routledge.
- Hannan, B. (1994) *Subjectivity and Reduction: An Introduction to the Mind-Body Problem*. Colorado: Westview Press.
- Kallestrup, J. (2008) 'Three strands in Kripke's argument against the identity theory', *Philosophy Compass*, 3(6), pp. 1255-1280. Available at: <https://compass-onlinelibrary-wiley-com.oxfordbrookes.idm.oclc.org/doi/10.1111/j.1747-9991.2008.00182.x> (Accessed: 14 November 2022).
- Kim, J. (2011) *Philosophy of Mind*. 3rd ed. Colorado: Westview Press.
- Kind, A. (2020) *Philosophy of Mind: The Basics*. New York: Routledge.
- Kirk, R. (2014) *Mind and Body*. Hoboken: Taylor and Francis.
- Kripke, S. A. (1980) *Naming and Necessity*. Oxford: Blackwell.
- Lowe, E. J. (2000) *An Introduction to the Philosophy of Mind*. Cambridge: Cambridge University Press.
- Mandik, P. (2014) *This is Philosophy of Mind: An Introduction*. Chichester: Wiley-Blackwell.
- Noonan, H. (2014) *Routledge Philosophy Guidebook to Kripke and Naming and Necessity*. Hoboken: Taylor and Francis.
- Place, U. T. (2008) 'Is consciousness a brain process?', in W. G. Lycan and J. J. Prinz (eds) *Mind and Cognition: An Anthology*. Oxford: Blackwell.
- Smart, J. J. C. (1991) 'Sensations and brain processes', in D. M. Rosenthal (ed) *The Nature of Mind*. Oxford: Oxford University Press, pp. 169-176.

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He has recently founded the Oxford Buddhist Society so that he is now playing a vital role as the Founding President of the Oxford Centre of Theravāda Buddhism. In addition, he was able to publish a couple of barnstorming articles in the last year: ‘A Critical Analysis: Is Aristotle’s Understanding of Eudaimonia Credible?’ (International Journal of History and Philosophical Research, European-American Journals, London, May 2022) and ‘A Contrastive Analysis: What is the Conventional Implicature? Is the “Bad” Content of a Slur Conveyed as a Conventional Implicature?’ (European Journal of Cultural Studies, Royal Library of Belgium, February 2022).

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