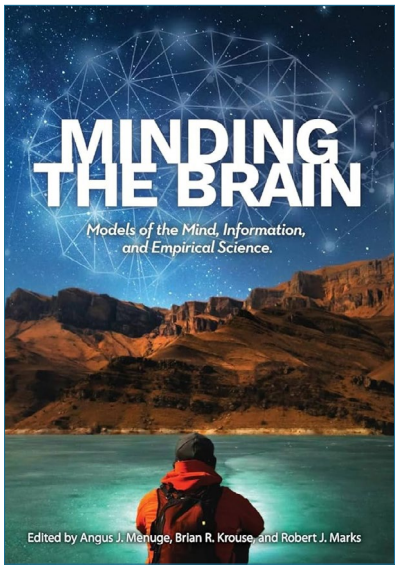
The mind-brain debate

Minding the Brain: Models of the mind, information, and empirical science

Angus J. Menuge, Brian R. Krouse, and Robert J. Marks (Editors)

Discovery Institute Press, Seattle, WA, 2023

Peter Line



The book is a collection of 25 chapters (three available online only), involving 25 different authors, with some contributing to more than one chapter. It is 488 pages long (plus 100 online pages) and said to be organized such that it loosely groups chapters in the first two units with those written by philosophers, and the last two units with those written by scientists.

The Introduction by the three editors includes brief, but useful, overviews of all chapters. "Fresh insights into the mind-brain debate" are said to be the subject of this anthology (p. 11). According to the editors, the mind-brain (or mind-body) problem relates to the question of whether the mind is the same thing as your brain or whether there are "aspects of mind that are external to the biology of the brain" (p. 11). The book deals with a smorgasbord of different topics on the relationship between the mind and brain, such as the soul, physicalism, materialism, dualism, idealism, the self, consciousness, near-death experiences, informational realism, etc. To stay within the word limit, I omitted from the review what, to me, seemed less relevant chapters.

Declining physicalism

According to philosopher Angus Menuge, in chapter 2 the history of physicalism has been "one of extraordinary diversity", with "a wide variety of theories, with multiple versions", yet "it is also a tale of persistent failure" (p. 12). Physicalism is said to be "the sustained attempt to explain the human mind in ways that are compatible with scientific materialism" (p. 25). Menuge points out the flaws in the arguments of the physicalists' many theories, some supposedly improvements on earlier versions, but in the end they all fail.

As stated by Menuge, the

> "... theories that are clearly faithful to physicalist commitments appear to be obviously false. But those theories which are more promising are not, in the final analysis, obviously physicalist" (p. 34).

The failure of physicalists' theories has led to a 'renaissance' of non-materialist theories to solve the mind-brain problem, such as various forms of dualism or idealism (pp. 36–38). Idealism is said to be "the view that all that exists are minds and their contents" (p. 38). Menuge writes that "the practice of science assumes the existence of persistent mental subjects, which is best explained by substance dualism (or idealism)" (p. 38).

Consciousness and the soul

Philosopher J.P. Moreland provides a philosophical lexicon of important concepts relevant to philosophy of mind in chapter 3. He discusses the nature of consciousness and of the soul, presenting powerful arguments for the existence of the soul. These include basic awareness of the self, unity of consciousness and the soul, free will, and sameness of the self over time. Reasons for the general irrelevance of neuroscience in addressing the ontological nature of consciousness and the soul are also presented. That is, neuroscience cannot explain mental and physical correlations because the correlations are odd and brute, as well as "contingent relative to their associated 'right physical situations'" (p. 69). As there are different ways to define the soul, and different versions of substance dualism (pp. 64–65), Moreland provides generic definitions of each:

> "The soul is an immaterial or spiritual substance that is characterized by and unifies mental properties or states and that animates or enlivens its body; generic substance dualism is the view that the 'I' or self is an immaterial or spiritual substance with the attributes of consciousness and which is not identical to anything physical, including one's body or any of its parts (e.g., its brain)" (pp. 53–54).

Although most scientists and philosophers of mind are said to be "physicalists of one form or another", Moreland writes that

> "Besides biblical teaching, property and substance dualism are the commonsense views held by the overwhelming number of human beings now and throughout history" (p. 45).

Property dualists may "believe that mental properties or states are

non-physical and irreducibly mental" (p. 53). However, according to Moreland, property dualism denies libertarian freedom, and so, "no less than physicalism, is false, given the truth of a libertarian account of free will, moral ability, moral responsibility, and punishment" (pp. 59–60).

Methodological naturalism

In chapter 4, philosopher Robert Larmer elucidates the enormous problems that methodological naturalism faces in accounting for the mind. According to Larmer:

> "Insofar as methodological naturalism requires that all events in the world must be elucidated in terms of physical causes, that it is illegitimate ever to appeal to a non-physical cause in seeking an explanation, it precludes any possible recognition of non-physical causes by science, even if they are active" (p. 73).

Larmer argues "that adopting methodological naturalism as a prerequisite for engaging in philosophy of mind", a methodology which treats the physical realm as causally closed (i.e., all physical events have a physical cause) and assumes physicalism to be true is unjustified, and that only from being unshackled by such an 'explanatory straitjacket' can a more adequate understanding of the mind occur (pp. 73–74, 85). Methodological naturalism is said to either deny the existence of mental states or view them "as exerting no causal influence on physical states" (p. 75). Embracing methodological naturalism's view that the physical realm is physically closed comes at a great price, "since nothing short of giving up all conception of persons as rational, purposive agents will suffice" (p. 76).

Substance dualism

In the following order, a condensed historical overview of what Plato, Augustine, Descartes, and Aristotle thought about the soul is given by philosophers Stewart Goetz and Charles Taliaferro in chapter 5. The philosopher Aristotle (figure 1) is said to be considered by many as one of the earliest proponents of property dualism (or dual-aspect theory) (p. 98). These philosophers are described as believing that "human beings are fundamentally material organisms with no substantial soul", but that they "yet have two irreducibly different kinds of properties, psychological and material" (p. 98). Property and substance dualism are briefly compared, with both facing similar problems in terms of causal interaction. The authors side with substance dualism over other philosophies regarding the mind-body debate, arguing that

> "The fact that reasoning, thinking, conscious reflection, and so on are indispensable in practicing (or even understanding) the natural sciences is justification for insisting that substance dualism is closer to the truth in explaining the occurrence of many events in the physical world than philosophies that deny the robust role of consciousness in life" (p. 103).

Mere hylomorphism

The Aristotelian doctrine of hylomorphism is presented by philosopher James Madden in chapter 6. As such, a lot of the discussion is about the claims and arguments of Aristotle. Madden constructs the position 'Mere Hylomorphism', said to be "the minimal doctrine one must accept to be a hylomorphist in continuity with Aristotle" (p. 107). To a hylomorphist, all material objects are composed of matter "and an additional principle of unity, the *form*, that accounts for the actuality of such a composition" (p. 109). To the hylomorphist, the soul

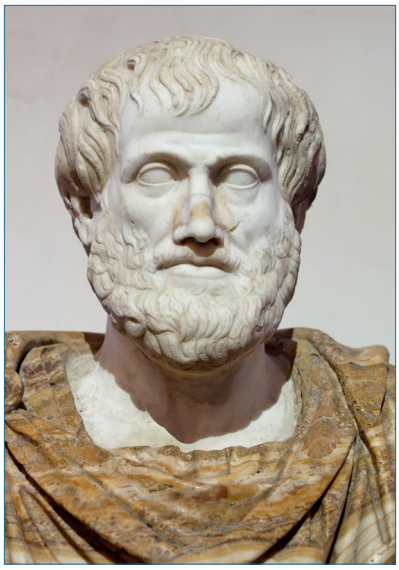


Image: Jastrow, Wikimedia / Public Domain

Figure 1: Bust of Aristotle (384–322 BC). Roman copy (in marble) of a Greek bronze original. Aristotle was an ancient Greek philosopher.

is not a substance, "but the definitive *being-able* of a substance [emphasis in original]" (p. 113). Human beings are said to be "a composite of matter and that special sort of form Aristotelians calls [*sic*] a 'soul'" (p. 113). However, Aristotle did not believe that human souls existed "as discrete individuals without matter" (p. 118). Hence, as admitted by Madden, Mere Hylomorphism "is certainly not a sly form of substance dualism" (p. 119). In Mere Hylomorphism the soul can be spatially located, being primarily located in the central nervous system of humans (p. 122).

Idealism

In chapter 7, chemical engineer Douglas Axe defends the idealism he subscribes to as summarized by the statement: "reality consists exclusively of minds and their ideas" (p. 129). Axe argues against both physicalism and substance dualism, although he regards the latter as less problematic (p. 131). Axe points out the destructive nature of the philosophy of physicalism:

Image: Smithsonian National Portrait Gallery, Wikimeida / Public Domain

Figure 2: Painting of Bishop George Berkeley (1685–1753). Berkeley was a famous proponent of idealism.

> "To say that neural activity in our brains is running the show when we engage in thought is to say that our own perception of our mental activity is so badly confused as to foreclose all hope of reason" (p. 132).

Axe has problems with a 'Supreme Being' breaking "into a realm where from eternity past he did not exist", asking how "could there even *be* such a realm" (p. 134)? Rather, everything is said to work seamlessly if 'things' are accepted as being "mathematical *thoughts* of a special kind":

> "Specifically, physical things are aspects of an enormous and elegant mathematical construct conceived and implemented by God, in which his creatures 'live and move and have their being'" (p. 138).

Most substance dualists would take issue with the insistence that what we call the physical world is just a very complex 'mathematical framework' (or special kind of mathematical *thought*) that interacts with our immaterial minds (p. 139). The substance dualist view that the physical world and non-physical (immaterial) are separate realms seems to me a more realistic framework.

More idealism

In chapter 8 Bruce Gordon, who has a doctorate in the history and philosophy of physics, defends a version of neo-Berkeleyan (figure 2) ontological idealism:

> "This idealism is *Berkeleyan* by being theistic and immaterialist, affirming that the phenomenological world we experience is an idea in the mind of God; it is *neo*-Berkeleyan because the arguments on which it rests have strong connections to modern science, especially relativity and quantum physics [emphasis in original]" (pp. 143–144).

Gordon outlines problems with various forms of physicalism (eliminativist, reductionist, and non-reductionist) and dualism (property, hylomorphic, and substance dualism). Gordon sees as a problem for substance dualism how something essentially immaterial could generate a material substance:

> "But how does immaterial substance cause material substance (spacetime and mass-energy) when the latter is *completely foreign to its nature?* God's omnipotence does not extend to the metaphysically impossible [emphasis in original]" (p. 156).

To get around this 'perceived' problem, Gordon proposes that "material substances *cannot exist* and *reality must be essentially immaterial* [emphasis in original]" (p. 152). In theistic ontological idealism:

> "God, as uncreated immaterial substance, brings finite immaterial minds into existence and, by direct divine communication to these souls, provides the reality they experience as 'physical'" (p. 156).

To me, the above constraints put on God by idealism, i.e., that it would be impossible for Him to create something material because He is immaterial, seem very presumptuous about the nature and abilities of God. In chapter 20, Gordon elaborates on his views. Although he writes very knowledgeably, one cannot help but feel that his apparent reverence for 'modern' physics constrains his view of the mind-brain problem. The Bible emphasizes that God is the Creator of our material universe and everything in it. Hence, it is not up to the substance dualist to prove what is self-evident.

Personal identity

In chapter 9, philosopher and psychologist Jonathan Loose argues that explaining consciousness and the self by denying they exist, as materialism does, "seems as obviously false as any position could be" (p. 169). In order to esteem the 'life scientific' (i.e., scientific activity and reasoning), materialism should be rejected, according to Loose, since it renders reasoning and observations unjustified, and the accomplishments and aspirations of scientists incoherent (p. 169). Materialism's incompatibility with the life scientific is said to be made clear by considering personal identity, which can be considered either simple or complex (pp. 169–170). Complex theorists believe "a person is identical to an entity composed of parts", whereas most simple theorists argue "that persons essentially are, or involve, simple, immaterial substances" (p. 170).

The simple view is compatible with substance dualism, with a strong argument in favour of the truth of the latter being that it "provides the only rescue from the elimination of the self" (p. 176). The simple view is said to be "consistent with the belief that a human person consists of a body and a soul, with the latter being the essential part that constitutes personal identity" (p. 181). Personal identity over time, i.e., "the holistic unity of consciousness and the persistence of human persons through time", which observation and reason rely on, is "sustained only by a simple view of identity" (pp. 182–183).

Such personal identity over time is said to be inconsistent with "mainstream complex accounts of personal identity at or over time that are consistent with materialism" (p. 183). For example, in the case of the latter, it would be incoherent to celebrate and reward a person for a scientific discovery if you are not dealing with the "same person who made them" (p. 182).

Mirror neurons

Chapter 10 is about mirror neurons (MNs). MNs are said to fire in response to an object being reached for in a goal-oriented manner, or the observation of an object being reached for (p. 185). Philosopher Mihretu Guta chooses to remain agnostic about the existence of MNs, which has its critics (pp. 185–186). Rather, he defends the claim, regardless of their existence or not, that "*the functional properties associated with them necessarily require consciousness and its bearer* [emphasis in original]" (p. 186). He discusses the discovery of alleged MNs in the monkey brain, as well as later in the human brain.

According to Guta, making both consciousness and its bearer (which the MNs literature is said to be "shockingly silent on") somehow identifiable with the brain is "one thing we cannot afford to grant" (p. 200). He warns about the danger of "*reductionism* as a paradigm of scientific methodology [emphasis in original]", which, in this instance, involves neuroscience (p. 202). This warning extends to the tendency of neuroscientists to be "committed to a physicalist view of the self", as no amount of knowledge about the brain and its function appears to give insights into the nature of consciousness and the self (p. 203).

Neo-Cartesian substance dualism

In chapter 12, philosopher and theologian Joshua Farris discusses the binding problem of consciousness, which is related to the unity of consciousness. Farris argues in favour of what he calls neo-Cartesian (figure 3) substance dualism:

> "I am a soul-body compound (i.e., substance dualism), and that what it is that makes me *me* is, strictly speaking, my soul (which I take as nearly synonymous with the terms mind, spirit, and immaterial substance), an immaterial substance relevantly distinguished from the material component (i.e., the body). It is this relationship that is phenomenologically implicit and metaphysically necessary in the unity of consciousness [emphasis in original]" (p. 212).

Part of this neo-Cartesian substance dualism package is that souls are directly created by God, although Farris does not argue directly this point in the chapter (pp. 212–213). Farris rejects the self postulated by materialism "as the thing that owns or individuates phenomenal consciousness, because that self is composed of underlying separable parts and lacks the unity descriptive of a distinct substance" (p. 222). He also considers other versions of substance dualism, such as Hasker's emergent dualism, Thomistic dualism, and Lowe's non-Cartesian emergent dualism, but argues that neo-Cartesian dualism is the best option (p. 223), i.e., it gives "the best explanation for the phenomenal unity of consciousness" (p. 231).

Neuroscience and dualism

Neurosurgeon Michael Egnor describes, in chapter 13, the circular reasoning that exists with modern neuroscientists and philosophers of mind, which "nearly always begin with implicit (and at times explicit) materialist predicates for neuroscience, and then invoke the results of neuroscience to buttress materialism" (p. 238). According to Egnor, materialism, idealism, and dualism are the three theories that vie to best account for the mind–brain relationship (p. 239).

Image: Gallica Digital Library, Wikimedia / Public Domain

Figure 3: Portrait of René Descartes (1596–1650). Cartesianism is the philosophical system of Descartes.

In dealing with the metaphysical questions at hand, Egnor considers relevant neuroscience studies and experiments, including split-brain research (commissurotomy, hemispherectomy), the new phrenology (correlating brain states with mind states), cortical stimulation, epileptic seizures, craniopagus twins (conjoined twins fused at the cranium), fMRI studies of patients in persistent vegetative state, near-death experiences, and Benjamin Libet's free will experiments using the readiness potential (RP). For example, after a hemispherectomy (removal of an entire hemisphere), Egnor states: "There is no evidence of splitting of consciousness—meaning intellect, will, and unitary sense of self" (pp. 243–244). From the above considerations Egnor concludes that

> "Perhaps the most apt formulation is that for sensation, perception, motor movement, imagination, memory, and emotion, specific brain states

are necessary and sufficient, while for intellect and will, brain states are (ordinarily) necessary but not sufficient. Intellect and will—the characteristic powers of the rational soul in Aristotelian psychology, are not powers caused by matter.

"The most parsimonious explanation for the perceptual/intellectual dichotomy is that intellect, in contrast to perception, does not arise from brain states, but requires a source other than matter" (p. 260)

He finds the materialist view of the mind-brain relationship inadequate, favouring instead Thomistic (hylomorphic) dualism as the best framework for neuroscience (pp. 260–261).

Free will

According to neuroscientist Cristi Cooper (chapter 14), there is a spectrum of views on free will by philosophers, spanning from non-deterministic to deterministic, with the latter view holding that

"... all of our decisions are causally pre-determined by brain states, entirely through physical processes, which excludes the possibility that the mind has any independent power of its own" (p. 265).

Cooper examines the 1983 RP study by Libet (pp. 266–268), as well as some relevant subsequent studies that questioned "the significance of the Libet findings on the free will question" (p. 272). Cooper concludes that the Libet experiments do not answer the question as to whether we possess free will or not.

Limitations of neuroscience

In chapter 15, neuroscientist Joseph Green writes that "even in the most optimistic case, neuroscience may be decades away from being able to inform critical ideas in philosophy of mind" (p. 275). He points out the gap between the technical ability to act on the brain and understanding how the brain functions, referring to it as the 'knowledge gap' (p. 277). Green states that materialist monism (or monistic physicalism) is the current dogma pervading neuroscience; i.e., that "we are nothing but our brains", and that this "is established by intellectual pressure rather than solid scientific evidence" (pp. 276, 285).

Neuroscience is said to discuss things from a physicalist standpoint, "as if there is nothing beyond the material world" (p. 284). However, if there is no proof that the physical brain is all there is, then philosophical frameworks involving non-physical properties of the brain, i.e., the mind, must be considered (p. 284). He concludes that our "theoretical understanding of the brain, unlike that of other physical systems, remains extremely limited" (p. 287).

Near-death experiences

The case for near-death experiences (NDEs), i.e., the existence of "at least some initial, credible indications of afterlife consciousness", is given by philosopher and theologian Gary Habermas in chapter 18 (p. 323). Habermas does an excellent job presenting evidence for the reality of NDEs, using plenty of examples with corroborative accounts that are difficult to explain in any other way than that the NDE happened as claimed. According to Habermas, most NDE critiques and alternative hypotheses tend not to focus on the outside corroboration part, instead:

"… postulate conditions that are *internal* to the individual NDEr, such as oxygen deprivation, temporal lobe seizure, drugs, exaggerations, false statements, hallucinations, or either a dying or a waking brain. That is, they rely chiefly upon the *interior* physiological conditions and/or psychological states of the NDEr's mind or body [emphasis in original]" (p. 341).

Limiting himself to the cases mentioned in the essay alone, there are over 300 evidential NDE cases; i.e., where external circumstances argue for their veracity (p. 341). Hence, Habermas argues that almost every one of them must be mistaken for the naturalistic suppositions against NDE cases to work (p. 342). He states that

"… most evidential NDE cases seem to occur during a state of cardiac arrest due to ventricular fibrillation. It is exceptionally well-documented that during such a condition, the heart stops and at least higher (cortical) brain activity usually ceases in a matter of just ten to fifteen seconds or so afterwards" (p. 340).

Although the NDEs may point to an afterlife, they appear not "to distinguish between individual religious perspectives" (pp. 337–338). The NDE data is said to be quite personal, with "continuity of selfhood" being "maintained throughout, in that the very same person who has the NDE observes the evidential details, and then reports them later as a continuous whole" (pp. 344–345). Also, Habermas says, "Some have argued directly for a connection between NDEs and substance dualism" (p. 345).

Information and the mind-body problem

Because it is not understood how something without the common medium of space could causally interact, such as the mind and body, this feature of dualism is used to dismiss it (p. 359). According to philosopher Angus Menuge (in chapter 19), physicalism, which claims "human beings are purely physical substances, therefore seems to win by default, especially because it is widely held to present a more 'scientific' view of the world" (p. 359). However, Menuge

points out that "physicalism cannot even account for what the mind is" (p. 362). Menuge describes his Command Model of Action (CMA) and the Signal Model of Sensation (SMS):

> "The CMA maintains that volitions are abstract commands translated into physical instructions to execute bodily motor programs, and the SMS maintains that nerve signals are translated back into particular sensations that give humans the information they need to guide future actions" (p. 369).

Menuge states that the CMA and SMS does not solve the mind-body problem, but makes the substance dualist response more plausible, as it addresses "the otherwise strange discrepancy between abstract mental commands and qualia on the one hand and the details of motor control programs and nerve signals on the other hand" (p. 374). He admits that his ideas need further development, and, in this regard, sees Wilder Penfield's "pioneering work" as offering "congenial and helpful pointers" (p. 375).

Information realism

In the final chapter, mathematician and philosopher William Dembski discusses informational realism. He states that

> "… informational realism asserts that the ability to exchange information is the defining feature of reality, of what it means, at the most fundamental level, for any entity to be real" (p. 449).

Information is said to arise "from the interplay between *contingency* and *constraint* [emphasis in original]" (p. 452). Informational realism is said to be incompatible with materialism, as well as different from Berkeleyan idealism, the latter viewing all that exists as being "minds and ideas residing in minds" (p. 450). According to Dembski "Idealism, at least in some of its varieties, is compatible with informational realism" (p. 457). Having said that, Dembski then distances informational realism from idealism, stating that the former "strikes me as having a very different flavor" (p. 457). Unlike idealism, informational realism is said to lend itself quite naturally to the "separation between creator and created things" (p. 459). Dembski acknowledges that physicality is essential to Christian theology:

> "Indeed, of all Christian doctrines, none is more central than the Incarnation, which describes God as taking bodily form in Jesus Christ (every other key Christian doctrine, from the Cross to the Resurrection, depends on the Incarnation). Moreover, Jesus's body did not just appear to be a body. Rather, it was an actual physical body no different from any other human physical body" (p. 468).

I would certainly agree with the above statement. Dembski writes that informational realism dissolves the mind-body problem by giving "information free rein" (p. 468). He sees the ontologies responsible for the existence of a mind-body problem (materialism) as those artificially restricting the creation and flow of information (p. 468). He gives, as an example of this, restriction-of-information-flow accounts given by people having had a near-death experience (NDE), yet can tell what was talked about in other rooms during their NDE (p. 469). With materialism, this is impossible, and so such information "must be through some subsequent communication of the information via 'ordinary channels'" (p. 469).

Informational realism is said to neither require nor disallow such "NDEs, insisting that informational evidence rather than metaphysical presuppositions decide whether and to what degree such NDEs exist" (p. 469). Dembski points out that materialism makes demands on what types of information certain types of information sources can generate; e.g., that the mind must "be reduced to mechanism" as materialism "sees all things as composed of parts that operate by mechanical principles" (p. 469). According to Dembski:

> "… informational realism's dissolution of the mind-body problem is achieved not by appealing to substance dualism, but by unburdening the mind-body problem of any compulsion to explain the body's informational behavior in terms of any presumed mechanistic processing of information by the body" (p. 472).

Conclusion

One thing that most authors seemed to agree on was that the materialist view that all we are is our physical brains is untenable. I would not say that this is an ideal introductory text to the subject area, with some chapters easier to follow than others, and some more relevant than others. However, to the reader with a background in some of the topics covered, it can be a useful resource on the mind-brain problem.