Structure and the Metaphysics of Mind

How Hylomorphism Solves the Mind-Body Problem

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Introduction

I regard the mind-body problem as wide open and extremely confusing.

Saul Kripke

[It is characteristic of our time, even while rejecting dualism, to take its questions to be fundamental starting points.]

Martha Nussbaum

[The “solution” of the problem of mind-body is to be found in a revision of the preliminary assumptions . . . which generate the problem.]

John Dewey

[Within the framework of Aristotelian metaphysics and psychology there can be no mind-body problem.]

Mortimer Adler

[Hylomorphism is on the rise in contemporary metaphysics.]

Michael C. Rea

The foregoing quotes suggest a research project, one that looks to solve mind-body problems by appeal to hylomorphism. Hylomorphism claims that structure (or organization, form, arrangement, order, or configuration) is a basic ontological and explanatory principle. Some individuals, paradigmatically living things, consist of materials that are structured or organized in various ways. You and I are not mere quantities of physical materials; we are quantities of physical materials with a certain organization or structure. That structure is responsible for us being and persisting as humans, and it is responsible for us having the particular developmental, metabolic, reproductive, perceptive, and cognitive capacities we have.

Hylomorphists take mind-body problems to be symptomatic of a worldview that rejects structure. Hylomorphic structure carves out distinctive individuals from the otherwise undifferentiated sea of matter and energy that is or will be described by our best physics, and it confers on those individuals distinctive powers. If hylomorphic structure exists, then the physical universe is punctuated with pockets of organized change and stability—composite physical objects (paradigmatically living things)

whose structures confer on them powers that distinguish what they can do from what unstructured materials can do. If those powers include the abilities to think, feel, perceive, and act, then hylomorphic structure provides a way of locating mind in a physical world.

If structure is uncontroversially part of the physical world, and mental phenomena are species of structural phenomena, then they must be uncontroversially part of the physical world as well. A worldview that rejects hylomorphic structure, by contrast, is a worldview that lacks a basic principle which distinguishes the parts of the physical universe that can think, feel, and perceive from those that can’t, and without a basic principle that carves out zones with distinctive powers, the existence of those powers in the natural world can start to look inexplicable and mysterious. If there is nothing built into the basic fabric of the universe that explains why Zone A has powers that Zone B lacks—if nothing explains why you, say, have the power to think, feel, and perceive, while the materials surrounding you do not, then the options for understanding the existence of those powers in the natural world become constrained: either those powers must be identified with the powers of physical materials taken by themselves or in combination (as panpsychists and many physicalists claim), or their existence must be taken as an inexplicable matter of fact (as many emergentists and epiphenomenalists claim), or their existence in the natural world must be denied altogether (as substance dualists and eliminative physicalists claim). If there is hylomorphic structure, however, the options are no longer constrained in the foregoing way. Distinctive powers like yours and mine exist in the natural world because structure exists in the natural world. Moreover, because structure is a basic principle on the hylomorphic view, this does not simply push the demand for an explanation back a step. A framework’s basic principles stand in need of no further explanation within that framework. Structure and things that get structured are both basic on the hylomorphic view. Nothing must explain why the former exists any more than something must explain why the latter does. As a result, the view leaves it unmysterious why and how mental phenomena exist in the natural world.

Despite differing in its basic principles from familiar mind-body theories, hylomorphism has a familiar profile. On the one hand, it is naturalistic; it claims that we are physical beings with physical components, and that our distinctive powers to think, feel, perceive, and act are essentially embodied in the physical materials that compose us. On the other hand, it is antireductive; it denies that descriptions and explanations of those powers are reducible to the descriptions and explanations provided by physics, chemistry, or neuroscience. The reason is that there is more to having and exercising those powers than the materials and conditions that lower-level sciences describe and explain. In particular, there are the higher-level structures that unify simpler lower-level entities and occurrences into more complex individuals and activities. These structures are what delineate the subject matters of special sciences such as biology and psychology, and what secure the autonomy those sciences enjoy.
Articulating an acceptable mind-body theory that is both antireductive and broadly naturalistic has been a major objective of philosophy of mind for the past fifty years. Familiar theories of this sort include various forms of nonreductive physicalism and emergentism. The kind of hylomorphic theory I defend is antireductive and naturalistic as well, but it rejects both physicalism and some of the central tenets of emergentism. It thus makes a unique contribution to the ongoing effort to articulate an acceptable nonreductive naturalism. It is nevertheless similar enough in its outlines to these more familiar theories that their exponents are likely to see in hylomorphism a congenial alternative or a worthy competitor. Hylomorphism also has unique resources for solving the problems that beleaguer competing theories; these include the problem of emergence, the problem of downward causation, and the problem of other minds. I’ve described hylomorphic solutions to mind-body problems elsewhere (Jaworski 2011: chapters 10–11; 2012), but I’ve not described in detail the metaphysics underlying those solutions. This book aims to do precisely that.

Hylomorphic metaphysics has been much neglected since the seventeenth century. As a result, the biggest challenge facing hylomorphists is to articulate their view with enough detail and rigor to enable it to compete with more familiar alternatives. Often when philosophers discuss hylomorphism they approach it historically in terms of what Aristotle, Aquinas, Leibniz, or some other philosopher of the past has claimed. That is not my approach. The hylomorphic theory I defend dovetails with current work in metaphysics, philosophy of mind, and scientific disciplines such as biology and neuroscience. I argue that there are good philosophical and empirical reasons to reintroduce hylomorphism’s core notion of organization or structure. The descriptions and explanations of living behavior advanced by many biologists, neuroscientists, and other empirical practitioners posit notions of organization or structure that play theoretical roles like the hylomorphic notion. If we are committed to countenancing the entities postulated by our best descriptions and explanations of reality, and we think those descriptions and explanations derive from empirical sources such as the sciences, then scientific appeals to structure make a serious ontological demand. The most direct way of meeting that demand is to take scientific appeals to structure at face value—to claim that structure really exists, and that it plays the theoretical roles those appeals imply. We can express those roles with some slogans:

*Structure matters*: it operates as an irreducible ontological principle, one that accounts at least in part for what things essentially are.

*Structure makes a difference*: it operates as an irreducible explanatory principle, one that accounts at least in part for what things can do, the powers they have.

*Structure counts*: it explains the unity of composite things, including the persistence of one and the same living individual through the dynamic influx and efflux of matter and energy that characterize many of its interactions with the wider world.
I articulate and defend a hylomorphic theory built around a notion of structure that plays these roles. That theory is based on a substance-attribute ontology which takes properties to be powers and tropes. The result differs substantially from the hylomorphic theories defended recently by Kit Fine (1999; 2008), Mark Johnston (2006), Kathryn Koslicki (2008), David Oderberg (2007), Michael Rea (2011), and Anna Marmodoro (2013). It is nevertheless similar in its implications to the hylomorphic theory defended by Robert Koons (2014) and to the theory Montgomery Furth (1978: 638–9) attributes to Aristotle.

I argue that structures are powers to organize or configure things—powers that structured wholes are essentially engaged in manifesting. You and I are essentially engaged in configuring the materials that compose us; we impose a human-wise organization on them, and we persist exactly as long as we do so. These particular configurings—yours and mine—are particularized properties or tropes. They are numerically different properties that nevertheless resemble each other rather closely—more closely than, say, either resembles Fido’s configuring the materials that compose him or the oak tree’s configuring the materials that compose it. The hylomorphic view I defend weds this account of structure to an account of composition similar in its outlines to Peter van Inwagen’s (1990). For van Inwagen, composition happens exactly when the activities of fundamental physical particles constitute a life. Importantly, lives on van Inwagen’s view play many of the theoretical roles that hylomorphic structures do: lives matter for van Inwagen; lives make a difference, and lives count. It is thus easy to see the hylomorphic view of composition as an extension of van Inwagen’s. According to hylomorphists, composition happens exactly when there is an individual that configures materials, and the configuring activities in which individuals engage are like lives in van Inwagen’s sense.

The hylomorphic view nevertheless differs from van Inwagen’s in three respects. First, it is not committed to atomism as van Inwagen’s is, but remains neutral on the nature of fundamental physical materials. Second, it is open to the possibility that there might be structured individuals other than living things, something van Inwagen denies. Third, unlike van Inwagen, hylomorphism endorses the existence of functional parts such as eyes, hearts, and brains. Van Inwagen claims that the literal details about what lives are and what characteristics they have need to be supplied empirically (1990: 84). Contrary to his view of composition, however, the actual empirical work of biologists, neuroscientists, and others indicate that there are parts such as eyes, hearts, and brains. Central to that work is the method of functional analysis, which looks to analyze the activities of complex wholes into simpler subactivities performed by simpler subsystems. Parts emerge as hierarchically arranged systems and subsystems that are identified and individuated by the contributions they make to the activities of whole organisms. They are, in other words, subpockets of order within more inclusive ordered wholes. The foregoing differences between van Inwagen’s view of composition and the hylomorphic one enable the latter, I argue, to respond more effectively to the objections that have been levied against the former.
One important point of convergence with van Inwagen is that composite individuals are emergent on the hylomorphic view: they have distinctive powers different from the powers of unstructured materials. It is this feature that enables hylomorphists to solve the mind-body problems that beleaguer their competitors. The key to understanding the hylomorphic approach to mind-body problems is the notion of an activity-making structure. The structures mentioned above, the ones that are like van Inwagen’s lives, are structures that make individuals what they are; they are individual-making structures, the kinds of things traditional hylomorphists called ‘substantial forms.’ But individual-making structures are not the only structures that exist on the hylomorphic view. The activities in which structured individuals engage have structures as well; they are activity-making structures. The idea that there are activity-making structures is based on the observation that the activities of structured individuals involve coordinated manifestations of the powers of their parts. When we walk, talk, sing, dance, reach, grasp, run, jump, throw, breathe, and engage in the various other activities we do, we are imposing an order on the ways our parts manifest their powers. On the hylomorphic view, these structured manifestations of powers include thinking, feeling, and perceiving. These activities, like the ones just mentioned, are essentially embodied in the physiological mechanisms that compose us, yet it is not possible to reduce descriptions and explanations of them to descriptions and explanations of physiological mechanisms. The reason, again, is that there is more to these activities on the hylomorphic view than the operations of physiological mechanisms; there is also the way those operations are coordinated or structured, and structure in general is something different from things that are structured. The hylomorphic view is thus robustly antireductive despite its commitment to essential physical embodiment.

There are several philosophical challenges facing the hylomorphic theory I articulate. Some of them concern the metaphysics of powers and tropes on which it is based. I defend the power-trope metaphysic in Chapters 2–5 against alternatives like David Armstrong’s, which posit categorical properties and universals. I do not claim that the metaphysics I defend is the only one capable of supporting a hylomorphic theory. I do not even claim that it is the best. I claim only that it provides a workable basis for understanding hylomorphism and its implications for the philosophy of mind.

Other challenges to the hylomorphic view concern its account of composition. They include the following:

(1) Arguments such as those advanced by Peter van Inwagen (1981) and Trenton Merricks (2001a), which purport to show that there are no functional parts such as eyes, hearts, and brains.

(2) Arguments such as those advanced by Ted Sider (1993) and Dean Zimmerman (2003), which purport to show that a view of composition similar to van Inwagen’s has problems accommodating the possibility of gunk (infinitely...
divisible stuff), and also problems accommodating a commonsense ontology that includes artifacts and natural bodies such as mountains and planets.

3 Arguments such as those advanced by David Lewis (1986b) and Ted Sider (2001), which purport to show that composition cannot be restricted.

4 Arguments advanced by Thomists such as David Oderberg (2007) and Anna Marmodoro (2013), which purport to show that things like electrons cannot survive being incorporated into more inclusive wholes, that they are instead obliterated and replaced by proxies which are essentially biological.

I defend the hylomorphic view of composition against these arguments in Chapters 6 and 7.

In Chapter 8, I defend the embodiment thesis, the claim that the capacities of structured wholes are essentially embodied in their parts. The embodiment thesis, I argue, represents the default hylomorphic position. It is challenged by Aristotelian and Thomistic hylomorphists who claim that the operation of one capacity in particular, thought or understanding (Aristotle’s *nous*, Aquinas’ *intellectus*), is not essentially embodied. The traditional arguments for this claim derive from Aristotle’s argument in *De Anima* III.4. I argue in line with other commentators that the argument is flawed in multiple ways.

Another challenge derives from the worry that hylomorphism is, as Bernard Williams once put it, “just a polite form of materialism” (1986: 224), where ‘materialism’ is synonymous with ‘physicalism.’ There are several versions of Williams’ worry. Some focus on hylomorphism’s commitment to supervenience; others on its commitment to exhaustive physical decomposition, and yet others on its approach to mental phenomena—phenomenal consciousness in particular. I argue that each version of Williams’ worry is based on a false premise. Several versions of Williams’ worry derive from confusions about physicalism and reductionism, as well as supervenience, necessitation, and their relationship to explanation. I argue that many definitions of physicalism are based on dubious metaphysical assumptions. These include definitions of nonreductive physicalism that appeal to property dualism (Kim 2006a: 13), and definitions of physicalism that appeal to supervenience or necessitation (Chalmers 1996; Stoljar 2010). These definitions, I argue, fail to capture the core physicalist thesis, the claim that everything is physical. As a result, they fail to express accurately what physicalism is. Something analogous is true of various definitions of reduction. They fail to express accurately what reduction requires. In addition, many philosophers wrongly assume that necessitation and supervenience imply some type of explanatory condition; that if A supervenes upon or is necessitated by B, then B somehow provides an explanation for A, and that this explanation undermines the causal or explanatory autonomy of A. The assumption is false for reasons that are well rehearsed in the literature. I clarify the foregoing notions in Chapters 9–11, and show that as a result, several versions of Williams’ worry disappear.
A related challenge comes from philosophers like David Chalmers (2009, 2010). Chalmers argues that any theory which approaches phenomenal consciousness in the way hylomorphism does must be false. Hylomorphists nevertheless reject a key premise in Chalmers’ argument, namely the premise that conceivability is in general a guide to possibility. There are many circumstances in which we form conceptions of things that do not correspond to any possible situations. This approach to Chalmers’ argument requires what he calls ‘strong necessities’—a posteriori truths that have metaphysically necessary primary intensions. Chalmers advances several arguments against strong necessities. Their crux is the premise that every conceivable scenario corresponds to a possible world. Hylomorphists reject this premise. According to them, there are many circumstances in which we form conceptions that correspond to no possible situations. I discuss Williams’ worry and Chalmers’ challenge in Chapters 12 and 13.

In Chapters 13 and 14, I argue against competing versions of hylomorphism such as those endorsed by Kit Fine, Mark Johnston, and Kathryn Koslicki, and argue that the version of hylomorphism I defend is a worthy competitor in metaphysics and the philosophy of mind. Its theoretical merits are at least as choiceworthy as those of its closest rivals: nonreductive physicalism, emergentism, and Russellian monism. Part of what makes hylomorphism attractive is that it implies elegant solutions to mind-body problems such as the problem of emergence, the problem of mental causation, and the problem of other minds. Other philosophers have looked to advance similar solutions, but many have fallen short because they have failed to situate their solutions within a broader metaphysical framework. Tyler Burge (1993, 2006) is an example. He has looked to solve the problem of mental causation by appeal to commonsense explanatory practice, but because he has not situated that practice within a metaphysical framework that explains why it should be what it is, his attempt to solve the problem has failed to address the deeper metaphysical puzzles about mental causation (Kim 1998). Hylomorphism provides the needed framework.

Hylomorphism is also able to make sense of many of our intuitions about composition, about the persistence of organisms, and about the distinctive powers they possess. Moreover, it is easier to defend hylomorphism than it is to defend physicalism because it does not make the totalizing claim about physics or any other branch of science that physicalism does. Because hylomorphism endorses a plurality of structures in the natural world, it endorses a plurality of autonomous scientific disciplines for describing them. Consequently, it does not insist that everything can be exhaustively described and explained by a single conceptual framework the way monistic theories like physicalism do. These points, combined with hylomorphism’s ability to solve a number of persistent philosophical problems, make a strong case in its favor. At the very least, they show that hylomorphism deserves a place at the table alongside the more familiar alternatives.