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Introduction: Special Issue on Late Medieval Hylomorphism

Russell L. Friedman and Zita V. Toth

This *ACPQ* special issue is devoted to “late medieval hylomorphism,” by which we mean hylomorphic theories developed in the period roughly 1300–1600. Hylomorphism, of course, is the philosophical theory that every physical object is composed of structurable “matter” (“hyle” in Greek) and structuring “form” (“morphe”) and it has a 2500-year history from its Aristotelian beginnings to today’s metaphysics. In the general Aristotelian hylomorphic theory as one can find it in the period of scholastic Latin philosophy, roughly 1200–1700, the structuring principle of a physical object is called its “substantial form,” the most basic stuff that a substantial form structures is called “prime matter,” and the composite of substantial form and prime matter is called a “primary substance,” usually taken to be an individual member of a natural kind. The substantial form gives to the primary substance that it is precisely the type of thing that it is, with all of the essential features as well as the disposition to taking on a range of non-essential features that things of that type can have. Thus, our substantial form is what makes us human beings with the essential features and the range of non-essential features that are appropriate to items belonging to our natural kind. It is on account of the substantial form that a human body has the shape and the general configuration of organs and appendages that it has, and this shape and configuration is in general just the right one to underwrite the many powers that a human being can exercise, like digesting, moving around, hearing, and, most especially, thinking. The prime matter, on the other hand, is what is structured by the substantial form. Prime matter is what ensures that there is identity over time during episodes of substantial change—that is, when one substantial form is replaced by another: it’s the prime matter that permits us to truthfully say

that what was previously 75 centiliters of wine *is* now vinegar or that the food you ate last week *is* now you, part of your substance and structured by your substantial form.

In that 500-year period of scholastic Latin philosophy, and particularly after the thirteenth-century reception of Aristotle and his Islamic commentators, hylomorphism became a lynchpin of intellectual endeavor. In thought from throughout this time, hylomorphism played its metaphysical and physical theoretical roles in explaining natural kinds, native powers associated with natural kinds, as well as change. What is more, since souls were considered to simply be substantial forms that make life possible, hylomorphism was central to scholastic philosophical psychology. It also was crucial in explanations of cognition (which was typically explained as the reception of the form of whatever was being cognized) and of cosmology (the hylomorphic composition of the heavenly bodies was a major point of debate), to mention just two areas. Hylomorphism was also crucial to the age's theological speculation: from explanations of creation to Christ's two natures and sacramental theology, hylomorphism played a decisive role. Other areas of scholastic endeavor, like alchemy and medicine, were colored by hylomorphic theory. Hylomorphism was as foundational a philosophical theory as could be found in these 500 years.

But when it comes to study of the period's hylomorphism, a genuine gap becomes visible. While still understudied, nonetheless the early part of the period, especially the period 1250–1320, and what is commonly called “Early Modern Scholasticism,” 1600–1700, have a significant and growing secondary literature on the hylomorphic ideas found in them. Thus, for the earlier part of the period a good deal of the literature concentrates on the thought of influential figures like Thomas Aquinas (d. 1274), John Duns Scotus (d. 1308), and William

of Ockham (d. 1347),¹ and there are also broader detailed discussions of all or part of the timespan.² With respect to Early Modern scholasticism, there is now considerable work exploring the continuities and discontinuities between the natural philosophy of René Descartes (d. 1650) and the Early Modern philosophical tradition, on the one hand, and seventeenth-century scholastics, on the other, including the way the Early Modern thinkers rethought, and sometimes rejected, Aristotelian hylomorphism.³ Moreover, in work on Early Modern scholastic hylomorphism, a special place is reserved for the Spanish Jesuit Francisco

¹ E.g., Jeffrey E. Brower, *Aquinas's Ontology of the Material World: Change, Hylomorphism, and Material Objects* (Oxford: Oxford University Press, 2014); Thomas M. Ward, *John Duns Scotus on Parts, Wholes, and Hylomorphism* (Leiden: Brill, 2014); Marilyn McCord Adams, *William Ockham*, 2 vols. (Notre Dame: University of Notre Dame Press, 1987), 633–95. Both here and in the following footnotes, the examples are purely indicative and could easily be multiplied; many further references are found in the articles in this *ACPQ* special issue.

² E.g., Roberto Zavalloni, *Richard de Mediavilla et la controverse sur la pluralité des formes* (Louvain: Éditions de l'Institut Supérieur de Philosophie, 1951); Sander de Boer, *Science of the Soul: The Commentary Tradition on the De anima, c. 1260–c. 1360* (Leuven: Leuven University Press, 2013), esp. chap. 5.

³ E.g., Tad Schmaltz, *The Metaphysics of the Material World: Suárez, Descartes, Spinoza* (Oxford: Oxford University Press, 2020). Surveying aspects of hylomorphic thought throughout nearly the entire Latin scholastic tradition is Robert Pasnau, *Metaphysical Themes 1274–1671* (Oxford: Oxford University Press, 2011).

Suárez (d. 1617), whose theory has generated a great deal of interest and a correspondingly large number of publications.⁴

In contrast, the hylomorphic theory of most of the period in between these two, what we are calling here “late medieval hylomorphism” and defining as roughly 1300–1600, is in basically every way understudied. There is, to be sure, secondary literature on the hylomorphism of post-Ockham, pre-Suárez hylomorphic thought, and some of that will be referred to in the articles below.⁵ But especially considering the fact that this is a roughly

⁴ E.g. Sydney Penner, “Suárez on Substantial Forms: A Heroic Last Stand?,” in *Francisco Suárez (1548-1617): Jesuits and the Complexities of Modernity*, ed. Robert Aleksander Maryks and Juan Antonio Senent de Frutos, *Jesuit Studies* 22 (Leiden: Brill, 2019), 46–71; Dominik Perler, “Suárez on the Unity of Material Substances,” *Vivarium* 58, no. 3 (2020): 143–67.

⁵ Again, just as indicative, see articles in *The Fate of Hylomorphism: ‘Matter’ and ‘Form’ in Early Modern Science*, ed. Christoph Lüthy and William R. Newman, special issue of *Early Science and Medicine* 2, no. 3 (1997); articles in *Physics before Newton*, ed. Barry Smith and Karl Schuhmann, special issue of *The Monist* 84, no. 4 (2001); Andreas Blank, “Nicolaus Taurellus on Forms and Elements,” *Science in Context* 27, no. 4 (2014): 659–82; Kuni Sakamoto, *Julius Caesar Scaliger, Renaissance Reformer of Aristotelianism: A Study of His Exotericae Exercitationes* (Leiden: Brill, 2016), 110–63; Davide Cellamare, “Renaissance Psychology: Francisco Vallès (1524–1592) and Otto Casmann (1562–1607),” in *Human and Animal Cognition in Early Modern Philosophy and Medicine*, ed. Stefanie Buchenau and Roberto Lo Presti (Pittsburgh: University of Pittsburgh Press, 2017), 74–88. Much of the recent literature focuses on sixteenth-century *innovatores*, figures who were largely non- or

300-year timespan and that there is an explosion of hylomorphism-related writings in the late fifteenth and the sixteenth centuries, the secondary literature can best be described as scattered. In particular, we are really only at the beginning of determining who the important figures in late medieval hylomorphism were and what significant innovations they produced. The *ACPQ* special issue before you is meant to go some small way in addressing this gap, by focusing on lesser-studied figures from these three hundred years and bringing to light the hylomorphic innovations they witness or develop. Thus, while the names mentioned above from the earlier and later periods will appear in articles contained in this special issue, most of the focus is on lesser-studied figures like Walter Burley (d. ca. 1344), Albert of Saxony (d. 1390), and Paul of Venice (d. 1429), just to mention a few, whose thought is revealed to be both innovative and influential. In this way, we hope the special issue will help to give the late medieval hylomorphic discussion some definition and serve as a foundation for further research.

The special issue contains papers dealing with several particular late scholastic debates within the broadly-speaking Aristotelian hylomorphic framework sketched above. The first two papers discuss a fundamental question arising for a hylomorphist: Assuming that matter and form compose substances, which are further joined with accidents to compose accidental unities, is the composite substance something over and above these metaphysical parts? And if yes (an answer granted by most medieval thinkers due to some theological givens associated with, among others, Christology), is it something over and above these parts plus their union?

even anti-Aristotelian, like Taurellus and Scaliger; scholastic literature, in the focus of the present *ACPQ* special issue, is less studied.

The first paper, by Peter Hartman, examines Durand of St.-Pourçain's (d. 1334) stance on this question, which Hartman labels a “moderate reductionist theory” of the hylomorphic composite. According to Durand’s theory, composite substances just *are* their essential parts (matter and form) plus their union, which union, furthermore, is constituted by two modes: the mode of inherence (of form in matter) and the corresponding mode of standing (of matter with respect to form). Since in contrast to many of his contemporaries, Durand has no dedicated discussion on this theme, Hartman makes a reconstruction on the basis of a number of texts. As part of the reconstruction, the paper defends Durand's position against some possible objections by utilizing several distinctions expounded by Durand himself. Thus, he uses a distinction between actual and potential absolute things in order to maintain that there is a significant difference between *per accidens* and *per se* composites. Further, he draws distinctions between various types of relations, whereby, treating inherence as a *per se* external relation, Durand can maintain that the result of natural generation is the substantial form with the inherence relation that naturally follows from it as a type of “causal free lunch.” Having presented Durand's view of the composite substance, the paper also looks at how this moderate reductionist theory was borrowed with slight modification by Francisco Suárez (maintaining that instead of four components, we need only three, since there is only one mode of union), and quite exactly by Suárez’s contemporary, Pedro Hurtado de Mendoza (1564–1648).

While Durand can be labelled a “moderate reductionist,” Gregory of Rimini's (d. 1358) position, as Richard Cross argues, is a “moderate idealist” one. On Gregory's view, hylomorphic composites involve no ontological commitments apart from their essential parts—that is, apart from their form and their matter. The position can be regarded as “idealist,” since once the form and matter are present and appropriately located, it is up to the divine will whether or not they compose a substance. Gregory gives the same account of the

complexe significabile, the ontological item Gregory contends to be the extramental significate of propositions and hence the object of such propositional attitudes as knowing and believing (the link to hylomorphism in Gregory's philosophy arises since, most often, the object of such propositional attitudes is a substance-accident composite). According to this account, God can make it the case that whiteness and bread cease to compose a substance. When that happens, however, ontologically speaking, nothing changes: we have the very same entities as before, except a divine volition hinders their natural composition. Perhaps motivated by some of William of Ockham's considerations, Gregory thinks that by referring to the divine will, he can both be a serious reductionist with respect to hylomorphic composites, as well as account for important theological test-cases, such as the hypostatic union and the Eucharist.

While the unity of prime matter and substantial form was one fertile ground for debate in the late medieval period, *how* exactly such a unity came about was another. What is the nature of substantial change, generation, and corruption? Are these processes instantaneous or temporally extended? What brings them about, and how? What role do accidental changes play and what, ontologically speaking, can accidents bring about on their own? These are some of the questions addressed in the next three papers in the issue.

Kamil Majcherek presents the debate surrounding the generation of artefacts, which is, ultimately, a question about whether local motion – moving around various already-existing component parts – can produce anything new. On the one hand, "artefact realists" maintained that the answer is affirmative, and hence that when an artefact is made, a new thing (*res*) comes into existence that is not identical to the natural things that make it up. On the other hand, for the "artefact nominalists," since artefacts are brought about by local motion, and local motion cannot produce anything new, there is no new form and no new existing thing that results from the production. The paper traces the debate from John Duns

Scotus through Walter Burley to Theodoric of Magdeburg (d. 1367), on the realist side, and from Ockham through John Buridan (d. ca. 1360) and Albert of Saxony to Blasius of Parma (d. 1416), on the nominalist side. While the realists argued that whatever makes a difference between two different states of affairs must be a thing (*res*) in the ontology, nominalists rejected this principle and argued that there are instances, most importantly those effected by local motion or some extrinsic change, where this is not the case.

Turning now from artefacts to primary substances, the next two papers center on fourteenth-century and later innovations in explanations of substantial change. In the thirteenth century, substantial change was looked at as a process with two distinct steps: a qualitative (i.e., accidental) and temporally extended “preparation” of the patient that was to undergo substantial change, followed by the instantaneous substantial change itself. Thus, in order to undergo the substantial change of catching fire, wet newspaper first needs to be warmed and dried, qualitative processes that take time, and only when that preparation is complete can the newspaper take on the substantial form of fire, which is an instantaneous event. Various aspects of this standard account were challenged in the fourteenth century, as the next two papers make clear.

Roberto Zambiasi presents a remarkable development in the fourteenth century, namely the gradual acceptance, among some philosophers, that substantial change itself can take place over time. Zambiasi studies fourteenth-century views of substantial change in the context of discussions of *minima naturalia*, that is, the smallest amount of matter that can take on a given substantial form. According to the traditional medieval interpretation of Aristotle, there *are* such minimal parts in homogeneous substances: thus, for instance, there is some amount of matter below which the substantial form of fire can no longer inhere. However, since it was nearly universally held in medieval philosophy that matter is potentially infinitely divisible, this prompted discussions about what happens when this

minimum is divided, as a consequence of which the fire and its substantial form corrupts. The paper traces three authors' views on this issue: Walter Burley's, John Buridan's, and Albert of Saxony's. All these thinkers agreed that the smallest amount of matter that can take on a given substantial form depends on the intensity of the corruptive power of the surrounding medium (water's ability to put out fire, for instance); but they disagreed on what happens exactly when this medium corrupts the substantial form in question. Burley thinks that in homogenous material substances, there is a temporally extended process of alteration that precedes and prepares an instantaneous substantial change, where that substantial change is considered by Burley to be the final part of the prior alteration. Buridan introduces a new element into the debate by arguing that a three-dimensional substance can only be corrupted layer by layer, so to say, which makes corruption a temporally extended process. Finally, Albert of Saxony, while agreeing with Buridan, takes the theory further by claiming that this is true not only of homogeneous but also of heterogeneous substances (save for human beings whose substantial form is the indivisible rational soul).

Sylvain Roudaut's paper, returning to Walter Burley, presents a broad but detailed overview of the problem of the causal role of substantial and accidental forms. As the paper shows, there were, by and large, three main positions on the question of what roles accidental and substantial forms play when generating a new substance. The "instrument theory," most famously endorsed by Thomas Aquinas, maintained that the accidents are instrumental causes of the substantial form when generating a new substance. The "disposition theory," most famously endorsed by Scotus and Ockham, maintained instead that accidents merely play a dispositive role by preparing the patient to receive the substantial form's immediate action. Finally, the paper's focus is Burley's unusual and controversial view, according to which accidents alone can generate a substance. While Burley's view seems to be a corollary to his position about the nature of substantial change, as seen in Zambiasi's paper, it was also a

problematic view for the hylomorphic theory in several respects. First, it seems to contradict the basic Aristotelian principle of causal superiority (substances, being superior to accidents, cannot be generated by them); and also, if we can account for all change by accidents alone, it may seem otiose to posit substantial forms in the first place. The paper traces the development of these problems and the competing views from Burley, through Buridan's, Nicole Oresme's (d. 1382), and Blasius of Parma's rejection of the view, to Paul of Venice's acceptance of it. It shows also that while Burley's position remained a minority view throughout the period, it prompted thinkers to elaborate on how they understood instrumental and dispositive causation, as well as on how they viewed substantial forms; while at the same time it also prepared the way for the early modern criticism of the hylomorphic theory.

Having dealt with these fundamental issues, the next few papers address some applications. One of the main applications of the hylomorphic theory concerns human beings as hylomorphic composites. How should we understand this particular hylomorphic composition? How many substantial forms do we have? How is the intellective soul related to the other parts, and, especially, what is its exact metaphysical status?

Thomas Jeschke's paper discusses these questions by picking up right where we left off in the previous one—namely, at Paul of Venice. Paul was active in Padua and has traditionally been interpreted as an Averroist; while this interpretation is, strictly speaking, incorrect according to the paper, Paul's position is highly unusual. Paul thinks—in contrast to a unicist about substantial forms like Aquinas (who held that all substances have one and only one substantial form), and even in contrast with pluralists about substantial forms like Scotus—that there are two souls in a human being: a cogitative (sensory) one and an intellective one. These two souls are really distinct, since, as Paul argues, they have different essential properties (e.g., the former is generable and corruptible, while the latter is neither). According to Paul, they are also both “total souls”; but while the sensory soul inheres in and

informs the human body, the intellective soul only informs it without inhering in it. The paper traces fourteenth-century sources of this unusual view, as well as aspects of its impact on some of Paul's successors at Padua. Regarding the sources, as is well known, there was considerable debate concerning the plurality of substantial forms in the late medieval period; but as the paper shows, Paul's position differs from representative pluralists' such as Scotus and Burley, and is closer to John of Jandun's (d. 1328) and an Anonymous author's, edited in the twentieth century by Benôit Patar. And regarding the reception of Paul's view in his successors, the paper shows that while Paul's position was unusual, we can find reactions to it in such later thinkers as Gaetano de Thiene (d. 1465), Nicoletto Vernia (d. 1499), and Agostino Nifo (d. 1545).

Turning from the number of human souls to the number of its powers, Adam Wood's paper discusses Descartes's criticism of Aristotelian substantial forms in light of the late-medieval debate over whether the human soul is identical to its powers. According to Descartes, Aristotelian substantial forms are obscure and explanatorily otiose, while they also threaten the immateriality and incorruptibility of the human soul. The paper looks at how this criticism applies to both a Distinction Theorist, such as Aquinas, who maintains that the soul is distinct from its powers, and to Identity Theorists, such as Ockham or Buridan, who maintain that they are identical. The paper argues that the Identity Theory may be more vulnerable to Descartes's criticism than the Distinction Theory. According to the Identity Theory, the soul, and consequently its powers that are identical to it, are uniformly distributed throughout the body, making it difficult to account for how the powers are diversified in the various sensory organs. Moreover, since the human rational soul as the form of the body is primarily what arranges the body-parts in the appropriate way, both Buridan and Ockham seem to be committed to the view that the rational soul's immateriality and subsistence cannot be established by philosophical reasons (and perhaps that philosophical reasons even

lean against it). By contrast, the paper argues that the Distinction Theory can maintain that while the soul is uniformly located throughout the body, its powers are not; rather, they are localized in the respective organs and are more amenable thereby to mechanical analysis. The Distinction Theory can also maintain that while the souls are extended and hence material forms with respect to some of their powers, they are unextended and immaterial forms with respect to other powers, making therefore the non-bodily existence of human souls more plausible.

The final paper in our issue, by Helen Hattab, presents how hylomorphism came under attack by late sixteenth- and early seventeenth-century thinkers due to the changes in their views on the issue of individuation. If we regard something as a metaphysical composite of matter and form, which of these components makes it one individual thing, both providing a unity to it and distinguishing it from other things of the same species? The paper, after giving background to the issue in Aquinas, Henry of Ghent (d. 1293), Scotus, Marcantonio Zimara (d. 1532), and finally Pedro da Fonseca (d. 1599) and Suárez, turns to how it was tackled by three Protestant scholastics around the turn of the sixteenth to the seventeenth century: Jacob Martin (d. 1649), Bartholomaeus Keckermann (d. 1609), and David Gorlaeus (d. 1612). Jacob starts by distinguishing various senses of unity, considers all the hylomorphic options as the principle of individuation, but after ruling out matter and accidents, concludes that it must be form. Keckermann does not treat the question in terms of matter and form at all, but instead argues that while Being considered as essence is universal, considered with respect to existence, which determines it to a particular time and place, it is individual, and hence the principle of individuation is existence. While Keckermann merely ignores matter and form when dealing with the question, Gorlaeus explicitly argues against them by claiming that metaphysical composition in individual substances makes them to be mere aggregates, endangering therefore their unity. In this way, in Gorlaeus, the criticism of

the previous authors' notions of individuation, opens the way towards the rejection of hylomorphism and the acceptance of atomism, which indeed Gorlaeus regards as more consistent with Aristotelian commitments.

The following symbols are used throughout the special issue:

<x> (in a Latin text): x has been added to the text by the paper's author

[x] (in a Latin text): x has expunged from the text by the paper's author

[x] (in an English translation of a Latin text): x has been supplied in the text by the paper's author

The guest editors of this special issue think that the articles appearing here serve to illuminate aspects of the vibrant late medieval hylomorphic debate, demonstrating its significance; we hope that in this way they will sponsor more interest in late medieval hylomorphism. We would like to thank the participants in the conference “Late Medieval Hylomorphism: Matter and Form 1300–1600,” which took place in Leuven in June 2022, where (among others) all the papers here were presented. We are grateful to the KU Leuven Internal Funds, which gave financial support to the conference through Project C14/20/007 (“Studying Medieval Hylomorphism Whole”). Finally, we thank the editorial board of the *American Catholic Philosophical Quarterly* for the invitation to organize and publish this special issue with the journal, and we want to express our gratitude to both David Clemenson and Heidi Giebel, who with clarity and helpfulness led us through the publication process.

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