Graduate Faculty Philosophy Journal
Volume 26, Number 2, 2005

Introduction

1. The Issue

In retrospect, it seems clear: modernity has been built on ground broken in the seventeenth century. Early modern philosophy emerged in reaction to what had become of the Aristotelian tradition, rejecting the scholastic metaphysics of substantial forms and final causes, and developed under the banner of a decisive break with the past. The more research is done into the emergence and development of early modern philosophy, however, the more continuity is seen to lie alongside discontinuity. The first half of the twentieth century saw significant growth in the availability of and interest in relatively unstudied source materials, bringing about a reconsideration of the relationship between the early moderns and their predecessors. Pierre Duhem's work was pioneering in this respect, finding the birth of seventeenth-century physics in fourteenth-century Paris. Such enthusiasm for 'precursors' was qualified, however, as the achievements and limitations of late medieval thought were more clearly articulated. In turn, this required a more complicated account of how the early moderns were able to draw conclusions evidently unavailable to their predecessors. More recently, philosophical interest in the period has continued to gain momentum. Scholars have been able to examine in detail how the conceptual and technical resources that cleared the ground for early modern thought were developed. Moreover, it has become clear how—despite their claims to the contrary—the early moderns were invested in and indebted to the traditions to which they reacted.

Yet that work of contextualization raises further difficulties. On the one hand, there seems to be no single moment in which early modern thought could be said without qualification to have broken with the medieval traditions. On the other hand, this is a period clearly marked by change, even innovation. The gesture of making a new start is repeated many times, and in many ways. How are we to understand and explain an effect that cannot be traced back to a single cause? It seems that some sense of continuity is needed. Although by no means uniform or univocal, a tradition (or, perhaps better, traditions) runs through the transition from the late medieval to the early modern period. Problems and resources for addressing them were inherited, appropriated, constructed, and at times actively excluded or suppressed. And those changes can be explicated. But the sense of continu-

ity at stake is not simply that of identity, nor even of a continuous line of transmission. It is, then, a matter of how to understand change. How were conceptual resources and their limitations shaped and dealt with? How were the central problems, and what would count as an adequate response to them, determined? How, if continuity can be established virtually every step along the way, has the early modern period come to stand as a decisive break with the past?

By focusing on problems concerning matter and materialism in the Aristotelian tradition, the essays presented here make significant contributions to opening up and exploring difficulties and prospects facing such questions. The wealth of recent research notwithstanding, this remains a relatively underdeveloped aspect of the history of philosophy, especially with respect to the transformations undergone by the medieval traditions. Moreover, problems concerning matter and materialism offer particularly fruitful resources for investigating those transformations. For those problems have to do not only with conceptions of matter, but also with a constellation of problems concerning change, causality, and how we know and explain phenomena. The transformations undergone by that constellation of problems run along the major fault lines of the Aristotelian tradition and the emergence and development of early modern philosophy.

Albeit in brutally short fashion, two such lines of transformation are worth recalling here. One concerns the identification of matter with potentiality; the other, the relationship between hylemorphism and atomism. For the Aristotelian tradition, the notion of matter is inherently bound up with the effort to explain change. At least in the context of natural philosophy, matter and form do not exist apart from one another. To identify matter with potentiality, then, is to point to the material aspect of things as that in virtue of which change takes place. In Aquinas' reduction of matter to pure potentiality, however, that distinction is transformed through the assimilation of elements taken from the Neoplatonists and Avicenna as well as from Christian theology. To be sure, on Aquinas' account physical creatures are embodied, but in a crucial sense that embodiment (at least in the case of human beings) is accidental: soul and body are one only in a qualified way (*Contra Gentiles* II, 56). In turn, the identification of the intellect or rational soul with the form and substance of a human being is one of the decisive moments in the debates concerning the unity of the intellect. Aquinas' worry is that one material intellect serving all of humanity entails that the intellect cannot be the form and substance of a human being. Conversely, the Averroistic tradition, in affirming the unity of both material and agent intellects, as well as the material origins of all knowledge, is not inherently committed to limiting humanity

to its rationality. Moreover, the reduction of matter to pure potentiality recurs in Descartes' conception of matter as extension, and the concomitant attribution of activity solely to thought, and ultimately God.

The second line of transformation concerns atomism. Aristotle rejected Democritean atomism because the random collision of homogeneous atoms cannot explain how different kinds of bodies interact in specific ways. In maintaining a close connection between matter and form, later atomism appears closer to the Stagirite's view. The crucial difference between the earlier and later atomistic conceptions, however, involves the rejection of final causality in favor of explanation in terms of efficient causes. The atomistic physics and chemistry of the sixteenth and seventeenth centuries was made possible by the combination of a felt need to account for the generation or composition of things in terms of their parts and the limitations of analysis in terms of the principles of matter and form. These two lines of transformation, leading to mind-body dualism on the one hand, and the physics of lawful forces acting on atomistic bodies on the other, constitute the dominant strand of the tradition that emerged.

Yet there were other currents, alternative trajectories that for various reasons were not incorporated within that dominant strand. Neither the medieval traditions nor the early modern period were unanimous—indeed, it is not without a certain irony that "Aristotelian" is said in many ways. The Aristotelian tradition includes, among others, Platonic, Neoplatonic, Islamic, Jewish, and Christian elements. Although readily caricatured in its scholastic modes, medieval philosophy manifests remarkable ingenuity and imagination in ferreting out possible responses to inherited problems (as well as in avoiding or ferreting out the hint of heresy). Nevertheless, medieval philosophy in the Christian West stood in an uneasy relationship with its Islamic and Jewish predecessors and contemporaries. It was through the latter that the bulk of the Aristotelian corpus was introduced to the Latin-speaking world, as well as advances in geometry, algebra, astronomy, medicine, and other areas that influenced the development of early modern philosophy and science. But the Aristotelian corpus, in particular, was appropriated primarily through the efforts of Christian thinkers *contra Averroistas*. And among later examples of such variety and difference, one notes Suárez' encyclopedic engagement with his predecessors; the blend of mysticism and chemistry in Paracelsus and Giordano Bruno; seventeenth-century debates among and between atomists and Cartesians; Spinoza's rejection of both atomism and dualism; and the vitalist materialisms of the seventeenth and eighteenth centuries.

The significance of this variety and complexity has yet to be adequately reckoned with. It calls into question the apparent unity and linearity of the history of philosophy, and poses serious questions about how we read and receive that history. The investigation of alternatives that were not incorporated within the dominant strand of the tradition offers potent resources for better understanding how the tradition has been shaped. Yet the fact of variety does not in and of itself obviate the extent to which such alternatives were not realized, did not become embodied in the changes in shared practices and principles informing the subsequent tradition. The dominant strand of that tradition emerged along with at least the idea of a decisive break with the past. The origins, character, and status of that break, and thus the status of philosophical resources found in the recesses of the past, are among the most pressing concerns facing ongoing work in the history of philosophy—both for understanding how the tradition we inherit has been determined, and for engaging resources that might yet be cultivated.

2. The Essays

Aristotle set the standard for the subsequent tradition, both in terms of the problems and the basic means and modes of addressing them. Nevertheless, the Stagirite explicitly understood himself as indebted to the tradition of which he was part. Rose Cherubin situates Aristotle's use of the notion of matter with respect to concerns about the possibility of explanation raised by his Eleatic predecessors. Parmenides, Zeno, and Melissus were concerned with how claims that there are many things capable of motion and change lead to incoherent statements. By focusing on Aristotle's understanding of the requirements and limits of inquiry and Parmenides' invocation of the figures of justice, necessity, and fate, Cherubin shows how Aristotle's conception of matter as a cause responds to such concerns.

In her essay, here translated into English for the first time, Anneliese Maier examines thirteenth- and fourteenth-century responses to Averroes' account of how the elements remain in compounds in an intermediate state between potentiality and actuality. Through a consideration of the problem in such figures as Roger Bacon, John Dumbleton, and Petrus Aureoli, Maier explicates how the Scholastics attempted to deal with a tension between the account of substances as composites of matter and form and the effort to account for their generation as compounds of the four elements.

One of the hallmarks of the Aristotelian tradition is the notion of prime matter. James B. South examines the relationship between the

conception of prime matter and scientific methodology in the sixteenth-century Aristotelian, Jacopo Zabarella. In his logical works, Zabarella develops the method of *regressus*, by which one reasons from a known effect to an unknown cause, determines the nature of the cause, and then demonstrates the effect through the cause. South shows how Zabarella's account of the existence and essence of prime matter exemplifies that method, making clear the unity of Zabarella's methodological and natural philosophical concerns.

Christoph Lüthy tracks the evolution of Daniel Sennert's matter theory from an Aristotelian hylemorphism to a form of atomism. Here, too, elemental mixture is seen to be a crucial problem for Scholastic metaphysics and natural philosophy in relation to the natural sciences. As Lüthy makes clear, Sennert is a particularly important figure because of how his gradual incorporation of atomistic elements into his matter theory pushes the hylemorphic account of matter to, and ultimately beyond, its conceptual limits.

All too often subsumed under the idea of the "Scientific Revolution," the seventeenth century was marked by difficulty, difference, and debate. Christia Mercer examines one of the ways in which a tension between mechanistic conceptions of matter and bodies and certain metaphysical and doctrinal commitments persisted through the seventeenth century. Focusing on the metaphysics of resurrection, Mercer exposes this tension in later seventeenth-century criticisms of the mechanistic models worked out in the first half of the century, and looks at Leibniz' understanding of substantial unity as an attempt to reconfigure the metaphysical basis of the new physics.

Richard A. Lee takes up the work of reason in Hobbes' materialism. He argues that materialism, if it is not to fail as an account of things and fall back into myth or theology, must include a moment of rationality. By focusing on the relationship between the social and political sources and effects of ideas, and the freedom of reason, Lee shows how Hobbes' materialist critique of scholastic metaphysics depends on the ways in which phenomenal immediacy is nevertheless mediated by reason.

In her article, Julie R. Klein elaborates Spinoza's conceptions of matter and body, situating Spinoza's rejection of both dualism and reductive materialism with respect to his appropriation of Aristotelian resources via the Judeo-Islamic traditions. By focusing on central themes in Spinoza's thought such as aspectival difference and the relationship between substance and modes and attributes, Klein shows how Spinoza is able to develop those resources in a conception of thought and extension as both inseparable from and irreducible to one another.

3. Acknowledgments

Something more than thanks is due to the Department of Philosophy at The New School for Social Research. In more ways than one, the *Graduate Faculty Philosophy Journal* would not be what it is without their uncompromising support and encouragement.

I take this opportunity to express my deepest gratitude to those without whom this would not have been possible. First and foremost, to the authors. These remarks were written largely in response to their work, and I am indebted to their insight and interest in these matters. To Keith Kitchen for his help in translating the Latin passages in Maier's essay; I am responsible for any errors that remain. To Claudia Baracchi for her wisdom and generosity as a mentor. To my fellow Journalistas, who saw this issue through, for all the things that would not be without good friends: Alexei Angelides, Ella Brians, James Griffith, Matthew Lampert, Christopher Roberts, Fanny Söderbäck, and Rocío Zambrana. Human beings are "more able to think and to act" together (*Nicomachean Ethics* VIII.1, 1155a16).

Benjamin J. Grazzini
November, 2005