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Form, Figure and Two Types of Extended Being:
Averroism in the Young Leibniz

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MOGENS LÆRKE

1. INTRODUCTION

Little has been written about the relations between Leibniz’s philosophy and the so-called Paduan Averroists or the several generations of Italian Renaissance Aristotelians associated with Averroism.¹ Leibniz refers quite frequently to figures like Gasparo Contarini and Pietro Pomponazzi in his mature writings, although always in general terms and not in any great detail (GP vi. 529/L 554–5; GP vi. 54–5).² He associates Paduan Averroism with the theory of ‘double truth’, proclaimed heretical by the Lateran Council and for which Pomponazzi had been condemned because of his *De immortalitate animi* (1516).³ Leibniz’s rejection of the double-truth theory is constant, going as far back as the *Demonstrationes catholicae* from the late 1660s and his reflections on the debates between Daniel Hoffmann and Paul Slevogt, but is on full display in the *Essais de théodicée* (1710).⁴ The mature Leibniz also associates Paduan Averroism with

¹ An exception is Giovanna Varani, ‘Il Giovane Leibniz e l’aristotelismo padovano’, in Gregorio Piaia (ed.), *La presenza dell’aristotelismo padovano nella filosofia della prima modernità [La presenza]* (Roma-Padova: Editrice Antenore, 2002), 393–416.

² See also *De realitate accidentium* (1688, A VI. iv. 995), and *Discours sur la théologie naturelle des chinois* (1716), Wenchao Li and Hans Poser (eds.) (Frankfurt am Main: Vittorio Klostermann, 2002), 49, 93, 97. Abbreviations to editions of the works of Leibniz and Zabarella are listed at the front of this volume. Unless otherwise indicated, translations are my own.

³ Émilienne Naert, ‘Leibniz et Pomponazzi’, in A. Heinekamp (ed.), *Leibniz et la Renaissance*, *Studia Leibnitiana Supplementa* 23 (Wiesbaden: Franz Steiner Verlag, 1983), 135–42; Mogens Lærke, ‘Leibniz et le libertinage: quatre fonctions théoriques’, in Pierre-François Moreau and Antony McKenna (eds.), *Libertinage et philosophie au XVIIe siècle*, vol. 11 (St. Etienne: Presses Universitaires de St. Etienne, 2009), 273–6; Lærke, ‘Les sept foyers du libertinage selon G. W. Leibniz’, *La Lettre Clandestine*, 15 (2007), 274–7.

⁴ See Maria Rosa Antognazza, *Leibniz on the Trinity and the Incarnation. Reason and Revelation in the Seventeenth Century* (New Haven: Yale University Press, 2007), 6–7, 162.

‘monopsychism’ and various doctrines of an *anima mundi* that he deems dangerously close to Spinozism. One can observe it in the 1702 *Considérations sur la doctrine d’un esprit universel unique* and in the preliminary discourse to the *Essais de théodicée*.⁵

If we turn to the texts of the young Leibniz, however, a somewhat different picture emerges. I have elsewhere tentatively suggested that Leibniz’s 1668 paper *De transsubstantiatione* has Averroist features, following up on analyses first proposed by Andreas Blank in a chapter of his *Leibniz. Metaphilosophy and Metaphysics*.⁶ In response to these suggestions, Blank has subsequently published three papers with detailed analyses of the relations between the philosophy of the young Leibniz and Renaissance Aristotelians and/or Averroists such as Giacomo Zabarella, Girolama Cardano, Andrea Cesalpino, Arcangelo Mercenario, Alessandro Achillini and Marcantonio Zimara, on topics including the identity of living beings, individuation and, in particular, monism.⁷ In this paper, I want to go deeper into this discussion by considering the importance for the young Leibniz of Averroist theories of matter and mind, and in particular those of Zabarella, in the period around Leibniz’s correspondence with Jacob Thomasius in 1668–1669 and the 1668 *De transsubstantiatione*.

I here focus on aspects of Leibniz’s texts from the late 1660s reflecting markedly different views from those he will later develop when coming of age philosophically. Commentators interested in the more constant features of Leibniz’s philosophical development have read the same texts in a very different, almost opposite direction, focusing on other passages and stressing other aspects of Leibniz’s argumentation. I am thinking here in particular of Christia Mercer who, in her *Leibniz’s Metaphysics* from 2002 and other writings, notably an article on the Thomasius correspondence from 2004, has stressed the continuities in Leibniz’s metaphysics from his earliest philosophical work to the latest, including in relation to the texts

⁵ See Catherine Wilson, ‘Modern Western Philosophy’, in Seyyed Hossein Nasr and Oliver Leaman (eds.), *History of Islamic Philosophy* (London: Routledge, 1997), 1013–29.

⁶ Andreas Blank, *Leibniz. Metaphilosophy and Metaphysics 1666–1686 [Metaphilosophy]* (München: Philosophie Verlag, 2005), ch. 5; Mogens Lærke, *Leibniz lecteur de Spinoza. La genèse d’une opposition complexe* (Paris: Honoré Champion, 2008), 488–9, 663–9.

⁷ Andreas Blank, ‘Jacobo Zabarella and the Early Leibniz on the Diachronic Identity of Living Beings’ [‘Jacobo Zabarella’], *Studia Leibnitiana*, 47 (2015), 86–102; ‘Renaissance Aristotelianism and the Conciliatory Approach to Individuation in the Early Leibniz’, in Juan-Antonio Nicolas and Niels Offenberger (eds.), *Beiträge zu Leibniz’ Rezeption der Aristotelischen Logik und Metaphysik* (Hildesheim: Georg Olms Verlag, 2016), 257–72; ‘Leibniz and the Sixteenth-Century Controversy over Substance Monism’ [‘The Sixteenth-Century Controversy’], *Revue Roumaine de philosophie*, 64 (2019), 157–76. See also Andreas Blank, ‘The Analysis of Reflection and Leibniz’s Early Response to Spinoza’, in Mark Kulstad, Mogens Lærke and David Snyder (eds.), *The Philosophy of the Young Leibniz [The Young Leibniz]*, *Studia Leibnitiana Sonderheft 35* (Stuttgart: Franz Steiner Verlag, 2009), 161–75.

and the notions of matter, form and substance that I am concerned with here.⁸ Yet I do not think that the following should be seen as opposing or competing with Mercer’s account, but rather as complementing it. The texts in question are frequently obscure, in many ways ambiguous, and reflect the thoughts of a young philosopher who was trying to satisfy his own syncretistic sensibilities by attempting to reconcile a whole range of philosophical positions often explicitly at odds with each other. In the texts I am concerned with, this gives rise to a highly unstable systemic draft including several strands of thought co-existing only somewhat uneasily.

This is most clear in *De transsubstantiatione*’s account of substantial form in which one strand of thought, concerned with the forms of bodies endowed with rational souls, clearly points in the direction of Leibniz’s later conception of individual substances as self-sufficient mind-like beings endowed with a principle of spontaneous action.⁹ In this context, he puts the scholastic axiom *actiones sunt suppositorum* at the heart of his conception of substance and mind, just as he does later in the *Discours de métaphysique* (A VI. i. 508/L 115; A VI. iv. 1539–40).¹⁰ At the same time, however, *De transsubstantiatione* contains other developments that have been somewhat neglected by commentators searching mainly for anticipations of Leibniz’s later position — developments that concern how bodies *not* endowed with rational souls, i.e. those bodies that mechanical physics also focuses on, acquire determined existence, and the role the divine mind plays in providing them with a form. In a passage clearly staking out the double perspective, Leibniz affirms that ‘the substance of the human body is union with the human mind, and the substance of bodies which lack reason is union with the universal mind, or God’ (A VI. i. 509/L 116).¹¹ I shall return briefly to these two theoretical strands in Section 9 below.

⁸ Christia Mercer, *Leibniz’s Metaphysics. Its Origins and Development [Leibniz’s Metaphysics]* (Cambridge: Cambridge University Press, 2002); ‘Leibniz and His Master: The Correspondence with Jacob Thomasius’ [‘Leibniz and his Master’], in Paul Lodge (ed.), *Leibniz and his Correspondents* (Cambridge University Press, Cambridge, 2004), 10–46.

⁹ The characteristic notion of spontaneity is not explicitly present in *De transsubstantiatione*. However, writing to Thomasius in 1669, Leibniz stresses that ‘freedom and spontaneity belong only to minds [*in solas mentes cadit libertas et spontaneum*]’ (A II. i. 32/L 99).

¹⁰ See Michel Fichant, ‘*Actiones sunt suppositorum*. L’ontologie leibnizienne de l’action’, *Philosophie*, 53 (1997), 135–48.

¹¹ These two doctrines have also been distinguished by Daniel Garber in an article in which he articulates Leibniz’s position in terms of a kind of restricted occasionalism according to which bodies not endowed with rational minds are continually moved by God. From a strictly conceptual point of view, I find the comparison very helpful. I am not sure, however, that it is historically pertinent. Leibniz does not refer to any occasionalist philosopher in the texts in question. See Daniel Garber, ‘Motion and Metaphysics in the Young Leibniz’, in Michael Hooker (ed.), *Leibniz: Critical and Interpretative Essays* (Minneapolis: University of Minnesota Press, 1982), 162–7.

The following is, however, principally a reconstruction of the second strand of thought. It is an attempt at understanding better the connection between, on the one hand, the curious blend of mechanist physics and reformed Aristotelianism that Leibniz develops in the Thomasius correspondence, and, on the other hand, the account of bodily form he provides in *De transsubstantiatione*. In particular, I want to suggest that Averroism and the Paduan Aristotelian tradition, and Zabarella in particular, stand centrally in the rudimentary system of natural philosophy that can be gleaned from those texts.

I should be clear about what I understand by ‘Averroism’ in this context, which is something quite specific. I qualify as ‘Averroism in the young Leibniz’ only doctrines that the young Leibniz himself endorsed and identified as Averroist, in several cases directly, in some others indirectly, but in any case explicitly, by reference to Averroes, Averroism or through appeal to concepts inseparable from self-identified Averroists. Moreover, by detecting such doctrines in Leibniz’s texts I have no intention of depicting him as a ‘follower’ of Averroes. The young Leibniz was, just like the mature Leibniz, a highly syncretistic thinker who aimed at accommodating a wide variety of positions within his own. Many other philosophical schools and thinkers play a role in the texts I am concerned with. Moreover, if he did, as I will argue, make important use of some Averroist doctrines, he never adopted all of the tenets he associated with that school of thought. He certainly never subscribed to any double-truth theory, for example. As we shall see, he also rejected key elements of the Averroist theory of the rational mind. It is, however, my claim that theories of matter and mind that Leibniz himself identified as Averroist played a central, structuring role for the rudimentary metaphysical physics that can be gleaned from the texts written during the late 1660s.

2. THE IMPORTANCE OF ZABARELLA

Let me first say something about why I focus on the young Leibniz’s relations to Zabarella rather than any of the other Italian Renaissance Aristotelians reputed to be Averroists that he sometimes refers to, such as Zimara or Mercenario. After all, although Leibniz consistently associates Zabarella with Averroism, it is not at all clear that he is the most representative thinker of that tradition. In fact, Zabarella was in many ways also an anti-Averroist and known as such in Germany, as we shall see below. I have three reasons for focusing on him nonetheless.

The first reason is that Zabarella is referenced by Leibniz from very early on and is a constant presence in key texts up to around 1670. He is clearly an author Leibniz was familiar with. In the 1663 *Disputatio de principio individui*, Zabarella's name is mentioned along with that of Mercenario in the context of Leibniz's nominalist critique of the Scotist notion of individuation by haecceity. Leibniz does not discuss Zabarella's position in any detail but refers to him as a source for scholastic controversies (A VI. i. 15–16).¹² The *Specimen quaestionum philosophicarum ex jure collectarum* from 1664 draws on Zabarella when discussing the transformation of forms in matter (A VI. i. 90). From these two very early texts, we learn that Leibniz was largely favorable to the Paduan Averroists' approach to Aristotle and that he was familiar with at least some of the books of Zabarella's *De rebus naturalibus*, including *De constitutione individui* (book X) and *De accretione et nutritione* (book XXII). This is by no means surprising: *De rebus naturalibus* was a popular textbook of natural philosophy in northern Europe throughout the end of the sixteenth and the first half of the seventeenth centuries.¹³ Occasional references in later texts also testify to familiarity with Zabarella's *Opera logica*, his commentary on Aristotle's *Posterior Analytics*, and his logical tables.¹⁴ It is difficult to gauge exactly how much of this knowledge was second-hand. Leibniz surely read Zabarella's works but also had ample opportunity to learn about him from philosophers like Joachim Jungius, a disciple of Zabarella and one of Leibniz's favorite logicians,¹⁵ from philosophical reformists like Johannes de Raey,¹⁶ and from encyclopedists like Johann Heinrich Alsted and Bartholomeus

¹² See also Laurence B. McCollough, *Leibniz on Individuals and Individuation* (Dordrecht: Kluwer, 1996), 54 and 58.

¹³ Ian MacLean, 'Mediations of Zabarella in Northern Germany, 1586–1623', in Piaia (ed.), *La presenza*, 173–98; Irena Backus, 'The Teaching of Logic in Two Protestant Academies at the End of the 16th Century. The Reception of Zabarella in Strasbourg and Geneva', *Archiv für Reformationsgeschichte*, 80 (1989), 240–51.

¹⁴ See Leibniz to Thomasius, 20 (30) April 1669, A II. i. 26/L 95 (repeated in Leibniz's revised edition of the letter in *Marii Nizolii de veris principiis et vera ratione pilosophandi libri IV*, 1670, A VI. ii. 434); *Guilielmi Pacidii initia et specimina scientiae generalis* (1682, A VI. iv. 494); *Logica de notionibus. Jungianarum schedarum excerpta annotata* (1685, A VI. iv. 1242); *De ratione dividendi* (1696?, A VI. v [Vorausedition 184302–3]). References in the last two texts are precise but taken over directly from Jungius.

¹⁵ Zabarella and Jungius appear side by side as authorities on logic in Leibniz to Thomasius, 20 (30) April 1669, A II. i. 26. On Zabarella and Jungius, see Daniel A. di Liscia, "'Operosum negotium': Jungius' doxoskopisch Betrachtung des Aristotelismus von Zabarella", in Piaia (ed.), *La presenza*, 215–55. See also Yvon Belaval, 'Leibniz et la Renaissance', in Yvon Belaval, *Leibniz. De l'âge classique aux Lumières. Lectures Leibniziennes*, Michel Fichant (ed.) (Paris: Beauchesne, 1995), 55.

¹⁶ In the 1668 letter, Leibniz first praises De Raey's *Clavis philosophiae naturalis* (Leiden, 1654) as a book that demonstrates how 'the obscurity of Aristotle is but scholastic smoke' (A II. i. 18). After Thomasius criticizes him, Leibniz turns against Raey in the 1669 letter, now discarding him as a 'paraphraser' of Descartes and claiming with regard to his own *philosophia reformata* that he 'had thought this way long before I even heard of Raey' (A II. i. 24

Keckermann who drew extensively on the Paduan philosopher's work.¹⁷ As we shall see in Section 8, Leibniz's own mentor, Thomasius, also wrote about Zabarella's natural philosophy.

As the second reason, I am intrigued by several passages in texts by the young Leibniz where he explicitly subscribes to Zabarella's views. The first appreciation of the Italian Averroists, including Zabarella, occurs as early as a text from 1664 where the 18-year-old Leibniz assures us that 'the Averroists, Zimara, Zabarella, and other Italians have more closely seen the mind of Aristotle and have also elegantly described how a living being remains one' (A VI. i. 91). Next, in the 1668 *De transsubstantiatione*, Zabarella's name appears in a list of Averroists or semi-Averroists. Leibniz observes that 'Averroës and Angelus Mercenarius and Jac. Zabarella claim that substantial form is the principle of individuation', and goes on to argue that what he has said of those authors can be 'explicated in a way that, I have no doubt, is accessible to proof through the careful reading of the recent philosophers' (A VI. i. 510). Both Andreas Blank and myself have put some effort into unpacking the meaning of this last passage and I shall return to it in more detail in Section 8. Finally, in the preface to Nizolius' *Anti-Barbarus*, published in 1670, Leibniz lists Zabarella among the 'secular Italian interpreters' of Aristotle who were superior to the scholastics (A VI. ii. 425). These texts testify to a level of deference toward the authority of Zabarella and Averroism that stands in stark contrast to the scandalized and marginalizing attitude toward the Paduan school that characterizes the assessments of the later Leibniz. We should also note that references to Zabarella's natural philosophy practically disappear from Leibniz's philosophical texts after 1670. One of my aims here is to try and understand at least some of the implications of that.

This brings me to the third and final reason why I stress the relations to Zabarella. It is contextual. In an important way, Leibniz considered Zabarella a precursor of Thomasius, writing to his mentor: 'First, about Aristotle. The Scholastics have strangely perverted his meaning; no one knows this better than you, distinguished Sir, who were the first to bring so many errors of this kind to light.... [N]ot only you acknowledge this, but also Soner and Dreier in metaphysics,

and 29–30/L 93 and 97; see also A II. I .20 and 22). On Leibniz and De Raey, see Richard Bodéüs, 'Jean de Raey et la Physique Réformée', *Studia Leibnitiana*, 23 (1991), 103–10. Bodéüs argues that Leibniz's attempt at a *philosophia reformata* owes more to Thomasius's reformed Aristotelianism than to De Raey's *Clavis*.

¹⁷ See Howard Hotson, *Johann Heinrich Alsted, 1588–1638. Between Renaissance, Reformation and Universal Reform* (Oxford: Clarendon Press, 2000), 29, 38, 93; *Commonplace learning. Ramism and its German Ramifications, 1543–1630* (Oxford: Oxford University Press, 2007), 151–2.

Viotti, Zabarella, and Jung in Logic' (A II. i. 26/L 95). Working as a historian of philosophy of a new kind — one who wrote the history of philosophies rather than philosophers, doctrines rather than lives, as Leibniz points out (A II. i. 24/L 93) — Thomasius aimed at reconstructing Aristotle's authentic philosophy against scholastic corruption. The effort was central to Thomasius's *Schediasma historicum* from 1665.¹⁸ About a century earlier, however, Zabarella already attempted to give voice to a more authentic Aristotelianism, insisting that one must 'philosophize on Aristotle in a correct and Aristotelian manner'.¹⁹ The young Leibniz inherited this common project of Zabarella and Thomasius. For him as well, the 'darkness of Aristotle is nothing but scholastic smoke', as he puts it (A II. i. 18). He was, however, more favorable than Thomasius to modern philosophy and proposed that authentic Aristotelianism was, in fact, more or less aligned with modern philosophy and that 'Aristotle himself agrees remarkably with Galileo, Bacon, Gassendi, Hobbes, Descartes, Digby' (A II. i. 18).

The young Leibniz, then, developed his own thinking along the lines of a so-called *philosophia reformata*, that is, a reformed anti-scholastic Aristotelianism modeled on modern mechanical philosophy, maintaining that it was not only possible, but necessary to establish agreement between Aristotelian philosophy and modern philosophy (A II. i. 26/L 95). Christia Mercer has studied the question in some detail in the works mentioned above. My argument in this paper however is that Averroism and Zabarella played a non-negligible role in this attempt to reconcile Aristotle and modern philosophy — a role that, apart from one brief remark, is left largely unexplored by Mercer.²⁰ Hence, I argue, Zabarella's conception of primary matter provided Leibniz with a useful technical conception of extension. Moreover, a comparison of Leibniz's correspondence with Thomasius from 1668–1669 and the 1668 *De transsubstantiatione* reveals a common conception of the function of the divine intellect in relation to the form of bodies that has important and explicit Averroist resonances and entertains complex relations to Zabarella's reading of Averroism in *De rebus naturalibus*. Finally, I want to

¹⁸ See Richard Bodéüs, 'Introduction', in Gottfried Wilhelm Leibniz and Jacob Thomasius, *Correspondance, 1663–1672* [*Correspondance*], Richard Bodéüs (ed. and trans.) (Paris: Vrin, 1993), 12–16; Giovanni Santinello (ed.), *Models of the History of Philosophy: From Its Origins in the Renaissance to the 'Historia Philosophica'* (Dordrecht: Springer, 1993), 409–41.

¹⁹ Cited in Nicholas Jardine, 'Keeping Order in the School of Padua: Jacobo Zabarella and Francesco Piccolomini on the Offices of Philosophy', in Daniel A. Di Liscia, Eckhard Kessler and Charlotte Methuen (eds.), *Method and Order in Renaissance Philosophy of Nature* (Aldershot: Ashgate, 1997), 183–209, at 184.

²⁰ Mercer, *Leibniz's Metaphysics*, 47.

stress how Leibniz followed Zabarella in adopting important parts of the Averroist theory of matter and body while at the same time rejecting the Averroist theory of the rational mind. In this way, I want to suggest that Zabarella had an important impact on how Leibniz appropriated Averroism, by providing guidelines for which parts to embrace and which parts to reject.

3. LEIBNIZ'S REFORMED PHILOSOPHY IN THREE POINTS

Let us now briefly summarize the most important features of Leibniz's attempt at a *philosophia reformata* in the two letters to Thomasius from October 1668 and April 1669. It is important to realize that, when proclaiming himself in favor of modern philosophy, Leibniz does not pledge allegiance to any particular strand of the new philosophy, stressing in particular his distance from Descartes: 'I confess I am anything but a Cartesian', he writes to Thomasius, adding that he 'approve[s] of more things in Aristotle's books on physics than in the meditations of Descartes: so far am I from being a Cartesian' (A II. i. 25/L 94). His commitment to modern philosophy mainly relates to the mechanist rejection of obscure qualities and notions of form: 'I maintain the rule which is common to all these renovators of philosophy that only magnitude, figure, and motion are to be used in explaining corporeal properties' (A II. i. 25/L 94).²¹ It is this common rule, first of all, that Leibniz believes agrees with Aristotle's doctrine. In order to argue this, Leibniz relies on three basic comparisons that he sums up succinctly in the October 1668 letter:

What is Aristotle's primary matter if not inert matter without movement and, consequently, if there is a plenum, without figure? The movement of matter comes from the understanding, that is, from God; figure, which is generated by a complex of movements, implies the very disposition of parts that nothing prevents us from calling the intimate and primary form of the body. This form is drawn from the potentiality of matter. (A II. i. 18)

First, in the 1668 letter, Leibniz compares the modern conception of extended substance (or mass) to Aristotelian *primary matter*. Leibniz develops the point further in the 1669 letter:

²¹ Cf. Descartes, *Principles* II.64 (AT viiia. 78–9/CSM ii. 247); *Le Monde* (AT xi. 25–6/CSM i. 89).

Primary matter is mass itself, in which there is nothing but extension and antitypy or impenetrability. It has extension from the space which it fills.... Now this continuous mass, which fills the world while all its parts are at rest, is primary matter, from which all things are produced by motion and into which they are reduced through rest. There is no diversity in it but only homogeneity, except through motion. (A II. i. 36/L 95)

He makes the same point in a slightly later fragment, entitled *De materia prima*, written around 1670–71, where he notes that ‘Aristotle’s primary matter is the same as Descartes’s subtle matter. Each lacks form and motion in itself, each acquires forms through motion. Each receives its motion from a mind’ (A VI. ii. 279/LC 343).²²

Second, Leibniz combines this modern understanding of Aristotelian primary matter as extended substance or passive mass with the Aristotelian conception of the *prime mover*. This, Leibniz argues, yields the most efficient argument available in favor of the existence of God: ‘Aristotle regards it as certain that no body has a principle of motion within itself, and it is by this argument that he ascends to the prime mover’ (A II. i. 32/L 99). A similar argument stands centrally in a text written around the same time, the 1668 *Confessio naturae contra atheistas*, where Leibniz shows how ‘through the ultimate analysis of bodies, it becomes clear that nature cannot dispense with the help of God’ and that, consequently, ‘bodies cannot have a determinate figure, quantity, or motion, without assuming an incorporeal being’ (A II. i. 492/L 112). Leibniz thus demonstrates the existence of God by adopting the mechanical explanation of the physical world in terms of magnitude, figure and motion, while showing at the same time that ‘the origin of these primary qualities themselves cannot be found in the essence of body’ (A VI. i. 490/L 110).

Third, and finally, Leibniz ties the modern conception of primary qualities to the Aristotelian notion of substantial forms, attempting to understand the latter exclusively in terms of magnitude, figure, and movement. The original doctrine of substantial forms, Leibniz argues, has been obscured by the scholastic talk of intentions in nature. Instead, on a correct

²² See also D. Garber, *Leibniz: Body, Substance, Monad* (Oxford: Oxford University Press, 2009), 7–9.

interpretation of Aristotle, the *form* of things is nothing but what the modern philosophers understand by the *figure* of things: '[E]verything agrees remarkably if we assume that form is nothing but figure' (A II. i. 27/L 95). Leibniz defines a 'figure' (*figura*) as a limit in extension (A II. i. 34/L 100). We should not, however, understand by figure the mere shape or external outline of a thing. Instead, Leibniz writes, the concept of figure 'includes the very disposition of parts'; it is 'the internal configuration of parts' and a 'configuration of plurality' (A II. i. 18, and A II. i. 34/L 100).²³

4. THE FORM OF CORPOREITY

At this point, it is already possible to identify an inspiration from Averroism, and from Zabarella specifically. It relates to Leibniz's assimilation of Aristotle's primary matter with the modern conception of mass and extension. This 'modernization' of Aristotelianism requires that matter acquires some independence from mind and that it can be conceived as actual in and by itself, like Cartesian extended substance. As part of his argument for this controversial point,²⁴ Leibniz notes the following in the 1669 letter to Thomasius: 'The essence of matter or the very form of corporeity consists in antitypy and impenetrability. Matter has quantity too, though this is indefinite, or interminate as the Averroists call it' (A II. i. 26/L 95).

The notion of a 'form of corporeity' (*forma corporeitatis*) has a long history going back to Avicenna. He argued that primary matter, in order to be something, i.e., to exist as such and not just be pure potentiality, would have to have a substantial form in and by itself, a *forma corporeitatis*. His position was challenged by Averroes who argued that this form of corporeity was not a *substantial form* but rather an *accidental* one, identified as indeterminate three-dimensionality.²⁵ Thomas Aquinas objected that nothing could have two forms but only one, since it would otherwise belong to two species at the same time. He rejected the notion of a form

²³ See also Mercer, 'Leibniz and his Master', 22–3.

²⁴ Descartes's conception of extended substance and Aristotle's conception of primary matter are usually seen as opposed and not similar with regard to the question of actuality. See e.g. Zev Bechler, *Aristotle's Theory of Actuality* (Albany, NY: SUNY Press, 1995), 180–1.

²⁵ See Arthur Hyman, *Averroes' De substantia Orbis: Critical Edition of the Hebrew Text with English Translation and Commentary* (Massachusetts/Jerusalem: The Medieval Academy of America and the Israel Academy of Sciences and Humanities, 1986), 7 and 41. See also Guy Claessens, 'Francesco Piccolomini on Prime Matter and Extension' ['Francesco Piccolomini'], *Vivarium*, 50 (2102), 231–2.

of corporeity altogether and embraced the conclusion that primary matter in itself was in fact nothing but ‘pure potency’ (*pura potentia*).²⁶ In the passage cited from the 1669 letter, Leibniz clearly reaches back to these debates. He adopts the notion of a *forma corporeitatis*, thus rejecting the strict Thomist view. At the same time, however, he also repeatedly stresses the notion that ‘forms are drawn from the potentiality of matter [*forma educitur e potentia materiae*]’ (A II. i. 18; see also A II .i. 21; A II. i. 24/L 94). At first sight, then, Leibniz, paradoxically, adopts both the position according to which matter has form inherently, and thus actuality in and by itself, and the position that matter has form only potentially. The question then arises how, exactly, he believes those positions are to be reconciled.

Now, searching out a middle position, Zabarella held that the form of corporeity should be understood as the undifferentiated genus of all bodies, a common reality of body in which they all participate. As he writes in the second book on primary matter in *De rebus naturalibus*: ‘Body, which is the highest genus in the category of substance, is the univocal genus of all perishable bodies, and so there corresponds to it in things a certain form participated in by all such bodies; there exists, therefore, a form of body [*forma corporis*].’²⁷ On this conception, body can be understood in two distinct ways. On the one hand, it can be understood as actual, but indeterminate matter when unassigned to a specific form; on the other hand, it can be understood as determinate matter when actualized through a given form. Zabarella thus rejects the Thomist notion of *potentia pura*, holding that matter does have an actuality proper and a form of corporeity. But he still agrees with the Thomist view that matter in itself is devoid of *determinate* or specific form. Instead he holds that the form of corporeity only bestows an *indeterminate* quantity on matter, a generic form, which includes both the actual existence of primary matter and the potentiality to receive all determinate forms:

²⁶ Thomas Aquinas, *Summa theologiae*, trans. by the Fathers of the English Dominican Province (London: Burns, Oates & Washburne, 1920), Ia q. 76 a. 4, a. 6. The notion of *forma corporeitatis* was taken up by Duns Scotus who used it to designate the substantial vital form that informs all *living* beings in addition to the substantial elementary form that informs all beings. He argued that such a form of the body was required in order to account for the difference between the living body and the cadaver. See Berard Vogt, ‘Note on the “forma corporeitatis” of Scotus’, *Franciscan Studies*, 3 (1925), 43–8; ‘The “forma corporeitatis” of Duns Scotus and Modern Science’, *Franciscan Studies*, 3:1 (1943), 47–62. The view clashed with Thomism and gave rise to a prolonged controversy that can be traced via Suarez all the way up to Descartes. See Dennis Des Chene, *De Physiologia. Natural Philosophy in Late Aristotelian and Cartesian Thought [Physiologia]* (Ithaca: Cornell University Press, 1996), 84; and *Life’s Form: Late Aristotelian Conceptions of the Soul [Life’s Form]* (Ithaca: Cornell University Press, 2000), 81–93.

²⁷ Zabarella, *De Prima rerum materia, lib. II*, chap. XIII, DRN 187, translated in Des Chene, *Physiologia*, 87–8.

For we shall say that primary matter according to its own nature is an indeterminate body in the category of substance, bound to no specific nature and able to become anything.... Therefore, there is no act in the nature of matter itself, but it is a kind of indeterminate substance, with the potency to receive any act. From this nature of matter two properties emanate, which are never separated from it: one is a quantity which has no limit of its own — after all, matter itself is the first root and source from which quantity and dimension in natural objects derive; the other is that universal potency to receive all forms without distinction.²⁸

This is clearly also the position that Leibniz adopts in the letter to Thomasius when arguing ‘with the Averroists’ that matter has ‘interminate quantity’ and that this is what its form of corporeity consists in, while at the same time holding that determinate forms are ‘drawn from the potentiality of matter’. Other texts from the period also suggest something like this. In the *Confessio naturae contra atheistas*, Leibniz argues that ‘the same matter is indeterminate [*indeterminata est*] as to any definite figure’ and that ‘bodies cannot have a determinate figure [*determinatam figuram*], quantity, or motion, without assuming an incorporeal being’ (A VI. i. 490 and 492/L 111 and 112).²⁹ Moreover, it is not surprising that Leibniz should generally characterize Zabarella’s position as being that of ‘the Averroists’, since Zabarella himself, who, as we shall see below, was in many ways also an anti-Averroist, still saw his position on that particular point as perfectly aligned with that of Averroes.³⁰

5. THE AMBIGUITY OF FIGURE

²⁸ Ibid. For a commentary and the translation, see Claessens, ‘Francesco Piccolomini’, 238–43 (slightly modified). See also Cornelis H. Leijenhorst, *The Mechanisation of Aristotelianism. The Late Aristotelian Setting of Thomas Hobbes’ Natural Philosophy* (Leiden: Brill, 2002), 152; and Des Chene, *Physiologia*, 87–8.

²⁹ Many commentators note that Zabarella’s conception of the form of corporeity brought him close to the later Cartesian conception of matter as extended substance, while still representing at least a version of Aristotelianism. See Robert Pasnau, *Metaphysical Themes, 1274–1671* (Oxford: Clarendon Press, 2011), 64; Guido Giglioni, ‘Introduction’, in Anna Akasoy and Guido Giglioni (eds.), *Renaissance Averroism and Its Aftermath: Arabic Philosophy in Early Modern Europe* (Dordrecht: Springer, 2013), 26.

³⁰ See Zabarella, *De Prima rerum materia, lib. II*, cap. IX: ‘Sententia Averrois declaratio & confirmatio’, *DRN* 176–8. See also Claessens, ‘Francesco Piccolomini’, 239.

Up to this point, Leibniz's attempt at a *philosophia reformata* seems to work, with a little help from Zabarella. From there on, however, the young philosopher encounters some difficulties. Most importantly, he is not quite sure where to put his foot down with regard to the two major strands of modern philosophy, hesitating between, on the one hand, Gassendi's atomism and the affirmation of the existence of a vacuum and, on the other hand, the Cartesian theory with its characteristic affirmation of a plenum. While the general tenor of his theory eventually is Cartesian, he rather seems to favor a position capable of accommodating both points of view. In any case, he refuses to let Aristotle — who of course denied a vacuum — be the judge:

For the most part Aristotle's reasoning about matter, form, privation, nature, place, infinity, time, and motion is certain and demonstrated, almost the only exception being what he said about the impossibility of a vacuum and of motion in a vacuum. To me it seems that neither a vacuum nor a plenum is necessary; the nature of things can be explained in either way. (A II. i. 25/L 94)

Without further qualifications, the position is hardly tenable. How are we to affirm, at the same time, two incompatible and contradictory conceptions of the physical world, vacuum and plenum, atoms and continuous mass? Leibniz will try to spell out better what he has in mind, and I shall return to that shortly. First, however, we need to understand better why he feels obligated to adopt such an uncomfortable position.

It concerns the status of *figure*, which is the modern notion that Leibniz assimilates to the Aristotelian substantial form. On the mechanical view that Leibniz embraces, no individual body contains the principle of its own shape or figure. As Leibniz writes in the *Confessio naturae contra atheistas*, 'the reason for a certain figure and magnitude in bodies can never be found in the nature of these bodies themselves' (A VI. i. 491/L 111). The position is echoed in the Thomasius correspondence: an external principle of movement is required in order for any figure to come about in extension. '[D]ivision comes from motion, the bounding of parts comes from division, their figures come from this bounding, and forms from figures; therefore, forms come from motion' (A II. i. 27/L 96). Hence, 'every arrangement into a form is motion' (A II. i. 27/L 96). Figure is always 'produced by a set of movements' (A II. i. 18).

And yet, at the same time, Leibniz claims that ‘it is not absurd to call the internal configuration of parts substantial form: for nothing can be attained by thought which, in corporeal things, is prior to figure, more simple, and more abstracted from matter. Aristotle himself admitted that *τα μαθηματικά*, that is, space, or its determination, figure, is a substance’ (A II. i. 18). Indeed, by the end of the 1669 letter to Thomasius, he even claims to ‘have proved that figure is a substance, or rather that space is a substance and figure something *substantive*’ (A II. i. 30/L 98). By stating that figures are ‘substantive’, presumably Leibniz wants to say that figures or forms are primary and not explicable in terms of anything else, or are in some sense self-contained, in conformity with the Aristotelian notion of substance which stipulates that what is substantial is not attributable to anything else nor can be derived from anything else.³¹ This, in any case, is the kind of definition of substance Leibniz himself provides in the *De transubstantiatione*: ‘Substance is being which subsists in itself’ (A VI. i. 508/L 115).

So what is going on here? Affirming that shape or figure is a substance is, in any case, not Cartesian. It is closer to Gassendi, for whom one of the fundamental, primitive properties of the atom is indeed shape or figure.³² For a Cartesian, on the contrary, figures are continually produced and changed by movements in matter and shifts in the relative positions between parts.³³ Moreover, still on the Cartesian picture, the indefinite divisibility of matter makes it impossible to conceive of actual shapes or figures in the primitive sense required to ascribe substantiality to them. Consequently, differences in figure are merely modal. This is the reasoning behind Descartes’s rejection of atomism.³⁴ And yet Leibniz’s theory requires, at different levels, that he embraces both views, sometimes considering, like Gassendi, that figure is a kind of primitive quality that justifies speaking of it as ‘substantive’, and sometimes, like Descartes, holding that figure is an accidental property of matter, a mere mode. Depending on which aspect of Leibniz’s reformed philosophy one focuses on, figure thus appears as both primitive *and* derived, both self-contained *and* contained in matter and produced by an external principle, both substance *and* mode. This explains Leibniz’s wavering between atomism and

³¹ Aristotle, *Categories* 5, 2a.

³² Pierre Gassendi, *Syntagma philosophiae*, IIa, III, cited by Richard Bodéüs, in Leibniz and Thomasius, *Correspondance*, 61, n. 17.

³³ See Descartes, *Principles* II.34 (AT viiia. 59–60/CSM i. 239).

³⁴ Descartes, *Principles* II.20 (AT viiia. 51–2/CSM i. 229–30). See also Daniel Garber, *Descartes’ Metaphysical Physics* (Chicago: University of Chicago Press, 1991), 124–5.

plenism, and the elusive assertion that ‘the nature of things can be explained in either way’ (A II. i. 25/L 94).

6. TWO TYPES OF EXTENDED BEING

In the 1669 letter, in an attempt to overcome Thomasius’s understandable scepticism, Leibniz addresses this problem by appealing to a distinction between two types of ‘extended being’ in a passage that will require some unpacking:

Space is a primary extended being [*Ens primo-extensum*] or a mathematical body, which contains nothing but three dimensions and is the universal locus of all things. Matter is a secondary extended being [*Ens secundo-extensum*], or that which has, in addition to [*praeter*] extension or mathematical body, also a physical body, that is, resistance, antitypy, solidity, the property of filling space, and impenetrability, which consists in its being constrained either to give way to another being of this kind which strikes it or to stop it. Motion therefore comes from this quality of impenetrability. So matter is a being which is in space or coextensive with space. Motion is change of space. But figure, magnitude, situation, number, etc., are not entities really distinct [*non sunt entia... realiter distincta*] from space, matter, and motion but are merely properties [*habitudines*] brought about within space, matter, motion, and their parts by a supervening mind [*mente superveniente*]. (A II. i. 34/L 100)

Leibniz distinguishes, first, a ‘primary extended being’ (*Ens primo-extensum*) which is *space*. Space is a three-dimensional, mathematical or rather geometrical ‘universal locus of all things’. It contains ‘mathematical bodies’. It is within this abstract, geometrical space that we find the figures that he assimilates to Aristotelian substantial forms: ‘[M]athematics (I mean pure mathematics, for the rest is part of physics) deals with the form or idea of things, or figure’ (A II. i. 31/L 98). Presumably, mathematics can assume this role because the geometrical construction

of figures can be said to represent a kind of blueprint for the production of the corresponding thing. Geometry, as the science that deals with spatial structure, thus provides formal, genetic principles of the things it describes; one can think, for example, of the construction of a circle by the rotation of a line around a point. This would then be the reason why ‘geometry should deal with the substantial form of bodies’ (A II. i. 31/L 98).

Next, Leibniz distinguishes a ‘secondary extended being’ (*Ens secundo-extensum*) which is the *matter* wherein *physical bodies* exist. He does not exactly say that such physical body is the actualization of the mathematical body, but rather seems to hold that mathematical and physical body combine within the actual thing as separate beings, or that the physical body is ‘in addition to’ (*praeter*) the mathematical one. Matter is similar to the Cartesian plenum, a pervasive mass, passive in itself. It is infused with movement externally from God, the prime mover, giving rise to complex organizations and determinate shapes formally following the forms/figures outlined in mathematical space. When those forms/figures, through movement, are combined with matter, impenetrability and antitypy, actual bodies exist. It is important to note how, on this picture, space and matter are endowed with relative independence with regard to each other, being separable, each of them having their own distinct being.

The theory of the two extended beings is designed to account for the ambiguous status of figure. Figures come out as substantial, in the meaning described above, i.e. as genetic blueprints, insofar as they *are* mathematical bodies or geometrical figures in space, or primary extended being. But figures come out as accidental properties or modes insofar as they appear in the secondary extended being, or matter, that is, insofar as they are *of* actual physical bodies. Hence, Leibniz argues, if figures are like self-contained constructions in geometrical space, when actualized in matter, they are ‘not entities really distinct from space, matter, and motion’, but merely *habitudines*, ‘properties’ in Leroy E. Loemker’s translation or ‘modes of being’ (*manières d’être*) as Richard Bodéus’ more direct French translation suggests (A II. i. 34/L 100).³⁵ This difference of status of figure with regard to abstract mathematical space and the concrete space of matter, respectively, is due to the fact that, when actually existing, figures appear as configurations *of* matter, thus as *modes or properties inhering in matter* from which they cannot be separated. Moreover, and most importantly, they only appear within matter in

³⁵ For the French translation, see Leibniz and Thomasiaus, *Correspondance*, 111.

virtue of *an efficient cause which is external to matter itself*, i.e. God as the prime mover. Consequently, they are *accidental* modes or properties of matter to the extent that they are not derived from the essence of matter itself.

By means of the distinction between two types of extension, Leibniz manages to safeguard the priority of figure over movement necessary to claim that they are substantial. For, in and by itself, figure is a ‘mathematical body’ separate from mass and movement which are the principles of ‘physical body’ that instantiate figure in matter.³⁶ Figures are substantial, or self-contained, in the mathematical or geometrical space described as the primary extended being. Without Leibniz himself putting it exactly this way, figures provide something like the *formal cause* of things. And yet, Leibniz does not abandon the mechanical, Cartesian view of the physical world, in which actual figures or shapes are produced by movement in matter.³⁷ For, according to his system, this only pertains to matter as the secondary extended being in which figures are *habitudines*, modes of being or properties inhering in matter, conceived as a single indeterminate being actualized by the *forma corporeitatis*. Hence, we get a theory that embraces substance pluralism on one level, that of *space*, and substance monism on another, that of *matter*.³⁸

7. PLATONIZED ARISTOTELIANISM

Leibniz concludes his exposition by triumphantly proclaiming to Thomasius that ‘there is obviously almost nothing in Aristotle’s physics which cannot be readily explained and made clear through reformed philosophy’ (A II. i. 29/L 97). His correspondent understandably remained unconvinced by the whole thing. In reality, over and above whatever systemic problems there may be, all of this does not represent an acceptable reading of Aristotle for

³⁶ See the commentary by Richard Bodéüs in Leibniz and Thomasius, *Correspondence*, 172–3.

³⁷ See Descartes, *Principles* I.53 (AT viiia. 25/CSM i. 210–1): ‘shape [*figura*] is unintelligible except in an extended thing By contrast, it is possible to understand extension without shape’. For this reason, Descartes characterizes shape, or figure, as the kind of property that is ‘merely a mode [*modus*] of an extended thing’. See also *Principles* II.25 (AT viiia. 54/CSM i. 233).

³⁸ In this way, while embracing a kind of substance pluralism in affirming the substantiality of individual forms at the level of abstract extension, Leibniz’s theory also points in the direction of a kind of substance monism, because it does not acknowledge that embodied forms, or form-figures actualized in matter-extension, are more than mere modes of being. I thus fully agree with Andreas Blank’s suggestion that Leibniz attempted to reconcile a kind of substance pluralism with a kind of substance monism. See Blank, *Metaphilosophy*, ch. 5; Blank, ‘The Sixteenth-Century Controversy’.

someone, like Thomasius, who aspired to reconstruct the authentic Aristotelian theory. Leibniz's mentor makes his position clear already in his reply to the 1668 letter: 'As for your opinion, inspired by the authority of De Raey, that Aristotle has expressed ideas not far removed from those of Descartes and other novel philosophers, pardon me, but I have not been convinced by it' (A II. I .20). His reply to Leibniz's 1669 letter diplomatically avoids further discussion of the matter, but there is little reason to think the additional explanations of his former student had made Thomasius change his mind about the merits of the doctrine as a reading of Aristotle.

What is perhaps most strikingly un-Aristotelian about Leibniz's reading is the independence that the theory of the two extended beings bestows upon form in relation to matter and *vice versa*. Leibniz even says that form, as mind, and matter are 'really abstracted' from each other: 'The first principle of motion is the primary form, which is really abstracted from matter, namely mind, which is at the same time the efficient cause' (A II. i. 32/L 99; see also A II. i. 18). By 'primary form', I take Leibniz to mean the form of a thing as contained in the 'primary extended being', that is, the figure or substantial form of a thing. That form, we already know, is like the *formal cause* of the determinate body it informs. What I understand Leibniz to assert here, then, is that, for each thing, that same form is closely related to *mind* and is also the *efficient cause* of the body. I shall return to this claim below because it suggests a close relation between form-figures and the conception of God as the prime mover, to the extent that Leibniz appeals to both in order to understand the efficient cause of determinate forms in matter. Here, I simply take note of the fact that substantial forms, or figures, are eventually both the formal *and* the efficient cause of the bodies they inform.

And yet, in an important sense, those form-figures are not really *of* bodies, since they are really distinct, i.e. 'really abstracted', from them. We should see this claim in light of what I argued in the preceding section: form-figures are substantial, i.e. self-contained and separate, with regard to the mathematical space within which they are primitively contained, but accidental with regard to the primary matter within which they are instantiated. In other words, it is conceivable that such substantial forms are not instantiated in matter, since the one is separate from the other, but this depends upon whether God, as the prime mover, wills those forms to be instantiated. Consequently, when Leibniz affirms that the 'form is drawn from the potentiality of matter' (A II. i. 18), this is only as an *accidental* form, a *habitudo* or 'mode of being'. The forms exist *substantively* as mathematical figures outlined in the space of the *Ens primo-extensum*, but

are only *accidentally* drawn from the potentiality of matter, or instantiated in matter, or the *Ens secundo-extensum*. As a result of this, the theory in many ways seems like thinly veiled Platonism. For it suggests that the substantial forms or figures do not really inhere in those bodies; rather physical bodies seem like ‘phenomenal’ instantiations of ‘noumenal’ mathematical bodies which constitute their formal as well as their efficient cause while still being ‘really abstracted’ from the actual bodies themselves.

Leibniz could not ignore that his conception of substantial forms pulled his theory sharply in the Platonist direction and gave rise to pressing questions regarding the relations between Aristotelianism and Platonism, for Thomasiaus took up the question explicitly in his reply to Leibniz’s 1668 letter:

In a way Aristotle is closer to Plato, or is [positioned] in the middle between the latter and Epicurus. Plato recognized the ideas of things, that is to say, their substantial forms, were recognized by Plato. Aristotle did so as well. But Plato wanted to place them in a god, either the first or the second, while Aristotle thought they were immersed in matter itself, from which stems his expression according to which forms are drawn from matter. (A II.i.21)

If we put to one side the remark about the first and second gods in Plato, an allusion to an obscure point in the *Timaeus*,³⁹ Thomasiaus’s reconstruction of the basic difference between Aristotle and Plato is fairly straightforward. Strikingly, he seems willing to speak of Plato’s theory of ideas as a theory of ‘substantial forms’ which, without being identical with them, are nonetheless comparable to Aristotle’s substantial forms, bringing the two ancient philosophers closer together in common opposition to Epicureanism. I read this passage as showing the exact degree to which Thomasiaus was willing to follow Leibniz in his implicit assimilation of Plato and Aristotle while still upholding a fairly traditional distinction between their respective conceptions of ideas and forms.

Leibniz did not pick up on Thomasiaus’s remark in his reply. Indeed, neither of his two letters to Thomasiaus mention Plato at all. On this point, though, we can turn to another text

³⁹ Thomasiaus alludes to a distinction in the *Timaeus* between the demiurge and his sons, the gods in charge of continuing his work. See Leibniz and Thomasiaus, *Correspondance*, 79, n. 30.

written at about the same time which I believe is closely related to the Thomasius correspondence, namely the 1668 *De transsubstantiatione*. Here, Leibniz explicitly identifies Aristotelian substantial forms and Platonic ideas: ‘The idea of Plato is therefore the same as the substantial form of Aristotle’ (A VI. i. 511/L 118). Leibniz proposes this baffling identification in the context of his discussion of the substantial form of bodies that are *not* conjoined with a rational soul. The forms of those bodies, he argues, derive from the divine mind concurring with motion and their substance is nothing but their ideas in the divine mind: ‘Ideas are the same as the substantial forms of things. Thus ideas are in God as all action is in an agent, and creation is in God’ (A VI. i. 510/L 120, n. 15). This is because ‘no body has a principle of motion within itself apart from a concurrent mind’ and ‘body is accident and of appearance without a concurrent mind. Something is a substance when taken together with a concurrent mind’. Consequently, ‘the idea is the union of God with creature’ and ‘the substance of bodies which lack reason is union with the universal mind, or God’ (A VI. i. 509/L 116). Against the possible objection that such a theory ends up making the substantial forms of all things one and the same, namely the single concurrent divine mind, Leibniz responds:

But this does not follow. For the divine mind consists of the ideas of all things. Therefore, since the idea of a thing *A* is one thing, the idea of *B* another, the result is that one idea of the divine mind concurs with *A*, another with *B*.... From this it is apparent that there is not one substantial form for all bodies but a different one for different bodies, for as the disposition of nature is varied, the form and idea are also varied; the motion and rest of a body derive from this fact. (A VI. i. 511–12/L 118)

Therefore, Leibniz concludes, ‘the substance of each thing is not so much mind as it is the idea of a concurrent mind. In God there are infinite, really diverse, substances, yet God is indivisible’ (A VI. i. 511–2/L 118). Or, as he puts it in some accompanying notes, ‘the ideas of God and the substances of things are the same in fact, different in relation’ (A VI. i. 513/L 119).

According to *De transsubstantiatione*, then, the substantial forms of bodies not endowed with a rational soul are the ideas of those bodies contained in the intellect of God. Such ideas are also those bodies’ principle of individuation. On this theory, clearly, *divine ideas* play the exact

same role as the *substantive form-figures* in the *Ens primo-extensum* according to the correspondence with Thomasiaus. And indeed, when outlining his theory in the 1669 letter, Leibniz explicitly associates his form-figures with ideas when stating that mathematics ‘deals with the form or idea of things, that is to say, their figure [*agit de de rerum forma, vel idea, nempe figura*]’.⁴⁰ It does not seem too much of a stretch, then, to correlate these texts and identify the abstract mathematical space of substantial form-figures in the 1669 letter to Thomasiaus with the active intellect of God in *De transsubstantiatione*, or to argue that the ‘primary extended being’ described in the first text just is the divine mind described in the second. Admittedly, the Thomasiaus correspondence does not mention the *divine* mind, let alone associate the abstract figures in geometrical space with *divine* ideas. It does, however, clearly state that the way in which forms or figures come to inform matter is the work of a mind. Leibniz thus writes to Thomasiaus in a passage that neatly unites the two perspectives: ‘[M]ind supplies motion to matter in order to achieve a good and pleasing figure [*figuram*] and state of things for itself. Matter in itself is devoid of motion. Mind is the principle of all motion, as Aristotle rightly saw’ (A II. i. 27/L 99). We should also recall the passage, already quoted, according to which we should identify each ‘primary form’ which is ‘really abstracted from matter’ with ‘mind’ (A II. i. 32/L 99).

In sum, when Leibniz, in the one text, claims that bodies are accidental forms in matter, formally and efficiently caused by substantive forms or figures in mathematical space, this is just another way of saying what he also says in the other, namely that bodies come about in matter as instantiations of the ideas of a concurring divine mind. On the systematic level, this helps explaining why Leibniz, in the Thomasiaus correspondence, as we saw in the previous section, appeals to both form-figures *and* to God as the prime mover in order to account for the ‘efficient cause’ of determinate forms in matter. For, on the proposed reading, these are just two ways of saying the same thing. First, God’s action as prime mover consists in bringing about determinate forms in matter. Next, the efficient cause of determinate forms in matter is motion. Finally, it is mind that supplies motion. Those three premises given, it seems natural to conclude that God’s action as the prime mover consists in the divine mind concurring with the production of determinate bodies. Saying that God is the prime mover simply means that, in virtue of his active

⁴⁰ Note however that the ‘*vel idea*’ is only present in the original letter, and deleted from the edition included in Leibniz’s preface to Nizolius’s *Anti-Barbarus*.

intellect, the ideas in his mind are both the formal and efficient causes of the determinate bodies in matter. And if divine ideas are the same as substantive form-figures, we then understand why Leibniz assigns the efficient cause of determinate bodies in matter *both* to God as the prime mover *and* to substantive form-figures.

If this reading is correct, the theory of the two extended beings in the 1669 letter to Thomasius and the theory of the concurrent divine intellect in *De transsubstantiatione* are parts of a single draft theory in which the substantive forms or figures of bodies are conceived in terms of ideas in the intellect of God, separate and abstracted from the realm of physical bodies, somewhat like Platonic ideas in relation to their instantiations.⁴¹ Notes accompanying *De transsubstantiatione* reinforce this impression: ‘The substance of things is an idea. Idea is the union of God and creatures.... It is in this way that the substance of things is in things or appearances’ (A VI. i. 513/L 119). Leibniz then goes on to correlate this distinction between substance/idea and thing/appearance with a strikingly Platonist-sounding distinction between a ‘pattern’ or ‘model’ (*exemplar*) and its ‘instances’ (*exemplis*) (A VI. i. 513/L 119).

8. AVERROISM AS RECEIVED PHILOSOPHY

Is there any precedent for such Platonizing Aristotelianism in authors with whom Leibniz was familiar? I think there is. As Alain de Libera notes, from Siger de Brabant in the thirteenth century to the Averroists of the sixteenth century, and all the way up to Descartes, in discussions about the theory of assistant forms, ‘Averroism and Platonism were brought together in a decisive and constant manner’.⁴² Leibniz’s theory has clear Averroist resonances. Moreover, he explicitly acknowledges this. In a revealing passage from *De transsubstantiatione*, he associates his own theory with Averroes and with the Italian Averroists, counting Zabarella among them. It is worth noting that Loemker’s English translation of the text, which I have generally relied on here, leaves out most of this passage under the somewhat dubious pretext that the passage is

⁴¹ In which case I must disagree with Daniel Garber, when he writes about the theory in the Thomasius correspondence that ‘this account of Aristotelian form is very different from the account he gives of the notion in the almost-contemporaneous essay, “De transsubstantiatione”’ (*Leibniz*, 8, n. 22). In fact, the theory is perfectly aligned with what Leibniz writes about the forms of bodies deprived of rational minds in *De transsubstantiatione*.

⁴² Alain de Libera, ‘Formes assistantes et formes inhérentes. Sur l’union de l’âme et du corps, du moyen âge à l’âge classique’ [‘Formes assistantes’], *Archives d’histoire doctrinale et littérature du Moyen Âge*, 81 (2014), 197–248, at 237–8.

truncated and that, besides, Leibniz could not have been serious about endorsing Averroes.⁴³ I cite here a slightly revised version of a translation proposed by Andreas Blank (the ellipses indicate illegible passages):

Our philosophical views by no means diverge from received philosophy. Even for Aristotle, nature is the principle of motion and rest. But for him, substantial form is properly nature. Therefore, Averroes and Angelus Mercenarius and Jac. Zabarella also claim that substantial form is the principle of individuation. Those who locate the nature of subsistence in the union of matter and form, like Murcia, agree with this as well.... What more? Plato himself propagates a world soul in the *Timaeus*; Aristotle an all-pervading active intellect in the *Metaphysics* and the *Physics*; the Stoics claim that God is the substance of the world; Averroes propagates... Aristotle's intellect; Fracastorius and Fernel, an origin of forms... All this, I think, is explicated in a way that, I have no doubt, is accessible to proof through the careful reading of the recent philosophers. (A VI. I. 510)⁴⁴

This is a difficult passage to decipher. The lacunae marring the manuscript oblige us to fill in the gaps in Leibniz's train of thought. But the gist of the argument is clear enough. Leibniz puts his own views on a par with those of Averroes, Mercenario and Zabarella on substantial forms and individuation. He makes no precise distinction between them, but labels those positions 'received philosophy' and claims that modern philosophy will come around to proving them right. He takes this Averroist tradition to affirm that the origin of forms must be found in 'an all-pervading active intellect' and compares it with Stoic notions making God 'the substance of the world' and with Plato's discussion of a 'world soul' in the *Timaeus*. Clearly, Leibniz taps into a long and very complex history of assimilating Averroism to Platonism, and of seeing Averroism as a doctrine that somehow bridges Aristotelianism and Platonism.⁴⁵

In the previous section, we have already seen how Leibniz explicitly assimilates his conception of Aristotelian substantial forms to Platonic ideas. But let us now see how this works

⁴³ See L 120, n. 16.

⁴⁴ Trans. in Blank, 'Jacobo Zabarella', 87 (modified).

⁴⁵ De Libera, 'Formes assistantes', 242–3.

if we consider it from the Averroist perspective suggested by the passage in *De transsubstantiatione*. There are two crucial notions to study in this context. The first is that of ‘assistant form’ which is common to all Averroism but that Leibniz does *not* explicitly employ here; the other is that of ‘supervenience’ which is specific to Zabarella’s account of Averroist assistant forms and that Leibniz *does* explicitly employ.

According to Averroism, the rational mind, or intellect, is not the *forma inhaerens* but the *forma assistens* of the body.⁴⁶ An inherent form inheres in and is of the essence of the thing it informs. An assistant form, on the contrary, is separable from what it informs and thus not of the essence of the thing it informs. It accompanies or ‘assists’ it in its operation and in the actualization of some of its features. Following Thomas Wylton’s original example, light is required to see color and yet light is not inherent in color but only an assistant form of it.⁴⁷ The Averroists principally mobilized this distinction in order to argue that the rational soul or human mind is only the *forma assistens* of the body, like a pilot in ship, and thus not of the essence of the body.⁴⁸ The theory of Leibniz we are concerned with here, on the contrary, is concerned only with bodies without rational souls. And yet I think this is the kind of schema that Leibniz appeals to in order to account for the relation between matter, form and body in the texts we are studying.

Let us take it from the top. In the Thomasius correspondence, primary matter is endowed with its own inherent form, the *forma corporeitatis*, which gives it actual existence in and by itself as indeterminate quantity. The figure-forms are contained in the abstract, ideal space of the first extended being inform. They do not inhere in primary matter. Instead, by concurrence, they assist in the actualization of determinate forms in matter, or in the constitution of determinate bodies in the second extended being. Hence, as one might sum up Leibniz’s theory, the *material cause* of body is the *forma corporeitatis* which accounts for the actuality proper to body as indeterminate quantity. The form-figures, conceived as geometrical structures outlined in abstract space, provide the blueprint or *formal cause* of determinate bodies. And finally, God, as the prime mover, provides the *efficient cause* that brings into being determinate forms in matter.

⁴⁶ The distinction does, of course, not exist in Averroes himself. It was first introduced in the early fourteenth century by the Averroist Thomas Wylton (Thomas Anglicus). See De Libera, ‘Formes Assistantes’, 204.

⁴⁷ Thomas Wylton, *Quaestio de anima intellectiva. Ad argumenta opinionis contrariae*, § 47, cited in De Libera, ‘Formes Assistantes’, 205.

⁴⁸ See De Libera, ‘Formes Assistantes’, 214–5.

A similar schema emerges from *De transsubstantiatione* where, in addition, it becomes clear how form-figures can be assimilated to active, divine ideas, in such a way that the formal and efficient causes tend to merge, or become like two sides of one and the same creative action of God. After affirming that ‘the substance of each thing is not so much mind as it is the idea of a concurrent mind’, Leibniz adds cryptically that ‘the ideas of God are the substances, but not the essences, of things’ (A VI. i. 512/L 118). By this, I think, he intends to say that divine ideas are not of the essence of body as such, that they do not inhere in matter, but that they nonetheless account for the substantial form of bodies. Divine ideas do not inform bodies from within but from without matter. Divine ideas do not *inhere* in existing determinate bodies, but *concur with* or *assist* in shaping or forming matter. They account for the determination of both form and determinate existence of bodies. Or, as one might illustrate it, God’s intellect guides God’s hand, or will, in carving out bodies in matter. Divine ideas of things, then, as conceived by God in his intellect and willed by God to exist, account both formally and efficiently for the determination of bodies in matter.

Leibniz does not himself use the notion of assistant form to articulate this theory. Yet it is not unwarranted to bring it into play, for he does mobilize it indirectly through his appeal to another, closely related, notion. We must here consider his use of a peculiar expression which, once again, brings us back to Zabarella. As may be recalled, Leibniz concludes the passage on the two extended beings quoted above by saying that figures in the second extended being are ‘not really distinct’ from matter but ‘merely properties brought about... by a supervening mind [*mente superveniente*]’ (A II. i. 34/L 100). This notion of a ‘supervening mind’ is characteristic of Zabarella’s understanding of the distinction between *forma informans* and *forma assistens* and constitutes the centerpiece in his account of the Averroist theory of active intellect and the human mind.⁴⁹ Hence, on Zabarella’s account, Averroes holds that the human soul is an assistant form that does not constitute the specific form of man in his genus. It is superadded to it, or is a ‘more elevated form supervening upon it’, endowing it with ‘the noble and excellent operation which is intellection’.⁵⁰

⁴⁹ De Libera, ‘Formes assistantes’, 239. See also Sascha Salatowsky, *De anima. Rezeption der aristotelischen Psychologie im 16. Und 17. Jahrhundert* (Amsterdam/Philadelphia: B. R. Grüner, 2006), 238.

⁵⁰ Zabarella, *De mente humana*, cap. II, DRN 831. See also *De mente agente*, cap. XI, DRN 928.

This, obviously, is not the specific sense in which Leibniz uses the notion of a ‘supervening mind’ in the passage I have quoted. He is not at all concerned with the status of the rational soul in relation to body. He is discussing how soulless bodies acquire form, figure and determinate quantity. He mobilizes Zabarella’s conception of supervenience in order to apply it in the broader context of understanding the role mind plays in relation to bodies without rational souls. Such use of the notion is however not without precedent. Moreover, it is not unwarranted by Zabarella’s own texts. If we turn to an author Leibniz admired and who was a follower of Zabarella, namely Joachim Jungius, we find the following general characterization of supervenience in his *Praelectiones physicae*: ‘Some form *B* is said to supervene upon or overlie [*supervenire sive superinducere*] form *A* if *B* begins to inform the matter organized according to the form of *A*’.⁵¹ Jungius goes on to provide examples explaining how the forms of bark, wood, flesh or bone supervene upon the form of animate being, or how the form of hardness (*forma adamantis*) supervenes upon the form of stone (*forma lapidis*), while in turn the form of stone supervenes upon the form of body (*forma corporis*).⁵² This last example is the most interesting because it corresponds well to the way in which Leibniz uses the notion of supervenience, namely in explaining how, by super-adding or ‘stacking’ forms so to speak, we get from indeterminate body, the *forma corporeitatis*, to determinate bodies like trees and stones, with determinate properties, like being made of wood or being hard. We should also note how the passage in Jungius is accompanied by a reference to the *Libri de communi rerum generatione & interitu* in *De rebus naturalibus*, where Zabarella argues that ‘there can be several substantial forms in one and the same composite’.⁵³ In this book, we find Zabarella himself employing the notion of supervenience, not just to explain the relation between the rational soul and the body, but more broadly in relation to the complex, formal constitution of determinate bodies. Thus, while accounting for how material things have both universal form and proper or special forms, he argues how ‘another substantial form can supervene upon the general form [*formae generali potest alia substantialis forma supervenire*]’.⁵⁴ Leibniz may very well have found his primary

⁵¹ Joachim Jungius. *Praelectiones Physicae* [*Praelectiones*], Chr. Meiner (ed.) (Göttingen: Vandenhoeck & Ruprecht, 1984), 72. Jungius’s text was first published in 1662 under the title *Doxoscopiae Physicae Minores*. Leibniz refers to it in a text from 1678 (see the editors’ note at A II. iii. 70).

⁵² Jungius, *Praelectiones*, 72.

⁵³ Zabarella, *Libri de communi rerum generatione & interitu*, cap. II, DRN 356–9.

⁵⁴ Zabarella, *Libri de communi rerum generatione & interitu*, cap. II, DRN 359.

inspiration in an author like Jungius for his use of the notion of supervenience when explaining how determinate forms appear in indeterminate matter. Yet that use ultimately stems from Zabarella himself. And, via Zabarella, it clearly links Leibniz's conception of form-figures and divine ideas to the Averroist theory of assistant forms.

9. LEIBNIZ AND THE LIMITS OF ZABARELLA'S AVERROISM

I have in the preceding sections attempted to give Leibniz's position as much systematic coherence as I think the texts can sustain and that the context will support. Within its own logic, however, this rudimentary doctrine is not without its problems and we need not give more credit to Leibniz's youthful philosophical syncretism than it deserves. It is in many ways driven by interpretive approximations and sometimes deliberate disregard for doctrinal details and distinctions among the authors he claims for his cause.

Most importantly, when we turn to the 'Averroists' Leibniz in fact cites, some of them do not deserve to be associated with the Platonizing branch of that tradition that Leibniz mobilizes when proclaiming Platonic ideas and Aristotelian forms to be 'the same'. Zabarella, in particular, was in reality the philosopher among the Paduans who most forcefully rejected Neoplatonic tendencies in interpreting Aristotle.⁵⁵ Moreover, when it came to the rational soul and its relation to the body, Zabarella was not an Averroist but the contrary. In the book *De mente humana*, he strongly rejected the key Averroist tenet according to which the rational soul is a mere *forma assistens*, arguing that only a theory which makes the soul the *forma inhaerens* of the body is true and authentically Aristotelian: 'I deem Averroes's opinion *false*, both according to the very truth of things, purely and simply, as well as according to the philosophy of Aristotle; true, rather, is the opinion of those who say that the rational human soul is truly the form of man through which man is man, and constituted as a species.'⁵⁶ For Zabarella, the human soul was 'a form that informs matter having power to be, and which constitutes the human species under the

⁵⁵ See De Libera, 'Formes Assistantes', 239–40; Eckhard Kessler, 'The Intellective Soul' ['The Intellective Soul'], in C. B. Schmitt, Quentin Skinner, Eckhard Kessler, and Jill Kraye (eds.), *The Cambridge History of Renaissance Philosophy* (Cambridge: Cambridge University Press, 1988), 530.

⁵⁶ Zabarella, *De mente humana*, cap. VI, DRN 838. On the distinction between *forma assistens* and *forma inhaerens*, see also *De mente humana*, cap. II, DRN 832–3. For commentary, see Giglioli, 'Introduction', 14–5; Des Chene, *Life's Form*, 76–8; Eugenio Garin, *History of Italian Philosophy*, vol. I, G. Pinton (ed. and trans.) (Amsterdam/New York: Rodopi, 2008), 367–8.

genus animal as a difference dividing up this genus, so that man is man by it, and without it would not be man'.⁵⁷

We find no references to Zabarella's books *De mente humana* and *De mente agente* in Leibniz's texts. But the position was well-known and widely discussed in his immediate context. As a striking example, we can highlight a short but illuminating 1662 article by Jacob Thomasius in which Leibniz's mentor rejected those who hold that the 'agent intellect is something separate from man', deeming it 'foreign to natural philosophy' and accompanying his invectives with a prominent reference to 'Zabarella, c. 12 de mente agente'.⁵⁸ Leibniz could not, I think, be unaware that it was problematic to classify Zabarella among the 'Averroists' without further qualification, as *De transsubstantiatione* seems to do.

We can only speculate as to how, exactly, Leibniz intended to resolve such tensions. When including Zabarella in his list of Averroists, he may have had in mind how, in *De mente agente*, Zabarella identifies the agent intellect with God with a universal principle of intelligibility, informing all things, while also granting the human intellect, or rational mind, a kind of agency of its own.⁵⁹ Zabarella's theory on this point is predicated on a reformulation of the passive intellect as containing more than mere possibility, *intellectus possibilis*, but being a veritable power of being acted upon, an *intellectus patibilis*, proper to the human mind and the rational soul.⁶⁰ Similarly, in *De transsubstantiatione*, Leibniz also attempts to find a way to affirm the universality of the active intellect while at the same time maintaining the agency of the rational mind as the *suppositum* of its own actions. He thus provides two distinct accounts, for bodies that are endowed with a rational soul and those that are not, claiming, as we have seen, that 'the substance of the human body is union with the human mind, and the substance of bodies which lack reason is union with the universal mind, or God' (A VI. i. 509/L 116). Certainly, his

⁵⁷ Zabarella, *De mente humana*, cap. II, DRN 831–2.

⁵⁸ Jacob Thomasius, 'Programma XXVIII. De intellectu agente', in *Dissertationes LXIII*, ed. Christian Thomasius (Halæ Magdeburgicæ: Impensis Johannis Friderici Zeitleri, 1693), 292. For the chapter Thomasius references, see Zabarella, *De mente agente*, cap. XII, in DRN, 930–2. Thomasius's little text is also discussed in Blank, 'The Sixteenth-Century Controversy', 24.

⁵⁹ See Zabarella, *De mente agente*, cap. IV and XIII, DRN 916 and 933. See also José Manuel Garcia Valverde, 'Editor's Note', in Giacomo Zabarella, 'Liber de Mente Agente', in *Fragmentos de filosofia*, 9 (2011), *Suplemento de textos*, 2; Heikke Mikkeli, *An Aristotelian Response to Renaissance Humanism. Jacobo Zabarella on the Nature of Arts and Sciences* (SHS: Helsinki, 1992), 105 and 404; Kessler, 'The Intellective Soul', 531–2.

⁶⁰ Zabarella, *De mente agente*, chap. V and XII, DRN 917–9 and 930. See also Leen Spruit, *Species Intelligibilis. From Perception to Knowledge. Vol. II. Renaissance Controversies, Later Scholasticism, and the Elimination of the Intelligible Species in Modern Philosophy* (Leiden: Brill, 1995), 234–5.

conception of the difference between bodies with and without rational souls is not the same as Zabarella's, but at least the ambition is similar. Moreover, we find possible echoes of a theory comparable to Zabarella's in the (to me rather obscure) details of Leibniz's theory in *De transsubstantiatione* when he writes that 'in [an] idea there is contained ideally both passive and active potentiality, both agent and patient intellect. Insofar as the patient intellect concurs, there is matter in the idea; insofar as the agent intellect concurs, there is form' (A VI. i. 512/L 118; trans. modified).⁶¹

10. CONCLUSION: THE DEMISE OF FIGURE

The positive evaluation of the Italian Averroists in the texts from the late 1660s stands in stark contrast to later texts such as the *Considérations sur la doctrine d'un esprit universel unique* of 1702, where Averroism is rejected because it uses an 'all-pervading active intellect' to account for the form and individuation of bodies — a position now deemed dangerously close to Spinozism. Later, as Mercer has shown, Leibniz will follow up on and generalize insights relating to the non-Averroist strands of the texts I have studied, mostly concerning only bodies with rational minds in *De transsubstantiatione*, and begin applying important parts of those conceptions to *all* bodies and to substances generally. Hence, later, *all* substances become individual minds or mind-like; *all* substances become spontaneous, self-contained and endowed with an internal principle of action; *all* substances become inseparable from the matter they inform.

And yet, perhaps surprisingly, Leibniz's early Averroist inclinations were still partially alive in some of the *De summa rerum* papers from the mid-1670s. In drafts from around April 1676, Leibniz modified the theory of the two extended beings into a kind of parallelism, arguing that 'just as there is something divine in space, namely the immeasurability of God, so there is something divine in the mind, which Aristotle used to call the active intellect, and this is the

⁶¹ For a (much) later assessment of the Averroist distinction between active and passive intellect, see Leibniz, *Considérations sur la doctrine d'un esprit universel unique*, 1702: 'Aristotle has seemed to some to have had an opinion approaching this, which was later revived by Averroes, a celebrated Arabian philosopher. He believed that there is an *intellectus agens*, or active understanding, in us and also an *intellectus patiens*, or a passive understanding, and that the former, coming from without, is eternal and universal for all, while the passive understanding, being particular for each, disappears at man's death' (GP vi. 529/L 554). This account of Averroes's doctrine is, I think, different from the theory he endorses in *De transsubstantiatione*.

same as the omniscience of God’ and that ‘just as space is to the immeasurable, so is the collection of all minds to the active intellect. God is the primary intelligence, in so far as he is omniscient, or, in so far as he contains the absolute affirmative form which is ascribed in a limited way to other things which are said to perceive something’ (A VI. iii. 391/DSR 43, and A VI. iii. 520/DSR 79).⁶² I have explored these texts in considerable detail elsewhere.⁶³ The conceptions they reflect uphold complex connections to the quasi-Spinozism present in several of the *De summa rerum* papers, discussed extensively by commentators, including myself, over the last twenty years.⁶⁴

Leibniz will however eventually distance himself from such conceptions on just about every level of his philosophy: physical, logical, metaphysical and theological. In our context, a clear grasp of the nature of those deep transformations in his thinking can be obtained by focusing on the notion of ‘figure’ and how Leibniz’s attitude toward it changed. In the papers from the late 1660s studied above, figure is equated with substantial form. According to Leibniz’s mature philosophy, on the contrary, figure cannot be considered as pertaining to the substance or form of bodies. Figure is a relative notion derived from our perception of extended

⁶² At the same time, in the *De summa rerum*, we find traces of the double perspective in *De transsubstantiatione*, in the context of concerns regarding the immortality of the soul. Hence, in *De veritatibus, de mente, de Deo, de universe* (15 April 1676), Leibniz writes: ‘If the mind could have begun, it will be able to be extinguished; and just as it was made by God, so it will return to God. This would be a view which agrees with that of Aristotle, and of those who speak of a universal intellect. To me, on the other hand, it seems that no soul has ever begun, or can cease. But the mind will nonetheless be created by God, since it will exist and remain by the will of God, that, by the will of a good intellect’ (A VI. iii. 512/65–7).

⁶³ See the end of the following note for references.

⁶⁴ See Mark Kulstad, ‘Did Leibniz Incline Towards Monistic Pantheism in 1676?’, in *Leibniz und Europa. VI. Internationaler Leibniz-Kongress* (Hanover: Leibniz Gesellschaft, 1994), 424–8; ‘Leibniz’s Early Argument that All Things Are One in Relation to Descartes’ Notions of Real and Modal Distinction’, in Hans Poser et al. (eds.), *Nihil sine Ratione. VII. Internationaler Leibniz-Kongress* (Berlin: Leibniz Gesellschaft, 2001), 663–8; ‘Exploring the Middle Ground: Was Leibniz’s Conception of God ever Spinozistic?’, *American Catholic Philosophical Quarterly*, 76 (2002), 671–90; ‘Leibniz, Spinoza and Tschirnhaus: *Metaphysics à Trois*, 1675–1676’, in Olli Koistinen and John Biro (eds.), *Spinoza. Metaphysical Themes* (New York: Oxford University Press, 2002), 221–40; Robert M. Adams, *Leibniz: Determinist, Theist, Idealist [Leibniz]* (New Haven: Yale University Press, 1994), 127–8; Christia Mercer, ‘Leibniz and Spinoza on Substance and Mode’, in Derk Peereboom (ed.), *The Rationalists: Critical Essays on Descartes, Spinoza, and Leibniz* (New York: Rowman and Littlefield, 1999), 273–300; Blank, *Metaphilosophy*, chs. 5–6; Emilio Maria de Tomasso, *De Summa rerum. Viaggio attraverso le esplorazioni metafisiche del Giovane Leibniz (1675–1676)* (Roma: Aracne, 2013). For some of my own work on the topic, see Lærke, *Leibniz lecteur de Spinoza*, 363–556; ‘*De Origine Rerum ex Formis* (April 1676). A quasi-Spinozistic parallelism in *De Summa Rerum*’, in Kulstad, Lærke, and Snyder (eds.), *The Young Leibniz*, 203–20; ‘Monism, Separability and Real Distinction in the Young Leibniz’, *The Leibniz Review*, 19 (2009), 1–28; ‘Leibniz’s Encounter with Spinoza’s Monism, October 1675 to February 1678’, in Michael Della Rocca (ed.), *Oxford Handbook to Spinoza* (Oxford: Oxford University Press, 2018), 434–63; ‘*De Summa Rerum*: Metaphysical Fragments, 1675–1676’, in Paul Lodge and Lloyd Strickland (eds.), *Leibniz: Key Philosophical Texts* (Oxford: Oxford University Press, forthcoming).

bodies, and imaginary to the extent that such limits are always fuzzy and indeterminate (A VI. iv. 1545). I shall not discuss when and how exactly his attitude toward the notion of figure changed. Let me just mention the four main factors that contributed to it. First, the discovery that the essence of body is not extension, but force, crucially contributed to relegating figure, derived from movement and mass, from the domain of the substantial to that of the merely phenomenal. Second, as Leibniz argues in many later texts, there is necessarily something imaginary about figure because the actual infinite division of matter — an original point of which Leibniz makes a great deal⁶⁵ — makes it impossible to assign precise limits or figure to any actual body: ‘[B]ecause of the actual subdivision of parts, there is no definite and precise figure in bodies’, as he writes to Arnauld in 1686 (A II. ii. 122; see also A II. i. 170–1; A VI. iv. 1613–14; A II. ii. 202).⁶⁶ Third, on theological grounds, conceiving of matter and substance in terms of extension and figure renders the dogma of real presence unintelligible: ‘If the essence of matter consists in extension, there is no way to explain the real presence in the Eucharist’, Leibniz writes in *De la philosophie cartésienne* of 1683–85 (A VI. iv. 1482). Finally, and interestingly, an early sign of the demise of figure appears in the context of one of Leibniz’s first hesitant formulations of the idea of a complete being. Hence we can read in *De existentia*, one of the last texts from the *De summa rerum* papers, written in December 1676:

In my view a substance or a complete being [*substantia seu ens completum*] is that which by itself involves everything [*involvit omnia*], or [*seu*], for the perfect understanding of which the understanding of nothing else is required. A figure [*figura*] is not of this kind; for in order to understand from what a figure of such and such a kind has arisen, we need to have recourse to motion. (A VI. iii. 400/*DSR* 115)

⁶⁵ See for example Gottfried Wilhelm Leibniz, ‘Reponse de M. de Leibniz a l’extrait de lettre de M. Foucher Chanoine de Dijon, insérée dans le Journal du 16 mars 1693’, *Journal des sçavans*, 30 (1693), 356 (= GP i. 416).

⁶⁶ This point of doctrine has been extensively discussed by commentators. See Robert Sleigh, Jr., *Leibniz and Arnauld. A Commentary on their Correspondence* (New Haven: Yale University Press, 1992), 112–4; Adams, *Leibniz*, 229–32; Samuel Levey, ‘Leibniz on Precise Shapes and the Corporeal World’, in Donald Rutherford and Jan A. Cover (eds.), *Leibniz: Nature and Freedom* (Oxford: Oxford University Press, 2005), 69–94.

In this passage, denying the substantiality of figure interestingly hinges on a logical consideration regarding the incompleteness of its concept.

In sum, in later texts, Leibniz came to hold that figure cannot be associated with substantial forms for four reasons that were, respectively, physical, mathematical, theological and logical: because the essence of body is force; because matter is actually infinitely divided; because one should not render real presence unintelligible; and because substantiality requires a complete concept. These later conceptions reflect deep internal developments in Leibniz's thought and correspond to the progressive appearance of the most fundamental features of his mature system. As I have argued in this paper, however, they also announce a fundamental shift in his attitude toward Averroism which, from being a 'received philosophy' proclaimed 'accessible to proof through the careful reading of the recent philosophers', later came to represent a marginalized and dangerous school of thought whose conception of the role of the active, divine intellect in the formation and individuation of bodies was now reviled rather than revered for its proximity to the doctrine of an *anima mundi*.⁶⁷

⁶⁷ I am grateful for comments and criticisms I received from Andreas Blank, Donald Rutherford, and two anonymous reviewers of *OSEMP*. Earlier versions of the paper were presented at the conference *La substance matérielle dans la scolastique tardive et la philosophie moderne* at the ENS, rue d'Ulm, Paris, in March 2017, the NY/NJ EMP seminar in May 2017, and the conference *Reformation and Modernity* at the University of Bucharest in November 2017.