

Advancing the Aristotelian Project in Contemporary Metaphysics

A Review Essay

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ABSTRACT: In a recent book, *Substance and the Fundamentality of the Familiar*, Ross Inman demonstrates the contemporary relevance of an Aristotelian approach to metaphysics and the philosophy of nature. Inman successfully applies the Aristotelian framework to a number of outstanding problems in metaphysics, philosophy of mind, and the philosophy of physics. Inman tackles some intriguing questions about the ontological status of proper parts, questions which constitute a central focus of ongoing debate and investigation.

Ross D. Inman. *Substance and the Fundamentality of the Familiar: A Neo-Aristotelian Mereology*. New York: Routledge, 2018. 304 pages. \$140.00.

Ross Inman's book is an excellent new installment in the ongoing renaissance of Aristotelian metaphysics in analytic philosophy. Central Aristotelian notions, such as substance, essence, causal powers, dependent parts, and matter/form combination, have reemerged in recent years, beginning with the work of Theodore Scaltsas, Peter van Inwagen, Kit Fine, David Oderberg, and Michal Rea in the 1990s.¹ The movement began to develop and flourish after the turn of the millennium. Kit Fine, David Oderberg, Michael Loux, and E. J. Lowe built upon their own earlier work,² while new collaborators

1. See Peter van Inwagen, "Material Beings," *Philosophy* 67 (1990): 126–7; Theodore Scaltsas, *Substances and Universals in Aristotle's Metaphysics* (Ithaca, NY: Cornell University Press, 1994); Kit Fine, "Things and Their Parts," *Midwest Studies in Philosophy* 23 (1999): 61–74; David S. Oderberg, ed., *Form and Matter: Themes in Contemporary Metaphysics* (Oxford: Blackwell, 1999), with chapters by E. J. Lowe, Peter Simons, John Haldane, Kit Fine, and Michael Rea; Michael J. Loux, *Metaphysics: A Contemporary Introduction* (London: Routledge, 1998); E. J. Lowe, *The Possibility of Metaphysics: Substance, Identity, and Time* (Oxford: Clarendon, 1998). Some of this was foreshadowed in earlier work by Michael Loux: "Kinds and the Dilemma of Individuation," *The Review of Metaphysics* 27 (1974): 773–84, and *Substance and Attribute* (Dordrecht: Reidel, 1978).

2. Kit Fine, "The Non-Identity of a Material Thing and its Matter," *Mind* 112 (2003): 195–234; Fine, "Coincidence and Form," *Aristotelian Society Supplement* 82 (2008): 101–18; David Oderberg, *Real Essentialism* (New York: Routledge, 2008); E. J. Lowe, *More Kinds of Being: A Further Study of Individuation, Identity, and the Logic of Sortal Terms* (Oxford: Wiley-Blackwell, 2009); Lowe, "Substantial Change and Spatiotemporal Coincidence," *Ratio* 16 (2003): 140–60; Oderberg, "Is Form Structure?," in *Neo-Aristotelian Perspectives in Metaphysics*, ed. Daniel D. Novotny and Lukaš Novak (New York: Routledge, 2014), 164–80; Michael J. Loux, "Aristotle's Hylomor-

joined the project: Alexander Bird, Mark Johnston, Kathrin Koslicki, Anna Marmodoro, William Jaworski, and myself.³

Inman demonstrates that neo-Aristotelian hylomorphism has the resources to resolve a number of outstanding problems and paradoxes in metaphysics, philosophy of mind, and philosophy of physics. He provides a useful introduction to the current state of the art while advancing the Aristotelian project at several crucial points.

Inman offers a forceful defense of serious essentialism in chapter 1. He distinguishes three sorts of essence: the essence or real definition of a natural kind, the particular kind-essence of an individual substance, and the individual essence of that substance (what it is to be that particular individual). His notion of *particular essence* is an intriguing and useful one. Inman builds on work on essence by Michael Loux and E. J. Lowe,⁴ but unlike either of them, Inman reifies particular essence. The particular essence of a substance *S* of kind *K* is identified with *S qua K*, a sort of thinned down or abstract version of *S*, characterized only by the constitutive essence that *S* shares with other members of *K*.

Inman offers trenchant criticisms of Richard Boyd's notion of essence as homeostatic equilibrium and of David Armstrong's identification of essence with a particular kind of universal.⁵ Boyd, Armstrong, and Alexander Bird (*Nature's Metaphysics*) all fail to provide truthmakers for the natural laws that account for the clustering of properties and powers characteristic of each essence. We need a fully reified essence as the ultimate explanatory ground of this clustering and of the individuation of particular instances of the essence.

Inman builds on and refines Fine's distinction between constitutive and consequent essences, a distinction that parallels the scholastic distinction between essence and proper accident (or "*propria*"). For Fine, the properties making up a thing's consequent essence must be *logically* entailed by its

phism," in *Neo-Aristotelian Perspectives in Metaphysics*, ed. Daniel D. Novotny and Lukaš Novak (New York: Routledge, 2014), 138–63; Michael C. Rea, "Hylomorphism Reconditioned," *Philosophical Perspectives* 25 (2011): 341–58.

3. Mark Johnston, "Hylomorphism," *Journal of Philosophy* 103 (2006): 652–98; Alexander Bird, *Nature's Metaphysics: Laws and Properties* (New York: Oxford University Press, 2007); Kathrin Koslicki, *The Structure of Objects* (New York: Oxford University Press, 2008); Anna Marmodoro, "Aristotle's Hylomorphism without Reconditioning," *Philosophical Inquiry* 37 (2013): 5–22; William Jaworski, *Structure and the Metaphysics of Mind: How Hylomorphism Solves the Mind-Body Problem* (New York: Oxford University Press, 2016); Robert C. Koons, "Staunch vs. Faint-Hearted Hylomorphism: Toward an Aristotelian Account of Composition," *Res Philosophica* 91 (2014): 151–77; Koons, "Forms as Simple and Individual Grounds of Things' Natures," *Metaphysics* 1 (2018): 1–11, <https://doi.org/10.5334/met.4>. See also recent papers by Patrick Toner and Michael Gorman: Patrick Toner, "On Aristotelianism and Structures as Parts," *Ratio* 26 (2013): 148–61; Michael Gorman, "On Substantial Independence: A Reply to Patrick Toner," *Philosophical Studies* 159 (2012): 293–7.

4. Loux, "Kinds and the Dilemma of Individuation," Lowe, *More Kinds of Being*.

5. Richard Boyd, "Homeostasis, Species, and Higher Taxa," in *Species: New Interdisciplinary Essays*, ed. Robert Wilson (New York: Cambridge University Press, 1999), 1414–85; David M. Armstrong, *A Theory of Universals* (New York: Cambridge University Press, 1978).

constitutive essence. Inman argues that the more fundamental relation is one of *grounding* or metaphysical explanation, and he provides convincing examples of cases where a proper accident is grounded in a constitutive essence without being entailed logically by it.

In chapter 2, Inman considers the grounding relation in detail. He rightly takes grounding to be a relation between pluralities, and not just individuals. He also takes grounding to be fundamentally a relation between things of any ontological category, including concrete individuals. I am skeptical of this view: it seems more natural to take grounding to be a relation between facts or truths. If an individual x is grounded in individual y , this is always because some facts about x (including x 's nature and existence) are grounded in facts about y .

Inman defines *total grounding* oddly: x is totally grounded by the y 's just in case x is grounded by every one of the y 's and *only* by members of the y 's. This makes it impossible for something to be totally grounded by two disjoint pluralities. But suppose x is totally grounded by the y 's, and the y 's are totally grounded by the z 's (where the y 's and z 's are disjoint). Then, by transitivity, x should be totally grounded by the z 's, but this is ruled out by Inman's definition. The reader would be well advised to consult Fine's recent "Guide to Ground."⁶

Inman suggests that each entity has its grounds necessarily (that is, in any world in which it exists). It is not clear to me that this is true in every case. It is probably right for substances (the case Inman has principally in mind), but it doesn't seem to be true for all facts and conditions. A disjunctive fact, for example, could have different grounds in different worlds.

Inman turns in chapter 3 to the heart of his book, a theory of fundamental mereology. Inman distinguishes three positions: priority atomism (the fundamental entities are simple), Jonathan Schaffer's priority monism (the only fundamental entity is the whole cosmos), and the priority of at least some intermediate entities (entities that are composite and less than the whole cosmos), which Inman calls the "Intermediate" view or "Priority Macrophysicalism."⁷ As Inman points out (94), the third position has tended to get short shrift in the recent literature, despite its venerable roots in Aristotle, the scholastic tradition, and the Austrian Brentanian school.

Given the notions of grounding and fundamentality, we can define substances as fundamental concrete entities—that is, as concrete entities that are not grounded in any way by other concrete entities (except by God). Inman argues for a somewhat narrower definition (98): " x is a substance only if (a) there is no y such that (i) y is concrete, (ii) y is not identical to x , and (iii) x

6. Kit Fine, "Guide to Ground," in *Metaphysical Grounding*, ed. Fabrice Correia and Benjamin Schnieder (New York: Cambridge University Press, 2012), 37–80.

7. Jonathan Schaffer, "Monism: The Priority of the Whole," *Philosophical Review* 119 (2010): 31–76; Jonathan Schaffer, "Monism," in *Stanford Encyclopedia of Philosophy*, ed. Edward N. Zalta, <http://plato.stanford.edu/archives/spr2007/entries/monism>.

is essentially grounded in y , and (b) x is unified in the right sort of way.” The “right way” of being unified consists in having only *inseparable* parts. Entity y is an inseparable part of x if and only if it is part of the individual essence of y to be part of x .

Inman insists that a substance have only inseparable parts. This raises an important question: could a fundamental entity have separable parts? If an entity is fundamental, its proper parts must be wholly grounded in it. Given Inman’s assumption of Necessity, a thing’s grounds are all essential to it, and given Inman’s assumption of the Facticity of ground, an actual thing’s grounds must themselves be actual. So, condition (b) should follow from condition (a).

However, suppose that Necessity is false—suppose that a substance’s proper parts, although actually grounded in the substance could exist with other grounds (or no distinct grounds at all). Why is Inman committed to ruling out this possibility? It suggests that he is not entirely confident about Necessity but wants to deny the status of substance to anything with any separable parts. This amounts to the thesis of Reverse Mereological Essentialism: all of the parts of a substance are essentially parts of that substance, and therefore cannot exist except as parts of it. Theodore Scaltsas (*Substances*) attributed such a thesis to Aristotle, relating it to Aristotle’s well-known homonymy principle, according to which a severed hand is a “hand” only metaphorically.

Reverse Mereological Essentialism implies a second principle, which Inman calls “No Fundamental Parthood,” the thesis that no substance can have other substances as proper parts. Aristotle and Thomas Aquinas embraced this thesis because they wanted to safeguard a substance’s unity: a substance with substantial proper parts would not be a single fundamental entity. As Inman notes, E. J. Lowe objected to this line of argument, arguing that it depended on the thesis of composition as identity, the notion that a whole is identical to its parts.⁸ If the whole is not *identical* to its parts but rather *composed* by them, then there is no obvious reason why the substantiality of some of the parts should be inconsistent with the substantial unity of the whole. In contrast, if we assume composition to be a kind of identity, then we would have to suppose that a substance containing other substances as parts to be both *one* substance and *many* substances, a contradiction.

In response, Inman points out that composition is a building or generative relation. A whole does not merely contain its parts (as a region of space can contain an occupant): composite objects are “constructed or generated from their parts” (105). If a whole W is constructed from substantial proper parts A and B , and these parts remain essentially unaltered, “it is difficult to

8. E. J. Lowe, “A Neo-Aristotelian Substance Ontology: Neither Relational nor Constituent,” in *Contemporary Aristotelian Metaphysics*, ed. Tuomas Tahko (New York: Oxford University Press, 2012), 229–48.

see how *W* could fail to be what it is *in virtue of* *A* and *B*, and thus derivative on its proper parts” (106).

This raises an important question. Could two substances (like *A* and *B*) be *mutually* grounding: with *A* partly grounded by *B*, and *B* partly grounded by *A*? Inman would respond no, because grounding is asymmetric. I agree with the asymmetry constraint, but suppose we take the *relata* of grounding to be (in the basic case) facts rather than things. Now suppose that certain facts about *B* are grounded in facts about *A*, and certain other facts about *A* grounded in facts about *B*. That seems possible. For example, the locational and distributional properties of the whole might be wholly grounded in the corresponding properties of its parts, while the causal powers (active and passive) and persistence of the parts wholly grounded in properties of the whole.⁹ We could then identify *substances* with concrete entities that are involved irreducibly in certain fundamental facts.

Inman appeals to a contrary “intuition” here, rather than an argument (107): a whole cannot be truly and fundamentally *one* unless its form gives *existence* to its parts.¹⁰ If we define substance as something all of whose proper parts depend for their existence on the existence of the whole, and we assume the asymmetry of grounding, then we can immediately derive the No Fundamental Parthood principle as a consequence. But now we need an argument for supposing that all fundamental entities are substances, so defined.

Inman (108) also favors Schaffer’s arguments for No Fundamental Parthood.¹¹ Any two substances must be modally unconstrained in their relation to one another. But there are necessary connections between the spatial location and intrinsic qualities of wholes and their parts. Schaffer and Inman just assume the impossibility of the sort of grounding circles that I mentioned above.

Schaffer also argues for the No Fundamental Parthood thesis from a principle of ontological economy: avoiding the needless multiplication of fundamental entities. I would argue that the economy principle makes sense when applied to fundamental facts, but a view could be economical with respect to fundamental *facts* without being equally economical with respect to fundamental *entities*.

I offered in 2014 an objection to No Fundamental Parthood and Reverse Mereological Essentialism, which Inman takes up in section 8.4.¹² I appealed to the Aristotelian principle that all natural change (including substantial change, corruption, and generation) requires a substrate that endures

9. See Koons, “Staunch vs. Faint-Hearted Hylomorphism,” 171–3.

10. Inman cites Thomas Aquinas, *Summa Theologiae*, I, q.76, a.8.

11. Schaffer, “Monism,” 41.

12. Koons, “Staunch vs. Faint-Hearted Hylomorphism,” 162–3.

through the change. Reverse Mereological Essentialism renders such survival impossible.¹³

In response to this worry, Inman appeals to a distinction between *objects* and *stuffs*. Inman restricted his No Substantial Parthood principle to objectual or individual proper parts, excluding stuffs and portions of stuff. Hence, matter as a stuff could still provide the enduring substrate.

But what does the object/stuff distinction come to? According to Lowe, entities in the category of object have determinate synchronic and diachronic identity conditions, in addition to determinate countability.¹⁴ In contrast, Inman asserts, “Quantities or portions of stuff have determinate identity conditions yet lack determinate countability” (246). I don’t understand this claim. Won’t there be a determinate cardinality of portions—something like \aleph_2 (the cardinality of sets of real numbers)? In any case, so long as portions of stuff are both metaphysically fundamental and possessing autonomous identity-conditions, why doesn’t the Aristotelian-Thomistic intuition require that the No Substantial Parthood principle apply to them, as well as to objects?

Inman responds that portions of stuff are not “structure-laden” (247). The idea seems to be that the unity of a substance is not threatened by a plurality of fundamental and separable proper parts, so long as those parts are internally unstructured. Why should we admit this exception, and no more? More needs to be said on this subject.

My own suggestion would be to consider making a different exception to the No Substantial Parthood principle: we could allow the cosmos to be the one substance that has other substances as proper parts. This would make the integral parts of local substances simultaneously integral parts of the whole cosmos, in such a way that these parts can survive the corruption of the localized whole. The local substances exist by actualizing certain potentialities of the cosmic substance, in such a way that their parts are partly grounded by the cosmos and partly by the form of the local substance. This solution has the added advantage of being compatible with the general-relativity-inspired super-substantialism about spacetime that Inman discusses in chapter 8 (231–6). The fundamentality unity of the cosmos is not threatened by a plurality of substantial proper parts, because the cosmos is unified precisely by its lacking special spatial or temporal boundaries—it exists wherever and whenever there is occupied space.

Inman returns to the issue of Reverse Mereological Essentialism in chapter 8. There he considers a new option: that some of the objectual parts of a substance might survive its corruption, thereby making a transition from derivative nonsubstances to fundamental substances, an option that I considered

13. Full disclosure: I no longer put much weight in this objection. I now believe that the survival of the whole system of the world at the cosmic level is sufficient to ground the continuity needed.

14. E. J. Lowe, *The Four-Category Ontology* (New York: Oxford University Press, 2006).

in 2014.¹⁵ Reverse Mereological Essentialism entails, in contrast, that all parts are annihilated when a substance corrupts, being simultaneously replaced by new material entities, preserving quantitative and qualitative continuity of the parts without numerical identity. This raises a problem much discussed in the Middle Ages: what *explains* the quantitative and qualitative continuity we see? What accounts for the brown color of the carcass of a brown cow? We can appeal to extrinsic, Armstrongian laws of nature, but that stands in some tension with Inman's ambition (in chapter 2) to ground all laws of nature in the essences of substances. The problem for Reverse Mereological Essentialism can be solved so long as the process of corruption is always continuous and extended in time, rather than discrete and instantaneous. In that case, the old substance and its proper parts exists at each moment at which the new substances are generated or increased, and the continuities can be explained in terms of the old substance's essence and *propria*. However, that solution won't apply to discrete entities, like atoms or subatomic particles, which, on my view, can never be substances.¹⁶

Chapter 4, "Against Part-Priority," is quite valuable. Inman effectively challenges current defense of the priority of the microphysical, and he uses recent work in the philosophy of quantum physics, quantum chemistry, and biology to build a strong case for fundamental wholes, arguing that we do not even have the supervenience of macroscopic facts on the microscopic. Quantum entanglement, for example, supports the thesis that novel facts emerge in composite systems that do not supervene on local facts about the parts and their merely spatial relations.

In chapters 5 and 6, Inman shows how hylomorphism can resolve the familiar puzzles and paradoxes about material composition, including the Tib/Tibbles (or Deon/Theon), the Goliath/Lumpl paradoxes, and Unger's Paradox of the Many.¹⁷ Inman's case is strong, since the hylomorphic accounts are principled and unified. In chapter 7, Inman (building on work by Trenton Merricks and Jason Turner) develops a version of Peter van Inwagen's Consequence Argument, showing that priority atomism and priority monism are both, no less than determinism, incompatible with free will.¹⁸

Inman also brings together a family of arguments that draw on intuitions about the unity of human consciousness. These arguments suggest both that

15. Koons, "Staunch vs. Faint-Hearted Hylomorphism," 162–3.

16. See Robert C. Koons, "Thermal Substances: A Neo-Aristotelian Ontology for the Quantum World," *Synthese* (2019), <https://rdcu.be/bQvZA>.

17. David Sedley, "The Stoic Criterion of Identity," *Phronesis* 27 (1982): 255–75; Davidiggins, "On Being in the Same Place at the Same Time," *Philosophical Review* 77 (1968): 90–5; Alan Gibbard, "Contingent Identity," *Journal of Philosophical Logic* 4 (1975): 187–221; and Peter Unger, "The Paradox of the Many," *Midwest Studies in Philosophy* 5 (1980): 41–67.

18. Trenton Merricks, *Persons and Objects* (New York: Oxford University Press, 2001); Jason Turner, "The Incompatibility of Free Will and Naturalism," *Australasian Journal of Philosophy* 87 (2009): 565–87; and Peter van Inwagen, *An Essay on Free Will* (New York: Oxford University Press, 1986).

conscious properties are examples of what Tim Pickavance and I called “essentially unitary properties,” and that these properties are fundamental and causally nonredundant.¹⁹ Inman plausibly argues that what these arguments point to is the sort of unity enjoyed by substances.

Inman concludes with a fascinating and wide-ranging discussion of the options for explaining the apparently fundamental features of proper parts of composite substances. This chapter (9) would be useful also for priority monists like Schaffer or those who, like Alexander Pruss, have toyed with mereological nihilism about human persons and other organisms.²⁰ The problem here is analogous to the problem of accounting for the local intrinsic properties of heterogeneous extended simples. Inman describes four options: (1) power distributional properties,²¹ (2) localized powers and other tropes inhering in the whole substance, (3) regionalized instantiation relations, or “spatial adverbialism,”²² and (4) stuff occupants,²³ with *portions of stuff* understood not as proper parts of substances but rather as standing in a primitive *constitution* relation to them.

Proper parts of substances can instantiate natural properties, properties that our best scientific theories incorporate into laws of nature and associate with causal powers. Doesn't this provide strong grounds for attributing metaphysical fundamentality to such bearers of natural properties? One might think that there is some tension between bottom-up causal mechanisms and top-down metaphysical grounding relations. However, as Inman points out, this tension is entirely the result of a confusion of metaphysical and causal explanations. Any Aristotelian will recognize that it is essential to uncover and identify bottom-up causal mechanisms within the world's complex substances, but these internal mechanisms are themselves ultimately to be explained in terms of the natures of the whole substance in which they subsist.

19. See Robert C. Koons and Timothy H. Pickavance, *The Atlas of Reality: A Comprehensive Guide to Metaphysics* (New York: Oxford University Press, 2017), 487.

20. Alexander R. Pruss, “Eliminating or Reducing Parthood,” <https://alexanderpruss.blogspot.com/2017/08/eliminating-or-reducing-parthood.html>.

21. Josh Parsons, “Distributional Properties,” in *Lewisian Themes: The Philosophy of David K. Lewis*, ed. Frank Jackson and Graham Priest (New York: Oxford University Press, 2004), 173–80.

22. Kris McDaniel, “Extended Simples,” *Philosophical Studies* 133 (2007): 131–41.

23. Ned Markosian, “Simples, Stuff, and Simple People,” *Monist* 87 (2004): 405–28.