2011


Daniel P. Maher  
*Assumption College, dmaher@assumption.edu*

Follow this and additional works at: [https://digitalcommons.assumption.edu/philosophy-faculty](https://digitalcommons.assumption.edu/philosophy-faculty)

Part of the Philosophy Commons

**Recommended Citation**

Reviewed by Daniel P. Maher, Assumption College (dmaher@assumption.edu)

Preview

This outstanding collection of ten essays pays handsome tribute to Allan Gotthelf for his many years at the center of scholarship on Aristotelian philosophy of biology and science. As noted in the introduction, “Perhaps no one has done more in recent decades to promote, to sponsor, to organize, and to stimulate research on these topics” (1). The main themes of the collection—metaphysics, natural science and biology, and methodology—show deliberate continuity with the line of research inaugurated in *Aristotle on Nature and Living Things* (Mathesis, 1985), edited by Gotthelf, which honored David Balme for his groundbreaking work on Aristotle’s biology. While Festschriften often amount to what Aristotle would call a heap, Lennox and Bolton cast their book as “a certain whole,” indeed, “a multifaceted common research project in which all of the contributors have been engaged for more than twenty-five years now, under early and continuing stimulus from Allan Gotthelf” (3–4). The result is not monolithic, but unified enough around common texts and themes for authors to express substantive differences in a way that permits an interesting dialogue to emerge. A glance at the list of contributing authors suffices to recommend this book in its entirety to specialists. A thorough reading should convince any remaining skeptics how fruitful it is, in James Lennox’s words, “to take Aristotle’s scientific study of animals more seriously as a valuable resource for deepening our understanding of every aspect of his philosophy” (56). Gotthelf richly deserves this durable sign of recognition for his success, with his various collaborators, in establishing a still-young tradition of scholarship.

David Sedley
“Teleology, Aristotelian and Platonic”

Sedley portrays Aristotle as developing his distinctive natural teleology in response to Plato’s presentation of the cosmos as ordered by the Demiurge. On Sedley’s view, Aristotle took the argument of *Republic* VII—that contemplation is superior to the busy life of governing others—somewhat more seriously than Plato did. No Aristotelian god would stoop to a life of production or action, and so Aristotle accounts for nature’s teleological order without appeal to “conscious purpose.” Eliminating the Demiurge purifies theology. Nature operates in a craft-like way without a craftsman, and Sedley offers a detailed and inventive interpretation of the analogy between nature and craft (or art). The longest part of the paper assembles considerable textual evidence for Aristotle’s “global teleology”—the cosmos itself is a teleological whole with a nature of its own—and its priority to that appearing in individual natural processes.

Robert Bolton
“Biology and Metaphysics in Aristotle”
Bolton emphasizes the independence of biology and metaphysics from one another against scholars who inappropriately blend them; we should expect the two sciences to be consistent but substantively autonomous. Respecting this separation of scientific powers requires precision in metaphysics. Bolton distinguishes between recognizing Socrates as a substance (metaphysical knowledge) and recognizing him as a human being (biological knowledge). “So if form is what substance is—what makes something a substance—then form cannot also be what a biological kind or living thing is” (44). Bolton addresses competitive readings and touches on the controversy whether substantial forms are universal or particular; he says a third possibility deserves consideration: substantial form might be “supra-species.” We could then inquire what makes a given this human, say, rather than canine. Bolton understands significant otherness between being a this and being a determinate nature.

James G. Lennox
“The Unity and Purpose of On the Parts of Animals I”

Lennox argues that On the Parts of Animals I introduces Aristotle’s entire investigation into animals, as that part of natural science devoted to substances subject to unqualified coming-to-be and passing away. In this essay, filled with interesting observations on the details of the text, Lennox modifies his own earlier view of Book I. He now sees a unified narrative: chapter 5 integrates the methods of division (chapters 2, 3, and 4) with the account of teleological explanation and conditional necessity (discussed in chapter 1). Division enjoys priority because it identifies biological kinds at the level of universality appropriate for causal explanation.

Alan Code
“An Aristotelian Puzzle about Definition: Metaphysics Ζ.12”

Code focuses on the unity of a complex definition: If we say that man is two-footed animal, “its parts must be related in such a way that collectively they constitute what a single substance is in and of itself” (91). The argument in Z.12 tends to the conclusion either that the last differentia (a quality) is substance or that the genus is substance. The attempt to define through division seems unable to express the unity of the defined thing, and Code sees Z.12 as “part of a critical examination of a method for inquiry into substance that fails” (95), which failure opens the way to the new approach in Z.17. Code ignores secondary literature almost entirely, as if he is trying to read Aristotle from scratch. Acknowledging the merits of this approach and his work, one still wishes (especially considering the essay’s proximity to Lennox’s) that Code had more thoroughly related the treatment of division in Metaphysics to that in Parts of Animals I.

Mary Louise Gill
“Unity of Definition in Metaphysics Η.6 and Ζ.12”

Gill begins with the same puzzle Code addressed and proceeds to develop a complex solution, revising along the way her view of Aristotelian genera. Aristotle’s analysis of definition by division in Z.12 reveals how to understand the unity of genus and differentia. With appeal to the Philebus, Gill says the genus animal may be understood under various aspects (mode of generation, mode of locomotion, etc.), and each of these may give rise to non-overlapping lines of division. The definition “biped animal” conceives the genus in a restricted way, and the unity between the genus so-conceived and the ultimate differentia first enables us to understand how matter and form are united in a substantial composite. A single animal species may need to be defined through multiple lines of division that are integrated by being hypothetically necessary for the animal’s characteristic life. Gill reinterprets without altering the text in H.6 in order to establish this reading, and she addresses a number of interesting texts and issues in a paper that will undoubtedly provide fertile ground for debate.

Pierre Pellegrin
“Definition in Aristotle’s Posterior Analytics”
Pellegrin examines a “double approach” to definition in the Posterior Analytics. When a definition serves as a principle of demonstration, the definition is known without being deduced from something else. In this way, the definition is prior to the syllogism, and the conclusion of the syllogism displays the attachment of a property to an essence. But a definition may also be the conclusion of a demonstration, and this definition may be formulated causally by restating the demonstration: thunder is the noise caused by fire being extinguished in the clouds. Pellegrin sees tension here, but not separate theories that fragment the text. Each manifests the centrality of essences to Aristotelian science, and together they make it clear that not all essences are principles in science. Pellegrin combines meticulous attention to detail with exceptional lucidity as he engages substantive difficulties and the interpretive tradition.

Aryeh Kosman
“Male and Female in Aristotle’s Generation of Animals”

Kosman offers “a reminder that on Aristotle’s view the form or soul of the generated animal must come into being gradually during embryonic development, just as its body does” (155). Aristotle does not explain the sameness of species between parent and offspring by the “preformationist” notion that the human form is transmitted from the male while the female supplies only matter. Kosman notes that in Generation of Animals Aristotle concentrates on the moving cause, and in this respect sperm has the power to initiate in the right sort of matter the motion that culminates in an animal the same in kind as the parents. The embryo’s nature is to be undergoing this motion, and animal form may be conveyed through (not in) sperm as the source of generative motion. Kosman defends Aristotle from misinterpretations of his claim that a female is a mutilated or “disabled male,” and he underscores Aristotle’s interest in the cause of sexually dimorphic (as opposed to merely dyadic) parentage.

David Charles
“Metaphysics Θ.7 and 8: Some Issues concerning Actuality and Potentiality”

Charles attempts “to understand why Aristotle sought to conceptualize matter and form in terms of actuality and capacity (or potentiality) in parts of Θ.6–8” (197). In his view, Aristotle explicates the announced solution (in Metaphysics H.6) to the problem of the unity of substantial composites by showing in Θ how the formal cause is identical with final cause. A teleological analysis of the relation of potency and act helps us conceive of the unity of substance and of definition, and it helps us understand the ways matter may persist in composites. The matter for a composite substance can only be fully understood from the final cause that requires matter of a certain potentiality, but matter may also be studied and understood incompletely “from the bottom up” in terms of efficient causality.

Sarah Broadie
“Where Is the Activity? (An Aristotelian Worry about the Telic Status of Energeia)”

Broadie’s essay deals narrowly with Aristotle’s thesis in Metaphysics Θ.8 that activity is prior in substance to potentiality, where he argues that even a transitive activity (like house building) is more of an end than is the potency for that activity. Broadie thinks, to the contrary, that the clear subordination of this activity to the result (the house) suggests transitive activity is no more telic than is bare potentiality. She finds an interesting way to support his argument and explains that his concern is to preserve (against possible Platonic objections) the telic status of intransitive activities (understanding, perceiving, etc.); these are not essentially incomplete (like an interrupted or failed building project).

John M. Cooper
“Political Community and the Highest Good”
Cooper aims to make sense of Aristotle’s claim in the final chapter of *Nicomachean Ethics* that ethics (the practical study of how to become fully good) requires completion with politics (the study of laws and constitutions). Cooper argues that the communal character of human life revealed in *Politics* means that the proper exercise of the virtues requires an orientation to the happiness of others with whom one shares life in the city. Cooper offers an extensive description of how diverse people in the political community according to nature (the decent, the morally virtuous private citizens, the morally virtuous political leaders, and the contemplatively wise) engage in shared virtuous activity with one another, for which activity, ultimately, they require knowledge of politics. One appreciates the inclusion in this book of an essay treating these texts, but it seems that opportunities were missed to connect its themes to those addressed by Sedley and (at least in footnotes) to Gotthelf’s professional interest in Ayn Rand.

Concluding Notes: Many essays in this collection originated in a 2004 conference held at the University of Pittsburgh in honor of Gotthelf. Only Sedley’s article (a modified chapter from his *Creationism and its Critics in Antiquity*) has appeared previously in English; earlier versions of four chapters have appeared in French or Portuguese. The use of footnotes and a comprehensive bibliography are wise editorial choices. About a dozen typographical errors pose little difficulty to the reader. Supplementary materials succinctly and helpfully summarize Gotthelf’s life and work in classical philosophy. Any disappointment at the absence of a contribution from Gotthelf himself should be lessened by the announcement of the (forthcoming) publication of sixteen of his papers by Oxford University Press: *Teleology, First Principles, and Scientific Method in Aristotle’s Biology*. 

Comment on this review in the BMCR blog

<table>
<thead>
<tr>
<th>Index for 2011</th>
<th>Change Greek Display</th>
<th>Archives</th>
<th>Books Available for Review</th>
<th>BMCR Home</th>
<th>Bryn Mawr Classical Commentaries</th>
</tr>
</thead>
</table>