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# Centaurus

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*Special Issue: Collections, Knowledge, and Time*

*EDITED BY*

**KARIN TYBJERG & MARTIN GRÜNFELD**

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**Matteo Favaretti Camposampiero & Emanuela Scribano (Eds.), *Galen and the Early Moderns*, Cham, Switzerland: Springer, 2022, xi + 215 pp., ISBN: 9783030863074.**

Studies of Galen and Galenism have surged significantly in recent years. A decade after R. J. Hankinson's landmark 2008 *Cambridge Companion to Galen*, we saw (among others) *Brill's Companion to the Reception of Galen*, edited by Petros Bouras-Vallianatos and Barbara Zipser; Vivian Nutton's new Galen biography; *Galen's Epistemology*, edited by Hankinson and Matyáš Havrda; the latest Galen editions in the *Corpus Medicorum Graecorum*; the newly discovered treatise *De indolentia*; as well as the milestone series of *Cambridge Galen Translations* edited by Philip van der Eijk, among others.<sup>1</sup>

The renewed interest might be owed in part to Galen's centrality to the vitalism-or-mechanism debates, echoing our own felt need to revise the ontology of organic life in the light of advances in medical technology and related cutting-edge fields. A similar revisionist urgency was certainly the lot of the early moderns. As anatomical knowledge and experimental methods progressed, ideas about the human body were renegotiated in new frameworks, while the proliferation of Galen translations fuelled reappraisals and disputes. With his eclectic, anti-dogmatic, and empirical attitude to medicine, Galen appealed not only to traditional humoralists, but even to those considering themselves modern.

This new volume reflects the endeavours of a small but burgeoning niche of scholars to recover the ancient roots of early modern medical ideas. The authors explore issues including medical and philosophical teleology; the soul-body relationship; medical-theoretical concerns such as causation, analogical reasoning, or Galenic methodology; and the Galenic import of physico-theology, including in Enlightenment philosophy.

Some of the papers stem from a 2018 conference at the Ca'Foscari University of Venice, which combined classicists and early modernists. It is fortunate that these scholars came together to attend to a shared preoccupation with genealogies of ideas

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<sup>1</sup> Hankinson (2008); Bouras-Vallianatos & Zipser (2019); Nutton (2019); Hankinson & Havrda (2022); Singer (2023); Tassinari (2019). Editions in the *Corpus* include: Kollesch (2022); Perilli (2017); Savino (2020); Brunschön (2022); Galenus & Gärtner (2015); Gundert (2009); Vagelpohl & Swain (2015–2022). On *De indolentia*, see Petit (2019); Rothschild, Thompson, & Galen (2014).

that cross the anachronistic boundaries of our subfields. Paralleling Charles Schmitt's adage about "many Aristotelianisms," one might say that in early modern Europe there were "many Galenisms." This book recuperates some of their aspects, with the heavy lifting focused on topics such as teleology (especially inspired by *De usu partium*), physico-theology, and Galen's eclectic methods.

The Introduction argues that there were different Galenisms in different realms—for example, philosophical and medical—and that even as the theoretical framework became obsolete, Galenic or Galen-inspired practices, such as in preventative medicine, survived as far as the 18th century. Different parts of the edifice had different survival rates; it was not a homogeneous reception. The chapters trace "the varied character of this phenomenon" (p. 5), but with a relatively strong focus on the later reception (the late 17th and early 18th centuries). Guido Giglioni examines the fortunes of Galenic ideas from *De naturalibus facultatibus* in the 16th and 17th centuries; key debates concern how nature devises orderly parts out of unstructured matter, and whether the active principles in bodily matter "know" what they do. Craig Martin's contribution focuses on Galenic causal categories, indicating their relevance to a rational program of early modern medicine, especially in Giambattista da Monte; interestingly, Martin underlines da Monte's additional focus on *efficient* causes, negotiated in a Galenic framework. Fabrizio Baldassarri argues for a plant–animal continuity in Galen, which, he argues, is based on a "functional identity": plants' structure and physiology function as a model for at least the early stages of animal development. Claire Crignon shows Locke rehabilitating a pluralistic account of Galenic preventative medicine intertwined with ethics, exhorting values like moderation and sobriety and building on the "Galenical idea of medicine as an art of living and a condition for pursuing a good life" (p. 100). Galen's writings and the "Galenist" uses of them could be divergent; by returning *ad fontes*, Emanuela Scribano examines how 17th-century mechanistic philosophers oversimplified Galen to more forcefully reject his finalism in the organization of living bodies, associating him even with Van Helmont and Fernel. Brunello Lotti turns to an apology for Galen's finalism (based on *De usu partium*) by 17th- and 18th-century British physico-theologians in their "obsessive fight against mechanism and atomism" (p. 118); the appeal to a divine artificer or an "argument from design" was sometimes balanced by an inherent risk of atheistic naturalism, also grounded in Galen. By differentiating between Galen's "use" and "usefulness" of parts, Raphaële Andrault charts "several kinds of teleological relations between parts and functions" (p. 141), providing a nuanced account of Leibnizian biological teleology. Matteo Favaretti analyses Christian Wolff's allegiance to Galen regarding teleology in organic functions and the "nesting of the organic structures" (p. 162), addressing a Leibniz-style mereology. Reliance on Galen enables the "mutual penetration of mechanism and finalism" (p. 171), spearheading 18th-century progress in the life sciences. Charles Wolfe discerns the emergence of a non-reductive *medical* materialism inspired by Galen's humoral theory, which differs from other, more physicalist types of early modern materialism and is based on an "embodied soul" of ambiguous ontology, albeit resulting from a mixture of material entities. Tinca Prunea-Bretonnet shows how a "rational physician" of the German



Enlightenment viewed Galen as a thinker marked by a “concern with verification,” a “sober approach to research,” and thoroughness (*Gründlichkeit*) (p. 197) as well as common sense (*gesunder Verstand*)—“readiness to alter one’s philosophical position if empirical proofs demand it” (p. 205). Galen’s appeal to 18th-century physicians, Prunea-Bretonnet argues, is due to his “methodological rigor” (p. 198); his commitments are “the attention to facts, the search for truth as the primary aim and an irenic benevolence” towards “past and competing doctrines” (p. 198).

The writing, while not homogeneous, is generally clear, and the arguments are mostly convincing. Placement of often lengthy bibliographical notes in the main text, sometimes mid-sentence, slightly impedes the flow of reading; fortunately, neither this minor issue nor the occasional typo affects the high quality of the content.

What strikes this reader overall is how categories as diverse as mechanists, humoralists, and even chemical physicians found in Galen fruitful resources for furthering their own ideas, whether by agreement or adversarially. Simplification reliably facilitates instrumentalization, and so both Scribano and Lotti emphasize that early modern uses of Galen could also be abuses. Departing from Galen had been commonplace for many chemical physicians, but it remains worth asking, case by case, what exactly they claimed to depart from. Their Galen could sometimes be a straw man. Other times, misunderstandings were accidental: Favaretti charts Christian Wolff’s unintentional misrepresentation of a Galenic argument due to Wolff’s second-hand reliance on Daniel Sennert’s account. For the early moderns, going back to the primary sources was paramount for making a solid and enduring argument about the past.

This remains true for us as well. Without a grasp of the original languages, however, the return to primary sources is illusory. What is sorely needed here is a systemic change: reintroducing Latin, and even optionally Ancient Greek, into the university curriculum for historical subdisciplines in the humanities. That this volume reaches us from Italy should come as no surprise: south of the Alps, the classical philology tradition is still alive and well, and other university systems might do well to follow that example.

In sum, the volume successfully shows that Galenism in early modern Europe was diverse and multi-pronged: theoretical and practical, medical and philosophical, conservative regarding humoral theory and modern in its eclecticism and experimentalism. Whether as friend or foe, Galen remained a reference that the early moderns could not overlook. *Galen and the Early Moderns* will hopefully inspire scholars, and especially new generations, to attempt more *longue durée* studies without sacrificing philological rigour and due attention to primary sources.

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### References

- Bouras-Vallianatos, P., & Zipser, B. (Eds.). (2019). *Brill's companion to the reception of Galen*. Leiden, The Netherlands: Brill.
- Brunschön, C. W. (2022). *Galenus De locis affectis V–VI/Galen, Über das Erkennen erkrankter Körperteile V–VI*. Berlin, Germany: De Gruyter. <https://doi.org/10.1515/9783110587449>
- Galenus, & Gärtner, F. (2015). *Galenus De locis affectis I–II: Edidit, in linguam Germanicam vertit, commentatus est*. Berlin, Germany: De Gruyter. <https://doi.org/10.1515/9783110435641>
- Gundert, B. (2009). *Galenus De symptomatum differentiis*. Berlin, Germany: Akademie Verlag. <https://doi.org/10.1524/9783050087979>
- Hankinson, R. J. (Ed.). (2008). *The Cambridge companion to Galen*. Cambridge, UK: Cambridge University Press.
- Hankinson, R. J., & Havrda, M. (Eds.). (2022). *Galen's epistemology: Experience, reason, and method in ancient medicine*. Cambridge, UK: Cambridge University Press.
- Kollesch, J. (2022). *[Galenus] Definitiones medicae/[Galenus] Medizinische Definitionen*. Berlin, Germany: De Gruyter. <https://doi.org/10.1515/9783110792614>
- Nutton, V. (2019). *Galen: A thinking doctor in Imperial Rome*. London, UK: Routledge.
- Perilli, L. (2017). *Galenus vocum Hippocratis Glossarium/Galeno, Interpretazione delle parole difficili di Ippocrate: Testo, traduzione e note di commento*. Berlin, Germany: De Gruyter. <https://doi.org/10.1515/9783110481969>
- Petit, C. (Ed.). (2019). *Galenus's treatise Peri alypias (De indolentia) in context: A tale of resilience*. Leiden, The Netherlands: Brill.
- Rothschild, C. K., Thompson, T. W., & Galen, G. (2014). *Galenus's De indolentia: Essays on a newly discovered letter*. Tübingen, Germany: Mohr Siebeck.
- Savino, C. (2020). *Galenus in Hippocratis Aphorismos VI commentaria/Galeno, Commento agli Aforismi di Ippocrate Libro VI: Testo, traduzione e note di commento*. Berlin, Germany: De Gruyter. <https://doi.org/10.1515/9783110663280>
- Singer, P. (Ed.). (2023). *Galenus: Writings on health. Thrasybulus and health (De sanitate tuenda)*. Cambridge, UK: Cambridge University Press. <https://doi.org/10.1017/9781009159524>
- Tassinari, P. (2019). *Galenus: Works on human nature (P. Singer & P. Van der Eijk, Eds.)*. Cambridge, UK: Cambridge University Press. <https://doi.org/10.1017/9781139149969>
- Vagelpohl, U., & Swain, S. (2015–2022). *Galenus in Hippocratis Epidemiarum librum I, II, VI, versio Arabica: Edidit, in linguam Anglicam vertit, commentatus est (Vols. 1–3.3)*. Berlin, Germany: De Gruyter. <https://doi.org/10.1515/9783110406597>