

*The Science and Myth of Galileo between the Seventeenth and Nineteenth Centuries in Europe* by Massimo Bucciantini

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This volume contains the proceedings of an international conference held in Florence at the Museo Galileo, 29–31 January 2020. There are 31 essays, including the editor's preface. Although the subtitle indicates that the conference was “international”, the vast majority of essays are by Italian scholars. This puzzling fact is not just an item of information concerning the statistics of the volume but is important in that it may help the reader contextualize the overarching ideological and political project that gave birth to the conference. It was, in fact, a collaborative undertaking shared by five Italian universities and the Museo Galileo, which was sponsored by the Italian government (defined as a *Progetto di ricerca di interesse nazionale* [viii]). In the remainder of the review, I will selectively discuss some of questions raised by the essays and highlight what I see as the major strengths and weaknesses of this collective volume. I am a historian and philosopher of science. Hence, my review will be concerned mostly with historical and philosophical aspects of the science and myth of Galileo.

The bad news first. Perhaps the most striking and disappointing weakness of the book as a whole is the absence of any sustained discussion of Galileo's science. Despite the promising but misleading title, suggesting a focus on the interplay of science and myth, the book's essays are not concerned with Galileo's science. By and large these essays address questions that might be labeled “cultural” or “reception” studies and bring to light a rich diversity of social, intellectual, and political themes in relation to Galileo and his legacy. Correlatively, the book does not offer any sustained discussion of what we

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should understand as “myth”. Rather, it seems that the theoretical import of both these categories, namely, science and myth, failed to attract the interest of the writers.

Another perplexing fact is that the volume’s title appears to delimit the time frame of the subject of the conference to the period spanning the 17th to the 19th centuries. But, in fact, many essays are dedicated to problems and issues that have emerged in the 20th and 21st centuries.

Now, the good news. This freedom is to be welcomed, and I must say that, in my view, it is the major strength of the volume, in that it opens up new vistas for scholars and future research despite the ideological baggage that comes with the national project behind the book. Above all, it shows that the definition of a meaningful periodization in relation to the categories *science* and *myth* is problematic in that, although it remains unexamined in the essays of the book, it appears to be a decisive element of that elusive Galileo myth, whose influence is obviously operative not only in the *Progetto di interesse nazionale* that originated the conference but also in the lack of a methodological consciousness that is conspicuous in the research style of the contributors to this miscellaneous volume.

I will very briefly summarize the contents of the essays in the order in which they are printed in the volume before selectively commenting on more specific issues. Paolo Galluzzi chronicles the minutiae of the wheeling and dealing concerning the shaping of the so-called *Edizione Nazionale* produced by Antonio Favaro at the turn of the 20th century, which remains the generally preferred edition for Galileo scholars. Despite the mine of curious information that this essay presents to the reader, Galluzzi seems unable to draw any conclusions. In fairness, however, he indicates that the essay was tentatively put together in preparation for a book to be published in the foreseeable future. Renée Raphael investigates how Galileo’s *Two New Sciences* was read in Oxford in the 17th century. Franco Giudice examines Galileo’s Platonism and its relation to Newton in what is perhaps the most confused piece in the book. Leonardo Anatrini explores the making of an early Bologna edition of Galileo’s works and how it shaped the beginning of a Galileo myth (but what is a myth?). Marta Stefani focuses on how Antonio Vallisneri read Galileo (so what?). Stefano Brogi takes us to Louvain, where Galileo’s legacy was implicated in an academic controversy concerning Copernicanism. Sébastien Molina-Betancur explores the Spanish reception of Galileo’s trial and condemnation. Luca Tonetti looks at the status of physics and Copernicanism in the 18th century through the lens of the *Journal de Trévoux*. Ferdinando Abbri studies Galileo in the French

Enlightenment literature. Andrea Battistini does the same for the Italian Enlightenment. Maria Pia Donato investigates the reception of Galileo in Italian literature of the Napoleonic period before the Restoration. Maria Conforti explores Galileo in the medical literature produced by early 19th-century Italian doctors and suggests that it was the locus of origination of the Galileo myth (but what is a myth?).

In one of the most interesting essays, Isabelle Pantin writes about the enigmatic presence of Galileo in the literary projects for a play by P. J. Proudhon (of all philosophers). Federico Tognoni investigates sculpture and architectural examples of the figurative representation of the Galileo myth. François de Vergnette analyzes the representation of Galileo in caricatures. Luigi Ingaliso looks at the reception of Galileo's image in the Jesuit Italian periodical literature of the 19th century. Pietro Corsi studies the reception of Galileo in 19th-century Britain. Sara Trovalusci looks at Galileo in, again, 19th-century French *pubblicistica*. Maria Pia Casalena focuses on the celebratory approach to Galileo by Italian women. This essay should be mentioned and praised, for it is the only one in the volume that brings into the conversation questions of women and gender and, more generally, diversity.

Alessandra Zangrandi studies Ippolito Nievo's reception of Galileo (for what purpose?). Alessandra Fiocca studies the correspondence between Silvestro Gherardi and Emil Wohlwil (why?). Stefano Salvia focuses on the making of Favaro's so-called *Edizione Nazionale* (why is this important?). Paolo Bucci looks at Paul Natorp's reception of Galileo (what are the implications of this philosophical reading of Galileo for Galileo's science and myth?). Massimo Bucciantini (who edited the volume and is also the author of the preface) studies Galileo in the Italian *risorgimento* against the backdrop of the opposition between church and state. ("Risorgimento" is a rather vague political and ideological category with which Italian scholars tend to refer to the political processes that led to the formation of the Italian state in the 19th century). Fulvio Conti looks at Galileo and Freemasonry. Massimino Baioni investigates celebratory politics in relation to Galileo in Fascist Italy. Enrico Giannetto looks at Henry More's erroneous (in Giannetto's view) Platonic reconstruction of Galileo. Michele Camerota reports on Arthur Koestler's fantastic reading of Galileo. Agnes Chaliier takes a look at the Chinese reception and translation of Galileo. Finally, Alessandra Lenzi presents a web-based Galileo project.

It is, in general, very hard, if not impossible, to form a balanced opinion of the achievements of the individual essays. The reason for this was already mentioned, a diffused lack of a methodological consciousness. Never do

the authors state the objectives of their essays clearly. The essays read more like endlessly meandering narratives that closely follow the impressionistic perception of the writers and/or the literary or material sources (such as books, manuscripts, pictures, sculpture, or architecture) on which they depend. Arguments are virtually nonexistent. It is impossible to do justice to the essays without risking misinterpreting the original intent, which has to be reconstructed by the reader. Perhaps the most sorely missing element in all this collective enterprise is a serious confrontation with diverse scholarly traditions emerging over the past decades in academia and beyond. Such a historiographic and philosophical confrontation is ruled out by the prevailing positivistic historiography that more or less unconsciously frames the research supporting the essays in this volume. There is also a persistent tendency—I would say almost an obligation, or mandatory exercise, or *basso obbligato* to use a musical metaphor—to focus on the Catholic Church and the Galileo case. This obstinacy steers the book's discourse away from its declared focus on Galileo's science and myth. None of the contributors seems to have noticed that this steering force might be the influence of the Galileo myth. More on this in a moment.

The word “myth” is rather frequently but casually tossed up in the essays throughout the volume. But, because of the lack of sustained engagement with myth as a concept, the reader is left with the impression that the book itself—both as a collective work motivated by a project considered to be in the national interest and dated at the beginning of the 21st century—represents the most subtle and vivid, if not crystal clear, revelation of a frayed and decadent tail end of the Galileo myth still very much operative in Italian academic culture. Yet, the Italian Ministry of Education and Academic Research mandates that in the prestigious high school known as the *Liceo classico*, which has for a century formed the backbone of the early stages in the production line of Italian academics, especially in the field of the humanities, all students must be exposed to the following authorities:

Riguardo alla filosofia moderna, temi e autori imprescindibili saranno: la rivoluzione scientifica e Galilei; il problema del metodo e della conoscenza, con riferimento almeno a Cartesio, all'empirismo di Hume e, in modo particolare, a Kant; il pensiero politico moderno, con riferimento almeno a un autore tra Hobbes, Locke e Rousseau; l'idealismo tedesco con particolare riferimento a Hegel.<sup>1</sup>

<sup>1</sup> <https://www.gazzettaufficiale.it/eli/id/2010/12/14/010G0232/sg>.

As one can readily see, Galileo is listed among the high priests of a canonic modernity in a language more suited to religious dogma (*autori imprescindibili*). One wonders if the outcome of the book as a whole serves purposes that have long been codified as ideological and political dogma. Unfortunately, the book does not question the dogmas that frame the research project considered to be in the national interest or the more specific research questions proposed by Bucciattini in the preface. Indeed, it is interesting to note that the essays pay little attention to the questions listed by Bucciattini in the preface but rather follow idiosyncratic lines.

Why should we buy uncritically into a distinction between myth and science in the first place? Take the example of Galileo's empirical work. He rolled balls down inclined planes, experimented with sounding bodies, swung pendulums of a variety of sizes and lengths, and did many other curious experiments besides. These strange or portentous experiments—I love the latter characterization—have been questioned, and it was even claimed famously by Alexandre Koyré [1973, 224–271] that Galileo never really performed them but only imagined them in his mind, thought experiments which he even abused, to put it frankly. Yet, against the claim that they were in principle impossible, recent work in this field has shown that the experiments are in fact possible. However, the replication of experiments also raises fascinating questions. In fact it has become clear to adventurous replicators like myself and others that Galileo's experiments are infinitely more complex and beautiful than the sanitized reportage offered by Galileo in his major works would have them.<sup>2</sup>

Without going into more detail, I wish to suggest that this field of cross-disciplinary research would have been a fertile ground to discuss the interplay between science and myth that is adumbrated in the book's title but never brought to fruition. The fact that Galileo's experiments turn out to be highly idealized constructs that escape easy categorization in terms of traditional categories, such as empirical versus theoretical, demonstrates that the distinction between myth and science is at best only preliminarily

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<sup>2</sup> For more information on this, I take the liberty of referring the reader to work I have published in which I report on and discuss the replication of experiments and place the results of work done at the laboratory for experimental history and philosophy of science at the University of Pittsburgh in historical and philosophical contexts. See Palmieri 2008 and 2011. I hasten to say that, of course, I am not the first who has replicated Galileo's experiments and that the reader will find literature reviews and discussion of my predecessors' results in my books.

serviceable. And, in the light of what is becoming known as a replication crisis in contemporary science, it would be instructive to revisit the origin of modern science by bringing to the fore the continually shifting, if not disappearing, ground of the past four centuries for marking a viable distinction between myth and science.

I will conclude by emphasizing a strength of the book as a whole. It is a mine of information and erudition showcased at its best. This wealth of accurate information would be better expounded in an encyclopedic format, however. The book's lasting achievement, in the final analysis, might be the unintended raising of the following question: Should academic communication of erudite research in the humanities espouse the format of the encyclopedia? It seems to me that a reordering of the erudition contained in this book in a more suitable format, following the schema of encyclopedic entries alphabetically placed, would free the contents from the weakness of lack of argumentation and present the reader with the raw materials of erudition in a fluid state, alive with their own information energy, which might be endlessly reconfigurable for any purposes, including teaching and further research. It would also alleviate the reviewer's dilemmas.

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