

it cannot safely be used to draw conclusions about the heretical qualities supposedly in *Paradise Lost*. Besides, this method of glossing the epic by the treatise is one that “has been weighed in the balance and found wanting” (15). Lieb does not defend or develop this assertion; he assumes its truth and moves on. I wish he would explicitly have taken on Maurice Kelley’s famous dictum that *Paradise Lost* is “an Arian document” (*This Great Argument*, 1941), but he only does so implicitly by dismissing glossing. And I wish he would have chosen to deal with Michael Bauman who following Kelley’s lead and emphasizing the anathemas appended to the Nicene Creed, concluded: “If what was condemned at Nicea was Arianism, then John Milton was an Arian” (*Milton’s Arianism*, 1987). But Bauman is not mentioned, nor are the anathemas as legitimate determinants of Arianism. Such critics Lieb implicitly dismisses as “Miltonists of the heretical bent” (215) and “the heresy police [who are] ever attentive to the possibility of heterodoxy” (227). His manner of arguing, irenic though it is throughout, bases itself on the comforts of uncertainties, as he has declared. The reader who is ready to label, instead of avoiding labels, is ever aware that Lieb’s cautious phrasing is moving him into the hushed corners of the library, to the quiet shadows where abrupt outbursts regarding knowledge of God are forbidden.

Ernan McMullin, ed. *The Church and Galileo*. Notre Dame, Indiana: University of Notre Dame Press, 2005. xii + 391 pp. \$60.00 cloth / \$30.00 paper.
Review by LUCIANO BOSCHIERO.

Galileo’s confrontation with the Catholic Church at the beginning of the seventeenth century regarding his open support for a heliocentric cosmos has long been a source of fascination for historians of science and the subject of countless publications. So why another book on this topic? Between 1981 and 1992, a commission established by Pope John Paul II investigated the theological, scientific, legal and cultural issues related to the so-called “Galileo affair.” While the commission’s report acknowledged the Church’s failure to deal effectively with Copernicanism and Galileo’s work, McMullin argues that the historical accuracy of the report fell short of what most scholars would expect. To address the report’s shortcomings, and in light of new documents found in recently opened archives of the Holy Office, a confer-

ence was organised at the University of Notre Dame in 2002. This book is the result of that conference and its aim is to provide “a more constructive approach” (2) to the Galileo affair by addressing the decisions and actions of all those involved in the events in early seventeenth-century Italy that followed the publication of Copernicus’ *De Revolutionibus* in 1543. In short, it is a book aimed at a specialised audience, promising to shed new light on an old topic.

That said, some readers might be disappointed to find that few of the thirteen chapters in this book actually provide new evidence about the complex relationship between Galileo and the Church authorities. However, the book’s strength lies in the ability of some of its contributing authors to articulate new interpretations of well-known sources and events and to provide a thorough contextual analysis of the Galileo affair. This is done in three parts: Part One examines the initial reactions to Copernicus’ work during the second half of the sixteenth century; Part Two, occupying the majority of the book’s pages, addresses the key issues Galileo and the Church confronted between 1616 and 1633; and Part Three comments on the scientific, political, and religious fallout of Galileo’s condemnation by the Church.

Before Galileo turned his telescope towards the heavens in 1609, Copernicanism had already been at the centre of some heated debates amongst Jesuit, Augustinian and Dominican astronomers and theologians. For example, in Part One of this book, Irving Kelter points out that while Augustinian Didacus à Stunica rejected Copernicanism in 1594, ten years earlier he was prepared to reinterpret key scriptural passages to accommodate Copernicus’ heliocentric claims. Jesuits Nicolaus Serarius, Johannes Lorinus and Johannes de Pineda also considered the mathematical possibility of the mobility of the Earth before rejecting the idea on theological and physical grounds. According to Kelter, the issues discussed by these authors reflect how Jesuits struggled to subordinate the status of the mathematical sciences, such as astronomy, to theology.

Part Two begins with Michael Shank’s insightful analysis of the geopolitical context in which Galileo moved. During the early seventeenth century, the Venetian Republic, the Grand Duchy of Tuscany and the Papal States were all involved in the economic, political and religious struggles between the various forms of Protestantism and Catholicism that eventually led all of Europe into the Thirty Years War (1618-1648). This political context assists

historians in appreciating the pressures Pope Urban VIII faced while confronting calls of condemnation against Galileo and Copernicanism.

Following Shank's attempt to set the political scene, McMullin, and Annibale Fantoli examine the theological arguments at stake in Galileo's *Letter to the Grand Duchess Christina*, as well as the authenticity of the mysterious third document pertaining to Galileo's acquiescence in 1616, and the Church's reasons for placing Copernicus' work on the Holy Index. These are lucid, well-written analyses pertaining to Galileo's all-important first confrontation with the Church authorities in Rome. However, the authors reveal little new about the early moves to silence Galileo on the topic of Copernicanism. There are several unanswered questions regarding the motivations and actions of the individuals involved in the 1616 debate, upon which McMullin and Fantoli only speculate.

Meanwhile, the subsequent chapters in Part Two contain much more original claims. Mariano Artigas, Rafael Martinez and William Shea suggest the possibility that the Inquisition might also have been interested in Galileo's controversial work on atomism. Questions regarding the atomic structure of nature had serious implications for the transubstantiation of the Eucharist. Indeed, in 1983 Pietro Redondi argued that had it not been for the intervention of Pope Urban VIII, Galileo would have been charged with heresy on the basis of his atomistic beliefs. Artigas, Martinez and Shea refer to a manuscript recently discovered in the archives of the Holy Office which sheds more light on the issue and indicates that while Redondi's thesis is not entirely accurate, there is still good reason to believe that atomism was an issue discussed by the Roman inquisitors.

Francesco Beretta also makes an original claim regarding the Church's sensitivity to controversial topics in natural philosophy. Beretta explores the connections between the Church's hard line against Aristotelian denials of the immortality of the soul, and Galileo's trial for his support for heliocentrism. The similarities between the Church's stances on these two issues add another layer of context aiding our understanding of the Church's motivations and aims in the Galileo affair.

Part Three, focusing on Copernican debates after 1633, serves as the book's epilogue. John Heilbron shows that despite the ban on Copernicanism and the condemnation of Galileo, the second half of the seventeenth century still saw an on-going debate, especially amongst Jesuit astronomers

and Italy's physico-mathematicians, on the validity of heliocentricism when compared to scriptural passages.

But the last word in this collection of essays belongs to Michael Sharratt and George Coyne, S.J, who turn the focus back onto the Galileo Commission and Pope John Paul II's adjudication in 1992. While Sharratt laments the Church's inability to create room to manoeuvre when taking its stance on matters to do with natural philosophy, Coyne, interestingly one of the principal researchers on the Galileo Commission, asks what the Commission's results mean for the future of science and religion. Issues raised by both these authors should be of great interest to scholars studying the complexities of the relationship between science and religion since the seventeenth century. However, once again these chapters do not provide much original insight into the Galileo affair.

Amongst the many academic and popular books recently published about the different facets of Galileo's life, it is difficult to find thorough contextual analyses of the Pisan philosopher's works. This collection of essays certainly goes some way towards providing an intellectual and political context for Galileo's confrontation with the Church between the critical years of 1616 and 1633. In the process, it eloquently responds to the shortcomings in the Galileo Commission. But it misses the opportunity to explore the complex relationship during this period between the mixed mathematical sciences (including astronomy), natural philosophy and theology, and how Galileo shaped his claims within these competing disciplines in his attempt to gain credibility and support from theologians, his Medici patrons, and fellow astronomers in other parts of Europe. Nevertheless, this updated synthesis of new sources and new interpretations of the Galileo affair which have come to light in the past ten to fifteen years, is still an important contribution to our understanding of this episode in the history of early modern science.

Massimo Turatto, Stefano Benetti, Luca Zampieri, William Shea, eds. *1604-2004: Supernovae as Cosmological Lighthouses*. Astronomical Society of the Pacific Conference Series, Vol. 342. San Francisco: ASP, 2005. 512 pp. \$77.00. Review by ALESSANDRO GIOSTRA, ACCADEMIA GEORGICA, TREIA.