experimental science" (p. 89). After Lavoisier's death on 8 May 1794, his widow Marie-Anne Paulze tried to keep the collection intact, "as a memorial to her husband and the chemical revolution" (p. 95). In the nineteenth century, one of Paulze's heirs, Léon de Chazelles, donated an important part of the collection to the Paris Academy of Sciences, which then decided to transfer the instruments to the Conservatoire in 1864. Despite the failure of the project of a museum of French chemistry around 1900, some relevant initiatives concerning Lavoisier's collection were carried out in the twentieth century. One is the Lavoisier exhibition at the Palais de la découverte in Paris during the German occupation (November 1943-January 1944). Beretta emphasizes the political value of this event: "the Lavoisier celebrations became an emblem of the resistance to the German occupation. Lavoisier's chemical revolution trumped Georg Ernst Stahl's phlogiston theory, and this was an indisputable historical evidence" (p. 109). After World War II, Pierre-Samuel Dupont, the president of the Dupont chemical company, asked McKie to locate and reassemble the Lavoisier collection. Many instruments were found and eventually donated to the Conservatoire, to complete the collection already present there. However, other important parts of the Lavoisier collection, especially manuscripts, were scattered in various places around the world. Regarding the holdings of the Arts et métiers, Beretta stresses that many instruments "were left in the storage of the Musée des arts et métiers and progressively decayed" (p. 113). Beretta and Brenni's monumental work is thus an attempt to reignite interest in this collection, which, as Robert G.W. Anderson points out in the Foreword, "is not the only surviving collection of eighteenth-century chemical apparatus and instrumentation, but it is without question the most important" (p. xi).

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Ileana Chinnici (ed.), 2022. *Appunti di un gesuita scienziato. I diari di viaggio di Angelo Secchi S.J. (1860-1875)*, Firenze, Olschki, xxii+152 pp., with 40 illustrations.

Angelo Secchi S.J. (1818-1878) is among the important protagonists of nineteenth-century Italian and international science. Beginning in the early 1990s, several studies and editions of selected portions of his vast correspondence have started to consolidate this assessment from a modern historical perspective. His research – also encompassing physics, meteorology and geodesy – was particularly relevant in the areas of solar physics and stellar spectroscopy: new approaches which brought physics and chemistry entirely into the heavens, as opposed to the previous traditional restriction to positional astronomy and celestial mechanics, requiring only precise determination of the positions of celestial bodies and calculation of their motions with Newton's universal gravitation. On account of

his attitude and results in astronomy, Secchi is certainly to be placed among the fathers of modern astrophysics.

The recent bicentenary of Secchi's birth has prompted further inquiries focusing on his interesting historical position as international prominent scientist and, at the same time, as a Jesuit priest working in a complex political and religious context, characterized by the confrontation between the two extreme positions of intransigent clericalism and radical laicism that emerged during the long and crucial pontificate of Pius IX.

Ileana Chinnici has been devoting several studies to Secchi well before the bicentenary, both as authoress and editor. This solid background has endowed her with the expertise for editing the present selected edition of manuscript diaries and notes by Secchi, documenting five scientific travels, four abroad and one in Italy, he made between 1860 and 1875. The Italian travel is grouped with the others on account of its particular interest, being the last of Secchi's life. In a sense, this too counted as a tour abroad, as he journeyed in the newly-established *Regno d'Italia*, which in 1870 had put an end to the century-long political power of the Papal State.

One purpose of Chinnici's new publication is to work as a sort of probe for showing the potentialities and richness of Secchi's archival materials, now mainly preserved in the two Roman archives of *INAF-Osservatorio Astronomico di Roma* and of the *Pontificia Università Gregoriana*. The introduction provides useful information about the constitution and contents of these two principal collections of Secchi's papers. The book also appears intended to encourage scholars to join GATE (Gregorian Archives Texts Edition), an online cooperative editing venture, to publish other manuscripts left by the Jesuit scientist.

The manifest interest of Secchi's international travels gained them publication long ago, in a series of articles issued, between 1933 and 1944, by Giuseppe Castellani S.J. in the Jesuit journal *Civiltà Cattolica*. This edition, Chinnici argues, is defective in various respects: scarcely annotated, containing transcription errors and both omissions and importations of text. She offers now a diplomatic transcription that restores the original texts and assists the reader with informative annotations about the people, situations and institutions involved. The wealth of footnotes and the rich final index of names testify at once to the editorial diligence and the breadth of personal contacts Secchi made during his travels, ranging from some minor and occasional encounters to many of the top scholars, instrument makers and scientific institutions.

Secchi's accounts take the reader into many central scientific and political events of the time, in which he was often significantly involved as a respected practicing scientist and as a variously perceived symbol of the Catholic church. Unconstrained by censorship, his texts provide precious insights and materials for historical investigation. Secchi's impressions, comments, abrupt reactions of like or dislike – the latter sometimes bursting into sharp verdicts or colourful epithets – shed light on many significant scientific and political episodes from the revealing perspective of the backstage.

On various occasions we also manage to glimpse into the workshops of Secchi's scientific research and construction of the written texts, from the initial quick annotations, to the diaries, to the final published papers. As an example of the first processing step, Chinnici offers both the sketchy notes and the more elaborate diary Secchi devoted to the total solar eclipse of July 18, 1860, observed from Spain, where he joined the expedition organized by the local government to investigate the phenomenon. Secchi's texts reveal a lively intertwining of perceptions, thoughts and selection of targets. The dip of a sun spot was exciting but the required chronometric precision was not available and so he stopped observing it and focused on the main goal, which was "especially the physical study of the sun." The reality of the protuberances and solar corona was still an open question. If for the solar protuberances he leaned towards reality because they were "exceedingly flame-shaped," about the second he balked, concluding that "the decision will depend on how the corona looks from elsewhere." Comparing Secchi's photos of the eclipse with his own taken from another station in Spain, the astronomer Warren de la Rue used this method to add, in 1863, a final point for the reality of solar protuberances.

The second edited diary is particularly full of scientific themes and encounters. Secchi set out to contribute, as frontrunner of papal science, to the *Exposition Universelle* held in Paris in 1867, without missing the opportunity to add a scientific visit to England, plus return journey through Switzerland. The working meteorograph he put on display won one of the main prizes. The awarding jury included "Delarue, Lissajous, De la Rive, Magnus, Jacobi, Foucault," who "came as Judges, stayed as friends, left as pupils." In the diary he pondered that the prize was a "triumph" involving more than his person: "long live religion and the cassock, which today was crowned more than myself." Remarkable steps during this travel were his encounters with Leverrier and Herschel to show them a photo of Orion nebula he brought from the *Collegio Romano*. Comparing the Italian with the English photos, he and Herschel concluded that "something has changed," implying that there was evolution in the skies. The British detour included visits to London (Kew, Greenwich, Kensington, British Museum) and Cambridge. The way back through Switzerland stimulated many naturalistic reflections.

In 1870 and 1872, Secchi joined the two international conferences held in Paris for establishing the standard metre. The diaries he kept are rather different. The 1870 account focuses on the scientific side and is very useful to understand various important issues and decisions taken by the appointed committees, among which the reasons to discard the metre preserved at the *Conservatoire des Arts et Métiers* and to choose as a yardstick the specimen kept at the *Archives Nationales*. In 1872 a complex situation put him and the Italian delegation at clash; thus, the diary mainly focuses on the political and diplomatic aspects. Politics had already come to the forefront in another 1870 diary, devoted to the travel he made to join the expedition to Sicily organized by the Italian government for the total solar eclipse of December 22. The situation was distressing because the new *Regno d'Italia* had recently taken Rome from the Pope. Such conditions prompted Secchi to blame a

number of evil qualities he sensed in the "liberals." On the other hand, his initiatives, or perception of them, ended up generating manoeuvres and a final "furious anonymous letter" from some radical, which Gaetano Cacciatore, director of the astronomical observatory of Palermo, thought he deserved because in practice he had become "the centre of all the reactionaries of the city."

In 1875 Secchi returned to Sicily on occasion of the national congress of Italian scientists in Palermo. Now the clericalists voiced against him for joining "that hubbub congress of Voltaireans" hosting Ernest Renan, who denied Jesus' divinity. The main reason for Secchi to participate was however to defend his observatory in Rome, amidst the many debates of the time about the reorganization of the new national network of astronomical observatories. Perhaps he now felt definitely discouraged but copious fruits had already ensued and were to follow from his work. One main outcome had been the foundation, with Pietro Tacchini in 1871, of the *Società degli Spettroscopisti Italiani*, the first scientific society specifically aimed at astrophysical studies and progenitor of today's *Società Astronomica Italiana*.

Chinnici's edition provides Secchi's original drawings together with additional archival images and is therefore useful in many respects. We can for instance see how Secchi represented the eclipse of 1860 and compare this with some of the photos he took. Or imagine the majestic echoing sound among the mountains of the alphorn he sketched when reasoning about the phenomenon but also acutely observing that, by playing this kind of natural concert for tourists, the Swiss had managed to turn "the spectacle of nature" into "a source of industry."

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Carolyn Merchant, 2022. *La morte della natura: Donne, ecologia e rivoluzione scientifica*, edited by Paolo Savoia, Milano, Editrice Bibliografica, 496 pp.

The latest Italian edition, for Bibliografica Editrice, of *The Death of Nature. Women Ecology and the Scientific Revolution* by the historian of science and ecofeminist philosopher Carolyn Merchant appears about forty years after the work's first Italian translation, in 1988, by Libero Sosio for Garzanti. It is a timely instrument for rethinking our present.

Merchant's work is somehow unsettling, prophetic, intriguing, and in some respects still relevant today. The book brings together three lines of inquiry: a) the seventeenth-century birth of the mechanical view of nature; b) its reflection on the tacit assumptions which make up the idea of woman-matrix and prodigal nature with the dual dominance of both as inexhaustible resources; and c) the technological Prometheans as man's (males)' unquestioned power over the world and the resulting degradation of living environments. Merchant's accurate and