

the being censored by Tycho's heirs. The amount of information in this chapter is so high that a useful summary would be almost as long as the chapter itself.

The tradition of combining poetry (in the broadest sense) and science continued for a while, for example with Goethe, but is essentially extinct today, perhaps the closest approach being made by some popular-science writers who go beyond the merely didactic. Max Tegmark's (1996) technical-paper abstract written in couplets deserves special mention here. While there are modern-day scientists who also write poetry (and poets who also do science), they are almost always two separate endeavours.

It is impossible to summarize meaningfully a work of this length, but I hope that I have indicated some of the main points; those who are interested (and can read German) will find a huge amount of information. Thus, 1585 footnotes (containing additional information, references (sometimes accompanied by brief quotations), or the originals of translated passages in the main text, bear witness to the amount of scholarly detail (in fact, the footnote texts make up 20–25% of the main text), as does the 78-page Bibliography—which is split into the following sections: philosophy, science and astronomy; muses; Dante; and Kepler. Each section also is split into primary and secondary literature.

The last numbered page is 648, but followed by 16 pages of colour plates (though printed on normal paper, like the rest of the book). Seventy-nine black-and-white figures are scattered throughout the book; they are repeated at smaller scale in a list after the main text with more detailed captions, and some are repeated at the end of the book at larger scale and in colour. Apart from a table listing the correspondence between Kepler and David Fabricius, the appendices contain three poems by Kepler with German translations (not by Rimpau), as well as notes. The only thing missing is an Index.

Despite the complex nature of the work, it reads well and contains fewer typos and questionable style decisions than most broadly similar books. Although it contains many references for those who want more detail, it is nevertheless self-contained enough to be understood even by those with little background in the subject matter. Although the emphasis is on the juxtaposition of Dante and Kepler, the book could be read for either alone or even just the introductory material

on ancient world systems. The price is very reasonable for a book of such length, quality (both in terms of content and in terms of the physical product), and presumably limited readership. Apart from professional historians of science, those looking for detailed yet accessible information on the topics covered should be interested in this book.

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**Poésie et Astronomie: de l'Antiquité au Romantisme**, edited by Florian Barrière and Caroline Bertonèche. (Grenoble, UGA Éditions, 2020). Pp. 209. ISBN 978-2-37747-205-5, 140 × 215 mm, €25.00.

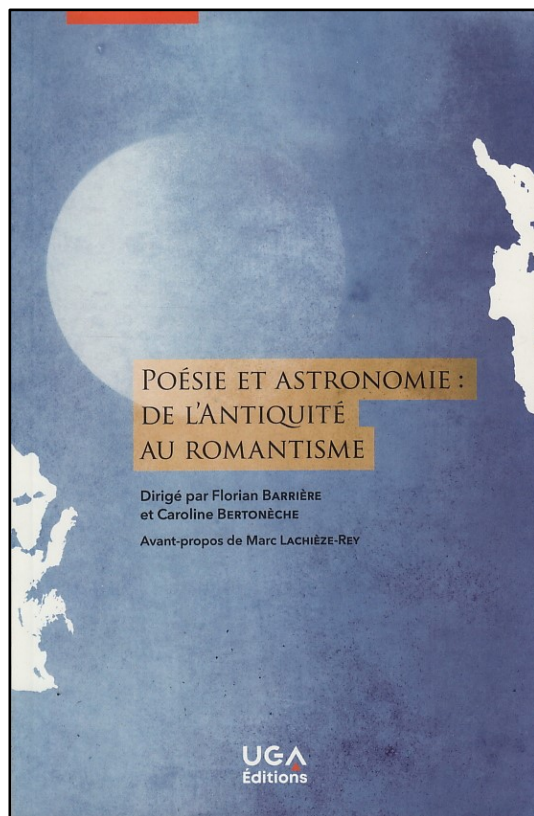
This book, in French, is devoted to the relations between poetry and astronomy. Artists—poets in particular—have at all times been inspired by the contemplation of the sky and by astronomical events. This was especially true in Antiquity, as recalled in the first part of the book; then, the various celestial bodies were often considered as incarnations of mythical or divine beings.

The first chapter, by Jean Trinquier, discusses the representation of constellations. Amongst the 48 constellations of the *Almagest*, 25 are animals, 13 personages and 10 objects. The Greek poet Aratos (ca. 315–245 BC), in his *Phaenomena*, describes most of these constellations, their motion (diurnal and perhaps other!) and the associated myths; note that the date of the poem is erroneously quoted as AD, not BC. There are also discussions of the meaning of celestial events in poems of Ovid and Seneca, and finally in Manilius' astrological/astronomical poem *Astronomica* (first century AD). For the

latter, Trinquier discusses the example of Aries how this constellation must be considered also as an animal, real or mystical throughout the Golden Fleece myth, in order to determine its influence on humans.

Lucan (39–65 AD) was another Roman poet interested in astronomy, as discussed by Florian Barrière. In several passages of his *Bellum civile*, he describes solar and lunar eclipses, and with much detail and some accuracy navigation using the stars or constellations, in particular the two Ursae, Polaris, Bootes, and Canopus. It seems that he did not use his own observations, if any, but rather relied on texts and reports by various authors that he did not always completely understand.

The next chapter, by Florian Audureau, recalls that sailors of Antiquity could use the



position of the two Ursæ, that are always visible, and the rise of various stars or groups like the Pleiades, Orion or zodiacal constellations to obtain direction and time. However, Ursa Majoris occupied a special place, as it was supposed to embody the divine presence and to command the motion of the sky. These ideas can be found in many Egyptian, Greek and Roman texts and poems, as well as an identification of this constellation with the god Seth-Typhon.

The second part of the book is devoted to the interest for celestial phenomena in English literature, poetry and theater of the seventeenth and eighteenth centuries. Indeed, as recalled by Sophie Chiari, they are of importance in Shakespeare's theater, in particular in *Romeo and Juliet* whose tragic story was supposed to be driven by celestial phenomena that provoked earthquakes, heat waves, etc. The death of Desdemone in *Othello* was announced by "a huge eclipse / Of sun and moon", and that of Anthony in *Anthony and Cleopatra* by shooting stars and an eclipse: "Alack, our terrene moon / Is now eclipsed, and it portends alone / The fall of Anthony." According to the author, for Shakespeare the celestial bodies influence human behavior and provoke catastrophes, in a determinist vision.

The following article, by Pierre Carboni, discusses the 'scientific' poetry of the Scot James Thomson (1700–1748), who commented in a long *Poem Sacred to the Memory of Sir Isaac Newton* of 1727 Newton's astronomical work and some of his work on light. He was impressed by the celestial harmony revealed by Newton's laws. This was rather new at the time, and while *Newton Demands the Muse* (Nicholson, 1946), the Muse demanded Newton as well (Thomson).

In the third part of the book, it is shown that the antique model, from Homer to Lucretius, was used by poets of the Romantic era to comment on the new astronomical discoveries (Uranus, Neptune, etc.), and more generally on discoveries in biology and geology. And the scientists appreciated this! This theme is developed in the article by Caroline Bertonèche. She recalls that, in his *Original Theory or New Hypothesis of the Universe* of 1750, Thomas Wright pays homage to poets, without whom we would ignore "... a multitude of things brought to light by the late discoveries in Astronomy." An example of those poets was John Keats (1795–1821).

Then Caroline Dauphin describes the relations between William Herschel and the poet, botanist and physician Erasmus Darwin (1731–1802), grand-father of Charles Darwin. Herschel compared the study of stars and star clusters to that of plants or animals. In the introduction to his second catalogue of stars (1791), he writes:

Why should we be less inquisitive than the natural philosopher, who sometimes, even from an inconsiderable number of specimens of a

plant, or an animal, is enabled to present us with the history of its rise, progress, and decay? Let us then compare together, and class some of these numerous sidereal groups, that we may trace the operations of natural causes as far as we can perceive their agency.

And further:

Perhaps, by placing before us the very extensive and varied collection of clusters and nebulae furnished by my catalogues, we may be able to trace the progress of its operation [of the constructing cause], in the great laboratory of the Universe.

The idea of evolution is clearly there, inspired by Lucretius. In his poem *The Botanic Garden* (1792, illustrated by William Blake who himself wrote similar poems), Darwin jumps on it, and imagines the beginning of the Universe as a sort of Big Bang, very far from the Christian Genesis:

... And the mass starts into a million  
suns; / Earths round each sun with  
quick explosions burst, / And  
second planets issue from the first.

Similarly, Darwin imagines the end of the Universe, a kind of Big Crunch, and even proposes, probably inspired by the theories of the geologist James Hutton, a cyclical Universe:

Till o'er the wreck, emerging from  
the storm, / Immortal NATURE lifts  
her changeful form / Mounts from  
her funeral pyre on wings of flame, /  
And soars and shines, another and  
the same.

Elsa Courant then describes the interest of Romantic poets in the starry night: it even became a *cliché* throughout the second half of the eighteenth century and almost the totality of the following century. This can be seen through the poems of Edward Young in England and Lamartine and others in France, and also in music through the numerous *nocturnes* of Field, Chopin, etc. Sometimes, poets like Musset made parodies of the theme and especially of its erotic side ...

To summarize, this is an interesting book, which gathers many facts and points of view on the history of the relations between astronomy and poetry from Antiquity to the Romantic era, with numerous citations of poems. It should be of interest not only to specialists, scholars and students, but also to

a wider French-speaking public. However, as its understanding requires an excellent knowledge of the French language, I doubt that it can reach an international audience: for this, a translation into English would be welcome.

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***Celestial Aspirations: Classical Impulses in British Poetry and Art*, by Philip Hardie. (Princeton, Princeton University Press, 2022). Pp. xi + 361. ISBN 978-0-691-19786-9 (hardback), 160 × 240 mm, US\$48.**

This wide-ranging study of the infusion of Classical influences in British poetry and art can best be understood in a phrase author Philip Hardie uses on page 225: "... a philosophical tour of the universe."

Hardie (Fellow of Trinity College, Cambridge) is specifically using that phrase in an examination of physico-theological poems. This serves to highlight both a strength and weakness of Hardie's book. He looks at such a poem by Sir Richard Blackmore, entitled *The Creation*. It was, he writes,

... acclaimed in its time as the English *De rerum natura* [by Lucretius], receiving high praise from John Dennis, Joseph Addison and Samuel Johnson. (page 199).

Hardie offers two quotes from the poem; in the first he relates it to a 'Miltonic flight', in the second to a 'Lucretian flight,' as Lucretius' Epicurus was the first to undertake a tour of the Universe. Since this book is about the impulses given to British poetry by ancient authors, highlighting the influence of Milton seems misplaced. His entire analysis of the extremely important *Creation* poem of 1712 encompasses just a single paragraph, far too condensed for a reader unfamiliar with Blackmore's work to get a proper understanding of it. For this, I invite the reader to consult a superb study by [Burgio \(2023\)](#).

The late Augustan writer Manilius, who created the numerical stellar magnitude system ([Cunningham, 2020](#)), uses the image of the mind's sublime flight through the heavens:

Lucretius is Manilius's prime model for his sky-wandering, but the truths that Manilius brings back for his read-