BOOK REVIEW

The Latin of Science. By MARCELO EPSTEIN AND RUTH SPIVAK. Mundelein, IL: Bolchazy-Carducci Publishers, 2019. Pp. xxxii + 395. Paperback, \$29.00. ISBN: 978-0-86516-860-2.

 \P his innovative work is based on a class taught for over twenty years at the University of Calgary and offers a selection of scientific texts (with facsimiles of incunabulae of the passages), commentaries aimed at an introductory/intermediate Latin student and a Latin grammar and glossary. The course itself pairs a semester-long introduction to the grammar and syntax of Latin with a semester of Latin scientific readings covering topics such as optics, astronomy and mathematics from a diverse group of authors (e.g. Seneca, Alhazen, Oresme, Newton). For Latin students interested in STEM fields or for professors who want to introduce such material to their introductory and intermediate level students, this book has much to recommend it. I certainly was unfamiliar with the psychological depth of Maimonides, who analyzes depression with the same complexity and descriptive power as Seneca in his de Ira, and the careful observation of prisms found in Newton's Lectiones Opticae. The concise historical survey of scientific authors that opens the work provides a wealth of information, and Epstein and Spivak's introductions to each author are strong. The excerpts are generally interesting, and, at times, quite gripping; I especially enjoyed Vitruvius' explanations of Caryatids, Harvey's excitement about the workings of the heart and Galvani's Frankenstein-esque description of muscular movements via electricity. But, while I appreciated the texts themselves and much of the commentary, I believe the work is stuck between two disparate genres – textbook and commentary – and it sits uneasily in this position.

The authors begin with a note on "How to Use This Book" and it immediately shows the problems with this hybrid text. While noting that certain authors are easier than others, and thus spurring the student to begin with Isidore of Seville or Leibniz, it is surely the case that the student will need substantial Latin to get through the opening sentence of Book 4 of Isidore (Medicina est quae corporis vel

tuetur vel restaurat salutem cuius materia versatur in morbis et vulneribus). The authors continue with some "Helpful Hints for Translation" including advice like, "Do not panic!...Do not start translating words sequentially ... Pay great attention to cases" (xviii), before brief comments on the subjunctive mood and indirect speech. This would seem to indicate some familiarity with Latin but, if students should read the grammar first, then why not place it first in the text instead of after the readings? Indeed, the model reader for this text is rather hard to discern. If it is an introductory student, problems arise immediately: the lemmata are not keyed to the 80page grammar, so it is difficult to know how students would use it efficiently and effectively when they find stumbling blocks in the texts (nor is there an index that could help point a student to their explanations of concepts such as the passive periphrastic or the ablative absolute). While the authors encourage students to read the facsimiles of early editions provided with each reading, at times their legibility and size make it difficult, and one finds some odd forms that make it into the transcriptions (e.g. navigij for navigii and caussa for causa are both found in the first reading). In my opinion, it would have been preferable to key the commentary to an accepted grammar such as Allen and Greenough and excise the grammar section of the text. Because the grammar "covers most, if not all, of the fundamental tools necessary to analyze and translate a text" (xii, my emphasis), why not simply beefup the grammatical/syntactical aspects of the commentary that speak to neo-Latin or scientific terminology, but suggest a traditional textbook? The commentary itself is uneven in its help and explanations. For example, a passage of Francis Bacon references Heraclitus, but Heraclitus is given no note,³ whereas a line of Vitruvius (umbram non rem persecuti videntur) leads to comparanda from Ben Jonson, Wordsworth, Burke, Shakespeare, Psalm 102:11 and more! Most grammatical and syntactical difficulties are well noted, although the explanations are sometimes

¹ The only note on this line in their commentary is "**tuetur: tueor**, **tueri**, **tutus** *sum to look at*, *to look after*, *to protect*." One could imagine an introductory student wondering about the antecedent of *cuius*, for instance. In a similar vein, while the Latin of Leibniz' passage may be relatively "simple," the infinitesimal calculus undergirding it is rather difficult (a note speaks how "the differential of a product of two objects x and y abides by what we now call Leibniz' rule, namely, d(xy) = x(dy) + (dx)y. He remarks that the symbols x, y are themselves immaterial").

² Their "Compendium of Latin Grammar" is in itself a fine overview, but it simply does not have the depth and detail of an introductory textbook. Some sections, such as "Building Latin Vocabulary for Free!" (270 about the derivation of English nouns from Latin nouns) and their summary of the indicative active mood (284-85), are very helpful and handy for students.

³ Especially shocking considering the general penchant for science of Heraclitus and many of his fellow pre-Socratic philosophers.

short (e.g. they often note if a word is ablative but do not describe the use of the ablative), and at times they betray their origins as a teaching-text (e.g. a note on page 170 reads "generet: subjunctive. Why?" and on page 220 we find "indivisibili: Recall that adjectives of the third declension form the ablative in -i"). While they give sporadic references to further reading, it would benefit the reader to know that there have been a bevy of recent books on ancient science in the last couple of years that cover many of the same topics. The website does offer additional exercises, electronic versions of the images, and an answer key to the exercises to aid the reader's progress (the publisher informed me that a companion volume is also in the works). Might I suggest that Bolchazy-Carducci add further links on the website to the scientific content and contexts?

In conclusion, *The Latin of Science* sheds light on the importance of Latin as the very language of science from antiquity to the 19th century. This volume provides readings that are seldom seen in Latin language syllabi, and the authors make a strong case for their future inclusion. Although some aspects of this textbook are problematic, *The Latin of Science* certainly made this reader want to include selections of Latin scientific literature in my future classes as a way to speak to those students who are more interested in the vascular system than Vergil.

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⁴E.g. The Oxford Handbook of Science and Medicine in the Classical World (eds. P.T. Keyser and J. Scarborough, 2018), A Companion to Science, Technology, and Medicine in Ancient Greece and Rome (ed. G.L. Irby, 2016), The Cambridge History of Science: Volume 1, Ancient Science (eds. A. Jones and L. Taub, 2018).