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*Domninus of Larissa, Encheiridion and Spurious Works. Introduction, Critical Text, English Translation, and Commentary* by Peter Riedlberger

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Domninus of Larissa, a contemporary of Proclus, the great head of the Platonist school of Athens in Late Antiquity (412–485), has enjoyed a somewhat intriguing, if marginal, existence in the history of philosophy and of mathematics as a fellow-student of Proclus—their teacher was Syrianus, Proclus' predecessor as head of the school—whose Platonism would be 'purged' in a book by Proclus, and as the author of a short manual, the *Encheiridion*, where, according to the great 19th-century historian of science, Paul Tannery, we find a reaction to the arithmetic of Nicomachus of Gerasa and a return to the rigor of Euclid. Tannery's view has since been repeated and indeed embroidered on, reaching almost dramatic dimensions in the only book devoted in particular to Domninus [see [Romano 2000](#)].<sup>1</sup> However, the present monograph by Peter Riedlberger shows how ill-founded the received view is by means of a comprehensive presentation and detailed analysis of the evidence concerning Domninus. Riedlberger provides us here, I believe, with the most thorough and reliable examination of the subject as a whole.

In the introductory part of his book, Riedlberger first collects and assesses all of the evidence that we have concerning Domninus' life, presenting this in the context of a description of the school of Athens in the fifth century, an account of the teaching of mathematics which, in this period, was part of the philosophical curriculum, and a full examination of what we know about Domninus' life (his family background in Syria, his studies in Athens,

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<sup>1</sup> Riedlberger [13–14] shows how almost all references to Domninus in modern works repeat Tannery's judgement, an edifying example of how scholars repeat each other and rarely take the trouble to look for themselves at the primary sources. Riedlberger addresses [Romano 2000](#) on page 16.

his conflict with Proclus and other anecdotes, his later life). In this introductory part, Riedlberger not only demonstrates a very good knowledge of the secondary literature, he also checks, and sometimes translates anew, the ancient sources for what we know about Domninus. However, he does not always himself escape the influence of the judgements of earlier scholars. Thus, he repeats Dodds' view of the philosophy of Late Antiquity as veering to the 'irrational' [28] and depends on Lewy for the question of theurgy. The considerable growth in research in more recent times allows for a more differentiated view of these themes. Of more importance, perhaps, to the subject of Domninus is the account given by the Patriarch Photius (ninth century) of Damascius' *Philosophical History* (or *Life of Isidore*), one of the most important ancient sources for our knowledge of Domninus: Riedlberger [57, with 26] accepts too readily the Patriarch's hostile and biased account of Damascius' work [on this, see O'Meara 2006, 88].

The works attributed to Domninus are surveyed next. Riedlberger provides a full demonstration that two manuscripts of a commentary by Domninus on Aristotle's *Sophistical Refutations* survived in the Renaissance period but have since been lost. This evidence is important in that it shows that Domninus worked on Aristotelian logic as well as on mathematics. And we know from Proclus that Domninus suggested interpretations of Plato's *Timaeus*. This shows, as Riedlberger indicates, that Domninus was not a 'pure' mathematician in the sense that he had no interest in the philosophical disciplines also taught in the school of Athens, but that he had rather a profile corresponding to that of a member of that school. Riedlberger also discusses an *Elements of Arithmetic* to which Domninus refers in his *Encheiridion* but which is not extant. Domninus' indications as to the content of this work show that a major impulse for the study of mathematics was the need to understand better the difficult mathematical passages to be read in Plato (in particular in the *Republic* and *Timaeus*), a need to which Domninus, Proclus and, before them, other Platonists such as Theon of Smyrna [see now Petrucci 2012] sought to respond.

The *Encheiridion*, the only work of Domninus that survives, is a very short summary (seven pages of Greek in Riedlberger's edition) of basic notions of ancient number theory. Riedlberger shows that there is no reason to doubt the attribution of the work to Domninus and proposes an interesting and plausible explanation of its title, «ἐγχειρίδιον ἀριθμητικῆς εἰσαγωγῆς»,

as referring in fact to Nicomachus of Gerasa's *Arithmetical Introduction*. The title should thus be read 'Encheiridion of [Nicomachus'] *Arithmetical Introduction*'.<sup>2</sup> Ancient *Encheiridia*, short manuals, could be produced on the basis of a larger text, a well known example of this being the *Encheiridion* of Epictetus (a manual familiar to late antique Platonists) which Arrian produced on the basis of the *Discourses* of Epictetus. Riedlberger's interpretation of the title has, of course, further implications: far from being a rejection of Nicomachus in favour of Euclid (as Tannery's story has it), Domninus is in fact basing his work on Nicomachus' manual. Riedlberger compares Domninus with Nicomachus in detail [74–75, and in his commentary on the text], showing that Domninus largely follows Nicomachus and uses him, while sometimes using Euclid, who was also read in the school of Athens. Domninus is not, then, a maverick mathematician who rejected the mediocre arithmetic of Nicomachus so admired by Proclus and the other members of the school in favor of the scientific Euclid. These modern evaluations, Riedlberger shows, are inappropriate and unfounded. But what can the *Encheiridion* tell us about Domninus as a mathematician? Riedlberger poses this question and answers:

Virtually nothing, actually. The few original traits listed above do not suffice to single out Domninus as an unusual arithmetician, and if so bare a list of definitions as the *Encheiridion* contains little metaphysical speculation, this does not need to be explained by the 'scientific' stance of the author, but could simply be due to its brevity.<sup>3</sup> [77]

Riedlberger then goes on to survey works sometimes associated with Domninus but for which there are no good grounds for attributing them to him. In one manuscript (Parisinus graecus 2531 = S), the *Encheiridion* is followed by a short work *How to Remove a Ratio from a Ratio*. This seems to be the reason why the latter work came to be associated with Domninus; but, as Riedlberger shows [79], this does not justify an attribution of the work to him. However, Riedlberger suggests that the work may come from a *milieu* similar to that of the *Encheiridion* and may date to the 5th/6th century

<sup>2</sup> The English version of the title given by Riedlberger ('*Encheiridion* of "Arithmetical Introduction"') will hardly do: I think a definite article is required ('*Encheiridion* of the "Arithmetical Introduction"') or, as I suggest above, '[Nicomachus]' could be inserted. The Greek title of the *Encheiridion* might also require the insertion of a definite article (« τῆς »), if it does indeed refer to Nicomachus' book.

<sup>3</sup> I came myself to a similar conclusion in O'Meara 1989, 145.

[82-83]. In manuscript S, the work *How to Remove a Ratio from a Ratio* is followed in turn by anonymous scholia on Nicomachus' *Arithmetical Introduction*. Here also, Riedlberger finds no grounds for attributing the scholia to Domninus [83], while locating them again in the same *milieu* as that of the previous two texts. However, as he notes, so much of the corpus of ancient scholia on Nicomachus remains unpublished that it is not possible at present to locate these scholia more precisely. Finally, Riedlberger discusses certain *Summaries of the Principles of Optics* by a 'Damianus of Heliodorus of Larissa'. He shows that there is no good reason for identifying this 'Damianus' as Domninus [83]. 'Of Heliodorus' could be a patronymic: this is not as rare as Riedlberger thinks in late Antiquity. To his example of Ammonius, son 'of Hermias' we could add Syrianus, son 'of Philoxenos'. Although rejecting an attribution of *How to Remove a Ratio from a Ratio* and the anonymous scholia on Nicomachus to Domninus, Riedlberger undertakes to provide an edition and translation of these texts<sup>4</sup> along with that of the *Encheiridion*, since a new critical edition of these texts is relevant to the question of Domninus. The edition of the anonymous scholia is the first ever. However, Riedlberger does not include the *Summaries of the Principles of Optics*, since an edition of this is due to be published by Fabio Acerbi.

A critical edition of Domninus' *Encheiridion*, of the anonymous *How to Remove a Ratio from a Ratio*, and scholia to Nicomachus follows. Riedlberger gives a detailed description of the manuscripts, of which two have been added by him to those already known for the text *How to Remove a Ratio from a Ratio*. He has examined the manuscripts and taken note of the corrections, conjectures (and errors!) of previous editors, reporting fully on all of this in the *apparatus criticus*. I believe that this work has been done thoroughly and carefully, and that it can be used as a basis for future work on Domninus. The English translation also seems to be reliable on the whole, clear, and accurate. On some points there may be disagreement or difficulty. For example, it might be wiser not to give the term «θεωρία» in English (transliterated) as 'theory' (for example at 110.11, translated as 'for the myriads [10,000's] have the same theory'), since this might be a source of confusion. Riedlberger relates the Greek work to its verb, which he translates as 'to consider' [153–154]. However, the word can have a stronger meaning,

<sup>4</sup> They are not printed by Romano [2000], who provides just the Greek text of the *Encheiridion* together with an Italian translation.

that of knowledge or doctrine, and would mean here ‘the same doctrine concerns the myriads’. It would have been better to translate «φάσιν» at 116.9, 21 and 28 as ‘they say’ (rather than ‘is said’), since Domninus is probably referring to the ‘ancients’ (Plato, Aristotle, Pythagoreans) who start to figure more prominently at the end of the *Encheiridion*. «παραδῶσομεν» at 120.18 probably has more the sense of ‘teaching’ than of ‘presenting’.

However these are minor points. The commentary which follows the edited texts is extremely developed, sometimes a bit verbosely, and provides the non-specialist reader with the necessary information about ancient number theory along with detailed comparisons with Nicomachus, Euclid, Theon of Smyrna, and other ancient mathematicians which confirm Riedlberger’s general assessment of Domninus’ work.

The book ends with a full bibliography, indexes of texts and of Greek terms, and a general index. All in all, Riedlberger has provided us with a very complete and thorough basis for dealing with Domninus. The quality of his work is in general very good and it will also be of great use to those who wish to work on the teaching of elementary arithmetic in the philosophical schools of Late Antiquity. The book is beautifully produced and is a pleasure to see and to read.

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