

PROCLUS

Commentary on Plato's Timaeus

VOLUME IV

Book 3, part II

Proclus on the World Soul

TRANSLATED WITH AN
INTRODUCTION AND NOTES BY

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Acknowledgements

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In spite of all this help, I am all too aware that, when it comes to ancient mathematics and harmonic theory, I am operating at or beyond the limit of my competence. This is highly specialised subject matter and I'm no expert. (Festugière's translation of this portion of Proclus' text has notes from Charles Mugler.)¹ Indeed, I don't have much of a head for quantitative questions even when they are framed in a perspicuous modern notation, much less in Proclus' ancient conventions for writing fractions or expressing different functions. I certainly have not provided a commentary on the more technical aspects of Proclus' discussion that would exhaust its interest. My limited acquaintance with ancient harmonics suggests to me that there are more interesting things to be said about Proclus' text. I am very mindful of the fact that I don't have the expertise to investigate these matters. My modest hope is that I will have made available a relatively accurate translation that will allow others with the relevant background to carry the investigation forward.

This book is dedicated to someone whose contribution toward this volume is rather less direct than anyone named thus far. My maternal grandmother, Iva Gildow Knight, was born on the family farm in the foothills of the Appalachians and educated at Crow School – a one room educational institution at the crest of Crum Ridge in

¹ Festugière (1966-68), v. 3, 211, ff.

Noble County, Ohio. Though she excelled in her studies, the high school in Caldwell was too far away to make the trip on a daily basis and the family had no money for her to live away from home. Her formal education thus ended with grade 8, though her autodidactic journey continues to this day. Her enthusiasm for the written word, and especially for poetry, contributed to my childhood love of reading. My attempts to turn Proclus' tortured sentence structure into readable English are a far cry from the rhythm and well-turned phrases of her own verse. Nonetheless, I hope she will take this offering for what it is worth and perhaps concede that, in some rather attenuated sense, we are both on the same page.

Iva Gildow Knight
1903–
bibliophile, grandmother, friend

Notes on the Translation

In this translation I have sought to render Proclus' text in a form that pays attention to contemporary ways of discussing and translating ancient philosophy, while trying to present the content as clearly as possible, and without misrepresenting what has been said or importing too much interpretation directly into the translation. I have not sought to reproduce Proclus' sentence structure where this seemed to create a barrier to smooth reading, for which reason line and page numbers will involve a degree of imprecision. The French translation by A. J. Festugière is an invaluable starting-point, and it is still a useful and largely faithful rendition of Proclus' Greek.² However, I and my collaborators consider it worthwhile to try to make the philosophical content and arguments of Proclus' text as plain as possible. To that end, we have not hesitated to break lengthy sentences into smaller ones, shift from passive to active voice, or provide interpolations that are indicated by square brackets.

The philosophy of late antiquity now stands where Hellenistic philosophy did in the early 1970s. It is, at least for the anglo-analytic tradition in the history of philosophy, the new unexplored territory.³ The most impressive contribution to studies in this area in the past fifteen years has been the massive effort, coordinated by Richard Sorabji, to translate large portions of the *Greek Commentators on Aristotle*.⁴ R. M. van den Berg has provided us with Proclus' *Hymns*, while John Finamore and John Dillon have made Iamblichus' *de Anima* available in English.⁵ Sorabji's Commentators series now includes an English translation of Proclus' essay on the

² Festugière, (1966-68). We are enormously indebted to Festugière's fine work, even if we have somewhat different aims and emphases. Our notes on the text are not intended to engage so regularly with the text of the *Chaldean Oracles*, the *Orphic Fragments*, or the history of religion. We have preferred to comment on those features of Proclus' text that place it in the commentary tradition.

³ To be sure, some of the seminal texts for the study of Neoplatonism have been available for some time. These include: Dillon (1973), Dodds (1963), O'Neill (1965), Morrow (1970), Morrow and Dillon (1987). There are also the translations by Thomas Taylor (1758–1835). While these constitute a considerable achievement, given the manuscripts from which Taylor was working and the rate at which he completed them, they cannot compare well with modern scholarly editions.

⁴ The *Ancient Commentators on Aristotle* (Duckworth and Cornell University Press). The first volume in the series, Christian Wildberg's translation of Philoponus' *Against Aristotle on the Eternity of the World*, appeared in 1987. There are a projected 60 volumes including works from Alexander Aphrodisias, Themistius, Porphyry, Ammonius, Philoponus and Simplicius.

⁵ van den Berg (2001), Finamore and Dillon (2002). Other important, but somewhat less recent, additions to editions and modern language translations of key neoplatonic texts include: Segonds (1985-6) and the completion of the *Platonic Theology*, Saffrey and Westerink (1968-97).

existence of evil, his essay on providence, and his commentary on Plato's *Cratylus*.⁶ There is also a new edition of Proclus' eighteen arguments for the eternity of the world.⁷ I hope that my efforts will add something to this foundation for the study of late antiquity. If I have resolved ambiguities in Proclus' text without consideration of all the possibilities, or failed to note the connections between a particular passage in the *Timaeus* commentary and another elsewhere, then I can only plead that our team is working to begin the conversation, not to provide the final word.

In all five volumes in this series, the text used is that of Diehl.⁸ Deviations from that text are recorded in the footnotes. On the whole, where there are not philological matters at issue, we have used transliterated forms of Greek words in order to make philosophical points available to an audience with limited or no knowledge of Greek.

Neoplatonism has a rich technical vocabulary that draws somewhat scholastic distinctions between, say, intelligible (*noêtos*) and intellectual (*noeros*) entities. To understand neoplatonic philosophy it is necessary to have some grasp of these terms and their semantic associations, and there is no other way to do this than to observe how they are used. We mark some of the uses of these technical terms in the translation itself by giving the transliterated forms in parentheses. On the whole, we do this by giving the most common form of the word – that is, the nominative singular for nouns and the infinitive for verbs – even where this corresponds to a Greek noun in the translated text that may be in the dative or a finite verb form. This allows the utterly Greek-less reader to readily recognise occurrences of the same term, regardless of the form used in the specific context at hand. We have deviated from this practice where it is a specific form of the word that constitutes the technical term – for example, the passive participle of *metechlein* for 'the participated' (*to metechomenon*) or comparative forms such as 'most complete' (*teleôtaton*). We have also made exceptions for technical terms using prepositions (e.g. *kat' aitian*, *kath' hyparxin*) and for adverbs that are terms of art for the Neoplatonists. (e.g. *protôs*, *physikôs*).

⁶ Opsomer and Steel (2003), Steel (2007), Duvick (2005).

⁷ Lang and Marco (2001). Cf. the first translation of the reply to Proclus by the Christian neoplatonist, Philoponus, Share (2005) and Share (2005).

⁸ Diehl (1904).

This policy is sure to leave everyone a little unhappy. Readers of Greek will find it jarring to read ‘the soul’s vehicles (*ochêma*)’ where ‘vehicles’ is in the plural and is followed by a singular form of the Greek noun. Equally, Greek-less readers are liable to be puzzled by the differences between *metechein* and *metechomenon* or between *protôs* and *protos*. But policies that leave all parties a bit unhappy are often the best compromises. In any event, all students of the *Timaeus* will remember that a generated object such as a book is always a compromise between Reason and Necessity.

This volume in particular calls for some special comment on specific terms that appear frequently in it. The term ‘*ousia*’ exhibits a delicate sensitivity to context in this portion of Proclus’ commentary. On the one hand, it is frequently used in the sense of ‘essence’, where it is often contrasted with power (*dynamis*) and activity (*energeia*). This is because Proclus adopts Iamblichus’ set of headings for organising an account of the soul; a systematic psychology considers first the soul’s essence, then its powers, then its activities.⁹ This sense of ‘*ousia*’ as essence frequently bleeds over into a discussion of the divisible and indivisible kinds of Being (*ousia*) into which Plato’s Creator God blends a third, specifically psychic, kind of Being (*Tim.* 35a1–5). Where this transition occurs in a way that helps to explain the connection that Proclus sees between the soul’s essence and the genera of Being, I alert the reader to this fact by including the transliterated term in brackets. But there is also a third sense that frequently crops up: the Aristotelian sense of *ousia* as substance. Here too there is a relation to the other uses, for the psychic essence, considered as a composite kind of Being, is what makes the World Soul ‘what it is’ (*ti esti*) and ‘a this’ (*tode ti*). In spite of the fact that Proclus refers to the mixture of divisible and indivisible Being as ‘dough’ (*phyrama*, in *Tim.* II 272.22) I have resisted the temptation to play on modern associations with ‘substance’ as ‘substrate’, for Proclus also insists that the psychic essence is not *really* a substrate of the soul (II 221.31).

There is a similar context sensitivity to the terms *mesos* and *mesotês*. On one hand, discussion of the geometric, harmonic and arithmetic *means* that the Demiurge inserts into the World Soul (*Tim.* 36a2–b5) plays a dominant role in Proclus’ commentary. One translation of ‘*mesos*’ or ‘*mesotês*’ is thus ‘mean’ or the middle term in a proportion. On the other hand, the World Soul is also constituted from an

⁹ Finamore and Dillon (2002)

intermediate kind of Being between the realm of Forms, associated with the indivisible kind of Being, and the realm of sensible things, associated with the divisible kind of Being. As a result, ‘*mesos*’ is also frequently ‘intermediate’ and here too Proclus often sees an analytic connection between the fact that the World Soul has the various *means* in it and the fact that it is an *intermediate* sort of thing between Being and Becoming. In addition, he sometimes draws an analogy between the soul’s role as an intermediate and the function of the middle term (*mesos*) in Aristotelian syllogistic (*in Tim.* II 104.1–3). A third use of the ‘*mesos*’ word group relies on the ambiguity of ‘*logos*’. In one sense, a *logos* can be a ratio and the terms in a proportion stand in ratios; hence there is a link to the first sense. In another technical Neoplatonic sense a *logos* is a rational-forming principle.¹⁰ Very roughly, a rational-forming principle *mediates* something at a higher order of reality to lower levels. For instance, the *logoi* within the World Soul mediate the participated Forms to matter. As a result, I sometimes translate terms from the ‘*mesos*’ word group as ‘intermediary’ where it is the soul’s *role* in relating intelligible to sensible reality that is at issue, rather than its *status* as something intermediate between them.

I follow Stephen Barker’s policy of leaving the technical harmonic vocabulary of *epogdoos*, *hêmiolios*, and *epitritos* untranslated. The first is the 9:8 ratio that corresponds to the tone, the second the 3:2 ratio that is associated with the musical fifth, and the third the 4:3 ratio associated with the musical fourth. It is common to translate ‘*epogdoos*’ as ‘tone’. Festugière simply uses the fractions 3/2 and 4/3 for *hêmiolios* and *epitritos*. But as Barker points out, this vocabulary can be used to refer to the ratio of a musical interval or to the interval itself.¹¹ Sometimes Proclus will write ‘*hêmiolios logos*’ so that it is clear that he means the 3:2 ratio. Other times, he will leave off ‘*logos*’ but it seems clear enough that it is the *ratio* that is at issue. In such cases, I supply ‘3:2 ratio’ in brackets as a supplement. At other points, Proclus will speak of ‘the *epogdoos* of 2048’ where it is clear that the referent is that number that *stands in the ratio* to 2048 rather than the 9:8 ratio itself. In order preserve these ambiguities and thus not prejudice interpretive questions one way or another, I have followed Barker’s practice of simply using the transliterated terms.

¹⁰ Witt (1931)

¹¹ Barker (2007), 267.

Our volumes in the Proclus *Timaeus* series use a similar system of transliteration to that adopted by the Ancient Commentators on Aristotle volumes. The salient points may be summarised as follows. We use the diaeresis for internal breathing, so that ‘immaterial’ is rendered *aïilos*, not *ahulos*. We also use the diaeresis to indicate where a second vowel represents a new vowel sound, e.g. *aïdios*. Letters of the alphabet are much as one would expect. We use ‘y’ for υ alone as in *physis* or *hypostasis*, but ‘u’ for υ when it appears in diphthongs, e.g. *ousia* and *entautha*. We use ‘ch’ for χ, as in *psychê*. We use ‘rh’ for initial ρ as in *rhêtôr*; ‘nk’ for γκ, as in *anankê*; and ‘ng’ for γγ, as in *angelos*. The long vowels η and ω are, of course, represented by ê and ô, while iota subscripts are printed on the line immediately after the vowel as in *ôioгенês* for ὀιογενής. There is a Greek word index to each volume in the series. In order to enable readers with little or no Greek to use this word index, we have included an English-Greek glossary that matches our standard English translation for important terms with its Greek correlate given both in transliterated form and in Greek. For example, ‘procession: *proödos*, πρόοδος.’

The following abbreviations to other works of Proclus are used:

in Tim. = *Procli in Platonis Timaeum commentaria*, ed. E. Diehl, 3 vols (Leipzig: Teubner, 1903-6).

in Remp. = *Procli in Platonis Rem publicam commentarii*, ed. W. Kroll, 2 vols (Leipzig: Teubner, 1899-1901)

in Parm. = *Procli commentarius in Platonis Parmenidem (Procli philosophi Platonici opera inedita pt. III)*, ed. V. Cousin (Paris: Durand, 1864; repr. Olms: Hildesheim, 1961).

in Alc. = *Proclus Diadochus: Commentary on the first Alcibiades of Plato*, ed. L. G. Westerink. (Amsterdam: North-Holland, 1954). Also used is A. Segonds (ed.), *Proclus: Sur le premier Alcibiade de Platon*, tomes I et II (Paris, 1985-6).

in Crat. = *Procli Diadochi in Platonis Cratylum commentaria*, ed. G. Pasquali. (Leipzig: Teubner, 1908).

ET = *The Elements of Theology*, ed. E. R. Dodds, 2nd edition (Oxford: Clarendon Press, 1963).

Plat.Theol. = *Proclus: Théologie Platonicienne*, ed. H. D. Saffrey and L. G. Westerink, 6 vols (Paris: Société d'édition "Les belles lettres", 1968-97).

de Aet. = *Proclus: on the Eternity of the World*, ed. H. Lang and A. D. Marco (Berkeley: University of California Press, 2001).

Proclus frequently mentions previous commentaries on the *Timaeus*, those of Porphyry and Iamblichus, for which the abbreviation *in Tim.* is again used. Relevant fragments are found in

R. Sodano, *Porphyrii in Platonis Timaeum Fragmenta*, (Naples: Instituto della Stampa, 1964) and

John Dillon, *Iamblichi Chalcidensis in Platonis Dialogos Commentariorum Fragmenta*, (Leiden: E.J. Brill, 1973).

Proclus also frequently confirms his understanding of Plato's text by reference to two theological sources: the 'writings of Orpheus' and the Chaldean Oracles. For these texts, the following abbreviations are used:

Or. Chald. = Ruth Majercik, *The Chaldean Oracles: text, translation and commentary*. (Leiden: Brill, 1989).

Orph. fr. = *Orphicorum fragmenta*, ed. O. Kern. (Berlin: Weidmannsche, 1922).

Majercik uses the same numeration of the fragments as E. des Places in his Budé edition of the text.

References to the text of Proclus' *in Timaeum* (as also of *in Remp.* and *in Crat.*) are given by Teubner volume number, followed by page and line numbers, e.g. *in Tim.* II. 2.19. References to the *Platonic Theology* are given by Book, chapter, then page and line number in the Budé edition. References to the *Elements of Theology* are given by proposition number.

Proclus' commentary is punctuated only by the quotations from Plato's text upon which he comments: the lemmata. These quotations of Plato's text and subsequent repetitions of them in the discussion that immediately follows that lemma are in bold. We have also followed Festugière's practice of inserting section headings so as to reveal what we take to be the skeleton of Proclus' commentary. These headings are given in centred text, in italics. Within the body of the translation itself, we have used square brackets to indicate words that ought perhaps to be supplied in order to

make the sense of the Greek clear. Where we suppose that Greek words ought to be added to the text received in the manuscripts, the supplements are marked by angle brackets.

Introduction¹²

I. The background to Proclus' Commentary on the World Soul in Timaeus

Proclus' treatment of the composition of the World Soul and the harmonic ratios within it is the most in-depth portion of the surviving *Commentary*. Proclus expends 216 pages of text on the 86 OCT lines from *Timaeus* 34b2–37c5. This yields a page-to-line ratio that slightly outstrips the effort that Proclus expends on the Demiurge and his model (*Tim.* 27c1–31b3) in Book II of the *Timaeus Commentary*. (To be precise: 2.51 pages/line versus 2.39 pages/line.) The interest of the latter passage to a Platonist is obvious; we are talking about nothing less than the identity of the Demiurge and the nature of the Intelligible Paradigm to which he looks in creating the visible cosmos. It is true that Proclus must also contend with what he takes to be seriously mistaken views of this part of Plato's text, *viz.* those previous interpreters who suppose that Plato describes here a creation of the cosmos in time. Hence a great deal of time and effort goes into refuting the views of previous interpreters, such as Plutarch and Atticus.

Naturally, the subject of the World Soul is equally interesting to a Platonist. However I think that Proclus' level of effort on the World Soul is largely determined by the difficulties of detail in Plato's text that had already generated a considerable literature. Proclus engages at length with these alternative interpretations and in the course of doing so tells us a great deal about such figures as Severus and Theodore of Asine. Indeed, the longest and most detailed testimonia that we possess about the latter come from just this portion of Proclus' *Commentary*. Thus in order to put Proclus' work into some sort of context, we need to consider it against the backdrop of the history of interpretations of *Timaeus* 34b–37c. The following remarks will add little to the work of Baltes and Brisson,¹³ but they will perhaps be sufficient for shedding some light on Proclus' relation to the previous tradition.

¹² The following section discusses Proclus' treatment of the composition of the World Soul in *Timaeus* 33b2–37c5. For an overall orientation to Proclus commentary, see the General Introduction in volume 1 of this series.

¹³ Baltes (1976), Brisson (1974).

A. *Previous interpretations of the psychic composition*

Plutarch of Chaeronea's essay, *On the Generation of the Soul in Plato's Timaeus*, makes clear that by the first century CE there was an established set of 'problems' (*zêtēmata*) around this portion of the *Timaeus*. The one that occupies most of Plutarch's attention is the way in which we are to understand the blending of the kinds from which the Demiurge composes the soul – not only the simple question of what is being asserted by *Tim.* 35a1–b1, but also the question of what the divisible and indivisible kinds of Being are. Plato's text is grammatically puzzling and there are different versions of it, so the two questions are not really separable. The second set of problems involves the quantity of numbers or portions involved in the composition of the soul, their arrangement, and their function in Plato's cosmology (*An. Proc.* 1027c). With respect to the first issue concerning the interpretation of *Tim.* 35a1–b1, Plutarch identifies a tradition of conflicting views that go back to the Old Academy. He juxtaposes what he takes to be the views of Xenocrates and his pupil Crantor.¹⁴ According to the former, the mixture of the divisible and indivisible kinds of Being in the Demiurgic composition of the soul signifies the generation of number.¹⁵ By contrast, Crantor seems to have stressed the epistemological significance of the soul's composition from a kind Being associated with the intelligibles and a kind of Being associated with the sensible world.¹⁶ At least this is the aspect of Crantor's account that Plutarch seeks to highlight. In both cases, Plutarch concentrates on the combination of the divisible and indivisible kinds of Being. The role of Sameness and Difference is minimised, with the two of them forming a kind of addition to the blend of divisible and indivisible Being. This understanding of the Demiurge's activities is quite natural given Plutarch's reading of the text – a reading that deviates in several ways from our OCT, but most importantly by having the singular αὐτήν for the plural αὐτῶν at *Tim.* 35a6.¹⁷ Plutarch thus understands a process in which the Demiurge

¹⁴ Cherniss thinks that the manner in which Plutarch introduces their views suggests that he may not have known their works first hand, but is instead working from some other source that summarises their interpretations.

¹⁵ Cf. Xenocrates fr. 188, Isnardi-Parente (1982).

¹⁶ Brisson (1974), 303.

¹⁷ Plutarch's version of the Demiurge's activities and the difference between his text of the *Timaeus* and ours is well analyzed in Opsomer (2004).

takes the divisible and indivisible kinds of Being and blends them together into a composite form. This is then combined with Sameness and Difference to create the “psychic dough” from which the Demiurge takes portions in 35b4–36b5. Note that in this process, we do not meet with Sameness and Difference of the divisible and indivisible sort. Only Being is thus differentiated: Sameness and Difference *tout court* are then blended with the composite form of Being. This is made clear at 1025b where Plutarch explains how the mixture of divisible and indivisible Being facilitates the combination of Sameness and Difference. Since the indivisible sort of Being is akin to Sameness, while the divisible sort of Being is akin to Difference, the composite of the kinds of Being is able to make possible the combination of things that are normally antagonistic.

Our evidence is not extensive, but there is some reason to believe that this understanding of *Timaeus* 35a1–b1 was not just confined to Plutarch. Alcinous glosses the process this way:

Declaring that there exists an intelligible essence which is indivisible, and another which is divisible about bodies, he constructed from these a single essence, explaining that thus it can grasp in thought each of the aforesaid two essences; and seeing that sameness and difference occur both on the level of the intelligible and of divisible things, he put the soul together out of all these things. (*Handbook*, 14.2, trans. Dillon)

This passage notes that both divisible sensibles and indivisible intelligibles fall within the scope of Sameness and Difference, yet it falls short of distinguishing divisible and indivisible Forms of Sameness and Difference.¹⁸ Plutarch’s exegesis of Xenocrates suggests that his attention was similarly directed at the fact that the soul contains both divisible and indivisible *Being* – and Proclus’ testimony on him is consistent with this.¹⁹ Similar remarks apply for the remains of Crantor’s earliest commentary on the *Timaeus*.²⁰ Sameness and Difference seem to enter in only as a means to account for the Motion and Rest that the soul manifests.²¹ If either of them derived psychic

¹⁸ ὁρῶν δὲ καὶ ἐπὶ τῶν νοητῶν ταυτότητα τε καὶ ἑτερότητα, καὶ ἐπὶ τῶν μεριστῶν...

¹⁹ Cf. *in Tim.* II 165.3–13 = test. 189 (Isnardi-Parente).

²⁰ Mette (1984).

²¹ *De An. Proc.* 1013d = Crantor test. 10.3 (Mette).

stability and the capacity to move from a specifically *intermediate* Form of Sameness and Difference – analogous to the Being that is blended from the divisible and indivisible kinds – our evidence leaves us no trace of this.

This strikes us as odd because Proclus' reading of this passage has more or less won the day since the mid- to late-20th century.²² On Proclus' version, as we shall see, the Demiurge similarly performs two steps in composing the World Soul, but the first step is more complicated than on Plutarch's reading. He does not merely combine divisible and indivisible kinds of Being, but also divisible and indivisible kinds of Sameness and Difference. The intermediate kinds of all three are then mixed together to constitute the "psychic dough" from which the Demiurge then takes portions. Therefore one reason that Proclus dedicates a great deal of attention to the exegesis of this part of the *Timaeus* is because he is seeking to correct what he takes to be a serious misunderstanding of Plato's text at 35a1–b1.

In the case of Plutarch and Atticus, there are other, even more serious misconceptions about Plato's text that Proclus seeks to correct. Plutarch's essay on the generation of the soul argues that this is a genuinely temporal creation. Moreover, Plutarch associates the kind of Being that is divisible in the realm of bodies with a pre-existing evil soul. Proclus has argued at length in Book II of his *Commentary* that the creation of the cosmos by the Demiurge is not a creation in time, so there is little need to revisit this issue extensively. Proclus does address Plutarch's claim that the Indivisible Being in the World soul is an irrational soul that pre-exists the rational soul (153.25–154.1). Proclus' explicit reply to this idea is very succinct (154.15–18) and it is immediately followed by his exegesis of *Timaeus* 35a4–6 which concerns precisely the point that has just been under discussion – the role of the divisible and indivisible kinds of Sameness and Difference in the World Soul's composition. So perhaps the real force of Proclus' response is positive rather than negative; by showing the correct reading of the text, he removes much of the evidence for Plutarch's account. After all, this account makes essential use of the idea that it is divisible Being – and not divisible Sameness and Difference – that is to be identified

²² Grube (1932).

with the irrational soul.²³ So Proclus' motives for detailed attention to the composition of the World Soul coalesce around 35a1–b1.

B. Previous interpretations of the psychic harmonies

There are three other standard problems (*zêtêmata*) that Plutarch identifies in his essay. These also provide Proclus with reasons to treat *Timaeus* 35b4–36b5 in great detail. As Plutarch's essay shows, these lines were already the subject of detailed mathematical and numerological speculations by earlier interpreters. By the time of Plutarch's essay, these have become rigidified into standard problems. Let us consider them in turn, since they provide another important part of the background against which Proclus writes his commentary.

Plato's text describes the Demiurge setting out portions of the psychic stuff that he has just mixed and these portions have ratios among them, e.g. the second portion is twice the first, the third is three times the first and half again as much as the second, and so on. It is a short step, but an important one, to go from talking about the *ratios of these portions* to one another to talking about *numbers* within the soul. The commentary tradition moves easily between these, though there is sometimes a sort of implicit recognition that these are slightly different issues. If the first portion were a numerical unit that serves as the measure of numbers, then it should be indivisible into smaller units (*Rep.* 525e). But, on the other hand, if the initial portion is merely a quantity that stands in the 1:2 ratio to the second portion, then nothing precludes us from thinking of it as being divisible into further parts. As we shall see, Proclus exploits this duality in both treating 384 as the value of the unit, and also treating it as a 'monad of the soul'. The problems that Plutarch catalogues also involve this movement between conceiving of Plato's project in the psychogony as setting out a number sequence and setting out portions that stand in ratios.

The first problem identified by Plutarch involves the *arrangement* of the portions of soul stuff and their corresponding numbers set out by the Demiurge in *Timaeus* 35b4–36a1. There we find the numbers 1, 2, 3, 4, 9, 8 and 27 – described in just that order. One view, assigned to Crantor, arranges these in the shape of a lambda, Λ , with the doubles on one side and the triples on another. (Note that the numbers are in fact

²³ Cf. *De An. Proc.* 1015e, 1025f-1026a.

1, 2, 3, 2², 3², 2³, 3³.) The alternative view, which Plutarch assigns to Theodorus of Soli, is that we should imagine the portions set out in a single line.

The second problem involves the *quantity* of numbers that are inscribed into the World Soul’s substance and the *value* of each of them. Recall that Plato tells us that Demiurge ‘fills in’ the intervals between the original numbers in three stages. First, he puts in the harmonic and arithmetic means in the double and triple intervals (35c2–36a6). The placement of these means produces ratios corresponding to the musical fourth (4:3), the fifth (3:2) and the tone (9:8) (*Tim.* 36a6–7). The second step involves the Demiurge ‘filling’ all the 4:3 ratios with the ratio of the tone (*Tim.* 36b1). This leaves us with the *leimma* – literally, ‘the left-over’ – or the ratio of the semi-tone, which Pythagorean tradition identifies with the ratio of 243:256. The placement of the numbers corresponding to the semi-tones is the third and final step (*Tim.* 36b2–5).

The first steps of this process are relatively easy to follow. The insertion of the means is straight-forward. The following table shows the Original numbers and the Harmonic and Arithmetic means in the double and triple intervals.

	O	H	A	O	H	A	O	H	A	O
Double	1	4/3	3/2	2	8/3	3	4	16/3	6	8
Triple	1	3/2	2	3	9/2	6	9	27/2	18	27

The problem about the quantity of numbers delineated in the Demiurge’s activities here intersects with the first problem about the arrangement of the psychic mixture in which the numbers are inscribed. Suppose we follow Crantor’s lambda arrangement. Let ‘= p x ...’ mean ‘is equal to the prior value times ...’ Then we’ll imagine the following filling in:

	O	H	A	O	H	A	O	H	A	O
Double	1	4/3	3/2	2	8/3	3	4	16/3	6	8
		= p x 4/3	= p x 9/8	= p x 4/3	= p x 4/3	= p x 9/8	= p x 4/3	= p x 4/3	= p x 9/8	= p x 4/3
Triple	1	3/2	2	3	9/2	6	9	27/2	18	27
		= p x 3/2	= p x 4/3	= p x 3/2	= p x 3/2	= p x 4/3	= p x 3/2	= p x 3/2	= p x 4/3	= p x 3/2

In this sequence, every term has to the term prior to it (p) one of the three ratios – that of the fourth, 4:3; that of the fifth, 3:2 or the ratio of the tone, 9:8. If we side with

Theodore of Soli, then we'll imagine a single line of numbers created by the filling in of the means.

1	4/3	3/2	2	8/3	3	4	9/2	16/3	6	8	9	27/2	18	27
	= p	= p	= p	= p	= p	= p	= p	=pp	= p	= p	= p	= p	= p	= p
	x	x	x	x	x	x	x	x	x	x	x	x	x	x
	4/3	3/2	4/3	4/3	9/8	4/3	9/8	4/3	9/8	4/3	9/8	3/2	4/3	3/2

In this sequence, nearly every term (except the first, of course) has to the one prior to it (p) one of three ratios: 4:3, 3:2 or 9:8. The only exception is 16/3, where we must go back a term to 4 in order to generate it from one of the musical ratios. (Hence, 'pp' for predecessor of the predecessor.) This is the only point in the number sequence where terms that figured only as harmonic means between terms in the double and triple sequence lie adjacent to one another.

In the next stage Plato instructs us to insert additional numbers in between each pair of terms where the successor (s) stands to the prior (p) in the ratio of 4:3. So, for example, in between 1 and 4/3 we can insert two tones. $1 \times 9/8 = 9/8$ and $9/8 \times 9/8 = 81/64$. An attempt to insert a third tone would "overshoot" by giving us 729/512, which is more than 4/3. However, multiplying 81/64 by the fraction corresponding to the ratio of the semi-tone yields exactly the sought-after 4/3. So we will 'fill in' the intervals between 3/2 and 2, 2 and 8/3, 3 and 4, 6 and 8, 27/2 and 18 with the tones and semi-tone, just as we did the interval between 1 and 4/3. When we do this in the interval between 4 and 16/3 the displeasing break in the sequence between 9/2 and 16/3 is mended: $4 \times 9/8 = 9/2$ and $9/2 \times 9/8 = 81/16$. This, in turn, multiplied by the fraction corresponding to the ratio of the semi-tone yields 16/3. So the number sequence here is 4, 9/2, 81/16, 16/3.

We can see already at this point that the fractions make the procedure messy. It seems that Crantor was the first to multiply the entire sequence by 384 in order to clear the fractions and express the harmonic ratios in the World Soul in whole numbers.²⁴ The necessity for this may itself have been a matter of contention. Plutarch, at least, replies to the potential objector who says that such a step is unnecessary (*De An. Proc.* 1027D). One of his replies is, I think, revealing in its honesty. If we do not assign some number to the unit, so as to eliminate the fractions, then this 'debars us from another speculation (*theôria*) that has a charm that is not

²⁴ *De An. Proc.* 1020c = Crantor test. 11a (Mette).

unphilosophical.’ That is, it precludes us from the joys of the various numerological associations and debate about which interesting mathematical patterns are revealed. As we shall see, such speculations were a mainstay of the tradition of interpretation around the *Timaeus*.

But there may also be a deeper reason than simply clearing the fractions.²⁵ If we suppose that we aren’t dealing with numbers here directly, but rather ratios between the “sizes” of portions, then when you put a harmonic mean between the first and second portions, it will stand to the first in the ratio of 4:3. If you take three equal parts of the first portion, it will take four parts of that size to make the portion that establishes the harmonic mean. Hence the first portion has to be conceived of something that is divisible into at least three equal parts. If one thinks of these parts atomistically, then when you work through the whole sequence, you will find that 384 such “atoms” are required in the first portion. Of course, there is strictly no need to think about it atomistically, but the duality in the notion of the first portion discussed above pulls the imagination very much in that direction. This duality is really that of the distinction between absolute and relative quantity, to put it in the terms that Nicomachus uses (*Arith.* I.3.1). Arithmetic is the science of the first kind of quantity. It works with an indivisible unit, and it is prior to harmonics which is the science that concerned with relative quantity. That is to say, numeric quantity is prior to quantitative ratios. So it may not simply be a matter of making the expression of the psychic ratios tidier ones between whole numbers that drives this enterprise. In any event, Plutarch also reveals to us that there was no consensus about what number to multiply by in order to clear the fractions. Crantor opted for 384. Plutarch himself seems to prefer 192, as did Theon of Smyrna.²⁶ The Platonist Severus argued for 768, perhaps on the grounds that the sequence of portions is split into two when the Demiurge cuts the strip of psychic mixture lengthwise (*Tim.* 36b5–7), thus necessitating twice as many units in the initial portion.²⁷ Plutarch and Theon’s choice of 192 seems

²⁵ I am grateful to John Bigelow for pointing this out to me.

²⁶ Theon of Smyrna (late 1st–early 2nd century) was the Platonist who wrote *Aspects of Mathematics Useful for the Understanding of Plato*. Greek text, Hiller (1878); English translation, Lawlor and Lawlor (1979).

²⁷ Proclus, in *Tim.* II 191.6 = Severus 16 T Gioè (2002).

Suppose we use a first value of 384 to clear the fractions from Plato's sequence of numbers. How many numbers will we arrive at if we follow Plato's directions for constructing it? Proclus' answer is 34. However, there is a tradition prior to Proclus according to which this sequence involves 36 numbers. It is equally possible to mount an argument that the answer is 29 or 37. To see that this is so, let us just ask *where* we are to insert the ratios of the tone and the semi-tone? Only in the 4:3 intervals? Or in the 3:2 intervals as well?

Let us consider the conservative approach that says we should insert tones and semi-tones only in the 4:3 intervals. One might justify this by a very stringent approach to Plato's text. Though he says ἡμιολίων δὲ διαστάσεων καὶ ἐπιτρίτων καὶ ἐπογδῶν γενομένων ἐκ τούτων τῶν δεσμῶν ἐν ταῖς πρόσθεν διαστάσεσιν – which might be taken to imply that the intervals of the tones are bonds among *both* the 4:3 and 3:2 ratios – he follows this general remark up with the specific instruction that τῷ τοῦ ἐπογδῶου διαστήματι τὰ ἐπίτριτα πάντα συνεπληροῦτο, λείπων αὐτῶν ἐκάστου μόριον. So there is textual support of a sort for what I'll call the conservative approach. Now, let us suppose that we prefer the lambda arrangement that permits numbers to appear twice. Then we'll have these two sequences:²⁸

²⁸ In my table, T indicates that the number stands in the ratio of the Tone to what comes before, H that it is a Harmonic mean between the initial portions set out in the double and triple series. A that it is an arithmetic mean between initial portions. These portions are indicated by O2, O3, etc to indicate the numbers that are the multiples of the ordinary series 2, 4, 8, and 3, 9, 27.

Double		384		Triple
432	T		H	576
486	T		T	648
512	H		T	729
576	A		A	768
648	T		O3	1152
729	T		H	1728
768	O2		T	1944
864	T		T	2187
972	T		A	2304
1024	H		O9	3456
1152	A		H	5184
1296	T		T	5832
1458	T		T	6561
1536	O4		A	6912
1728	T		O27	10368
1944	T			
2048	H			
2304	A			
2592	T			
2916	T			
3072	O8			

This version of the numbers within soul is conservative and reduplicative. It inserts tones only in the 4:3 ratios. It also permits the same number to appear twice. It yields 37 numbers. It would also be possible to take a conservative approach that didn't count the duplicated numbers twice. In this case we would have 29.

A non-conservative approach inserts the tones not only into the 4:3 ratios, *but also into the 3:2 intervals*. If we arrange the number sequence in a single line so as to avoid reduplication, this will yield a sequence where every number stands to its predecessor either in the ratio of the tone (9:8) or the ratio of the semi-tone (243:256). In this case there will be 34 numbers. This is the approach that Proclus takes, since he

understands Plato to be directing us to include tones within both the 4:3 and 3:2 ratios.²⁹

Why does this matter? Again, it seems to the modern reader to be a bit of a tempest in a tea cup, but Plutarch's essay and the epitome of Plato's *Timaeus*, entitled *On the Nature of the World and the Soul* and attributed to the Pythagorean Timaeus, show that this was a matter of some moment in antiquity. One issue concerns the extent of harmonic theory that is revealed in the *Timaeus*. Proclus claims that one reason why the Pythagorean Timaeus' version of the harmonies in the World Soul includes 36 terms is because it is meant to reveal the ratio of the *apotome* or major semi-tone (*in Tim.* II 188.10–19). (The nature of the *apotome* and the semi-tone will be discussed in more detail below.) Plato clearly shows us the ratios associated with the fourth, the fifth, the tone and the semi-tone. Can we credit him with revealing the ratio of the major semi-tone as well? Ps-Timaeus' *On the Nature of the World* probably included a table of 36 numbers that expressed the ratio of the *apotome* twice – first in its lowest whole number expression (2048 : 2187) and then again at three times these numbers.³⁰ Proclus thought that we should not adjust the quantity of numbers specified by Plato's instructions to include the *apotome* since Plato himself does not mention it. So one substantive issue that turns on the quantity of numbers in the psychic harmonies is the question of just how much harmonic theory there is in the *Timaeus*.

Plutarch's third standard problem concerns the *significance and function* of the harmonies in the World Soul. These numeric sequences are inscribed in the 'psychic dough' that is rolled out and split down the middle to become the circle of the Same and the circle of the Different (*Tim.* 36b2–c5). These circles are, in turn, associated with the celestial equator and the path of the ecliptic (c5–d1). The circle of the Different is then divided into seven circles corresponding to the Sun, Moon and planets (d1–7). So, should the harmonic ratios in the substance of the World Soul have any correlation to the planetary orbits? And if so, what should they correlate with? Their relative speeds? Their distance from Earth? Their size? We have evidence

²⁹ *in Tim.* II 185.3–6: καταπεπύκνωνται δὲ οἱ ὄροι καὶ τὰ διαστήματα πάντα ταῖς τε ἀρμονικαῖς καὶ ἀριθμητικαῖς μεσότησι, καὶ τῶν ἡμιολίων καὶ τῶν ἐπιτρίτων αἱ διαίρεσεις εἰς τε τὰ ἐπόγδοα καὶ τὰ λείμματα γέγονασιν· The most detailed of the modern commentaries – Taylor (1928) – agrees with Proclus' calculation.

³⁰ The question is somewhat complicated by textual issues. See Tobin (1985), 21–22 and Proclus *in Tim.* II 188.14–18.

not only from Plutarch, but also from Calcidius, Macrobius, and Hippolytus that there was plenty of speculation about this question. Once one equates the planetary circles with heavenly spheres, what is at issue here is the question of the harmony of the spheres. Plutarch's text gives a good indication of the scope of the speculations about the manner in which the harmonic ratios might be realised in the heavens (*De An. Proc.* 1028B–1029A). Like Proclus, Plutarch pours cold water on such flights of fancy, but they nonetheless remain a part of the background that a Platonist commentator must address.

C. *The mathematical and harmonic background*

In addition to these issues about the interpretation of Plato's text, Proclus' *Commentary* also appears against a backdrop of handbooks of arithmetic and harmonics. Theon's *Mathematics Useful for the Understanding of Plato* is expressly addressed to the would-be reader of Plato. Other handbooks, such as Nicomachus of Gerasa's *Introduction to Arithmetic* and *Manual of Harmonics* are not so specifically directed toward Plato's *Timaeus*, but nonetheless seek to communicate information about concepts, such as geometric, harmonic and arithmetic means, that are central to Plato's dialogue. In addition, we know of some works that seem to have been primarily on harmonics but which were apparently written as commentaries on at least part of the *Timaeus* – viz, the works of Adrastus and Aelianus quoted by both Porphyry and Theon.³¹ The former is called a Peripatetic and only the latter a Platonist,³² so it was perhaps possible to write a work on harmonics by writing a commentary on the *Timaeus*, or perhaps simply on that part that concerns the harmonies in the World Soul.

Both Proclus' *Commentary* and Plutarch's *De An. Proc.* – which was written for the benefit of the latter's sons – reflect this background in their substantial didactic content. Plutarch interrupts his interpretation of Plato's text with straight-forward exegesis of central mathematical concepts. Sometimes this interruption is rather abrupt (1019C). Sometimes it draws on earlier sources, as when Plutarch explains Eudorus' method for arriving at means. Proclus' exposition of the requisite

³¹ Cf. Barker (1989), 209–235.

³² Porphyry, *Commentary on Ptolemy's Harmonics* 96.1–7, Düring (1980).

mathematical concepts is less intrusive and abrupt, but nonetheless recognised as an essential preliminary step for grappling with the philosophical import of Plato's text.

These matters having been articulated to the extent that it is possible, it is necessary to get a grip on such matters concerning numbers and the harmonies of the soul as is necessary for those who intend to understand must have at hand, lest we attempt the exegesis of the following section of the text in vain. It is surely necessary, then, if we wish to speak about this part of the dialogue, to have gotten a grip on the things that are typically discussed in works on harmonics. (*in Tim.* II 167.24–30)

Proclus' text often follows various handbooks quite closely. Sometimes this is simply a structural similarity where Proclus treats the order of topics in the same way that, say, Theon does. Other times the dependence is much closer. At one point Proclus pulls a sentence almost verbatim from Nicomachus' *Introduction*. Proclus, however, omits the table of numbers that follows in Nicomachus' text, thus rendering the point almost unintelligible (177.5–7). (Or at least, if Proclus' *Timaeus Commentary* ever contained such a table, neither our manuscripts nor the scholia on them give any indication of it.) In any event, the didactic element in Platonic tradition of writing about and around the *Timaeus* also explains why Proclus spends so many pages over so few lines of Plato's *Timaeus*.

Even if this mathematical background material is largely didactic, it is not free from controversy. Proclus belongs to the Pythagorean tradition in harmonics, as do the predecessors discussed above. It seems to have been part of the tradition for such Platonist and Pythagorean writers to point out the issues that divide them from the Aristoxenian tradition.³³

For the Pythagorean tradition, the pitches of different notes are conceived of quantitatively.³⁴ Most often this is interpreted in terms of the relative frequency of impacts of the air that has been moved by the sounding object striking the ear. However, the quantitative character of music is a matter of discrete, as opposed to continuous, quantity. The theoretical orientation is arithmetic – not geometric.

³³ Barker (2007) provides an outstandingly clear account of these competing traditions up to the time of Theophrastus, with a short addendum on Porphyry and later writers who touch on topics in harmonics.

³⁴ Cf. Barker (1989), 7–8.

Musical intervals are conceived of as *ratios* between numbers. In the Greek arithmetic tradition, there is no room for intervals that would correspond to ratios involving irrational numbers. Finally, the Pythagorean tradition treats harmonics as another branch of mathematics. As a result, the terminology for discussing musical intervals is that of mathematics, not the terminology of practising musicians.

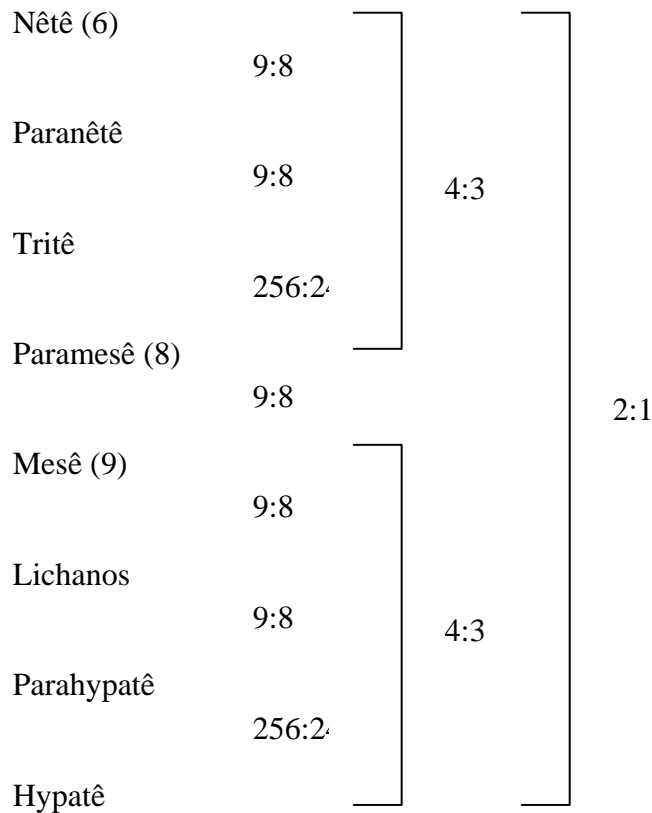
Many of the texts in the background to Proclus *Commentary* include variations on the story of how Pythagoras discovered the correspondence between the intervals of the octave, the fourth, and the fifth with the ratios 2:1, 4:3, and 3:2. Nicomachus' *Introduction to Harmony* tells us that Pythagoras noticed that the sounds made by different hammers used by a blacksmith corresponded to the octave.³⁵ Further investigation revealed that the weight of the hammers stood in the ratio 2:1, and similarly for the other ratios. More and less plausible variations on the story include pipes of different lengths and strings with different weights attached to them.³⁶ The Pythagorean tradition recognises as the primary concordances only those that are expressed by simple ratios – that is, those that are multiples, such as 2:1 for the octave, 3:1 for the twelfth and 4:1 for the double octave, or those that are super-particulars (*epimoria*), such as 4:3, 3:2. The three primary concords can all be constructed from the numbers found in the 'tetractys' or the numbers 1–4.

With Archytus we have a second 'musical' tetractys: 6, 8, 9, 12. This second tetractys is achieved by taking the harmonic and arithmetic means of within the double interval of the first tetractys: 1, 4/3, 3/2, 2. Multiply by the smallest number that will clear the fractions and it yields the sequence 6, 8, 9, 12. When these are combined with the three musical proportions – the arithmetic, geometric and harmonic – further mathematically satisfying facts are revealed. The number 9 forms the arithmetic mean between 6 and 12. 6:9 expresses the ratio of the fifth, while 9:12 expresses the ratio of the fourth. The number 8 forms the harmonic mean between 6 and 12 and 8:6 is a fourth, while 8:12 is a fifth. The ratio of the extreme terms, 6 and 12, is that of the octave. We can think of the proportion 6, 9, 12 as expressing an octave composed of a fifth followed by a fourth. The proportion 6, 8, 12 is an octave constructed of a fourth followed by a fifth. The ratio 8:9 thus expresses the difference

³⁵ *Harm.* chapter 6 is copied by Iamblichus in his *Life of Pythagoras*, chapter 26. See also Macrobius (*Som. Scip.* II 1, 9–14) and Boethius (*Inst. Mus.* I 10–11).

³⁶ Adrastus, ap. Theon 56.9–57.10; Aelianus ap. Porphyry, *Comm.* 33.16 ff.

when a fourth is ‘subtracted’ from a fifth.³⁷ This is the ratio of the tone revealed in the ‘musical’ tetractys and it forms the basis for the construction of the Pythagorean diatonic scale that we find in Plato’s *Timaeus*.



This Pythagorean tradition stands opposed to a more empirical approach to harmonics that stems from Aristoxenus. Aristoxenus did conceive of acoustic space as a continuum and this fact helps explain the central point of disagreement with the Pythagorean tradition: the division of the tetrachord. The Pythagoreans equate the fourth with the ratio 4:3 and the tone with 9:8. The interval of the fourth is “bigger” than two tones, since $\frac{9}{8} \times \frac{9}{8} < \frac{4}{3}$. If the remainder or *leimma* were exactly half of a

tone, then there would have to be a rational square root of $\frac{9}{8}$. But this fraction is a super-particular or *epimorion*. That is, it has the form $\frac{n+1}{n}$ and super-particular ratio is such that it is impossible to insert one or more geometric means between the terms.

³⁷ Cf. Theon, 70.7–13

So there is no rational number, x , such that $8 : x = x : 9$, nor any pair of rational numbers such that $8 : x = x : y = y : 9$.³⁸ Any such value would involve an irrational number, such as the square root of 8, and such irrationals lie outside the Pythagorean conception of a number as a determinate collection of units. So what is left over when one takes two tones from the musical fourth is not *half* a tone. Taking the musical fourth to be composed of two tones and such a remainder, the Plato calculates that its ratio must be 256:243.³⁹

By contrast, Aristoxenus and those who followed him were content to divide the tone into halves, thirds, or even quarters since they deemed each of these to be ‘melodic’ (*El. Harm.* 21.20–8). The determination of this question for the Aristoxenians was presumably musical practice, rather than the austere, mathematical reasoning of the Pythagoreans.

It seems to have been traditional for exegetes of Plato’s *Timaeus* to highlight these points about the narrow range of legitimate consonances and the fact that the semi-tone is not really *half* a tone. Plutarch’s *De An. Proc.* certainly does so and so too does Proclus.

Let us now turn our attention to those exegetes of Plato that are both more proximate in time to Proclus and also regarded by him as philosophical allies. We would call them ‘the other neoplatonists’ but Proclus just thinks of them as particularly enlightened Platonists.

D. Proclus’ bacchic chorus

We have fragments from *Timaeus* commentaries by two of those Platonists whom Proclus regards as among the more insightful of the Platonist tradition: Porphyry and Iamblichus.⁴⁰ Indeed, much of our knowledge of these earlier works comes from Proclus’ own *Commentary*. In addition, Proclus also discusses the views of Amelius

³⁸ This is proved by Archytus, DK 47A19. For a characteristically clear discussion, see Barker (2007), 303–5.

³⁹
$$\frac{4}{\left(\frac{9}{8}\right)^2} = \frac{256}{243}$$

⁴⁰ Proclus characterises Plotinus, Amelius and Porphyry, Iamblichus and Theodore of Asine as a chorus of bacchants following the divine Plato (*Plat. Theol.* I 6.16–7.8).

and Theodore of Asine on the proper interpretation of the World Soul. These Platonists, like Porphyry and Iamblichus, make Proclus' list of enlightened Platonists. It is unclear whether Proclus knew the work of Amelius and Theodore directly, or whether he was relying on the contents of the commentaries of Porphyry and Iamblichus.⁴¹ The controversies over the *Timaeus* that feature in Plutarch or Timaeus Locris form a somewhat distant part of the background to Proclus' own *Commentary*, but the writings of those Platonists whom Proclus regards as more or less correct readers of Plato are arguably a much more important piece of the background.

What issues emerge from what we know of the commentaries of Porphyry and Iamblichus? The first and most obvious controversy in the backdrop to Proclus' *Commentary* is the question of the hypercosmic soul. According to Iamblichus 'every order is presided over by the unparticipated monad, prior to the participated entities' (*in Tim.* fr. 54, Dillon). This is a general principle of Iamblichus' view on emanation. He distinguishes between the unparticipated (*amethektos*), paradigmatic cause and the participated one (*metechomenos*). The latter is related to the things that participate in it, while the former remains transcendent and unrelated to the things for which it is the paradigmatic cause.⁴² It follows from this general principle that, when we come to the class of souls, there must be an unparticipated soul. But this cannot be the World Soul, since in animating the cosmos such a soul is participated – that is to say, it is the soul of *some body*. So there must be a hypercosmic soul prior to the World Soul.

According to Proclus' reports, Iamblichus did not think that Plato's *Timaeus* was silent on the subject of the hypercosmic soul. He takes various distinctions in Plato's text to be distinctions between a variety of *different souls*: the hypercosmic soul, the World Soul, and the souls of various beings within the cosmos. In this respect, it seems that the view of Theodore of Asine was similar – or at least Proclus presents them as similar.⁴³ On the other hand, Proclus also presents objections that purport to come from a work by Iamblichus entitled 'Refutations of Amelius and his school – and of Numenius.' However, these objections seem to be directed primarily at the

⁴¹ Cf. Dillon (1973), 337–338 on Proclus' direct acquaintance with Amelius. For a study of Proclus' knowledge of Numenius, with some broader morals drawn from this, see Tarrant (2004).

⁴² There is a third distinction between the participated cause and the cause *in* the participants. This third way of being is described as *kata methexin* or *en schesei*. Cf. Dillon (1973), 33.

⁴³ Cf. Iamblichus *in Tim.* fr. 52.

views of Theodore of Asine, so the relation of his ideas on the subject of souls prior to the World Soul to the thought of Iamblichus is left rather mysterious. In any event, Proclus chooses to portray them as in agreement on the proposition that there is a soul prior to the World Soul. In addition, both seem to have read the *Timaeus* as containing such a doctrine.

On the latter point, at least, they stand in opposition to Porphyry. At several points in his *Commentary*, Proclus juxtaposes the views of Porphyry and Iamblichus. Iamblichus thought that *Timaeus* 34b2–3 described the hypercosmic soul (fr. 50, Dillon). Porphyry claims that it deals with the World Soul (fr. 61, Sodano). Iamblichus thought that lengthwise splitting of the ‘psychic stuff’ at *Timaeus* 36b6–7 introduced two souls, one hypercosmic, the other the soul of the universe (fr. 54, Dillon). Porphyry’s commentary remarks on how the splitting of the psychic strip generates a X in a circle, a symbol of the World Soul (fr. 70, Sodano). This is unsurprising since Porphyry treats the subject of *Timaeus* 34b–37b as one and the same thing – the World Soul – throughout. Proclus’ position on this question is a complex one, as we shall see below.

Some issues in the commentaries of Iamblichus and Porphyry are continuous with earlier work. So, for instance, the tendency to look for deep numerological significance among the numbers that make up the harmonies in the World Soul that we noted in Plutarch is very much present in Iamblichus’ work (fr. 53). Proclus describes him as ‘singing hymns’ on the number sequence 1, 2, 3, 4, 8, 9, 27. Both Theon and Plutarch note that 27 has the distinctive property of being equal to all the sum of the numbers that come before it.⁴⁴ However, Iamblichus goes beyond this in locating the cubic numbers 8 and 27 within the mechanics of emanation where they correspond to the phase of *reversion* upon the cause.⁴⁵ By contrast, Theodore of Asine seems to read the psychic numbers in terms of correspondences with things within the cosmos – 9, for instance, is the number of water.⁴⁶ As we shall see, Syrianus and Proclus similarly interpret the numbers within the World Soul in terms of procession, reversion and remaining in the cause, thus following the lead of Iamblichus. Proclus

⁴⁴ Theon, 96.5–8 (Hiller); *De An. Proc.* 1018D–E.

⁴⁵ For an overview of the triad: procession, reversion, remaining, see Siorvanes (1996), 105–109 and Lloyd (1982).

⁴⁶ Proclus, *in Tim.* II 216.30 included in Theodore test. 22 (Deuse).

regards Theodore's numerological speculations as having a certain level of sophistication (*ouk amousos*, 218.9), but as insufficiently connected with the text of the *Timaeus*. I suspect another work lurking in the background may be the *Theology of Arithmetic*.⁴⁷ This short book catalogues various symbolic associations with the numbers that form the decad (1–10). It has been attributed to Iamblichus, but it seems to be a pastiche of selections from Nicomachus of Gerasa's lost work of the same name and from Anatolius' *On the Decad and the Numbers Within It*. Whatever its authorship, it or something like it seems to form part of the background to Proclus' numerological associations. Many of Proclus' claims that seem wholly unmotivated actually gain some sense when viewed against the fuller treatment in the *Theology*. So, it is not obvious why the number seven is 'motherless and not at all womanish' (*in Tim.* II 236.19) unless one knows from the *Theology* that seven is unique among the numbers in the decad in having no other member as a factor. Hence it is 'motherless' in as much as it is born of the unit alone. Since it is not a factor of any number less than 14, it has no 'offspring' in the decad and so is, in this respect, not at all 'womanish.' However contrived or uninteresting some modern readers might find such associationist thinking about numbers, this tradition forms a significant part of the backdrop to Proclus' *Commentary*.

Above I noted that Plutarch's essay on the soul in the *Timaeus* contained a significant quantity of didactic material on mathematics and harmonics. Porphyry's commentary seems to have similarly contained explanations of fundamental concepts and harmonic doctrines distinctive to the Pythagorean tradition. Sodano's collection of fragments from Porphyry's *in Timaeum* contains extensive extracts from book II of Macrobius' *Commentary on the Dream of Scipio* in fragments 65–8. Within these passages we find the enumeration of the legitimate consonances and the claim that the semi-tone is not really half a tone (fr. 67). Sodano notes parallel passages in Theon of Smyrna. Theon makes use of Adrastus, and so too does Porphyry, so it is unsurprising that there are similarities among these texts.⁴⁸ Sodano also notes parallels to the Macrobius text in Proclus. Though Proclus never announces that he is drawing on material in Porphyry's commentary in his exegesis of the salient bits of harmonic

⁴⁷ Greek text, Falco (1922); translation, Waterfield (1988).

⁴⁸ As Runia notes in his introduction to volume II in this series, a new study of Porphyry's commentary is probably in order.

theory, it remains a distinct possibility that the didactic portions of Proclus' text reflect the content of Porphyry's earlier work.

The place of Theodore of Asine in the background to Proclus' *Commentary* deserves special mention since Proclus seems to go out of his way to explain his views. Theodore seems to fall into the tradition that speculates on the significance of the divisible and indivisible kinds of Being that the Demiurge combines in making the soul. According to Proclus, Theodore related these to two different *intellects* – one containing ideas of wholes, the other of particular things (*merika*). The soul is supposed to be an intermediate between these in as much as it is established from both of them.⁴⁹ What Proclus tells us about the provenance of this idea is intriguing. It is one that Theodore discovered which derives from the Persians through Porphyry – so perhaps the impetus was something that Theodore discovered in Porphyry's writings on the *Chaldean Oracles*. But there is another interesting remark here too: Proclus adds 'Or at least this is what Antonius, who was the student of Ammonius, reports.' The Antonius in question was an associate of Plotinus' teacher, Ammonius Saccas. The intellect that contains ideas of particulars seems to have contents that would be properly described as *individual Forms* – the subject of Plotinus' treatise V.7 and an issue on which some commentators suppose Plotinus remained ultimately undecided or inconsistent.⁵⁰ This notion of an intellect containing ideas of particulars is one that Proclus elsewhere tells us that Theodore derived from Amelius, Porphyry's fellow student under Plotinus.⁵¹ The context for this remark is interesting, since Amelius seems to be discovering individual Forms from *Timaeus* 30c5–7.⁵² So another issue among the more recent Platonic interpreters seems to be that of individual Forms.

This issue emerges in our section of the text only in connection with the World Soul's knowledge of both intelligibles and sensibles (*Tim.* 37b3–c3). Both Iamblichus and Porphyry interpreted this passage in terms of the image of the soul as chariot-

⁴⁹ II 154.4–9 (= Theodore, Test. 19, Deuse).

⁵⁰ There is an extensive literature on this subject. See the selection of primary texts and the bibliography assembled by Sorabji (2005), 363–7.

⁵¹ I 425.16–22 (= Theodore, Test. 11, Deuse).

⁵² Plato's text here is ἀτελεῖ γὰρ εἰκότως οὐδέν ποτ' ἂν γένοιτο καλόν—οὐ δ' ἔστιν τᾶλλα ζῶα καθ' ἑν καὶ κατὰ γένη μόρια and these interpreters seem to have inferred that individual Forms (καθ' ἑν) are being contrasted with the universal Forms (κατὰ γένη μόρια).

driver with two horses in *Phaedrus* 246a ff. On Porphyry's reading, the Circle of the Different is that through which the World Soul possesses the knowledge of sensibles. It knows these sensibles, not because it is affected by causes lower than itself, but because it is the source both of the sensible things themselves, and also the repository of the knowledge of sensibles had by the whole soul. Hence Porphyry says 'the knowledge of sensible things is both carried out [from the Circle of the Different] toward that which is external but also bent round again and brought back into the soul itself.' However, Iamblichus reads this passage and the chariot image generally in such a way as to make the chariot driver the *hypercosmic* soul. This hypercosmic soul rouses up the Circle of the Different – a thing distinct from itself – thus stirring up the *logoi* of the things of sense, and reports on them to the soul in general. However, in doing so, it turns out that even the Circle of the Same possesses the knowledge of sensible things. Does Porphyry's view that the Circle of the Different is both the proximate causal source of sensible things and the repository of knowledge of them imply that there are something like paradigms of individuals within it? Should we regard these as individual *Forms* or merely as the *logoi* of sensibles? The answer is clear enough to Proclus. He will insist that the Circle of the Different possesses only 'projected rational-forming principles' (*proballomenoi logoi*) of sensibles.

Proclus also tells us a great deal about Theodore's exegetical techniques involving letters (or linguistic items generally), characters and numbers.⁵³ These innovative interpretive techniques include the use of *isopsêphia* or *gematria*. So, for instance, the soul is shown to be essentially alive by appeal to the fact that its first and last letters correspond to the numbers that, in turn, can be turned back into letters that yield the phrase, 'it lives.' The letter ψ is used to represent 700. This is the 'third heptad' in the sequence 7, 70, 700. Theodore believed that if one concentrated on the first heptad, all would be made clear. The number 7 is represented by the letter ζ . If you combine this letter with the last letter of $\psi\upsilon\chi\eta$ it yields $\zeta\eta$ – or more precisely $\zeta\eta$ for 'it lives.' Theodore's interpretive toolkit is not exhausted by the letter–number correlations of *gematria*. In another example, he again discerns the soul's status as an intermediate between intellects from the position of the υ in $\psi\upsilon\chi\eta$. This is said to be between 'two spheres' – one of which is hotter and life-engendering because of the *pneuma* in it.

⁵³ in *Tim.* II 274.10–15 included in Theodore, Test. 6 (Deuse).

Here I think it is not the fact that ψ and χ correspond to 700 and 600 that is salient. Rather it is the shape of the letters themselves. Plato's own text has the two psychic strips of soul stuff in the shape of a χ (*Tim.* 36b8) which is then bent round to form two circles corresponding to the sphere of the heavens defined by the celestial equator and the path of the ecliptic. The letter ψ might plausibly be so bent round too. Since these letters can be transformed into spheres, and the activity of a sphere's motion around its centre is the visible analogue of *noêsis* (*Laws* 898a, cf. *in Tim.* II 69.15), by being located between these letters the υ in $\psi\upsilon\chi\eta$ reveals that soul is an intermediate between two intellects.

These flights of interpretive fancy are too much even for Proclus and Iamblichus. Proclus tells us that Iamblichus composed a work entitled 'Refutations of Amelius and his school, and of Numenius'.⁵⁴ Theodore is not named in this connection, but Proclus follows his exposition of Theodore's views with the rebuttal from Iamblichus' work as if it didn't much matter: Amelius, Numenius, Theodore – any of that mob who go in for such interpretive excesses as this! The fact that Proclus lumps them all together suggests that Theodore was not alone in regarding the shapes of letters or correspondences between letters and numerals as salient aspects of Plato's text to be interpreted. This is an issue to which Proclus and Iamblichus must respond however. Their insistence on the unity of each dialogue in its *skopos* means that their own commentaries labour over what we modern readers might regard as irrelevancies and coincidences.⁵⁵ So why should one stop there? If, by Iamblichus' lights, the indisposition of the person absent from the previous day's discussion at *Timaeus* 17a4–5 must be read in a way consonant with the dialogue's *skopos* in physics, why should not the shapes of the letters in $\psi\upsilon\chi\eta$ be fair interpretive game as well? So another issue in the background of neoplatonic readings of the *Timaeus* is the question of what properties of Plato's text are legitimate targets for interpretation.

A final issue lurking in the neoplatonic background to this section of Proclus' *Timaeus Commentary* is the status of the numbers, especially those in the World Soul. His teacher, Syrianus, seems to have developed quite extensive views on the various modes in which numbers may exist. The first and most important distinction is

⁵⁴ *in Tim.* II 277.26–278.25 = Iamblichus *in Tim.* fr. 57 (Dillon).

⁵⁵ On the role of the *skopos*, see the General Introduction to this series in volume 1, p. 12.

between Form-numbers and mathematical ones. The latter correspond to a plurality of units and are subject to mathematical operations like addition. The former are not able to be added and correspond to ‘what it is to be (e.g.) seven’. Syrianus further distinguished between ‘substantial psychic numbers’ and insubstantial mathematical or monadic numbers. The substantial psychic numbers seem to be some sort of intermediate between Form numbers and mathematical numbers.⁵⁶ They will be differentiated from the latter by being indivisible and not subject to mathematical operations,⁵⁷ but Proclus tells us that they are nonetheless *participated* and this presumably differentiates them from Form numbers. This is a more complex scheme than the division found in, say, Nicomachus of Gerasa between divine and scientific (*epistêmonikos*) numbers.⁵⁸ There is also a further question of how the ratios (*logoi*) between the psychic numbers exercise their influence on the sensible realm. Some commentators seem to have tried to assimilate these to the *spermatikos logos*, an equation that Proclus resists.⁵⁹ But the matter is complex since the neoplatonists credited Pythagoras himself with a notion of number explained in terms of such seminal *logoi* and it would be easy enough to confuse the idea that ‘number is the extension and activation of the *spermatikoi logoi* in the monad’ with the idea that the psychic numbers and the ratios in which they stand are similarly *spermatikoi logoi*.⁶⁰

II. The structure of Proclus’ commentary

The text translated in this volume corresponds to the latter two thirds of Book III of the *Commentary*. The first part of Book III (volume 3 in this series) is dominated by the idea of the ‘ten gifts of the Demiurge.’ Proclus treats the text of *Timaeus* 31b–40a as enumerating ten gifts that the Creator bestows upon the ‘god who will at some time be’ (34a8–b1). Each of these endowments plays a role in making the ensouled and intelligent cosmos a ‘visible god’. The present volume is far longer than volume 3 in our series, but while it described six gifts that the Demiurge bestowed on the body of

⁵⁶ in *Tim.* II 164.19–165.6

⁵⁷ in *Tim.* II 193.23–6.

⁵⁸ Cf. *Arith.* I.6.1–4.

⁵⁹ in *Tim.* II 193.26–30.

⁶⁰ Syrianus in *Metaphys.* 142.11–21; cf. Iamblichus, in *Nic. Arith.* 10.12–17.

the world, this volume deals only with the seventh Demiurgic gift: the fact that the cosmic body is animated by a divine soul (*in Tim.* II 5.25–6).

This is not to say that the present volume has no organising architectonic. In fact, Proclus thinks that this part of Plato’s text is structured by the same order of topics as Iamblichus’ *De Anima*. Iamblichus’ work is structured by the idea that first one inquires into the substance or *ousia* of the soul (§§2–9), then its powers (§§10–15), and then its activities (§§16–19).⁶¹ This order of questions is perhaps one that Iamblichus arrived at by reflecting on what he took to be the short-comings of Aristotle’s way of categorising previous theorising about the soul (*DA* I.2, 403b25, ff).⁶² Whatever the origins of the Iamblican order of exposition in psychology, Proclus treats Plato’s text as conforming to it. The commentary in this volume divides into five main headings. First there is a transitional section in which Proclus discusses the relation between the World Body and the World Soul (102.7–119.24). Then he turns to the composition of the World Soul, and in particular its *ousia* (119.29–166.14). From the psychic *ousia* we pass to a discussion of the psychic harmony (166.15–237.7). This portion of the *Commentary* is very long because it includes two considerations of the lemma text *Tim.* 35b4–7. As noted above, it is part of the tradition in discussions of this part of *Timaeus* for there to be a considerable didactic element concerning proportions and harmonies. The section on the psychic harmonies is followed by discussion of the “form” or “shape” of the World Soul (237.8–257.29). Literally, of course, the World Soul has no spatially extended shape – a point that Proclus hammers home repeatedly by drawing a distinction between the visible heavenly bodies that travel along the ecliptic and the immaterial, purely psychic counter-parts to the paths that the visible bodies will traverse. Yet Plato does communicate to us important truths about the soul by treating it as two strips which are bent round to form two circles, one of which is subdivided, etc. This section on the

⁶¹ Or at the very least, John Stobaeus transmits the fragments of Iamblichus’ work under the headings *περὶ δυνάμεων ψυχῆς* (*Anth.* I 49.33.1) and *περὶ τῶν ἐνεργειῶν τῆς ψυχῆς* (I 49.36.1). It must be said that these headings fit very neatly over the content that he then reports from Iamblichus’ work. It is possible, of course, that this way of systematising things is one that Stobaeus draws from elsewhere (though it is unclear where that might be, save Proclus’ *Commentary*) or one that he imposes himself. But the fact that Proclus explicitly uses it too makes it far more plausible that it derives from Iamblichus. In personal correspondence, Dillon tells me that it is, to his knowledge, original to Iamblichus.

⁶² Iamblichus’ remarks on the ambiguities of Aristotle’s three main categories (*DA* §1) seem somewhat at odds with the praise for Aristotle’s essay by Iamblichus that ps.Simplicius reports (*in DA* I.11).

form of the World Soul is followed by a discussion of its powers (257.30–279.16) and then a discussion of its activities (279.19–316.4). This structure is announced at 125.10–127.25 and the reader is reminded of it at particular intervals.⁶³ Proclus even has a justification of sorts for what he regards as a merely apparent deviation from Iamblichus’ three-fold treatment of issues in psychology (II 126.30–127.11). The question of psychic harmony and form is subordinate to that of the soul’s substance or *ousia*. So we have the primary triad: *ousia*, power, activity. But the first member of the triad, *ousia*, is itself triple: *hyparxis*, harmony and form. So Plato’s discussion of the soul falls into five parts. And it is fitting for it to be a pentad since the soul is an intermediary between the intelligible and sensible realms, while the pentad is the arithmetic mean between those numbers in the decad that sum to ten, as the diagram in the *Theology of Arithmetic* would have illustrated.⁶⁴

1	4	7
2	5	8
3	6	9

Runia notes in his introduction to volume 2 in this series that Proclus’ method in his *Commentary* conforms only loosely to the later structure of *theôria* and *lexis*. This structure is clearly apparent in a work like Olympiodorus’ *Commentary on Plato’s Gorgias*. This work is the record of Olympiodorus’ lectures, as indicated by the use of *apo phônês* in the title. As a consequence, Plato’s text is dealt with in fifty lecture-sized chunks. In each lecture, the teacher provides a general interpretation, which may also involve the resolution of interpretive problems and the answering of potential objections. This is the *theôria*. The text under discussion was then likely read out and the teacher would comment on significant words or phrases. This is the *lexis*. Some aspects of Proclus’ *Commentary on the Timaeus* conform very roughly to this model. Often a discussion of individual words or phrases concludes the treatment of a *lemma*. Sometimes such detailed discussion is explicitly contrasted with the general interpretation that has preceded it. Thus the treatment of *Timaeus* 34b10–c2 at *in Tim.* II 113.15–116.1 falls neatly into the pattern of *theôria* and *lexis* and Proclus marks the

⁶³ 160.18–23; 223.21–24; 258.1–3; 279.20–25.

⁶⁴ Cf. *Theol. Arith.* 31.12–16. The diagram is missing from our manuscripts, but it is easy to construct. The pairs of numbers that sum to ten appear on the middle horizontal, the middle vertical and at the diagonals. In each case, the arithmetic mean is five.

passage from one to the other explicitly: ‘Right now, however, if you are willing, let us consider each of the words in Plato’s text’ (113.26–7). What is certainly lacking, however, is anything like the relatively uniform divisions of the text that we find in Olympiodorus’ *Gorgias Commentary* – divisions that owe to the *Commentary*’s origins in a context of lectures of more or less uniform duration.

I noted above that it seems to have been traditional for works on this portion of Plato’s *Timaeus* to contain considerable material on mathematics and harmonics of a more or less didactic nature. Proclus conforms to this expectation in ways that affect the otherwise regular structure of his *Commentary*. He repeats the lemma at *Timaeus* 35b4–6 (‘First He took a single portion from it’, etc.). After a brief introduction to the topic of the World Soul’s harmony (166.16–67.25), Proclus gives a mathematical preface, followed by the initial quotation of *Timaeus* 35b4–6. This first quotation of the lemma is then followed by a discussion of such basics of harmonic theory as multiples; harmonic and arithmetic means; the epimoric ratios corresponding to the fourth, the fifth and the tone; the semi-tone; as well as the apotome and the komma. The alternative constructions of the scale by Adrastus, Timaeus Locris and Severus are discussed.

To this point, the discussion is mostly a technical one about harmonic theory and the extent of harmonic theory to be found in Plato’s text. (For instance, does Plato reveal to us the apotome, as well as the semi-tone?) But at 193.6 the discussion turns to an ‘exegesis of the text that is *pragmateiôdês*’. This term occurs just once in Plato, at *Parmenides* 137b1 where it means something like ‘serious’ or ‘laborious’.⁶⁵ We find no occurrences of the term in Plotinus, Porphyry or Iamblichus, but the Athenian school beginning with Syrianus and Proclus seem to have given it a new career. Sometimes it seems to mean no more than ‘substantive’ or ‘important’ – as Morrow and Dillon translate it in Proclus’ *Parmenides Commentary*. But in the context at *in Tim.* II 193.9 it seems to mean something more like ‘exegesis that involves correlations between concepts in the text of Plato and things.’ Under this heading Proclus seeks to disabuse the reader of mistaken correlations, such as the correlation between psychic divisions and arithmetic numbers, or between the psychic ratios and material, Stoic *spermatikoi logoi*. The mistaken ideas that he dismisses cannot do justice to the fundamental fact that the World Soul is both divisible and indivisible,

⁶⁵ ἐπειδήπερ δοκεῖ πραγματειώδη παιδιὰν παίζειν, κτλ.

both a single whole and a plurality. So the correct understanding of the passage pays attention to the soul's status as an intermediate and requires Proclus' distinctions among a) the whole prior to the parts, b) the whole composed from the parts, and c) the wholeness in each part. It also requires seeing the World Soul as simultaneously monadic and dyadic, as well as simultaneously Apollonian (in virtue of being harmonised) and Dionysian (in virtue of being divided). Proclus caps this section off with correlations between the three means within the soul and the daughters of Themis, as well as correlations between various ratios and mixed participation relations. There is a concluding section as well (211.10–30) that summarises the important point that we should look upward from the divisions within the World Soul to their intellectual Demiurgic causes – not downward to correlations between them and things in the sensible realm.

The structure of this section of the text might lead to the expectation that this is Proclus' final word on the subject, but this expectation is not met. Instead Proclus quotes *Timaeus* 34b4–6 a second time. He then says:

As we said earlier [174.15], it is necessary to interpret what has been said by Plato not only mathematically, but also physically or philosophically. For the substance of the soul has not been composed from mathematical numbers and ratios, but instead all these ratios and numbers symbolise (*apeikonizein*) the soul's genuine substance and the Demiurgic and life-generating divisions within it. But what things the mathematical ratios symbolise in this iconic manner, and how they disclose the substance of the World Soul, this is not easy to explain to those who fail to pay attention to the very thought of Plato. (212.3–12)

Proclus then returns to dismissing mistaken views, such as the idea that the psychic divisions in the World Soul correspond to motions, sizes or speeds of the heavenly bodies. Amelius is listed as among those who give a view that is *pragmateiôdês*. His interpretations include just the sort of correlations of numbers with things that I suggested is characteristic of an exegesis of this sort. So, for instance, the World Soul is said to exercise providence over domesticated animals by virtue of the presence of the number 8 in the initial psychic portions, while it cares for wild animals by virtue of the number 27. (The odd number is proper to what is 'more dignified and authoritative', while the even (female!) number corresponds to what is subordinate.) It

appears that Proclus, however, still wants to read the numbers corresponding to the psychic portions “upward” – as images of higher, divine causes (214.31–215.2). Following an account of the various numerological speculations of Porphyry, Iamblichus and Theodore of Asine, Proclus turns to ‘another mode of reasoning’ which he credits to his teacher, Syrianus. This is a mode of reasoning built around the central insight, noted earlier, that the soul is both a unified whole and also a divided plurality, a one–many.

The account of Syrianus’ teaching has a structure not too dissimilar to that which we encountered under the first quotation of *Timaeus* 34b4–6. There Proclus began by discussing the three kinds of wholeness (195.24, ff). Similarly here he begins from the perspective of wholeness (218.30). In this version, however, he talks about three cycles of procession, remaining and reversion. The number one corresponds to a entity remaining in its cause. The number two or the dyad corresponds to procession into plurality. Three is correlated with the reversion of that which proceeds upon its cause. Nonetheless, this corresponds structurally to the triad of three kinds of wholeness: that prior to the parts, that of the parts, and that in the parts. In the next phase, he takes up the perspective of division (220.5). This corresponds, albeit not so exactly, to the earlier discussion of the soul’s simultaneously monadic and dyadic character (196.19, ff). In both cases, one of the things to be explained is how some of the psychic ratios are inclusive of others. Nothing in the later treatment of *Timaeus* 34b4–6 corresponds to the earlier – essentially Orphic – reading of the Demiurge’s Apollonian and Dionysian activities in creating a soul that is both unified and divided. Nonetheless, the next phase⁶⁶ of Syrianus’ reading returns to the theme that the various means in the World Soul have intimate connections to principles of distributive justice. This corresponds to the earlier reading of the arithmetic, harmonic, and geometric means in terms of the daughters of Themis (198.14–28).⁶⁷ Correspondences between the remaining portions of the two texts – that is, those at 200.21–211.10 and 221.4–224.3 – are far less easy to discern, in part because the texts

⁶⁶ Cf. 220.24 ἔπειτα δείκνυσιν, ὅτι καὶ αἱ δύο μεσότητες αὐται κτλ.

⁶⁷ Note that the material on Themis and her daughters is reprised in the Appendix tacked on to the end of Book III (316.4–17.19). It is not, however, in exactly the same words that we find at 198.14–28. It is probably too tenuous to make any very confident inferences from this, but it would be a scrap of text that would fit somewhere around 221.4.

themselves are collections of remarks with far less thematic unity. However, the parallels observed thus far suggest certain possibilities.

The appearance of the same lemma twice in Proclus' *Commentary* raises the initial expectation that the first quotation will be followed by didactic material that reminds the audience of the salient facts about harmonics – facts that are essential for seeing the point of Plato's text. This is just what we would expect when we consider Proclus' text against the backdrop of works like Plutarch's *De An. Proc.* To a large extent this expectation is met. We might anticipate that the second quotation of the lemma would provide the occasion to turn from an examination of Plato's text *mathematikôs* to an interpretation *physikôs* and *philosophikôs*. This expectation too is met, and in just these terms. This leaves the end of the first treatment of the lemma (195.24–211.30) as a bit of a mystery. It is certainly *not* largely didactic treatment of the salient mathematical and harmonic facts. In fact, it is a series of really quite extravagant speculations on the manner in which the numbers and ratios in the World Soul function as images of higher, intelligible causes. But so too is the passage in the second treatment of the lemma at 218.20–224.3 and this is expressly said to be an account of the teachings of Syrianus.

One hypothesis that might explain this is that we have here something approaching a Proclean doublet. That is, the more speculative material at *in Tim.* II 195.24–211.30 that is appended to the preparatory mathematical information represents a re-working and expansion of Syrianus' ideas in 218.20–224.3 by Proclus. This may have occurred at some later stage, after the initial composition of the text.⁶⁸ Our existing text is thus perhaps at a stage where this new material has not been fully incorporated and digested. The exegesis *pragmateiôdês* that intrudes at 193.6 is in competition with the examination of the text from a physical and philosophical point of view that follows the second quotation of the lemma. The latter is clearly identified as the view of Syrianus. It is possible that the former section represents Proclus' expansion of his teacher's exegesis.

III. The contributions of Proclus' Commentary

⁶⁸ For what little we know about the circumstances of its initial composition, cf. Marinus *VProc.* §§12–13 and the General Introduction to this series in volume I, pp. 13–15.

Within this overall architectonic, what does Proclus accomplish in his commentary? Some of these achievements are ones that promote a clearer understanding of Plato's text. Others are innovations in Neoplatonic philosophy.

A. *The psychic composition*

Proclus' *Commentary* is the first source we possess from antiquity that takes what most people now regard as the proper reading of *Timaeus* 35a1–8. It is not known whether this is something that was already clear in Porphyry's *Commentary*, or that of Iamblichus, or whether it is a reading that Proclus derived from Syrianus. If so, no traces of any such earlier version have survived. The problem with the interpretation of this line of text centres around the words αὐ̄ περί in the second clause of the problematic sentence:

[a1] τῆς ἀμερίστου
καὶ ἀεὶ κατὰ ταῦτὰ ἐχούσης οὐσίας καὶ τῆς αὐ̄ περί τὰ σώματα
γιγνομένης μεριστῆς τρίτον ἐξ ἀμοιβῶν ἐν μέσῳ συνεκεράσατο
οὐσίας εἶδος, τῆς τε ταύτου φύσεως [αὐ̄ περί] καὶ τῆς τοῦ
[5] ἑτέρου, καὶ κατὰ ταῦτὰ συνέστησεν ἐν μέσῳ τοῦ τε ἀμεροῦς
αὐτῶν καὶ τοῦ κατὰ τὰ σώματα μεριστοῦ· καὶ τρία λαβῶν
αὐτὰ ὄντα συνεκεράσατο εἰς μίαν πάντα ἰδέαν, τὴν θατέρου
φύσιν δύσμεικτον οὔσαν εἰς ταῦτὸν συναρμόττων βίᾳ.⁶⁹

Most editors have sought to omit or amend αὐ̄ περί in spite of the fact that it is in all our manuscripts. The effect is to then identify Sameness and Difference with the divisible and indivisible kinds of Being. This makes the mixing process described in the second clause one in which the Demiurge combines the third kind of Being blended from the divisible and indivisible kinds again with the original ingredient – the divisible and indivisible Being – thus rendering καὶ κατὰ ταῦτὰ συνέστησεν ἐν μέσῳ τοῦ τε ἀμεροῦς αὐτῶν καὶ τοῦ κατὰ τὰ σώματα μεριστοῦ repetitive and redundant.⁷⁰

⁶⁹ *Timaeus* 35a1–8 in the OCT text. a4 αὐ̄ περί (περὶ) A F P Y Pr. Plut. Eus. Stob. : om. (bis) Sext. Emp., non vertit Cic. a5 ταῦτὰ F: τὰ αὐτὰ Eus.: ταῦτα A P Y Stob.

⁷⁰ Taylor (1928), 108–109 has more or less the same reading as Plutarch – the reading contested by Proclus and later by Grube. He excuses the repetition that his proposed omission would produce as

Proclus, however, refuses to *equate* the divisible and indivisible kinds of Being with Difference and Sameness respectively (*in Tim.* II 155.20–156.8). He offers several arguments against such an identification. Among other things, this would violate the axiom that all things are in all, though each according to its ability. Those mistaken Platonists who equate the indivisible Being with Sameness and divisible Being with Difference have jumped from the fact that Sameness *predominates* in intelligible, indivisible things to the conclusion that Difference is not there *at all*. But this is surely wrong, since even intelligibles are, in a sense, differentiated one from another.

Because he refuses to identify Sameness and Difference with the indivisible and divisible kinds of Being, Proclus sees what function the second occurrence of αὐ̃ πέρι is serving. There are divisible and indivisible kinds of Sameness and Difference, as well as Being. So αὐ̃ πέρι in a4 indicates that the Demiurge does again that which he did in the case of Being: he combines the indivisible kind of Sameness with the divisible kind to form a third, intermediate kind. He does the same thing with the divisible and indivisible forms of Difference. Thus the end of the first stage of Demiurgic activity results in the production of three kinds of ingredients for the World Soul – three intermediate gradations of Being, Sameness and Difference which have resulted from the blending together of the divisible and indivisible kinds.

That Proclus has the best explanation of Plato's text has been largely accepted since the publication of G.M.A. Grube's two and a half page note in *Classical Philology* in 1932.⁷¹ Rather than covering the same ground again, then, let us ask what prompts Proclus' insight and what results he produces as a consequence of reading Plato's text this way.

In my opinion, the primary reason why Proclus is inclined to resist the equation of indivisible Being with Sameness and divisible Being with Difference that other readers seem to have succumbed to is because he thinks that Plato's *Sophist* sheds essential light on the text of the *Timaeus*. In the *Sophist*, Being, Sameness, Difference,

follows: 'This seems a repetition of what had already been said three lines above, but has a point if the object of the clause is to remind us that the Same and the Different of 4–5 are identical with the Indivisible and Divisible of a5–6.'

⁷¹ For a list of those who have accepted Grube's solution, as well as the few dissenters, see Opsomer (2004), 140–141. Opsomer also gives an extremely lucid explanation of the differences between Plutarch's quotation of Plato's text and the OCT version and how they matter. I have benefitted enormously from it.

Motion and Rest are the *five* greatest kinds. They are proved to be distinct and five in number. Proclus appeals directly to the *Sophist* at II 132.18 and 133.25 in his defence of this point. Plutarch, by contrast, utilises only a single reference to the *Sophist* in his *De An. Proc.* and this is to argue against those interpreters who suppose that the soul's motion and rest owe to the presence of Sameness and Difference in it. Plutarch notes that in the *Sophist*, Motion and Rest are distinct from Sameness and Difference. Hence Sameness and Difference ought not be treated as the source of Motion and Rest in the soul. He apparently fails to appreciate that similar reasoning should tell against his own equation Sameness and Difference with intelligible and sensible Being. Or perhaps he did not think that the *Sophist* was tied particularly closely to the *Timaeus* and thus uses the discussion of the five greatest kinds only dialectically against alternative interpretations of the *Timaeus*. Proclus, however, composed a commentary on the *Sophist* and makes frequent reference to it both in his work on the *Parmenides* and in his *Platonic Theology*, but also in his *Timaeus Commentary*.⁷²

Supposing that Proclus reads Plato's text correctly, what does he do with this insight? One thing he does is to develop another means of differentiating among souls. There is a long-standing issue among Platonists about the relation between the World Soul and individual souls. This is evident in Plotinus' treatise on whether all souls are one (IV.9), and also in the remains of Iamblichus' *De Anima* in the discussion of the number of souls (DA §25). Iamblichus characterises Amelius' position as monistic: there is just numerically one soul that is multiplied, not intrinsically, but by its relations to things. Your soul, or the soul that animates the Moon, is the World Soul *standing in a certain relation to a body*. Iamblichus rejects such an explanation of multiplicity – or the appearance of multiplicity.⁷³ In the descent of souls from the World Soul, there is a substantial change, so that a descended human soul both is and is not the same in essence as the World Soul. As Carlos Steel puts it in his study of the nature of soul in Iamblichus, Damascius and Priscianus:

⁷² Proclus' citations from the *Sophist* are collected by Christian Guérard to Annick (1991). However, this list is complete only with respect to his *in Parm.*, *in Alc.*, *in Crat.*, *Tria Opuscula*, and the first five books of *Theol. Plat.* No systematic study has been made of Proclus' use of the *Sophist* in his *Commentary on the Timaeus*.

⁷³ Cf. *in Tim.* fr. 56 and Finamore and Dillon (2002), 145.

Iamblichus believed that, if the *intermediary* character of the soul is given its due, one must accept that it changes also in its *substance*. For he who considers the substance of the soul as something unchangeable, lapses unaware into the position of Plotinus for whom ‘something’, the highest part of the soul, always remains pure and unaffected.

According to Iamblichus temporality and change are not accidental to the soul but affect its very substance. But throughout this substantial change, the soul still preserves its identity or, as Iamblichus says, ‘the soul simultaneously changes and remains’.⁷⁴

If there can be a plurality of kinds of such substantial change, depending on the extent to which a soul has descended, this would entail that the multiplicity of souls is not merely a matter of their relations to numerically distinct bodies. Rather it is grounded in intrinsic differences among their substance or being. Hence Iamblichus would have good reason to deny the view that he identifies as Amelius’.

Proclus rejects Iamblichus’ paradoxical position, arguing instead that *all* soul is eternal in its substance, but temporal in its activities (ET 191; *in Tim.* II 124.17–19). This position might be thought to be plagued with two problems. First, must Proclus then accept the ‘relational differentiation’ view of Amelius on the apparent plurality of souls? After all, if your soul, the soul that animates the Moon, and the World Soul are all the same in their essence, differing only in their activities, then isn’t this just a version of the position of Amelius? That view seems to make the relation of souls to various bodies the origin of such multiplicity as we may say is present among souls. (But how could material objects be a principle of multiplicity for that which is superior to them?) Perhaps the Proclean view is equally relational – it is just that the relation is a relation between the psychic essence and its *activity*, not between a soul and a *body*. (This, however, does not escape the worry that what is lower might be a principle of plurality in what is higher, since Proclus regards essence as prior to activity.) Second, Steel argues on the basis of *in Tim.* II 131.20–5 that there is a kind of tension in Proclus’ view. On the one hand, he is committed to the general principle that what is present in a thing’s activity is pre-figured in its essence, since *ousia* is prior to *energeia*. So the ‘seed’ of the soul’s temporal life and activity is present in its essence. On the other hand, he seeks to maintain that all souls are the same and eternal

⁷⁴ Steel (1978), 61.

in their essence. Steel thinks that this tension is not really resolved by Proclus' view that the soul's essence is not in Becoming insofar as it is whole, but is in Becoming insofar as it has parts (*in Tim.* II 131.23–5; 144.5–7).

I think that the role of the divisible and indivisible kinds of Sameness and Difference have been overlooked in this debate. Proclus is not particularly vocal about this, but he uses the presence of these kinds of Sameness and Difference within the psychic essence to provide an intrinsic principle of differentiation among souls, but one that allows them to all have the same essence or substance. It is certainly true that bulk of Proclus' discussion of the issues around the differentiation of souls occurs in his discussion of Timaeus 35a1–4. His discussion of the second clause that begins with the problematic second occurrence of αὐ̃ περί at 35a4–6 is rather shorter (*in Tim.* II 155.2–156.24). However, following an even briefer discussion of the mixture of these three intermediate kinds (*Tim.* 35a6), Proclus raises the question of why this mixture of the intermediate kinds of Being, Sameness and Difference is such as to constitute the *World Soul*, as opposed to some other soul (*in Tim.* II 158.3–15). His answer is two-fold. First, the admixture of ingredients that constitutes the World Soul is drawn from the *universal* intellect (for the indivisible kinds) and the *universal* corporeal nature (for the divisible kinds). A second, important addition to this explanation⁷⁵ is that in this particular psychic mixture, Being predominates. This fact makes a soul divine. By contrast, a predominance of Sameness makes a soul daimonic, while a predominance of Difference makes it a partial or human soul. This means that Proclus has the resources to allow for intrinsic differentiations among souls that are descended to different degrees, but without denying them the same psychic essence or substance. The *ousia* of each and every soul is an admixture of the divisible and indivisible kinds of Being, Sameness and Difference. He can thus deny Iamblichus' view that the essence or substance of a soul is altered in descent. All of them have one and the same *ousia*. Yet there can be variations within this shared substance that explain the difference between, say, human and daemonic souls by appeal to a fact that is intrinsic to the soul in question – the predominance of Sameness or Difference. This is not a matter of its relation to other things, as in Amelius' solution. Proclus refers to this solution again in his discussion of the 'second

⁷⁵ Note the καὶ μέντοι καὶ at 158.9.

and third degree of purity' found in the mixture from which mortal souls are composed at *Timaeus* 41d. There he says:

In addition to this, the kinds [from which mortal souls are composed] are the same and different, for while all souls are composed from the intermediate [kinds of Being, Sameness and Difference], some souls are composed from the first of these, some from the leftovers and the last.... Moreover, the manner [of composition] is simultaneously the same and not the same, for there is more Difference in the case of partial souls. (*in Tim.* III 245.13–18; cf. 254.2–10)

What enables this solution is the correct reading of *Timaeus* 35a1–6 with its repetition of $\alpha\tilde{\upsilon}$ περί. This reading prevents the equation of Sameness with indivisible Being and Difference with indivisible Being that we see in Plutarch and, later, Taylor. This, in turn, gives Proclus his two additional factors that can be varied within any soul's essence. This particular use of the correct reading of this passage may strike us as odd. For us, it seems clear enough that Proclus' interpretation makes the best sense of the grammar of Plato's sentence. But there is a genuine issue for any Platonist about what makes the difference between souls of different orders – some way of giving sense to Plato's highly mythical language at *Timaeus* 40d. Proclus' reading of the vexed syntax of *Timaeus* 35a1–6 gives him the resources to do this.

B. The other traditional problems of the psychogony

What about Plutarch's other 'problems' about the composition of the World Soul? These involve the *arrangement* of the psychic divisions – a single length or a Λ -shape – the *quantity* of such divisions and the values of the psychic numbers involved in them, and finally the *function* of the psychic harmonies (*De An. Proc.* 1027C). With respect to the first issue, Proclus follows Theodorus of Soli in setting them out as a single sequence of numbers, rejecting the view of Crantor, Plutarch, and Adrastus.⁷⁶ Proclus' reasons for doing so do not seem to add substantially to the reasons against the position that Plutarch himself reports (1022D). On the question of the *quantity* of terms in the series of numbers that Plato describes, Proclus argues against the 36-term

⁷⁶ For Plutarch's apparent endorsement of the Λ arrangement, see *De An. Proc.* 1017E. Proclus names, and argues against, only Adrastus. Others who adopted the Λ arrangement include Clearchus, Theon of Smyrna, and Macrobius. Cf. Cherniss' note c on p. 319, Cherniss (1976).

reading of Timaeus Locris which includes the ratio of the *apotome*.⁷⁷ Instead, he advocates the 34-term reading that requires us to fill not only the 4:3 ratios with tones, but also the 3:2 ratios in Plato's sequence. I noted above Proclus' most obvious argument against the 36-term reading: Plato does not mention the apotome. But he also tries to argue that Plato's scale is diatonic and the number 34 is proprietary to the diatonic scale. Following Nicomachus, he regards the tone with its 9:8 ratio as distinctive to the diatonic scale. Indeed, he thinks that its name derives from the fact that it alone 'progresses through tones' (*Harm.* 12.1.35–40). 18 has to 16 the ratio of the tone – that is, 18:16 :: 9:8 – and the sum of these numbers is 34. So, Proclus says, the number of terms that compose Plato's diatonic scale is just right.⁷⁸ This may not strike us as a particularly convincing bit of evidence for Proclus' interpretation of the number of terms in the Platonic sequence but it is, to my knowledge at least, unique.

With respect to the values of the numbers, Proclus makes the value of the initial unit 384 in order to present all of the numbers in the sequence without fractions. This measure goes back to Crantor and is common to most of the subsequent commentators on the *Timaeus*.⁷⁹ Proclus' most original contribution in this respect comes not in this book, but later in book III where he considers the differentiation of souls. At *in Tim.* III 255.30–256.21, Proclus insists that all encosmic souls – the World Soul, daemonic souls and those of mortals – must have the same ratios in them since Plato mentions these ratios in connection with the latter (*Tim.* 41d6).⁸⁰ In the case of the World Soul, these ratios are given in their lowest possible terms (*puthmên*, 256.5). Nothing, however, prevents the same ratios being present in lower souls in doubles or other multiples of these lowest terms, depending on their rank (256.7–9). So while the first portion in the World Soul corresponds to the number 384, the soul of one of the visible heavenly gods might begin with 768. Your own soul's unit might be 1152 or even higher. As in the case above with the different admixtures of Being,

⁷⁷ *in Tim.* II 188.10–190.10.

⁷⁸ *in Tim.* II 189.4–6. There is supposed to be some sort of additional evidence in the presence of 16 since 'this second number is fitting to the second procession of the soul from its primary intelligible principle.' This is a bit opaque. Normally Proclus accepts the Pythagorean equation of the number 6 – not 8 – with the soul.

⁷⁹ Cf. Plutarch *De An. Proc.* 1020C and Cherniss' note *ad loc.* The dissenter is Plutarch himself who makes 192, though this would not, in fact, succeed in clearing the fractions in the Platonic sequence.

⁸⁰ The question of the numbers and harmonies present in *hypercosmic* souls is a vexed question. See Winnington-Ingram's notes on Proclus' discussion at 251.29–255.2 in Festugière.

Sameness and Difference, Proclus can draw differentiations among ranks of souls whilst still preserving their essential structural sameness.

Plutarch's third traditional problem around the psychogony in the *Timaeus* involves the *function* of the harmonic ratios in the World Soul. Proclus concurs with Plutarch's negative judgement that these ratios should *not* be seen as encoding information about the distances between, or the relative speeds of, the heavenly bodies. Plutarch's positive view is that the psychic harmonies are meant to signify the World Soul's concord with itself – a concord that further characterises at least the heavenly regions of the cosmos that this soul animates (*De An. Proc.* 1030C).

The views of Syrianus and Proclus on the significance of the psychic harmonies have been discussed above in the section on the structure of Proclus' commentary. In general terms we may say that they, like Plutarch, seek to avoid any one–one matching between things in the cosmos and either specific number or ratios in the World Soul. This is true for attempts to assign planetary distances or speeds to specific psychic numbers, as well as for attempts to equate particular proportions with worldly elements, as we find in Theodore of Asine. Like Iamblichus, Syrianus and Proclus discern the three phases of remaining in the cause, procession, and reversion upon the cause in these numbers and ratios. Proclus is unique, I believe, in regarding the different forms of ratio in the World Soul as causal pre-cursors to different *participation relations*.

All the ratios within the World Soul are either super-particular or super-partient ones. Those of the fourth, fifth and the tone as super-particular since they have the form $n + \frac{1}{n}$. The semi-tone, however, is a super-partient since it is $243 + \frac{13}{243}$.

Participation relations can imitate either of these kinds. When you participate in Humanity, Proclus thinks that this is an image of the super-particular, since you have the whole of Primate, plus one part (i.e. *homo sapiens*) of it. Hybrids, such as the mule, however, participate in the mode of super-partients. The mule has the whole of the genus Equus. However, it has, not one, but *two* parts or species within it – one of donkey, one of horse. Hence its participation relation resembles the form of the super-partient $n + 2/n$. To my knowledge, such speculations about variations within the participation relation are unique to Proclus.

C. *Harmonic theory on Proclus' Commentary*

Consistent with the tradition of works on the *Timaeus*, Proclus' *Commentary* contains a considerable exegesis of harmonic theory. He declares his Pythagorean–Platonist credentials by providing us with three arguments for the proposition that the semi-tone is not really half of the tone. This, Proclus tells us, is one thing that sets the followers of Aristoxenus apart from the Pythagoreans (*in Tim.* II 183.20–22). However, Proclus maintains a studied neutrality on the other question that sets them apart. Is the octave plus a fourth or the 'musical eleventh' concordant? The Pythagoreans say No, since it would correspond to an untidy superpartient ratio, 8:3.⁸¹ The followers of Aristoxenus, however, say Yes, because it sounds right. Ptolemy is seen by Proclus as making some concessions to the Aristoxenian point of view.⁸² Though Ptolemy accepts the Pythagorean proposition that the semi-tone is not really half of a tone (*Harm.* 21.21–23.19), he nonetheless regards the octave plus a fourth as a harmony (*Harm.* 13.1–8). Proclus insists, however, that we may pass over this second question in silence. It is clear from what the divine Plato has written that the semi-tone is not half a tone, but since he says *nothing* about the octave plus a fourth Proclus thinks that he need not say anything either.

I leave it to experts in the area of ancient music to further assess the value of Proclus' contributions in his *Commentary*. The following seem to me to be passages worthy of noting.

Proclus provides an elegant demonstration of the relations of the terms in the musical tetractys: 6, 8, 9, 12. If we have four terms in continuous geometric proportion like this, then if one of the intermediate terms forms the arithmetic mean between the extremes, the other forms the harmonic mean. Moreover, if there are four terms a , b , c , d such that c is the arithmetic mean between a and d , while b is the harmonic mean, then the proportion is a geometric one (*in Tim.* II 173.11–174.10). This demonstration reprises material in the final chapter of Nicomachus' *Introduction to Arithmetic*, though Proclus' presentation is much more succinct and clearer. This reciprocal relation between the harmonic and arithmetic means, on the one hand, and the geometric on the other serves to ground the judgement that the geometric

⁸¹ Cf. Barbera (1984).

⁸² For Ptolemy and his somewhat more empirically oriented strain within the Pythagorean tradition, see Barker (1989), 270–274.

proportion is the ‘most perfect’ (Nicomachus) or ‘the only one that is true proportion’ (Adrastus).⁸³ It is interesting to observe that this theorem forms the final part of Nicomachus’ *Introduction* and is not explicitly articulated in Theon’s *Mathematics Useful for the Understanding of Plato*. Proclus, however, drops it in as a brief addendum at the conclusion of his discussion of nature of the three kinds of proportion and the method for arriving at them. This kind of material is, of course, common to Theon (116.8–119.17) and Nicomachus (2.23.1–25.5). But the reciprocity of the means is entirely absent from Theon and given as the final word in Nicomachus. (Indeed, Nicomachus illustrates the proposition with the example of the musical tetractys, 6, 8, 9, 12.) This perhaps indicates that Proclus’ text is one for the very advanced Platonist–Pythagorean.

Proclus provides three arguments for the Pythagorean claim that the semi-tone is not really *half* a tone (*in Tim.* II 179.10–180.26). First, there is the fact that super-particular ratios cannot be halved – at least not in such a way as to yield a rational number.⁸⁴ We can see this by doubling the numbers in ratio of the tone so as to yield whole number ratios. This yields 18:16. But 18:17 is not equal to 17:16. Thus far the line of argument is familiar from other sources.⁸⁵ Proclus goes on to show, in effect, that $\frac{256}{243} < \frac{18}{17} < \sqrt{\frac{9}{8}}$. Hence not only is there no division of the ratio of the tone into two equal half-tones, but the 256:243 ratio that Plato identifies with the semi-tone is revealed to be the *minor* semi-tone.

Proclus’ second argument creates a three geometric proportion that advances by the ratio of the semi-tone:

$$256^2 : (243 \times 256) = (243 \times 256) : 243^2$$

Hence

$$65,536 : 62,208 = 62,208 : 59,049$$

If each of these ratios really corresponded to *half* a tone, then the *epogdoos* or one-and-one-eighth of 59,049 should be equal to 65,536. But if you multiply this number by 9/8ths it yields 66,430 and 1/8th – a number larger than 65,536. So this shows that

⁸³ ap. Theon, 106.12–17.

⁸⁴ Archytus, DK 47 A19 and Euclid, *Sect. Can.* 9.

⁸⁵ Cf. Adrastus ap. Theon, 69.14–15 and Aristides Quintilianus, *Mus.* III.1.43–53.

the ratio of the semi-tone is not equal to half that of the tone. I have located no other source that vindicates this conclusion by a similar use of brute arithmetical force.

Proclus' third argument utilises a notation that makes it clear how he arrives at fractions and performs various functions on them. This argument too strives to show the non-identity of the ratio 243:256 with *half* of a tone. Proclus sets out to find the number that is 9/8ths of 243. He does this by find an eighth of 243 and adding this to 243. He takes an eighth of 243 by a method that is reminiscent of Egyptian arithmetic.⁸⁶ He 243 as $240 + 2 + 1$ and then takes an eighth of each of these, obtaining λ καὶ δ' καὶ η' – an expression that reads literally '30 + 1/4 + 1/8.' Adding $30 + 1/4 + 1/8$ to 243 yields the *epogdoos* of 243. But $(273 + 1/4 + 1/8) : 256$ is greater than $256 : 243$. So since 256 does not fall exactly in the middle of the tone expressed by $243 : 273 + 1/4 + 1/8$, the semi-tone is not half a tone.

Proclus also provides a proof in the manner of the *Sectio Canonis* that 243:256 is in fact that ratio of the semi-tone (181.25–182.25) and that these are the lowest possible terms in which it is expressed (182.25–183.1). The latter uses the method of mutual subtraction described in Book VII of Euclid's *Elements*. We also find a calculation of the value of the major semi-tone or *apotome* in its lowest terms in the ratio 2048 : 2187 (180.27–181.24).

Proclus completes his account of the necessary mathematical background for understanding Plato's *Timaeus* by a calculation of the value of the comma (183.30–185.1). This ratio expresses the extent to which the *apotome* or major semi-tone exceeds the *leimma* or minor semi-tone. Proclus tells us that 'the ancients' said that this was 531,441 to 524,288. Here too Proclus' calculations are interesting. He calculates the larger number above 256 that expresses the same ratio that $256 : 243$ expresses with 256 in the place of 243. In essence this is $256 \times \frac{256}{243}$ or $\frac{256^2}{243}$. The ratio between this number and the number that is a whole tone below 243 will be the ratio of the *komma*. He denotes the semi-tone from 256 as $\sigma\xi\theta$ καὶ

⁸⁶ I am indebted to John Bigelow for pointing this out to me.

διακοσιοστοτεσσαρακοστότριτα τρισκαιδεκάκις δεκατρία or $269 + \left(13 \times \frac{13}{243}\right)$.⁸⁷

Why does he write the number this way? The best explanation is that in order to ease his calculations Proclus is thinking of $\frac{256^2}{243}$ in a way that allows him to cancel a great many of the fractions. To square 256, he presents it as $(243 + 13) \times (243 + 13)$. He can then cancel the 243 to yield $243 + (2 \times 13) + \frac{13^2}{243}$. This, in turn, can be simplified to $= 269 + \frac{13^2}{243}$ or $269 + 13 \times \frac{13}{243}$. This illustrates a similar manner of handling fractions to that which he took in calculating $1/8^{\text{th}}$ of 243 above by conceiving of 243 as really amounting to $240 + 2 + 1$ – each element of which readily yields an obvious $1/8^{\text{th}}$ part.⁸⁸

D. Proclus and the previous Neoplatonic commentators on the Timaeus

1. Iamblichus and the hypercosmic soul

As I noted in section I, part D above one issue that seems to have divided Iamblichus and Porphyry was the question of the hypercosmic soul. The former reads several passages in Plato's *Timaeus* as concerned with a soul that is beyond the cosmos and thus superior to the World Soul. Porphyry, by contrast, insists that Plato's *Timaeus* is concerned with the soul that animates the cosmos. Proclus often juxtaposes these divergent readings of Plato's text.⁸⁹ What, then, is Proclus' view of the matter?

This is not easy to discern. On the one hand, Proclus' *Elements of Theology* seems to be unequivocally committed to the idea of hypercosmic souls. Dillon argues convincingly that Iamblichus own commitment to the idea of an unparticipated, hypercosmic soul follows from his general metaphysical principle that 'every order is

⁸⁷ In fact, our text has σξθ καὶ διακοσιοστοτεσσαρακοστότριτα δεκατρία or $269 + \frac{13}{243}$ but the mathematical facts of the matter require us to systematically amend the text, as Festugière argues.

⁸⁸ It also seems to me that it shows that Proclus' methods for dealing with fractions go beyond those of the Egyptians since the latter only rarely use fractions with a number other than 1 in the numerator. Comparative mathematics, however, is well beyond my very limited competence in these matters. I leave it to the experts to investigate such matters further.

⁸⁹ The most notable example of such a juxtaposition is 104.30–105.27, but see also 142.27–143.21, 240.4–29, 252.21–9 and 313.15–24 where Proclus reports Iamblichus' interpretations of the *Timaeus* in terms of a hypercosmic soul.

presided over by an unparticipated monad that is prior to those that are participated' (fr. 54). Proclus accepts the very same principle in *ET* 21 and it is one of the cornerstones of his metaphysical system. One might find it therefore unsurprising that in proposition 166 of the *Elements* he speaks of both encosmic and hypercosmic souls. On the other hand, at the point in his *Timaeus Commentary* where he most obviously juxtaposes the views of Iamblichus and Porphyry on the hypercosmic versus encosmic soul, he *rejects* Iamblichus' reading. In fact, as Dillon notes, Proclus reports Iamblichus' view in indirect speech and does not fully identify with it. By contrast, he reports the view of Syrianus' alternative interpretation in direct speech and commends it as 'more in keeping with the words of Plato.'

What is this interpretation? Syrianus claimed that the World Soul itself has a certain hypercosmic *aspect (ti)* that transcends the universe and through which the World Soul is in touch with Intellect. This hypercosmic aspect is identified by both Plato in the *Phaedrus* (248a3) and "Orpheus" in the *Sacred Discourse on Hipta* with the 'head' of the soul (*in Tim.* II 105.29–106.1). Nothing requires that such a hypercosmic aspect of the World Soul be itself a soul. Indeed, the identification with the head tells against such a view; a head is a *part* of a person, not itself a person.

One easy way to reconcile this apparent tension is by reminding ourselves that there may be two separate questions here. First, are there hypercosmic souls according to Proclus? Second, does Proclus think that *Plato's text* discusses a hypercosmic soul. I think Dillon's position is that Proclus answered the first question in the affirmative but the second in the negative. Dillon notes that at *in Tim.* II 240.4 (= Iamblichus, *in Tim.* fr. 54) Proclus has a not too subtle dig at Iamblichus by suggesting that in his reading of Plato he is 'busy with higher matters, as it were, and scrutinising things invisible.'⁹⁰ Dillon comments, 'For Proclus to indulge in jocularitas – to the extent of quoting Aristophanes – at the expense of the divine Iamblichus, there must be grave provocation.'⁹¹ Based on a somewhat parallel criticism of Iamblichus in fragment 3 (*in Tim.* I 19.10), Dillon suggests that Proclus regards

⁹⁰ Aristophanes fr. 672; cf. *Apology* 19b4–c3.

⁹¹ Dillon (1973), 335.

Iamblichus' interpretation as involving some excessive subtlety.⁹² The divine Iamblichus might be right about the facts – there really is a hypercosmic soul – but wrong to see this soul being alluded to in Plato's *Timaeus*. Proclus sides with Syrianus, and against Iamblichus, at *in Tim.* II 105.29 simply as an expositor of Plato's text. Nonetheless, there is, in his view, a hypercosmic soul.

I think that Dillon is probably correct about Proclus' view, but I would like to raise the further speculation that his teacher Syrianus rejected Iamblichus' view about the hypercosmic soul, not merely as a reading of Plato's text, but as a bit of philosophical doctrine. Our present volume contains what seems to me to be one good objection to the very idea of hypercosmic souls.

Therefore hypercosmic souls, if indeed there are such things, and if they cognise discursively – for every soul cognises in this manner, and in virtue of this there is a difference between soul and intellect – nonetheless these hypercosmic souls produce for themselves the grasp (*hypolêpsis*) of the objects of cognition many at a time (*kata pleiô*), for it is necessary for such souls to think *a plurality* of things simultaneously since they are closer to an intellect that thinks *all* things simultaneously. But the World Soul is the first of those that think things one at a time, which is exactly what has made it encosmic. In any case, (*goun*) it is by this that all encosmic souls have been set apart from hypercosmic ones. (*in Tim.* II 289.29–290.6)

If there were indeed such things as hypercosmic souls, their discursive thinking would have to be an intermediate between Intellect, which thinks *all things* at once, and the World Soul which thinks *one big thing* – a universal cosmic intelligible⁹³ – at a time. This means that a hypercosmic soul would have to think *discursively* a plurality of things all at once, but a plurality short of the totality of intelligibles that Intellect cognises all at once non-discursively. But such a manner of thinking would seem to make the hypercosmic soul implicated in a greater degree of plurality than the supposedly inferior World Soul. After all, the former is discursively thinking a

⁹² There is a typographical error in Dillon's commentary on fr. 54 (p. 335). The words ὁ δὲ γε θεῖος Ἰάμβλιχος ὑψηλολογούμενος ἐν ταύτῃ τῇ ῥήσει belong to fragment 3, not 6.

⁹³ Cf. *in Tim.* II 290.14–15 δεῖ γὰρ κόσμου ψυχὴν οὔσαν τὸ κοσμικὸν αὐτῆς ὅλον νοητὸν ἀνελίττειν

plurality of objects, while the latter thinks just one. So in the first case there is a greater departure from unity and thus perfection.

Proclus returns to the question of the hypercosmic soul in a digression in his commentary on *Timaeus* 41d4 and the mixing of the lesser kinds of soul in the Mixing Bowl. As noted, he chides Iamblichus for reading in a reference to the hypercosmic soul where Plato's text is clearly discussing the World Soul.⁹⁴ Proclus' view seems to be that Plato's view does not mention hypercosmic souls explicitly.⁹⁵ Nonetheless, he thinks that the existence of such souls is a worthy question to pursue and begins it by a series of objections to those who posit such souls.

Doubtless to those who posit the existence of such unparticipated souls [they suppose them], on the one hand, to think discursively, and in this respect differ from intellect, but, on the other hand, are more composite and not one, and in this respect they are superior to encosmic souls. (The procession does not go at once from thinking all things at the same time to thinking one individually, but happens because of thinking more than one – although not all things simultaneously.) For these reasons, it is therefore incumbent upon those who posit [such hypercosmic souls] prior to the World Soul to say how the former are intermediate between the divisible and indivisible kinds of Being. And if they are divisible, what is the divisible [element in them]? And if they have been divided, have they been configured similarly [to encosmic souls]. Finally, what answer can be given for why these souls are prior to the others since they do not differ from them with respect to the kind of existence (*hypostasis*) that they have? (*in Tim.* III 251.32–252.9)

Prior to the questions that it is incumbent upon the proponent of hypercosmic souls to answer, we have a description of the cognition of hypercosmic souls that nearly coincides with that of *in Tim.* II 289.29–290.6. The parenthetical remark amounts to a sort of reply to the objection that I claimed was implicit. The order of procession,

⁹⁴ *in Tim.* III 251.21–29 = Iamblichus, *in Tim.* fr. 82A (Dillon).

⁹⁵ Cf. *in Tim.* III 251.31–2 οὐδαμοῦ διαρρήδην τοῦ Πλάτωνος εἶναι λέγοντος τοιαύτην ψυχὴν and III 255.1–2 κἀν μὴ λέγῃ Πλάτων ψυχὴν ὑπερκόσμιον.

which involves a series of minimal differences, requires that intermediate between the thinking of all things simultaneously and the thinking of one thing at a time, there must be a stage that involves the thinking of many – though not all – things at once. We are now in a position to see, however, that this intermediate stage need not involve the greater degree of plurality that I suggested above. For at this point in the dialogue, Proclus has discussed time and distinguished hypercosmic from encosmic time (*in Tim.* III 53.6–55.2). Though the activities of both hypercosmic and encosmic souls will be discursive – since this is one thing that distinguishes souls from intellects – the discursive activity of the hypercosmic souls will take place in hypercosmic time. Unlike encosmic time, this sort of time involves *both* procession and remaining in its cause, while encosmic time exists in conjunction with change (III 53.14–16). Proclus reads this distinction into what is quite probably Plato’s innocent use of both *logos* and *dianoia* in *Timaeus* 38c3–4.⁹⁶ The former corresponds to the higher, hypercosmic time, the latter to the encosmic time that requires change. Proclus does not say so explicitly, but I think that this will imply that the “discursive” activity of hypercosmic souls will have a different, more unified character than the dianoetic activity of encosmic souls. It is thus plausible to suppose that Proclus’ order of procession from thinking all things in no time at all (Intellect) to “discursively” thinking a plurality of things in a more unified temporal manner (hypercosmic soul) to thinking one thing in ordinary time (World Soul) does *not* involve a move from greater plurality to lesser plurality.

To whom should we credit the objections that Proclus considers against the idea of a hypercosmic soul? I think they belong to his teacher, Syrianus. Note that the objections that Proclus considers all aim at a position that posits not merely a hypercosmic aspect to the World Soul, but the existence of a *soul* that is hypercosmic and thus superior to the World Soul. The first objection just discussed presupposes that souls *qua* souls have a distinctive, discursive activity. The other objections similarly turn on the idea that there is a deep commonality between the hypercosmic soul and the World Soul. The objector would like to know how it is supposed to be superior to the World Soul, since if it is a *soul* it must have the same “shape” (i.e. be composed of a circle of the Same and a circle of the Different, demarcated with the psychic numbers and harmonies). None of these objections would tell against the

⁹⁶ ἐξ οὗν λόγου καὶ διανοίας θεοῦ τοιαύτης πρὸς χρόνου γένεσιν, κτλ.

view that the World Soul itself had some aspect or part of itself that was hypercosmic. Hence I think we should see these objections that Proclus considers as part of Syrianus' position – a position developed in opposition to that of Iamblichus.

Proclus goes on to attempt to provide answers to the other questions that any proponent of hypercosmic souls must answer. I believe he does so in his own voice. Having articulated them, he goes on, 'If it is necessary to convey something [about these matters] through my own insight'⁹⁷ Proclus' solutions to these problems are not easy to interpret. Festugière's translation includes a series of twelve notes by Professor Winnington-Ingram on the passage in which Proclus does this. The general nature of Proclus' speculations is clear enough. Since hypercosmic souls, unlike encosmic ones, are not the souls *of any body*, they will have a different set of numbers in them. They will not need the cubes 8 and 27 that are related to three-dimensional bodies (III 252.21–27).⁹⁸ Therefore the complement of 'Platonic portions' that the Demiurge places into the World Soul (*Tim.* 35b4–c1) is abbreviated in their case. Hypercosmic souls will thus differ "structurally" from encosmic ones in this respect.⁹⁹ This variation among the structure that we find within souls goes hand in hand with Proclus' idea that differences among ranks of souls can be explained by appeal to different percentages of Sameness or Difference in their basic psychic substance that we discussed above in connection with *Timaeus* 35a1–6. Proclus' overall strategy is to proliferate the variable elements within a kind of entity, like a soul, in order to provide a differentiation among levels by appeal to such variations. These variations are not essential differences. Hypercosmic souls with an abbreviated sequence of Platonic portions, a greater admixture of Sameness, and perhaps even different harmonies, are still *souls*. It is just that some souls are purer and closer to the unity of Intellect than others!

⁹⁷ III 252.9–10 καὶ εἴ τι δεῖ τῆ ἐμῆ μαντεία προσ ἔχειν, κτλ. And concludes his discussion with a similarly explicit comment on the status of the preceding remarks: 256.20–1 ἀλλὰ ταῦτα μὲν ἡ ἐμῆ μαντεία περὶ τούτων. Cf. II 169.3 καὶ εἴ με δεῖ τὴν ἐμὴν λέγειν μαντείαν, κτλ. and *in Remp.* II 53.5–6 εἰ δεῖ τῆ ἐμῆ μαντεία προσέχειν, κτλ.

⁹⁸ In fact, this line of reasoning leads Proclus to speculate that there might be two kinds of hypercosmic souls. One kind contains only the first three Platonic portions: 1, 2, 3. The kind intermediate between these hypercosmic souls and the encosmic ones will contain the squares as well, so their psychic structure consists in the sequence 1, 2, 3, 4, 9 – and presumably the means inserted between them.

⁹⁹ Proclus seems to think that such differences may result in different harmonies in the two and, as Winnington-Ingram notes, it is hard to see why this should be the case. But let us leave this puzzle aside.

2. Individual Forms and the World Soul's knowledge of sensible things

Proclus tells us a quite a lot about the views of Theodore of Asine and he does so for a variety of reasons. One aspect of Theodore's view that crops up twice is the fact that he posits two intellects prior to Soul – one containing ideas of wholes, the other of *particular things*.¹⁰⁰ Earlier I suggested that this notion of an intellect containing ideas of particular or partial things (*merika*) was entwined with the question of individual Forms that occupies Plotinus. What is Proclus' view on this controversy among his fellow Neoplatonists?

Proclus certainly did not feel one of the incentives that Amelius is alleged to have had for positing Forms of individuals. As we saw above, Amelius seems to have taken Plato's *Timaeus* 30c5–7 to indicate that there were paradigms of particulars (*in Tim.* I 425.16–22). Proclus does not have this textual incentive, since he reads this passage with Iamblichus who, far from seeing in this a notion of individual Forms subordinate to general ones, regards Plato's use of *kath hen* as indicating the monadic cause in the intelligible Living Being that is prior to the kinds of living beings that it encompasses. We ourselves may find neither of these readings of Plato's text particularly plausible. The point is that Proclus did not feel compelled to posit Forms of individuals as Amelius did because of the authority of Plato's text.

Perhaps another incentive for positing Forms of individuals was to allow the World Soul to 'have opinions and convictions [about them] that are stable and true' (*Tim.* 37b6–9). The opinions and convictions could not derive such a character from the sensibles themselves, since they are unstable and have a kind of truth that is 'obscure' (*in Tim* II 51.16). Moreover, it would be contrary to the order of procession for the sensible particulars to *cause* such true opinions in the World Soul. They are causally downstream from the World Soul and thus do not cause anything in it. It is certainly possible that Amelius introduced his second intellect, containing ideas of particular things, in order to solve both these problems. The contents of such an intellect would have the truth and stability that the particulars themselves lack. Moreover, if World Soul were itself partially a product of this intellect, there would be no violation of the downward causal order in emanation. The knowledge of sensibles would be encoded in the World Soul from above – not received as a result of causation from what is secondary to soul in the order of being.

¹⁰⁰ *in Tim.* I 425.16–22; II 154.4–9.

Proclus does not feel this incentive either. The nature of the knowledge about something depends upon the character of the *knower* – not the *object known*. This is a view that Proclus also adopts from Iamblichus.¹⁰¹ It is used by Proclus to solve the problem of divine foreknowledge, since the gods may determinately know a future that is itself indeterminate or contingent. They may have a single indivisible awareness of things that are themselves divided.¹⁰² Similar reasoning is applied to the case of the World Soul’s knowledge of sensible things (*in Tim.* II 304.29–305.25).

Moreover, the World Soul is not *affected* by sensibles (*in Tim.* II 311.16–25). This is because the World Soul knows sensibles by knowing their causes – causes which are antecedently comprehended (*prolambanein*) within itself. Proclus likens the narrative that unfolds among the sensible things that comprise the cosmos as like a drama. The World Soul is like the author. He does not need to watch the actors’ performance in order to know that, in the final scene, Oedipus blinds himself (II 305.6–15).

What are these causes within the World Soul and how close should we regard them to Forms of individuals? Since they subsist within a soul, they are not intelligible entities and thus not Forms in as much one thinks of Forms as strictly *noêta*. In another passage, Proclus likens them to ‘projected concepts’ or ‘projected rational-forming principles’ (*proballomenoi logoi*, II 311.20). This terminology has its origins in Iamblichus’ account of perceptual recognition.¹⁰³ Perceptual judgements by souls are not brought about by the action of external sense objects upon them. Rather, the soul, on the occasion of having a stimulation of the sense organs ‘projects’ an innate concept of the sensed quality and it is about this object that it makes its judgement.

...upon it [sc. the sense organ’s] being acted upon, the perceptive soul may project (*proballomenê*) the common concepts (*logoi*) within it of the sensible things in a way appropriate to the effect (*pathos*) and recognise (*gnorizein*) the sensible object through its own activity, being in a state of accord with the Form (*eidos*) of the sensible object.

¹⁰¹ ap. Ammonius, *in De Int.* 135.14.

¹⁰² *Prov.* 63.6–64.4; *ET* 124.

¹⁰³ Cf. Priscian *Metaphrasis in Theophrastum* 7.11–20

(‘Simplicius’ in *DA* 124.34–125.2, trans. from Sorabji, Richard (2005), 40)

The creature that is the cosmos, of course, has no sense organs.¹⁰⁴ It doesn’t need them since it has the highest sort of sense perception which ‘includes the sense object in and of itself’ (in *Tim.* II 83.19). So these are not *concepts* such as our souls project when our sense organs are affected by objects external to us. Rather, they are the rational-forming principles or *logoi* of the objects in the sense world. They are, in short, *Forms* of the things within the cosmos that the World Soul understands in its ‘convictions and opinions that are stable and true’ (*Tim.* 37b6–9).

Proclus, however, distinguishes a vast variety of different sorts of Forms, only some of which are intelligible. At in *Parm.* 969.16–26 he differentiates eight kinds of Forms: 1) those that are primal and intelligible Forms; 2) those that are intelligible but *in* that which is intellectual; 3) those that are such as to connect universals or wholes; 4) those that are such as to bring to completion intellectual and hypercosmic things; 5) those that are intrinsically intellectual; 6) those that assimilate secondary things to intellectual Forms; 7) transcendent and hypercosmic Forms that unify the Forms that are divided among the cosmos; 8) Forms in the cosmos. If the causes within the World Soul are Forms in any sense, they can only be so in the last way. Within this eighth category, Proclus distinguishes further ranks:

Some [among the encosmic Forms] are intellectual, others psychic, others physical, and others sensible. Among the latter, some are immaterial, while some are material. It is down to these that the procession of Forms descends from the intelligibles, appearing first at the limit of the intelligibles, and making its last manifestation at the limit of the sensibles. (in *Parm.* 969.26–32)

It seems likely that what are described here as ‘encosmic Forms’ are called in the *Timaeus Commentary* ‘projected rational-forming principles’ (*proballomenoi logoi*, II 311.20). I say this because they seem to play a similar role in Proclus’ metaphysics. For instance, shortly after the passage quoted above from the *Parmenides Commentary*, Proclus again returns to the lowest level of Forms which he now calls

¹⁰⁴ Cf. in *Tim.* II 86.10–89.1.

‘*atoma eidê*’.¹⁰⁵ Here an *atomos eidos* is the last step in the line of causation that terminates in an *individual*. For example, in the *Parmenides Commentary* we are told that each such *atomos eidos* is ‘that which is immediately followed by the individual in the truest sense, when it has proceeded down to the ultimate material division.’¹⁰⁶ Like the ‘projected rational-forming principles’ of *in Tim.* II 311.20 these are the most specific instructions in the World Soul’s “script” for the narrative that plays itself out in the sensible realm.¹⁰⁷

So does this mean that Proclus accepted Forms of individuals, as did Amelius and – perhaps – Plotinus? The right answer to this question, I believe, is ‘in name only’. What makes the notion of an individual Form look questionable to many modern philosophers is the fact that this is putatively a *universal*, but one that cannot be ‘had by many’.¹⁰⁸ By contrast, the most controversial aspect the idea of Forms of individuals among the Neoplatonists was as much ethical as metaphysical. It was the consequence that a portion of the soul would remain “unfallen”. If there were a Form corresponding to the individual soul, then since the individual is his soul, some aspect of the soul would remain fully present to the intelligible realm.¹⁰⁹ What then would be the need for philosophy in order for the soul to reascend?

Proclus’ notion of *atoma eidê* or maximally specific ‘projected rational-forming principles’ in the World Soul manages to evade both these problems. With respect to the first, there is a tendency in later neoplatonism for the role of Forms as universals to be eclipsed by their role as causes.¹¹⁰ Simplicius’ *Categories Commentary* (83.10–12) treats them as common *causes* of things – not common *natures*. Proclus’ teacher,

¹⁰⁵ In some contexts, it is clear that we should translate *atoma eidê* as ‘infimae species’ – the most specific *kind* to which individuals may belong, such as Hairy-nosed Wombat or Common Wombat. For example, *in Tim.* II 132.16 and 24 where Man and Horse are given as examples of *atoma eidê*.

¹⁰⁶ *in Parm.* 970.23–4, trans. Morrow and Dillon.

¹⁰⁷ Compare Porphyry, *Isagoge* 7.16–19 λέγεται γὰρ τὸ μὲν γενικώτατον κατὰ πάντων τῶν ὑφ’ ἑαυτὸ γενῶν τε καὶ εἰδῶν καὶ ἀτόμων, τὸ δὲ γένος τὸ πρὸ τοῦ εἰδικωτάτου κατὰ πάντων τῶν εἰδικωτάτων καὶ τῶν ἀτόμων, τὸ δὲ μόνον εἶδος κατὰ πάντων τῶν ἀτόμων, τὸ δὲ ἄτομον ἐφ’ ἑνὸς μόνου τῶν κατὰ μέρος.

¹⁰⁸ This aspect of Aristotle’s definition of a universal (*Int.* 17a39–40) is accepted by such realists as Armstrong as a good reason for denying that there can be such a property as ‘being identical to John’. Cf. Armstrong (1978), 93.

¹⁰⁹ Proclus, *in Alc.* 227.2–228.6.

¹¹⁰ This line of argument is developed at length in Sorabji (2005), vol. 3, §5.

Syrianus, similarly highlights the role of Forms as the causal origins of things (*in Metaphys.* 106.26–107.1). The distinction that Proclus adopts from Iamblichus between the unparticipated and participated Form makes the latter Form as cause – not as shared nature (*in Parm.* 650.19–34). Thus, because Neoplatonic Forms play a rather different role from universals in contemporary metaphysics, the first objection to the notion of an *atomos eidos* is not so pressing. But Proclus’ notion of a maximally specific “recipe” for a particular thing in the World Soul also avoids the Neoplatonic objections to Forms of individuals. These *atoma eidê* are not in the intelligible realm at all. Thus, one can hold that there are ‘particular Forms’ in Proclus’ sense whilst still accepting that every particular or partial soul descends entirely (*ET* 211).

3. Theodore and the minimal interpretive unit

In a very learned appendix to his book, Stephen Gersh raises a very good question about Iamblichus’ and Proclus’ attitudes toward the interpretive methods of Theodore of Asine. On the one hand, Proclus goes to considerable effort to tell us about how Theodore drew conclusions about the soul on the basis of ‘linguistic items, characters, and numbers’ (*in Tim.* II 274.13). On the other hand, he also reports and endorses what he regards as Iamblichus’ devastating criticisms of these methods.¹¹¹ Why does Proclus spend almost four pages of his *Commentary* on views that he regards as so misguided? Gersh also notes that there appear to be plenty of places where both Iamblichus and Proclus engage in similar interpretive strategies to those that they condemn in Theodore. What explains this?

Gersh helpfully teases apart three strands in Theodore’s interpretive practice. First he is concerned with the *phonetic* analysis of terms like ‘*hen*’ (one). This concentrates on the inferences about the principles of reality that can be drawn from the way in which the Greek words that are used for them are pronounced. Second, Theodore drew inferences from the *graphic* qualities of the letters composing these words. As noted above, this goes so far as to consider not merely the appearance of the ψ and the χ that figure in $\psi\upsilon\chi\acute{\eta}$ but the circular shape that these letters would assume if they were bent round upon themselves. Finally, Theodore used the *correlations between*

¹¹¹ *in Tim.* II 277.26–278.25 = Iamblichus, *in Tim.* fr. 57 (Dillon).

letters and numbers in the Greek practice of writing numerals to draw inferences about the realities named by terms such as ψυχή.

Gersh helpfully examines similar uses of the phonetic, graphic and arithmetical properties of terms among both philosophers and magicians prior to or contemporary with Theodore. Gersh goes on to argue that both Proclus and Iamblichus engage in similar analyses, or at the very least signal their interest in such uses of phonetic, graphic and arithmetical aspects of terms. This, he thinks, makes their criticism of Theodore somewhat puzzling.¹¹²

With respect to the first form of analysis, Gersh notes that Nicomachus of Gerasa reports that the seven vowels derive their names from the seven planetary spheres and that this fact explains the use of ‘hissing, clucking and inarticulate and discordant sounds’ in theurgical acts of worship.¹¹³ Both Proclus and Iamblichus, of course, were practitioners of theurgy – the use of ritual magic to bring about union with the divine. He then points out that Proclus discusses a similar theory which involves a relationship not only between the vowels and the seven spheres, but between all 24 letters and the signs of the zodiac (*in Remp.* II 65.12–20). Proclus assigns this view to Nestorius and he seems to give it a limited endorsement of sorts, since he says that it was by means such as this that Nestorius was able to gain certain astrological insights. However, it is far from clear that Proclus supposed that analysis of the words of Plato’s text by reference to the letters that make them up was a fruitful interpretive method. He speculates that by means of such speculations one might regulate the marriages and births (*Rep.* 459e–461a) in Plato’s ideal city:

And this might be the most proper goal of this [Nestorian] theory of triangles – not to consider this [goal of regulating marriages and child-bearing] merely mathematically or dialectically, but also hieratically – since this activity in itself particularly demands the providence of the gods. (*in Remp.* II 66.15–19)

¹¹² ‘[T]he problem remains why Iamblichus chose to make these particular criticisms [sc. the ones that Proclus summarises and endorses at II 278.1–21] when our evidence suggests that he himself or at least the school of philosophy to which he belonged had advocated many doctrines not dissimilar to those which he attacks.’ (Gersh (1978), 303)

¹¹³ Nicomachus, *Excerpta* 6 (ed. Jan); text and translation in Gersh, p. 295.

Such astrological and magical techniques would doubtless be thought useful and one can well imagine Proclus endorsing them. But it is a further question whether Plato's text should be interpreted right down to the level of its phonetic elements. Nothing in this passage from Proclus suggests that it should.

Similarly Proclus also does not engage in the same kind of interpretive methods regarding the graphic aspects of language that Theodore of Asine does. Gersh suggests that he does by appealing to *in Remp.* II 143.14–144.12 and *in Tim.* II 255.31–256.11. I think we need to draw some subtle distinctions here.

In his *Republic Commentary*, Proclus does say that the letter χ is proper to all souls. But this is not on the basis of the appearance of this letter in the word $\psi\upsilon\chi\acute{\eta}$. Rather, it is because in the Timaeus' psychogony (36b6) the soul's essence is split into two strips which are conjoined in the shape of a χ . It may well be that Proclus identified a confluence of authority around the association between the soul and χ since he tells us that the theurgists in their 'unknowable signs' associate the two (*in Remp.* II 143.26). So it seems likely that it may have been part of theurgical practice to draw associations between the graphic elements of words and things. But nothing that Proclus says here suggests that he thinks that the text of Plato should be read down to the level of graphic elements. Such associations as he draws between χ and the soul in the passage from his *Republic Commentary* seems to me to be quite consistent with his endorsement of Iamblichus' criticisms of Theodore's use of the graphic level of interpretation in reading Plato.

Similar remarks apply to *in Tim.* II 255.31–256.11. Proclus does indeed endorse the idea of a general 'psychic character' which is the letter χ , in addition to individual psychic characters or names. But Plato 'beheld this things in an intellectual manner' (256.2) and handed them on to other wise men who were anxious to follow. That is to say, Plato links the letter χ with the soul because he understood the nature of the psychogony, not on the basis of the graphic properties of the word $\psi\upsilon\chi\acute{\eta}$. Those who came after him, such as theurgists, may have apprehended this deep truth in another way. Moreover, the case of the universal psychic character χ is here combined with the idea that the Demiurge baptises aspects of the World Soul with proper names, and that there may additionally be names that are proper to individual souls. There is no suggestion whatsoever that the graphic elements of $\tau\acute{\alpha}\upsilon\tau\omicron\nu$ or $\theta\alpha\tau\acute{\epsilon}\rho\omicron\nu$ show us why

the Demiurge named these aspects of the soul correctly (*in Tim.* II 255.10–15). Nor do the examples of *individual* true psychic names that Proclus discusses make use of graphic connection. He thinks that the gods doubtless told Plato and Heracles the proper names of their souls – though, of course, Proclus does not tell us what these might be! His other example is slightly more illuminating. When Dionysius hints to Pentheus what his real psychic name might be, it is not the graphic or phonic elements that matter. It is rather the *semantic* connection between *penthos* (grief) and Pentheus.¹¹⁴

I do not think that Gersh's puzzle about Iamblichus' (and Proclus') apparent inconsistency over the use of phonic and graphic levels of interpretation is as pressing as he supposes. Certainly he is right to think that, as practitioners of theurgy, they supposed that characters and sounds had magical efficacy. But at no point can I find an example where they see fit to interpret Plato's text right down to this level. This, in itself, might seem to be a bit surprising. After all, Iamblichus and Proclus seem to think that there are few elements in Plato's works that are too minor to play a role in contributing to the significance of the dialogue – hence the time that they spend, for instance, interpreting character and setting. Why should they pass up any opportunity for yet more elements of Plato's text to serve as grist for their hermeneutic mill?

I think there is a principled answer to this question in Proclus' views about language. Theodore's phonetic, graphic and arithmetic methods assume that there is some natural relation between a name and what it names. Proclus too thinks that there is a sense in which names are natural. But he adopts a hylomorphic view of names that distinguishes between a formal and a material aspect to names. The phonetic and graphic elements fall on the side of matter.

Somewhat ironically, Proclus' hylomorphic view of names probably emerged from his arguments *against* Aristotle's purely conventionalist views on language.

To the syllogism of Aristotle which goes as follows: 'things that are natural are the same for all men, but names are not the same for all men, so things that are natural are not names and names are not natural.' Proclus objects to the major premise as follows: 'if the name is a Form observed in different matter, because it is Form, it is the

¹¹⁴ *in Tim.* II 256.6, cf. Euripides, *Bacchae* 507–8.

same for all men; but the first, therefore the second. (*in Crat.* §58.1–7, trans Duvick)

Since Proclus takes the message of Plato’s Cratylus to be that there is a sense in which names are natural and a sense in which they are conventional, the hylomorphic distinction provides him with just the tool that he needs. The formal aspect of a name is associated with naturalness, while the matter contributes the conventional and contingent character.¹¹⁵ The formal aspect is what is informative to us, since it is in this respect that names seem to be like the things that they name:

In terms of Form all names are the same, have one power and are natural; but in terms of matter they differ from each other and are conventional. For in Form they are like their objects, but in matter they differ from them. (*in Crat.* 17.20–3, trans. Duvick)

It is by no means easy to see exactly what ‘Form’ is supposed to encompass here. But it is clear what aspects of a linguistic item constitute the matter – certainly its sound (*in Crat.* §49.10) and by the same reasoning also presumably its graphic shape. In a passage that I think is important for our present discussion, Proclus criticises those ‘grammarians’ who derive the name of Agamemnon from his vehement (*agan*) features – not, as Plato does, from his admirable (*agastos*) qualities (*Crat.* 495b). Plato, Proclus says, ‘despises matter’ and ‘adheres most to the Form’. Grammarians, however, look at things from the point of view of matter and so mistake the meaning of Agamemnon’s name.¹¹⁶ The phonic or graphic similarities between ‘Agamemnon’ and *agan* are not nearly as salient as the *semantic* connection between the admirable qualities of the hero and the word ‘*agastos*’. From this point of view it is easy to see how Proclus could endorse Iamblichus’ criticism of Theodore’s methods. There is too much contingency – too much matter – involved in Theodore’s observation that since ψυχή end in ή and this corresponds to the number 8, which is a cubic number, the very word for ‘soul’ tells us that it mediates Forms to three-dimensional reality. Given Proclus’ views on language, he *should* reject such observations as not well founded.

IV. Conclusion

¹¹⁵ Cf. *in Crat.* §10.12;

¹¹⁶ *in Crat.* §90.1–6.

No single issue dominates Proclus' *Commentary* on the psychogony in the *Timaeus* in quite the way in which the issue about the number of elements dominated Proclus' observations on the creation of the cosmic body in the previous volume in this series. Nonetheless, here too he is responsive to traditions of commentary on Plato's text that pre-date his own work. Because there are a multiplicity of issues in this earlier tradition, this portion of Proclus' text seems an even more bewildering 'grab bag'. I hope that this introduction provides some overview of the context in which he was writing about Timaeus' psychogony and alerts the reader to some of the salient controversies. It is often not at all easy to 'see the woods for the trees' in Proclus' *Commentary* and this is perhaps even more true of this often quite "technical" portion of it.

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