

СТАТЬИ / ARTICLES

NUMBERING, NUMBERS, AND BEING: PROCLUS VERSUS PLOTINUS

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ABSTRACT. Plotinus' investigation into numbers has peculiar characteristics that cannot be confused with numbers' ontological role in late Neoplatonism. However, since, in his inquiry on the nature of Being and numbers, Proclus explicitly calls Plotinus into question, the analysis of such a comparison can contribute to understanding some different speculative assumptions of the two philosophers. With this in mind, I will focus on two issues: the role accorded by Plotinus and Proclus to arithmetic, and the different ontological rank of numbers.

KEYWORDS: Plotinus, Proclus, numbering, numbers, being, intermediates.

Numbering, Numbers, and Being in Plotinus

The Numbering Soul: Quantity, and Essence

In his treatise *On Numbers* (VI 6 [34]), Plotinus attributes two kinds of arithmetical activity to the soul: one is associated with the Aristotelian monadic number ($\mu\omega\nu\alpha\delta\iota\chi\kappa\sigma$);¹ the second is related to what the philosopher referred to as the substantial number ($\omega\bar{\nu}\sigma\iota\omega\delta\eta\varsigma$).²

¹ See Arist. *Metaph.* M 8.1083b16–17. This paper is a part of the project FIS 2021 – “Ancient Science–Ancient Philosophy”.

² Plotinus' aim is to emphasize the substantial nature of this kind of number. See e.g., *Enn.* V 5.4, 18, and Slaveva-Griffin (2009) 90.

While numbered entities are quantities only by accident, monadic number is conceived of as quantum in itself:³ thanks to quantity, it is endowed with specifically arithmetical properties, namely, the multiplication of units, the possibility of their being compared, and the classification according to even and odd.⁴ Unlike the intermediate mathematical entities whose postulation Aristotle traces back to Plato,⁵ Plotinus does not seem to investigate, at least in VI 6, whether such arithmetical quantities are ontologically autonomous but makes them dependent on the individual soul when it gathers a group of objects that are in themselves separate from each other:

When [...] you, after taking one object together with another, say “two” – for example, a dog and a man or even two men – or by taking more you say “ten” and determine a decade of men, [...] to the extent that you are the one who [...] counts them, [...] this decade of men can find existence in you who count [...]. And this ten that you create is a quantum.⁶

The multiplication of numerical quantities is made to rely upon the participatory paradigm, whereby what is unique in itself seems to multiply through the predicative act:

We [...], just as we make the idea of man manifold by predicating it over and over again and do the same with beauty and other ideas, so with the image of each idea we also produce the image ($\varepsilon\iota\delta\omega\lambda\sigma\tau\omega$) of number; and just as we make the city manifold insofar as it is not such, in the same way we also make numbers manifold.⁷

More specifically, arithmetical operations are not investigated as such but interpreted in the light of an asymmetrical reading of participation, dating back to

³ See e.g., Plot. *Enn.* VI 1.4, 16 ff.

⁴ See Plot. *Enn.* VI 3.13, 3–8.

⁵ The hypothesis of mathematical entities ontologically intermediate and distinct from the so-called eidetic numbers goes back, as is well known, to the Aristotelian reading of Platonic doctrines (see Arist. *Metaph.* A 6.987b14–18; M 6.108ob11–14). For this issue, which cannot be discussed in detail here, see e.g., Koumachis (2004); Steel (2012); Marongiu (2025) 15–22 and cross-references.

⁶ Plot. *Enn.* VI 6.16, 13 ff. Unless otherwise specified, translations are mine. On number as a quantity in Plotinus, see Kalligas (2015).

⁷ Plot. *Enn.* VI 6.2, 10–13.

the *Parmenides*, whereby the features of the participating realities cannot be attributed to the participated ones.⁸ From such a perspective, the characteristics that numbers possess when the soul counts cannot be automatically ascribed to numbers conceived as an ideal paradigm of the act of counting.⁹

This ontological framework constitutes the basis for Plotinus' attributing two distinct operations to the soul: the first is that by which the $\psi\chi\gamma$ realizes an ontologically *unfounded* numbering, whereby numbers are used regardless of their participation in ideal natures; in the second case, the soul traces what counts back to the corresponding ideal paradigm. The unfounded enumeration gives rise to the creation of an *evanescent* numerical quantity, i.e., the $\mu\omega\nu\alpha\delta\iota\kappa\delta\dot{\iota}\mu\mu\sigma$, which Plotinus not surprisingly calls $\varepsilon\tilde{\iota}\delta\omega\lambda\omega$ ν of the true number:¹⁰ such a quantity is unrelated either to the numbered nature, or to that of which it participates. Taking up the suggestions of the *Theaetetus*¹¹ and grounding them ontologically, Plotinus also notes that the entities numerically collected by the soul are wholes by homonymy, and it is only in such a domain that numbers can be divided into parts and, as a consequence, serially ordered.¹² When, on the other hand, the soul takes into account the essence of an entity, the number indicating it cannot be divided, since it represents what the entity is in itself:

When you divide quantity according to units and [...] create parts, you [...] establish units as the principle of the quantum [...]. But when you say that man [...] is a number – for example, a dyad: living-and-rational –, [...] you mean a number of another nature, the substantial one. And this dyad [...] represents what is in the essence [...]. In this case you are not the one who creates the number [...], for this is a different unit from that of the chorus.¹³

In the case of number measuring essence, i.e., the $\sigma\omega\sigma\omega\delta\gamma\zeta$ number, the soul thus recognizes what exists according to its own substratum¹⁴ and participating in

⁸ On the asymmetrical participatory model in Plato, see e.g., Chiurazzi (2023). On the role of ontological asymmetry in Plotinus, see e.g., D'Ancona Costa (1992); Wagner (1982).

⁹ See e.g., Pl. *Phd.* 101b9–c7. Therefore, investigating the nature of monadic numbers *per se* would be the same as attempting to understand the nature of intelligible realities from that which participates in them.

¹⁰ See Plot. *ENN.* VI 6.9, 33–35.

¹¹ On *Theaetetus'* contribution in defining numbers as wholes prior to parts see Marongiu (2025) 66–77.

¹² See Plot. *ENN.* VI 1.4, 24 ff.; O'Meara (1990) 408–409.

¹³ Plot. *ENN.* VI 6.16, 18 ff. See also VI 6.14, 41–50.

¹⁴ See O'Meara (1990) 409.

numerical realities, which, as ideal natures, cannot be serially ordered.¹⁵ In this regard, it is worth pointing out that in *Treatise VI* 6 Plotinus sometimes refers to the substantial numbers in a more *orthodox* way. Indeed, when the philosopher speaks of the decade in itself,¹⁶ he implicitly seems to admit, like Aristotle,¹⁷ that ideal numbers also may constitute a series. Actually, elsewhere Plotinus clearly states:

Perhaps it is not the monad that generates the dyad, nor the dyad the triad, but they are all an identical reality. [...] Only with respect to us can it be admitted that the number that precedes in the series is lesser, the one that follows, is greater.¹⁸

In short, if substantial numbers are not quantitatively commensurable, they cannot be ordered in series and, by extension, they are devoid of any other arithmetical property.¹⁹ It is to these non-arithmetical numbers, that the soul must refer to, if it is to know the ordering of reality.²⁰ It follows that the most appropriate inquiry into the nature of numbers will not an arithmetical one, but the analysis of number's relationship to being.

The Second Hypostasis, and the Ontological Status of Numbers

The Plotinian inquiry into the intelligible status of the substantial number is determined by a reading of reality in which the greater or lesser degree of unity indicates the ontological level of the nature under investigation. Approximately, at least five levels should be identifiable: 1. the One beyond Being, conceived as an absolute, simple and unrelated unity; 2. the one-manifold structure of the second hypostasis, in which whole and parts are dynamically identified; 3. the one-and-many nature of the Soul, where the manifold is distinct from unity but, nevertheless, wholly participates in it, since individual souls are immaterial realities, in which there are no quantitatively parts; 4. the many-with-parts, i.e., the sensible realities endowed with greatness, whose existence is guaranteed by possessing

¹⁵ See Plot. *Enn.* VI 3.13, 19–22.

¹⁶ See Plot. *Enn.* VI 6.14, 49.

¹⁷ See Arist. *Metaph.* M 8.1083b36 ff.

¹⁸ Plot. *Enn.* VI 3.13, 19–22.

¹⁹ On the Aristotelian approach to the question of numbers $\alpha\sigma\mu\beta\lambda\eta\tau\iota$, see Maggi (2025) 13–17.

²⁰ Hence, the soul can enumerate in two ways: when it creates the monadic number, it counts-but does not know; when it recognizes the dependence of numbers it uses on their intelligible paradigms, it understands the structure of reality.

unity; 5. the absolute multiplicity, which represents a state of absence of unity to which Plotinus does not acknowledge existence.²¹ This fifth level is identified by Plotinus with pure infinity. It does not really exist in itself, on the basis that everything that exists, by the very fact of being derived from the One, manifests the presence of unity, order, and, therefore, countability.²²

From these considerations Plotinus addresses the question of the relationship between intelligible natures and number. Firstly, he derives from the *Parmenides* the idea that a class of objects is such by virtue of something that cannot be an element of the class itself, nor result from the mere sum of the entities that compose it.²³ Therefore, since numbers are the condition of numerability, they do not merely coincide with numbered entities.²⁴ It follows the ontological priority of numbers with respect to everything that is numbered, and it is in this perspective that numbers are substances in the most proper sense.²⁵ Such a conclusion not only concerns sensible realities, but also involves the status of number with respect to intelligible realities: indeed, as a structure of order, capable of keeping all entities in being, number ontologically precedes everything that, thanks to it, is ordered. However, as will be seen, the ontological priority of number stops at the second hypostasis, with which number is identified.

In furthering his investigation, Plotinus does not adhere to what Aristotle asks about the relationship between Platonic ideas and ideal numbers – are numbers ideas? do they identify with ideas? do they precede ideas? –,²⁶ since he approaches the problem from a different perspective, namely that of the one-manifold nature of the second hypostasis, which in this context is derived from the Platonic theory of the genera of Being. Therefore, examining the ontological status of substantial number is made to coincide with the analysis of its relationship with the triad of the second hypostasis Being-Intellect-Living Being.²⁷

²¹ See Maggi (2010) 92–93.

²² See Plot. *Enn.* VI 6.1, 1–3.

²³ See again Chiurazzi (2023).

²⁴ The number model as a structure prior to numbered classes is also based on the principle of μὴ συναναιρεῖσθαι (see Arist. *Metaph.* N 3.1090b5–7; Plu. *Plat. Quaest.* III.1001e–1002a; Alex. Aphr. *in Metaph.* 55, 20–56, 5; see also Pl. *Men.* 73e ff.), whereby one admits ontological priority to that which, if it disappeared, would result in the annihilation even of that in which it is manifested.

²⁵ See Plot, *Enn.* VI 6.10, 39–51.

²⁶ See Arist. *Metaph.* A 9.991b9; M 8.1084a7–8, and the discussion in Maggi (2025) 8–9.

²⁷ The order of the triad in the treatise *On Numbers* is different from that which Plotinus would accept elsewhere, where the Living Being precedes the Intellect. This would

As for numbers, it is indeed necessary to investigate how they exist in the intelligible world [...]. For example: have we conceived the one because Being is such that it is in itself first? And then, since Movement and Rest come from Being, have we conceived the three?²⁸

The solution is found, once again, in the asymmetrical participatory model. Since the Living Being embraces the whole number of all living beings, and the Intellect is manifold in that it is endowed with part-thoughts, it follows that number cannot be identified with either of the two but must precede both. And as Being is the first nature among those proceeding from the One, number is placed at the same level as Being, by the very fact that it is not the pure One:

If then it is necessary to consider Being first since it is first, second the Intellect, third the Living Being – since it has already been established that the latter encompasses everything while the Intellect is second as the active actuality of Being – number cannot exist at the same level as the Living being, since before it there were already both one and two; neither can it be at the level of the Intellect, since before it there was Being which is one-many.²⁹

After establishing that number exists primarily at the rank of Being, Plotinus engages with the question of their relationship:

We must now consider whether Being generated number through its own division or whether, on the contrary, it was number that divided Being: that is, whether Being, Movement, Rest, Same and Otherness generated number or whether it was number that generated them.³⁰

Based on the ontological premises mentioned above, Plotinus should conclude that, if Being is manifold but not infinite, then number would be what thanks to which this is possible, so number should be ontologically prior. However, a multiplication of hypostases would arise, which Plotinus rejects.³¹ Moreover, Being's unity and manifoldness cannot really be separate – if that were the case, unity would be pure and thus would be that of the One beyond Being, and manifoldness

depend on the fact that the Living Being, conceived as the whole number of beings, would be, because of this, more manifold. See Hadot (1960) 117–118; Nikulin (2019) 17.

²⁸ Plot. *Enn.* VI 6.4, 1–5.

²⁹ Plot. *Enn.* VI 6.8, 17–22.

³⁰ Plot. *Enn.* VI 6.9, 1–5.

³¹ See e.g., Anton (1977) 258 note 1 and discussion; Gertz (2022) 53–55.

would be without unification and thus would tend toward infinity and non-being. It follows that the one and the being of the second hypostasis should be somehow identified, while remaining distinct.

In order not to multiply hypostases, Plotinus admits that in the derivation process there are logically, but not ontologically, distinct stages. This distinction, in general, is based on the following assumptions: 1) the similarity between the higher and the lower level, resulting from the derivation itself; 2) the otherness of that which is derived with respect to that from which it is derived; 3.1) the possibility for the higher reality to represent that which, once contemplated as an object appropriate to the subordinate nature, 3.2) will ontologically stabilize it as a new and lower hypostasis.³² Hence, it is possible to recognize Being's unity as having a logical priority on manifoldness, insofar as the former indicates the similarity of Being to the One, while the latter is the constitution of Being as Otherness with respect to the One.

From this ontological framework, Plotinus rethinks the Aristotelian testimony on the generation of Platonic ideal numbers by means of the One and the Indefinite Dyad:

When Thinking sees the intelligible and turns towards it, is perfected by it. Therefore, it is in itself indeterminate [...] but is determined by the intelligible. This is why it has been said: "From the Indefinite Dyad and from the One derive forms and numbers". This is the Intellect.³³

What is the Plotinian Indefinite Dyad? Since Plotinus does not admit the existence of a second principle of reality together with the One, the Indefinite Dyad takes on a new connotation: it represents the nature derived from the One, but not-yet-stabilized as a distinct hypostasis. In the quoted passage, the intelligible presumably indicates the object that the derived nature contemplates to be able to determine itself and is, therefore, the One in the way that the Intellect can think of the One, namely a multiplied one.³⁴ It is when the Intellect contemplates the One and multiplies It, that Intellect becomes number:

Number is not first in reality. The One, in fact, precedes the Dyad. Therefore, the Dyad is second and, as it is produced by the One, finds in It its determination (δριστήν), since

³² See e.g., D'Ancona Costa (1990).

³³ Plot. *Enn.* V 4.2, 4–9. See Arist. *Metaph.* A 6.987b21–22; M 7.1081a13–15.

³⁴ See Schniewind (2010) 36–41; Rist (1962) 100–103. About the relationship between One, Dyad, and number, see Slaveva-Griffin (2009) 68–70; Slaveva-Griffin (2022) 142–144. On the Plotinian Dyad, see also Rist (1962) 104; Chindea (2007) 98–99; Maggi (2013).

for itself it would be indeterminate. Once determined, the Dyad becomes a number, a number as substance (*οὐσία*).³⁵

Can we conclude that the substantial number is conceivable as Intellect and defined Dyad, while the indefinite Dyad is what immediately proceeds from the One, and contributes to number's genesis? Actually, since the Intellect is second in rank, if the Dyad is second, it is *already* Intellect, although at an indeterminate stage. In this regard, Plotinus explicitly states that it is the One who generates number, so number and the first reality derived from the One somehow coincide.

The following consideration should be added to what has been said: second hypostasis' oneness is made possible by both the One and the fact that its parts – i.e., Intellect's thoughts/ideas –, which are different from each other,³⁶ are unified by the Intellect, and under this condition is the second hypostasis one-manifold. Thus, rejecting some Middle-Platonic theories that reduced ideas to thoughts of God external to him, Plotinus replies that the unification of manifoldness implies that the Intellect possesses in itself its own objects.³⁷ By virtue of such an inclusion, Intellect's objects are not merely Platonic ideas, but active and living thoughts (*νοῦ*),³⁸ being both thoughts and thinkings, thus embodying the multiple/numerical structure of the Intellect itself.³⁹ It is in the light of this that Plotinus compares the Intellect to Kronos: like him, the Intellect generates its own children and then swallows them, remaining thus unified and being in this way an image of the One.⁴⁰

To ensure that the substantial number can simultaneously express all these dynamic aspects of the second hypostasis, Plotinus finally proposes, from his interpretation of *Parmenides* and *Sophist*, a quaternary structure, which allows to identify the substantial number and the genera of Being, insofar as both indicate the dynamic similarity-otherness of Being related to the One beyond Being:⁴¹

Number was in Being, without being number of Being, since Being was-still-one, so that the power of number, placed at the base of Being, divided Being and caused it, as

³⁵ Plot. *Enn.* V 1.5, 6–9.

³⁶ See Plot. *Enn.* VI 7.10.

³⁷ See Plot. *Enn.* V 9.7. On these issues, see e.g., Armstrong (1960); Corrigan (1986); Emilsson (1995); Emilsson (1996) 234–244; Hadot (1999); Menn (2001) 235–239.

³⁸ See Plot. *Enn.* VI 6.15, 14.

³⁹ See Nikulin (2019) 16.

⁴⁰ See Plot. *Enn.* V 1.7. On the Plotinian reading of Kronos, see Jurasz (2016); Volpe (2023–2024).

⁴¹ See Slaveva-Griffin (2022) 144–151.

it were to be born to multiplicity. So, the number is both the substance (*χώστια*) and the actual activity (*ἐνέργεια*) of Being, as well as the Living Being in itself and the Intellect. Could we conclude that Being is unified number (*ήνωμένος*), beings unfolded number (*ἐξεληλυγμένος*), the Intellect number that moves in itself (*ἐν ἔαυτῷ κινούμενος*), the Living Being encompassing number (*περιέχων*)? Yes. Since Being arises from the One, as the One-was-One so it is necessary that Being-was-number.⁴²

Here, the substantial number alludes to the metaphysical movements through which Being, insofar as it proceeds from the One, is for this reason unified; insofar as it assumes the One as the object of its contemplation, it moves itself in itself and, by moving in itself, generates its objects; insofar as it determines itself as hypostasis, it identifies with and embraces its objects.⁴³

Therefore, Being, Intellect, and the Living Being are all three numbers and, just as they are not ontologically distinct, similarly, the number that indicates them does not multiply but embodies the wholeness of the second hypostasis. In this respect, it could be said that, while monadic numbers constitute a linear series, the substantial number is circularly and serieslessly structured, which, for the principle of all-in-all,⁴⁴ makes it acquire an almost *organic* and *holistic* nature.⁴⁵

However, once the fundamental characteristics of numbers have been excluded, the Plotinian substantial number becomes a “nombre sans l’arithmétique”.⁴⁶

Proclus versus Plotinus

The Numbering Soul and Intermediates

Although Plotinus' examination of intermediates cannot be excluded,⁴⁷ the philosopher is seemingly more interested in investigating the nature of substantial numbers, partly identifiable with Platonic/Aristotelian ideal numbers, and tends to make the intermediates coincide with the Aristotelian monadic numbers, associating them, as Aristotle himself does, to counting. However, soul's arithmetical

⁴² Plot. *Enn.* VI 6.9, 24–33. See also VI 6.15, 24–32.

⁴³ See Slaveva-Griffin (2009) 87–88.

⁴⁴ See Plot. *Enn.* VI 6.6, 1–4. See also V 9.6.

⁴⁵ See Slaveva-Griffin (2009) 126.

⁴⁶ Charles-Saget (1982) 160.

⁴⁷ See Isnardi Parente (1994) 400–401.

operations are conceived, like everything that exists, in the light of the participatory paradigm, for which every numbering or numbered is such by virtue of participation in the substantial number. Therefore, to admit that the intermediates enjoy an ontological status of their own would be, at least in the Plotinian model, an unnecessary complication of the structure of reality, multiplying the levels of the same nature. It is probably for this reason that Plotinus, while also recognizing the numerical structure of the Soul, by the very fact of being an essence,⁴⁸ explains this considering its dependence on the second hypostasis.⁴⁹ The relationship between soul and numbers is instead discussed by Proclus from a new perspective, in the light of exegetical contaminations between Platonic dialogues and Pseudo-Pythagorean imperial age texts, that date back to Iamblichus and Syrianus.⁵⁰

Starting from these non-Plotinian assumptions, Proclus attributes the doctrine of intermediate mathematical entities to Plato himself:

Mathematical being necessarily belongs neither among the first nor among the last and least simple of the kinds of being but occupies the middle ground between the partless realities – simple, incomposite, and indivisible – and divisible things characterized by every variety of composition and differentiation.⁵¹

Intermediate entities are conceived as objects appropriate to discursive reason, which, in this sense, is also intermediate:⁵²

Though second in rank to intellect and the highest knowledge, understanding is more perfect, more exact, and purer than opinion. For it traverses ($\delta\iota\epsilon\xi\delta\epsilon\nu\epsilon\iota$)⁵³ and unfolds the measureless content of Nous by making articulate its concentrated intellectual insight ($\nu\omega\rho\hat{\alpha}\zeta\ \epsilon\pi\beta\omega\lambda\hat{\eta}\zeta$), and then gathers together again the things it has distinguished and refers them back to Nous.⁵⁴

⁴⁸ See Plot. *ENN*. VI 6.16, 44–45.

⁴⁹ See Slaveva-Griffin (2009) 112–118; Slaveva-Griffin (2022) 151–155.

⁵⁰ On Iamblichus, see e.g., O'Meara (1989) 79 ff. See Slaveva-Griffin (2014) for a comparison between Plotinus, Iamblichus, Syrianus, and Proclus on these issues. See also Martijn (2022). For Proclus' dependence on Iamblichus and Syrianus, see e.g., Mueller (1987); Nikulin (2008) 156; d'Hoine (2018) 587–589.

⁵¹ Procl. *in Euc.* 3, 1–7 (Morrow's translation). See Nikulin (2019) 129–130. For a comparison between Euclid Commentary and *Republic* Commentary on this topic, see d'Hoine (2018) 590–593.

⁵² See Nikulin (2008) 156–157.

⁵³ The use of $\delta\iota\epsilon\xi\delta\epsilon\nu\epsilon\iota$ to indicate the impossibility for the $\delta\iota\alpha\nu\alpha\iota$ to intuitively grasp its objects goes back to Plotinus. See Plot. *ENN*. V 9.7, 10.

⁵⁴ Procl. *in Euc.* 4, 8–14 (Morrow's translation).

To be more precise, Proclus defines mathematical entities as *λόγοι*, because “their properties and structure may become explicit in a discursively developed argument”,⁵⁵ so claiming that such objects are the products of the soul itself:

We must therefore posit the soul as the generatrix (τὴν γεννητικήν) of mathematical forms and ratios (λόγων). And if we say that the soul produces them by having their patterns in its own essence and that these offspring are the projections (προβολαί) of forms previously existing in it, we shall be in agreement with Plato and shall have found the truth about mathematical being.⁵⁶

Proclus, like Plotinus, thus makes the arithmetical properties of numbers depending on the soul. Indeed, both associate numbers with quantity⁵⁷ and find in the soul the substantial substratum of quantification. The similarity between the two philosophers on this point stops at the surface.

In the first part of Euclid Commentary’ Prologue, while discussing the ability of mathematics to put the soul in contact with intelligible realities, Proclus refers to Plotinus:

As Plotinus says, to a man of this nature <i.e., the philosopher> one must give mathematics to familiarize him with incorporeal nature and, using these figures as models, one must lead him to dialectical arguments and to the contemplation of being in general. That mathematical science provides the most important contribution to philosophy is clear from what has been said. But (δέ) it is also necessary to remember [...] that <mathematics> is advantageous to theology in preparing direct intellectual apprehension.⁵⁸

Accordingly, soul’s ascending activity is stimulated by mathematical procedures, as they are characterized by order and the power to lead multiplicity back to unity.⁵⁹ Not surprisingly, Plotinus, like any other Platonist, is recognized by Proclus as a defender of the ancillary function of mathematics towards dialectics. The

⁵⁵ Nikulin (2019) 132. See also d’Hoine (2018) 589, and Helmig (2017) 195–199.

⁵⁶ Procl. *in Euc.* 13, 6–11 (Morrow’s translation, slightly modified). On projection and its relationship with Platonic recollection, see e.g., Cleary (2000) 90–91; Nikulin (2008); Lernould (2011); Chlup (2012) 144–147; d’Hoine (2018) 589–590; Nikulin (2019) 140–143. See also MacIsaac (2001).

⁵⁷ See the discussion above and below, and Procl. *in Euc.* 35, 28–36, 1.

⁵⁸ Procl. *in Euc.* 21, 20–22, 2. See Plot. *Enn.* I 3, 3, 5–10.

⁵⁹ See e.g., Procl. *in Euc.* 84, 19–23.

fact, however, that the continuation of the reasoning is introduced by an adversative particle ($\delta\acute{e}$), leads one to think that Proclus considers Plotinus' vision, in a certain sense, incomplete, precisely because it would not have deepened the theological value of mathematical procedures and their objects. Indeed, while Plotinus seems inclined to consider them as non-substantial, Proclus includes mathematics in the four theological paths:⁶⁰

The way that proceeds through images ($\delta\acute{e}\tau\acute{a}\nu\epsilon\iota\kappa\acute{o}\nu\omega\nu$) is Pythagorean, since it was precisely by the Pythagoreans that the forms of mathematical knowledge were discovered to arrive at the recollection of divine reality and through these, as through images, they sought to arrive at it. And indeed they traced numbers and figures back to the divine.⁶¹

Although Proclus refers to the Pythagoreans, this theological project resorts to doctrines of different origins.⁶² In any case, its core consists in the fact that mathematical theology makes use of images, relating to those numbers and figures that are conceivable as the essence of the soul,⁶³ which help soul's kinship with immaterial realities, thus bringing towards the intelligible.⁶⁴ The identification between the essence of the soul and mathematical realities is probably influenced not only by the *Timaeus*,⁶⁵ but also by the doctrine, attributed to Xenocrates and accepted by Iamblichus, according to which the soul is like a number that moves itself.⁶⁶ The same theory is accepted by Plotinus, but transferred, as we have seen above,

⁶⁰ See Procl. *Theol. Plat.* I 4.17, 18–24.

⁶¹ Procl. *Theol. Plat.* I 4, 20, 8–11. See also *in Euc.* 21, 25–22, 6.

⁶² The possibility that mathematics encourages recollection dates back to Plato. See e.g., Landry (2012). Moreover, the use of numbers and figures in the theological sphere, ascribed by Proclus to the Pythagoreans (see also *in Euc.* 22, 1–16), would rather be a Neopythagorean readaptation of Pythagorean models, since, while the Pythagoreans seem to have preferred arithmetical images, it would be the Neopythagoreans who extended mathematical theology to geometry as well. In particular, although divine geometry cannot be ruled out from ancient Pythagoreanism, it is more likely that it was Plato who initiated or at least firmly established the use of geometrical figures in theology. See Steel (2007) 217–218; 227–235.

⁶³ See Procl. *in Euc.* 17, 6–11. For the difference between mathematical entities as such and those applied to sensible objects, see e.g., in *Euc.* 40, 1–4, and the discussion in Klein (1992) 46 ff.

⁶⁴ See Procl. *in Euc.* 20, 27 ff; 46, 3–18.

⁶⁵ See Gregory (2022).

⁶⁶ See Arist. *de An.* A 2.404b27–28; A 4.408b32 ff.; Plu. *De procr. an. in Tim.* 1.1012d ff.; Iamb. *Comm. Math.* 40, 19 ff.

to the Intellect as a number, namely to the second hypostasis.⁶⁷ As a consequence, the Plotinian soul participates in substantial numbers, but monadic numbers that the soul generates are abstracted, that is, separated, from the essence of reality.

From this perspective, the different way in which Plotinus and Proclus make use of the Xenocratean doctrine is not accidental, as it depends on the different role they ascribe to mathematical entities and, consequently, to mathematics. This means that numbers that represent the essence of the soul, i.e., intermediates, and constitute the paradigm of arithmetical procedures cannot be considered, as in Plotinus, abstract from the higher levels of reality but, on the contrary, depending on them, which in turn implies that Proclus' theological use of mathematics cannot be independent from actually doing mathematics. In short, Proclus' aim is non-Plotinian: he wants to make arithmetical numbers and their characteristics – number series, distinction between even and odd – ontologically grounded.

Intermediates' Rank in Being

The Proclean model of numbers is set within an ontological framework deriving from the exegesis of the *Parmenides*, according to an interpretative key which develops Plotinus' asymmetrical reading of participation and can be summed up in the so-called pre-containment principle. It establishes that each participated nature causally pre-contains the participant – thus guaranteeing continuity between the producer and the produced level –, without this leading to a complete identification between cause and caused, with the result that the higher reality will be at the same time participated and separate, and that the lower level – resulting from the appearance of any form of otherness with respect to the higher one⁶⁸ – will manifest new characteristics, which are not found as such in its cause.⁶⁹ Unlike Plotinus, Proclus therefore not only places the intelligible triad Being-Life-Intelligible Intellect/Living Being in itself⁷⁰ at three distinct levels⁷¹ but in general multiplies the hypostatic levels, from which a different reading of the substantial Plotinian number and its quaternary structure also follows:

⁶⁷ See above and note 42.

⁶⁸ See d'Hoine (2017) 99–101.

⁶⁹ On these issues, depending on Proclus' exegesis of the *Parmenides*, see e.g., Gerson (2011); Martijn and Gerson (2017) 51–55; 58–61; d'Hoine (2019).

⁷⁰ For the identification between Intelligible Intellect and Living Being in itself, see the discussion in Opsomer (2000).

⁷¹ See Procl. *Theol. Plat.* I 10.41, 24–42, 20; I 10.46, 18–22; I 11.48, 10–15; I 11.53, 9–10. On this issue, see Van Riel (2017) 87–88; Oosthout (2025) 94–95.

Moreover, even starting from the commonly accepted opinions of those who [...] are the true masters of divine reality, we believe that we can arrive at an identical conclusion [...]. Plotinus [...] in his treatise *On Numbers* [...] clearly states that the absolutely primary Being exists before numbers and that it generates the divine number. If [...] Being is the producer of the first number and, in turn, number is produced by Being, we must not change the order of these genera or reunite them in a single autonomous subsistence. Moreover, since Plato presents Being and number separately, it is not correct to ascribe both to the same order of determinations of Being. For that which is a cause and that which is caused can in no way have the same [...] rank, but these realities are separated from each other.⁷²

The One-Being [...] generates number together with otherness, thus determining distinction of forms and ratios.⁷³

In sum, if the *Parmenides* presents the generation of numbers as caused by Being and otherness,⁷⁴ nor can they be placed on the same level of Being, nor can they be identified with those realities in which otherness has not yet manifested itself. Therefore, 1. as in the One-Being the one and the being are not yet separated through otherness,⁷⁵ and 2. Life represents the power bringing One and Being together,⁷⁶ and 3. the Living-Being, conceived as the Intelligible Intellect, is defined as one-begotten,⁷⁷ it follows that number cannot be considered an intelligible reality, whereby the Plotinian substantial number, at least to the extent that it is identifiable with the intelligible triads, will not be a number.

If we wanted to reason about the Plotinian quaternary structure in Proclean terms, we may perhaps say that the only candidate to be number could be the unfolded one: it will have to be sought among those realities in which otherness has separated the one from being, that is, among the intelligible-intellectual realities, so that it can be defined as the absolutely first ($\tau\delta\pi\rho\omega\tau\iota\sigma\tau\delta\tau\delta$) among the intellectual ones.⁷⁸ It is only at this level that number can be wholly generated,⁷⁹

⁷² Procl. *Theol.Plat.* I 11.50, 14–51, 2.

⁷³ Procl. *Theol.Plat.* IV 27.79, 17–19.

⁷⁴ See Pl. *Prm.* 143b3 ff.

⁷⁵ On Being's unified nature, see Procl. *Theol.Plat.* IV 27.79, 16–80, 6.

⁷⁶ See Opsomer (2000) 363.

⁷⁷ See Pl. *Ti.* 31b3.

⁷⁸ See Procl. *Theol.Plat.* IV 27.78, 16 ff.; IV 33.98, 2–3. See the discussion in Terezis and Tempelis (2017) 54–58.

⁷⁹ See Procl. *Theol.Plat.* IV 28.83, 2–5.

since it is not a unified manifoldness but a divided one (*διηρημένον* ἐστὶ πλήθος, ἀλλ' οὐχ ἡνωμένον),⁸⁰ which thus develops as a series. In this regard, Proclus states:

Number is other than absolute manifoldness. While in the intelligibles there is manifoldness, in the intellectuals there is number. While in the intelligibles number is according to cause, in the intellectual level manifoldness subsists based on participation.⁸¹

The meaning of the reasoning is approximately the following: the intelligible is (one)manifold – otherwise it would be a pure one –, but this multiplicity is not yet divided. Number, on the contrary, by reason of otherness, is diversified and serially structured: a divided multiplicity follows from it, which is such precisely thanks to the participation in number. At the same time, due to the seamless relationship between cause and caused, the intelligible is that from which number exists. Indeed, according to the principle of pre-containment, Proclus admits that number has an intelligible cause: therefore, he speaks of an ἀριθμός κρύφιος⁸² and asserts that the intelligible monad and dyad, where manifoldness is still unified, causally embody the root of the intelligible-intellectual number and its distinction into even and odd.⁸³ To the two principles that govern the entire order of Being, namely the Limit and the Unlimited, numbers in general owe their constitution in an ordered series.⁸⁴ With respect to intellectual realities, number is, in turn, the cause of every distinction.⁸⁵

It is from this perspective that Proclus offers his interpretation of the ninth chapter of *Ennead VI 6*: if “number was in Being, without being number of Being, since Being was-still-one”, then “the power of number” must be conceived as a cause, depending on a further cause that is not yet numerical, capable of dividing the One-Being, that is, of dividing Being from the One, so giving birth to all divided multiplicity. And it is in this sense that numbers are intermediate, since they are found between the properly unified-intelligible level and the properly divided-intellectual one.

⁸⁰ See Procl. *Theol. Plat.* IV 28.83, 6.

⁸¹ Procl. *Theol. Plat.* IV 28.83, 8–11.

⁸² See Procl. *Theol. Plat.* IV 32.95, 20.

⁸³ See Procl. *Theol. Plat.* IV 28.81, 3 ff; IV 29.

⁸⁴ See Procl. *in Euc.* 5, 11 ff, and Cleary (2000) 88; Butler (2008) 132–133; Nikulin (2019) 133; Kutash (2011) 69–70. On the possibility of identifying monad and dyad with Limit and Unlimited, see Terezis and Tempelis (2017) 56.

⁸⁵ See Procl. *Theol. Plat.* IV, 29.85, 20–28.

While in Plotinus the logical-ontological status of substantial numbers overcomes that of intermediates, Proclus considers only these latter numbers in the proper sense. It follows that the typical categories of arithmetical numbers, which Plotinus ascribes to the unessential operations of the individual soul, are ontologically justified, being the effect, at a distinct and lower level, of the causal action of further intelligible-intellectual numbers. Thus, as Proclus clarifies in Euclid Commentary, the intermediates are the products of the soul but, at the same time, are produced by something ontologically higher, on which the soul itself depends:

If, however, mathematical forms do not exist by abstraction from material things [...], of necessity the soul must obtain them either from itself or from Nous, or from both itself and that higher intelligence. Now if the soul gets them from itself alone, how can they be images of intelligible forms? [...] Yet if they come from Nous alone, how can the inherent activity and self-moving character of soul be preserved when it receives its ideas from elsewhere, like a thing moved by outside forces? [...] There is left only the conclusion that soul draws its concepts both from itself and from Nous, that it is itself the company (*πλήρωμα*)⁸⁶ of the forms, which receive their constitution from the intelligible patterns but enter spontaneously upon the stage of being.⁸⁷

Insofar as Proclus includes the generation of intermediates within the entire process of manifoldness' unfolding, he can accept as true a series of assumptions: 1. the idea of the production of intermediates by the two principles common to all Being; 2. that according to which they would have their hidden root in the intelligible; 3. the idea that the proper and first number would be an intelligible-intellectual reality; 4. the conclusion that the numerical series would give order to the intellectual natures, up to the soul;⁸⁸ and, finally, 5. the idea according to which the embodied soul would be numbers' producing cause, in the sense of completing their generation. It is from the perspective of this model that Proclus considers mathematical entities and mathematics itself as images,⁸⁹ and comes to recognize numbers as *εἰκόνες* of the henads themselves, since they reveal their *τάξις*,⁹⁰ in itself unknowable. Therefore, in relation to higher realities, which are not numbers,

⁸⁶ For this lexical choice, see Morrow (1992) 14 note 28.

⁸⁷ Procl. *in Euc.* 15, 19–16, 7 (Morrow's translation). See Cleary (2000) 91–92. On Proclus' criticism of Aristotelian abstractionism – to which the philosopher opposes the model of projection –, see e.g., Nikulin (2019) 132; Helmig (2017) 193–199. See also above, note 56.

⁸⁸ On the relationship between numbers and World-Soul, see Finamore and Kutash (2017) 129–131.

⁸⁹ See e.g., Procl. *in Euc.* 36, 12–21.

⁹⁰ See Procl. *Theol. Plat.* III 5,17, 18–22.

numbers are symbols; in relation to lower ones, which manifest themselves from numbers, numbers are paradigms.

Proclus' interpretation of intermediates leads to a rereading of the Plotinian monadic numbers produced by the soul. While Plotinus considers them to be separate from the participatory model and, in this sense, evanescent products, Proclus believes that everything that participates in the intelligible-intellectual level is a number-image of the first number. It follows that the quantum-numbers generated by the soul depend on the higher numbers and preserve ontologically grounded characteristics. The ontological dependence of monadic numbers on higher numbers ultimately justifies the theological value of arithmetic.⁹¹

The different perspective also gives rise to the way in which the two philosophers deal with the section of the *Parmenides* (144a5–6), where numbers make it possible to recognize in being some form of infinity. Since Plotinus makes number coincide with the second hypostasis and rejects that true numbers are serially ordered, he concludes that the substantial number is infinite for not to be encompassed by any limit, being what it is for itself.⁹² As Proclus accepts the numerical series as ontologically grounded, he explains the question posed by the *Parmenides* differently. Firstly, he distinguishes between the intelligible cause of numbers and the numerical series as such. Regarding the first, he agrees with Plotinus and hypothesizes that the intelligible number is infinite in the sense of not being knowable, since the intelligible manifoldness has characteristics that are not unfolded (*ἀνεξέλικτα*) and, therefore, cannot be understood by discursive reason.⁹³ Regarding the numerical series, Proclus admits that human reason is sometimes overcome by the limitlessness, being unable to encompass the series in a single glance.⁹⁴ This, however, does not imply that numbers are truly infinite, in the sense that the limit is completely *overwhelmed* by the unlimited. It is possible, in other words, to recognize that numbers are in series and not to admit that they are infinite.

⁹¹ On Proclean monadic numbers, see e.g., *Theol. Plat.* II 1.8, 5–14. The numerical model adopted here is that dating back to Aristotle and taken up by Plotinus himself, according to which the numbers we use to count can be conceived as monadic precisely because they are constituted by units. In this sense, they are endowed with parts; therefore, although each of them is one, they are not pure units (see *Theol. Plat.* I 20.94, 18–22). To explore this issue further, see Kobec (2017) 793–796. For the dependence on Plotinus' treatise *On Numbers*, see Kurdybaylo (2019) 476–477.

⁹² See Plot. *Enn.* VI 6.18, 1–11. On the problem of number of infinity, see e.g., Slaveva-Griffin (2009) 54–70.

⁹³ See Procl. *Theol. Plat.* IV 34.100, 2–8.

⁹⁴ See Procl. *Theol. Plat.* IV 34.100, 11–20.

Finally, there is a further aspect to underline. The numerical series primarily indicates the set of intellectual gods. In order for the conversion of the (Intellectual) Intellect to take place, the Intellect must turn towards both itself and its causes.⁹⁵ This double conversion, which prevents the division from continuing to infinity, allows us to think of the Proclean numerical series in two ways: compared to discursive reason, it seems, as Plotinus also states,⁹⁶ linear and, therefore, infinite; relating to its ontological status and Intellect' conversion, the series acquires, similarly to Plotinus' substantial number, a circular structure, yet diversified in its parts, due to the lowering of the number in the rank of being.

It seems significant that in this context Proclus uses the image of Kronos, re-thinking his role in the same way in which he rethought the Plotinian intelligible level. The unity of the two conversions of the Intellect is represented by the intellectual monad which, in a certain sense, surrounds the parts and prevents their dispersion, containing and devouring them in the manner of Kronos.⁹⁷ Yet, precisely because Kronos is here an intellectual god, Proclus also insists on another aspect of the myth, that is, the emasculation of the god,⁹⁸ as if to remind us that what the intellectual monad does not retain, will then go on to generate extra-intellectual realities.

REFERENCES

- Anton, J. P. (1977) "Some Logical Aspects of the Concept of Hypostasis in Plotinus," *The Review of Metaphysics* 31, 258–271.
- Armstrong, A. H. (1960) "The Background of the Doctrine 'that the Intelligibles are not outside the Intellect,'" in P. Henry, P. Hadot, O. Gigon, and O. Reverdin, eds. *Les sources de Plotin. Entretiens sur l'Antiquité classique*. Vandoeuvres-Genève: Fondation Hardt, 393–425.
- Brisson, L. (2002) "La figure du Kronos orphique chez Proclus. De l'orphisme au néo-platonisme, sur l'origine de l'être humain," *Revue de l'histoire des religions* 219, 435–458.
- Butler, E. P. (2008) "The Intelligible Gods in the *Platonic Theology* of Proclus," *Méthexis* 21, 131–143.
- Charles-Saget, A. (1982) *L'architecture du Divin. Mathématique et philosophie chez Plotin et Proclus*. Paris: Les Belles Lettres.
- Chindea, G. (2007) "Le nombre est-il une réalité parfaitement intelligible? Une analyse de l'intelligibilité du nombre chez Plotin," *Chora* 5, 97–109.

⁹⁵ See Procl. *Theol. Plat.* V 37.

⁹⁶ See Plot. *Enn.* VI 6, 2, 1–9.

⁹⁷ See Procl. *Theol. Plat.* V 37.138, 12 ff. On Proclean Kronos, see Brisson (2002); Sheppard (2014) 72; Kurdybaylo (2019) 468–469.

⁹⁸ See Procl. *Theol. Plat.* V 5.24, 13–14 and *Orph.* fr. 137 Kern.

- Chiurazzi, G. (2023) "Idealism as an Asymmetrical Relationship: a Reconsideration of Plato's Doctrine of Ideas," *Athena* 18, 44–57.
- Chlup, R. (2012) *Proclus. An Introduction*. Cambridge: Cambridge University Press.
- Cleary J.-J. (2000) "Proclus' Philosophy of Mathematics," in G. Bechtle and D. J. O'Meara, eds. *La philosophie des mathématiques de l'Antiquité tardive*. Actes du colloque international (24–26 septembre 1998). Fribourg Suisse: Editions Universitaires, 85–101.
- Corrigan, K. (1986) "Plotinus, *Enneads* 5, 4 [7], 2 and Related Passages. A New Interpretation of the Status of the Intelligible Object," *Hermes* 114, 195–204.
- Cutino, M. (2023) *Proclo. Lo stile e il sistema della teologia*. Berlin-Boston: De Gruyter.
- D'Ancona Costa, C. (1990) "Determinazione e indeterminazione del soprasensibile secondo Plotino," *Rivista di Storia della Filosofia* 45, 437–474.
- D'Ancona Costa, C. (1992) "AMORPHON KAI ANEIDEON. Causalité des formes et causalité de l'Un chez Plotin," *Revue de Philosophie Ancienne* 10, 69–113.
- d'Hoine, P. (2017) "Platonic Forms and the Triad of Being, Life, and Intellect," in P. d'Hoine and M. Martijn, eds. *All from One. A Guide to Proclus*. Oxford: Oxford University Press, 98–121.
- d'Hoine, P. (2018) "The Metaphysics of the 'Divided Line' in Proclus: A Sample of Pythagorean Theology," *Journal of the History of Philosophy* 56, 575–599.
- d'Hoine, P. (2019) "Proclus and Self-Predication," *Epoché* 23, 461–470.
- Emilsson, E. K. (1995) "Plotinus on the Objects of Thought," *Archiv für Geschichte der Philosophie* 77, 21–41.
- Emilsson, E. K. (1996) "Cognition and its Object," in L. P. Gerson, ed. *The Cambridge Companion to Plotinus*. Cambridge: Cambridge University Press, 217–249.
- Finamore, J. F. and Kutash, E. (2017) "Proclus on the *Psyché*: World Soul and the Individual Soul," in P. d'Hoine and M. Martijn, eds. *All from One. A Guide to Proclus*. Oxford: Oxford University Press, 122–138.
- Gerson, L. P. (2011) "Proclus and the Third Man," *Études platoniciennes* 8, 105–118.
- Gertz, S. (2022) "Plotinus, Gnosticism, and Christianity," in L. P. Gerson and J. Wilberding, eds. *The New Cambridge Companion to Plotinus*. Cambridge: Cambridge University Press, 41–63.
- Gregory, A. (2022) "Mathematics and Cosmology in Plato's *Timaeus*," *Apeiron* 55, 359–389.
- Hadot, P. (1960) "Être, vie, pensée chez Plotin et avant Plotin," in P. Henry, P. Hadot, O. Gigon, and O. Reverdin, eds. *Les sources de Plotin. Entretiens sur l'Antiquité classique*. Vandoeuvres-Genève: Fondation Hardt, 107–157.
- Hadot, P. (1999) "La conception plotinienne de l'identité entre l'intellect et son objet. Plotin et le *De anima* d'Aristote," in Id., *Plotin, Porphyre. Études néoplatoniciennes*. Paris: Les Belles Lettres, 267–278.
- Helmig, Ch. (2017) "Proclus on Epistemology, Language, and Logic," in P. d'Hoine and M. Martijn, eds. *All from One. A Guide to Proclus*. Oxford: Oxford University Press, 183–206.
- Isnardi Parente, M. ed. (1994) Plotino. Enneadi VI 1-3. *Trattati 42-44 Sui generi dell'Essere. Introduzione, testo greco, traduzione, commento*. Napoli: Loffredo.
- Jurasz, I. (2016) "L'Intellect - Kronos chez Plotin. La place du mythe dans la noétique plotinienne," *Methodos* 16, <https://doi.org/10.4000/methodos.4401>, 1–24.

- Kalligas, P. (2015) "Plotinus on Number as Quantity," *Philosophical Inquiry* 39, 207–216.
- Kobec, A. (2017) "Proclus on the Forms of Attributes: The Case of Figures and Numbers (*in Prm. 3.826.19-827.18*)," *Mnemosyne* 70, 775–807.
- Klein, J. (1992) *Greek Mathematical Thought and the Origin of Algebra* (transl.). New York: Dover Publications.
- Koumachis, G. Ch. (2004) "Plato So-called Unwritten Doctrines," *Dodone* 33, 89–114.
- Kurdybaylo, D. (2019) "On *Symbolon* and *Synthema* in the *Platonic Theology* of Proclus," *ΣΧΟΛΗ (Schole)* 13, 463–485.
- Kutash, E. (2011) *Ten Gifts of the Demiurge. Proclus' on Plato's Timaeus*. London-New York: Bloomsbury Academic.
- Landry, E. (2012) "Recollection and the Mathematician's Method in Plato's *Meno*," *Philosophia Mathematica* 20, 143–169.
- Lernould, A. (2011) "Le statut ontologique des objets géométriques dans l'*In Euclidem* de Proclus," *Études Platoniciennes* 8, 119–144.
- MacIsaac, D. G. (2001) "Phantasia between Soul and Body in Proclus' Euclid Commentary," *Dionysius* 19, 125–136.
- Maggi, C. (2010) *Sinfonia matematica. Aporie e soluzioni in Platone, Aristotele, Plotino, Giamblico*. Napoli: Loffredo.
- Maggi, C. (2013) "The Plotinian Rethinking of Dyad and Numbers in *Ennead VI*6," *Chora* 11, 79–89.
- Maggi, C. (2025) "The Aristotelian Plato. Some Aporias of Participation, and the Ontological Status of Mathematical Entities," *The International Journal of the Platonic Tradition*, <https://doi.org/10.1163/18725473-bja10043>, 1–22.
- Marongiu, L. (2025) *"Un piccolo esempio": la psicagogia matematica di Platone*. Leiden: Brill.
- Martijn, M. and Gerson, L. P. (2017) "Proclus' System," in P. d'Hoine and M. Martijn, eds. *All from One. A Guide to Proclus*. Oxford: Oxford University Press, 45–72.
- Martijn, M. (2022) "From Plotinus to Proclus," in L. P. Gerson and J. Wilberding, eds. *The New Cambridge Companion to Plotinus*. Cambridge: Cambridge University Press, 65–89.
- Menn, S. (2001) "Plotinus on the Identity of Knowledge with its Object," *Apeiron* 34, 233–246.
- Morrow, G. R. ed. (1992) *Proclus. A Commentary on the First Book of Euclid's Elements*. Princeton: Princeton University Press.
- Mueller, I. (1987) "Iamblichus and Proclus' Euclid Commentary," *Hermes* 115, 334–348.
- Nikulin, D. (2008) "Imagination and Mathematics in Proclus," *Ancient Philosophy* 28, 153–172.
- Nikulin, D. (2019) *Neoplatonism in Late Antiquity*. New York: Oxford University Press.
- O'Meara, D. J. (1989) *Pythagoras Revived. Mathematics and Philosophy in Late Antiquity*. Oxford: Clarendon Press.
- O'Meara, D. J. (1990) "La question de l'être et du non-être des objets mathématiques chez Plotin et Jamblique," *Revue de Théologie et de Philosophie* 122, 405–416.
- Opsomer, I. (2000) "Deriving the Three Intelligible Triads from the *Timaeus*," in A.-Ph. Segonds and C. Steel, eds. *Proclus et la Théologie Platonicienne. Actes du Colloque International de Louvain (13-16 mai 1998)*. Paris: Les Belles Lettres, 351–372.

- Oosthout, A. (2025) *Proclus on Whole and Part: A Reappraisal of Mereology in Neoplatonic Metaphysics*. Leiden: Brill.
- Rist, J. M. (1962) "The Indefinite Dyad and Intelligible Matter in Plotinus," *The Classical Quarterly* 12, 99–107.
- Schniewind, A. (2010) "Où se situe l'intelligible? Quelques difficultés relatives à *Ennéade* V 4 [7], 2," in D. P. Taormina, ed. *L'essere del pensiero. Saggi sulla filosofia di Plotino*. Napoli: Bibliopolis, 27–44.
- Sheppard, A. D. R. (2014) "Proclus as Exegete," in S. Gersh, ed. *Interpreting Proclus. From Antiquity to the Renaissance*. Cambridge: Cambridge University Press, 57–79.
- Slaveva-Griffin, S. (2009) *Plotinus on Number*. Oxford: Oxford University Press.
- Slaveva-Griffin, S. (2014) "Number in the Metaphysical Landscape," in Remes and S. Slaveva-Griffin, eds. *The Routledge Handbook of Neoplatonism*. London: Routledge, 200–215.
- Slaveva-Griffin, S. (2022) "Plotinus on Number," in L. P. Gerson and J. Wilberding, eds. *The New Cambridge Companion to Plotinus*. Cambridge: Cambridge University Press, 136–162.
- Steel, C. (2007) "Proclus on Divine Figures. An Essay on Pythagorean-Platonic Theology," in M. Bonazzi, C. Lévy, and C. Steel, eds. *A Platonic Pythagoras: Platonism and Pythagoreanism in the Imperial Age*. Turnhout: Brepols, 215–242.
- Steel, C. (2012) "Plato as Seen by Aristotle *Metaphysics A 6*," in C. Steel and O. Primavesi, eds. *Aristotle's Metaphysics Alpha: Symposium Aristotelicum*. Oxford: Oxford University Press, 167–200.
- Terezis, Ch. and Tempelis, E. (2017) *Proclus on the Transition from Metaphysical Being to Natural Becoming. A new Reading of the Platonic Theory of Forms*. Piscataway: Gorrias Press.
- Van Riel, G. (2017) "The One, the Henads, and the Principles," in P. d'Hoine and M. Martijn, eds. *All from One. A Guide to Proclus*. Oxford: Oxford University Press, 73–97.
- Volpe, E. (2023–2024) "La triade Ouranos-Kronos-Zeus chez Plotin et ses relations avec le *Cratyle* et le *Timée*. Entre problème exégétique et philosophique," *Chora* 21–22, 71–93.
- Wagner, M. F. (1982) "Vertical Causation in Plotinus," in R. Baine Harris, ed. *The Structure of Being. A Neoplatonic Approach*. Albany: State University of New York Press, 51–72.