

Why is the World Soul composed by Being, Sameness and Difference?

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Abstract :

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Introduction

When commenting the impossibility for the Grammarians to understand difficult philosophical texts, Sextus Empiricus mentions two examples (Adv. Math. 1.301) : Heraclitus and what Plato wrote about the constitution of the World Soul in the *Timaeus*. Sextus actually quotes 35a1-5 and concludes his citation claiming that on this passage all the interpreters of Plato keep silence (περὶ τὴν λέξιν πάντες οἱ Πλάτωνος ἐξηγηταὶ ἐσίγησαν)². However, not all the interpreters of Plato have kept silence on this very enigmatic passage of the *Timaeus* and all the difficulties it involves in relations to Plato's psychology and ontology³. In fact, Timaeus' description of how

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² Sextus-Empiricus, *Adv. Math.* 1.301 : "For how can any of the grave "Grammarians comprehend Heraclitus or follow the meaning of Plato where he says,—“ Between the Being which is indivisible and remains always the same and the Being which is divisible in bodies, He blended a third form of Being compounded of the twain, that is to say, out of the Same and the Other,” and the rest of the context, about which all the interpreters of Plato keep silence?" (Trans. Bury)

³ For an account of the main interpretations of this passage from antiquity to contemporary scholarship see Brisson (1994), pages 267-354. Proclus's Commentary on Plato *Timaeus* contents a very detailed account of the discourse on the constitution of the World-Soul (Proclus in *Timaeum*, Book III, Part 2) and Plutarch has written a treatise on

the Demiurge constitutes the World-Soul (35a-b) does contain a fundamental importance for the comprehension of the *Timaeus* as a whole : in 29d-30c, the Demiurge offers his reasoning on the fabrication of the *cosmos* and states clearly that: *taking thought, therefore, he found that, among that by nature visible, no work that is without intelligence will ever be better than one that has intelligence, when each is taken as the whole*⁴ (30b1-3 : λογισάμενος οὖν ἡύρισκεν ἐκ τῶν κατὰ φύσιν ὁρατῶν οὐδὲν ἀνόητον τοῦ νοῦν ἔχοντος ὅλον ὅλου κάλλιον ἔσεσθαι ποτε ἔργον). Just before this sentence, Timaeus mentioned the goodness (29e1 : ἀγαθός) of the Demiurge : as a divine craftsman, he wishes his work to be the best possible realization (29e-30a). The sentence just quoted actually represents the beginning of the his teleological⁵ reasoning. Thus the Demiurge will constitute the universe following this basic principle: as a visible reality, it will be better with, than without, *nous*. A second premise is immediately added : *in virtue of this reasoning, when he framed the universe, he fashioned reason within soul and soul within body* (30b4-5 : διὰ δὴ τὸν λογισμόν τόνδε νοῦν μὲν ἐν ψυχῇ, ψυχὴν δ' ἐν σώματι συνιστάς τὸ πᾶν συνετεκταίνετο)⁶. From this argument, it can be deduced that *this universe must be said to be a living creature with soul and reason* (30b7-8 : δεῖ λέγειν τόνδε τὸν κόσμον ζῶον ἔμψυχον ἔννοον). The fact that the universe is a living creature will imply that the Demiurge will have to fashion both the World Body and the World Soul. The deduction just offered gives a justification about the fact that our universe is not only a corporeal entity but possesses a soul. The nature of this World Soul, as Sextus pointed out, is exposed in a very enigmatic text, which we will examine in this article. In order to try to understand better why the Demiurge constitutes an ensouled universe, we will explicitly relate the realization of the

this subject: *Plutarchou chairōneōs Peri tēs en Timaiō psycholonias*. See Ferrari (1999) for an analysis of Plutarch's interpretation.

⁴ Translation are from Cornford (1937) with slight modifications.

⁵ For a discussion of the notion of teleology see, in this volume, Brisson's contribution. Within a cosmological framework, it is important to distinguish Plato's from Aristotle's teleology: for Aristotle, teleology can be understood as the final causality of the Unmoved mover (*Metaphysics* Λ), whereas for Plato, teleology must be conceived as the Demiurge's reasoning who aims to fashion the best possible universe : from 30b1, this principle will guide every act the Demiurge will do, including the constitution of the World Soul (see on that question Karfik 2007) This finalist dimension must be understood within the *eikōs mythos* framework of Timaeus' discourse : see Moreau (1939), pages 10-14 and 39-43.

⁶ The relationship between the intellect and the soul is commonly related to the function of the Demiurge. His reasoning ability (λογίζομαι) seems to imply that he himself possesses a *nous*, or maybe is *nous*, as does the World Soul. Since the Antiquity attempts have been made to identify the Demiurge with the *nous* of the World Soul, as is, for example, Cornford tempted (1937), page 38-39. What our text seems to guaranty is that for visible objects *nous* will be situated in soul, which does not prevent the possibility for the Demiurge to be a transcendent pure nous (as Menn (1995)). On this problem see also Mason (2013) for an examination of the concept of *nous* in Plato's philosophy (*Phaedo*, *Timaeus*, *Philebus* and *Laws*). What Timaeus affirms here should also be related to *Sophist* 249a

World Soul with its finality as conceived by the Divine craftsman. This will imply ask, and try to answer, the question : why the World Soul is composed by Being Sameness and Difference? While answering this question, we will try elucidating the nature of the World Soul presented as an intermediary mixture between the sensible and the Intelligible.

The nature of a *why* question is nevertheless ambiguous : it could mean *for which reason* or *for which objective* did the Demiurge fashion the World Soul out of these three ingredients.

While describing the phenomenon of vision and the formation of images in the eye in 44c-46c, Timaeus introduces a key distinction that makes possible a better understanding of the structure of the dialogue: there are, on the one hand, the accessory or auxiliary causes (*sunaitiai*) and on the other the proper causes (*aitiai*). The former are those used by a demiurge as auxiliaries to achieve the best possible result (46 c8: “τὴν τοῦ ἀρίστου κατὰ τὸ δυνατόν ἰδέαν”). On the contrary to what many think, they are not the causes of all things (46d2: “αἴτια εἶναι τῶν πάντων”), since these causes can demonstrate no rational conduct, no intelligent intent for anything (46d4: “λόγον δὲ οὐδένα οὐδὲ νοῦν εἰς οὐδὲν δυνατὰ ἔχειν ἐστίν”)⁷. Only the proper causes can demonstrate these latter properties. Timaeus distinguishes these two types of causes in order to apply them to the distinction between the two points of view that he develops with regards to the *cosmos*, namely the explanation of the action of necessity (*ananke*) which must be persuaded by the action of the intellect (*nous*), two actions that can be contrasted, as the two types of causes just described, by means of the opposition between “with intelligence” (“μετὰ νοῦ”) and “deprived of thought, acting randomly and without order” (“μονωθεῖσαι φρονήσεως τὸ τυχὸν ἄτακτον ἐκάστοτε ἐξεργάζονται”) (46e4-6). As regards the phenomenon of vision, Timaeus insists that the mechanical description which has just been made of it can be situated on the side of accessory causality (47a). It is also necessary to find the proper causality of vision, distinguishing what for has it been constituted and what is its function and usefulness (46e8: “τὸ δὲ μέγιστον αὐτῶν εἰς ὠφελίαν ἔργον”). For Timaeus, the proper function of vision, and therefore its proper causality, is that it has made possible by the observation of the planets and their motions the invention of number (47a6), which itself has led to knowledge of time and

⁷ A similar distinction is introduced in *Phaedo* (97b-99d) and in the *Laws* (888e and 892a) from a critical point of view against philosophers satisfied with mechanistic explanations of reality.

consequently to research on the universe. In the end, it was through the use of vision that philosophy emerged.

If the distinction between the two causalities is introduced to distinguish, within Timaeus' mission to deliver a speech on the *cosmos*, the two irreducible dimensions of the universe, namely intellect and necessity, it has to be noted that this very distinction also aims at highlighting two ways of accounting for the existence of a reality by associating the hierarchy of two types of explanations, a less fundamental one, which consists in establishing *how* a reality is what it is, and another, more fundamental, that determines what is the finality of that reality. In other words, it is by determining the purpose of an object (*allowing the emergence of philosophy*) that its structure (*the mechanism of vision*) is necessarily determined⁸. Perhaps, this distinction can also contribute to a better understanding of why the World soul, when constituted by the Demiurge, is described as an intermediate mixture of Being, Sameness and Difference (35a -b)? One of the strategies to better understand those obscure and enigmatic lines can make use of the distinction between the two causes. It is true that this introduction is carried out by Timaeus later in his discourse, but it seems nevertheless that it is already applicable from the beginning of the cosmic story.

The constitution of the World soul

If it is possible to suppose that the structure of the soul of the world is a function of its finality, let us first take a look at that structure as described by Timaeus:

⁸ It should be noted that the distinction between *aitiai* and *sunaitiai* is introduced in order to distinguish between a mechanical and material explanation of a phenomenon on the one hand and its teleological explanation on the other one. Whether it concerns vision or the *cosmos* as a whole, we must distinguish between auxiliary causes (the mechanical description of the vision or the description of the action of necessity) and its proper causes (the finality of vision and the finality of the *cosmos* in function of the action of the *nous*). It is evident that the World soul, within the cosmological discourse, belongs to the side of *nous* (46d). Nevertheless, it seems possible, insofar as it is itself considered as the product of a demiurgic fabrication, that the soul can be understood from two points of view: either by examining its material explanation (it is indeed an assemblage of various ingredients), or by examining its finality (for the sake of what is the soul made), and in this sense the use of the two kinds of causes may seem relevant.

The things of which he composed soul and the manner of its composition were as follows: Between the indivisible Existence that is ever in the same state and the divisible Existence that becomes in bodies, he compounded a third form of Existence composed of both. Again, in the case of Sameness and in that of Difference, he also on the same principle made a compound intermediate between that kind of them which is indivisible and the kind that is divisible in bodies. Then, taking the three, he blended them all into a unity, forcing the nature of Difference, hard as it was to mingle, into union with Sameness, and mixing them together with Existence. And having made a unity of the three, again he divided this whole into as many parts as was fitting, each part being a blend of Sameness, Difference, and Existence.⁹ (Translation Cornford)

The demiurge seems to intend to make an intermediate mixture between the sensible and the intelligible. This will not appear as a complete surprise since two important theses about the soul have been highlighted elsewhere in the dialogues: first, the soul is neither a sensible object nor an intelligible Form but possess a kinship (*suggeneia*) with Forms as Socrates affirms in *Phaedo* 79a6-80b3, where the soul is described as being more similar (*homoiotaton*) to what is uniform (*monoeides*). Secondly, the soul is defined as a motion capable of moving oneself (*Laws* 895e10-896a2: “τὴν δυναμένην αὐτὴν αὐτὴν κινεῖν κίνησιν”), a principle of motion (*Laws*, 896b3: “ἀρχὴ κινήσεως”) or a motion that moves itself (*Phaedrus* 245e7-246a1: “τὸ αὐτὸ ἑαυτὸ κινεῖν”). It should first be noted that this definition is absent from the passage just quoted¹⁰. The self-moving function of the soul does not appear directly when it comes to describe its constitution but, as we will see, will be pointed out when it comes to describe the moving function of the World soul as the cause of the celestial motions (37c-40d). As for the intermediate status of the soul, our passage is directly related to it. The soul is indeed described as an intermediate mixture between divisible and indivisible, a distinction which probably refers

⁹ *Timaeus*, 35a1-35b3 : « τῆς ἀμερίστου καὶ ἀεὶ κατὰ ταῦτὰ ἐχούσης οὐσίας καὶ τῆς αὖ περὶ τὰ σώματα γιγνομένης μεριστῆς τρίτον ἐξ ἀμφοῖν ἐν μέσῳ συνεκράσατο οὐσίας εἶδος, τῆς τε ταυτοῦ φύσεως [αὐτὸ πέρι] καὶ τῆς τοῦ ἑτέρου, καὶ κατὰ ταῦτὰ συνέστησεν ἐν μέσῳ τοῦ τε ἀμεροῦς αὐτῶν καὶ τοῦ κατὰ τὰ σώματα μεριστοῦ· καὶ τρία λαβὼν αὐτὰ ὄντα συνεκράσατο εἰς μίαν πάντα ιδέαν, τὴν θατέρου φύσιν δύσμεικτον οὖσαν εἰς ταῦτὸν συναρμόττων βίᾳ. μειγνὺς δὲ μετὰ τῆς οὐσίας καὶ ἐκ τριῶν ποιησάμενος ἓν, πάλιν ὅλον τοῦτο μοίρας ὅσας προσῆκεν διένειμεν, ἐκάστην δὲ ἐκ τε ταυτοῦ καὶ θατέρου καὶ τῆς οὐσίας μεμειγμένην. »

¹⁰ In general, this definition is not directly found in the discourse of *Timaeus*, although it is possible to assert that it might be expressed in 46d7-e2, 89a1-2 and 37b5 in the expression “ἐν τῷ Κινουμένῳ ὑφ' αὐτοῦ”.

to the one between the sensible and the intelligible, as the divisible is "περὶ τὰ σώματα γιγνομένης," while the indivisible is "Ἀεὶ κατὰ ταῦτ' ἔχουσης οὐσίας". The intermediate nature of the soul is also accentuated by the double mixing operated by the demiurge: first, he constitutes three intermediate mixtures from the Being, Sameness and Difference, divisible and indivisible, so to obtain intermediate Being, intermediate Sameness, and intermediate Difference. Then, in assembling these three intermediate mixtures, he constitutes the World soul.

Why then does the Demiurge use these three ingredients and what are they for each of the two levels mentioned, namely the sensible and intelligible levels? Our interpretative hypothesis emphasizes that it is by asking about the finality of the soul that we could better understand its elementary constitution. Let us notice beforehand that the three ingredients introduced seem to refer explicitly to one discussion in the Platonic corpus, namely the description of the communication of the Great Kinds in the *Sophist* (249d-259a). In this dialogue, Plato proposes a long argumentative journey in order to solve an extremely complex problem, perhaps addressed for the first time by Parmenides: what is non-being and what is its relation to being? The solution offered by Plato in this dialogue is based on the ambiguity which can be found in the statements "is" and "is not" which can reciprocally mean "exists", "is the same as" and "does not exist", "is different from". By distinguishing between existence and identity on the one hand, and non-existence and difference on the other, Plato seems to have succeeded in escaping the *aporias* associated with affirmations such as *non-being is not* or *non-being is*, this last statement being banned by the old Parmenides.

In order to arrive at this solution, Plato introduces five Kinds whose relations are described in terms of communications, according to a well-established order: Being, Sameness, Difference, Rest and Motion. If non-being as non-existent does not exist, non-being as what is different finds its justification in the study of relations between the five kinds. In reality, only three of these five kinds possess the property of being participated not only by each of the five kinds, but also by every intelligible Form (254d-258c). All the intelligible Forms participate in these three kinds because for any Form F, F exists, is the same as itself and is different from all the other Forms. Thus Plato highlights in the *Sophist* that there are three properties which are shared by all the intelligible Forms (including the five kinds), and as such, all Forms communicate (or maybe participate) with the kinds of Being, Sameness and Difference. While non-being as non-existent does not exist, it seems that for Plato, non-being as *being different from* exists (and

therefore communicates with the Form of Being) and, in one sense, is not, since Difference is different from all other Kinds. What may appear to be a superficial linguistic game which makes use of the ambiguity of certain concepts is actually a description of the fundamental relations which exist within the intelligible realm. Plato's reasoning in the *Sophist* also stresses the fundamental dimensions of existence, identity, and difference which characterize all the Forms and which guarantee, so to speak, that they are what they are, namely, intelligible entities.

In the context of an examination of the relations between the Forms, and in order to avoid their complete atomic isolation, Plato discovers that three of them are more fundamental since they exemplify the properties that are shared by all the intelligible beings and, as such, contribute to the determination of the mutual relations between the Forms¹¹. Now, in the constitution of the World soul, the demiurge makes use of these three intelligible kinds. It is very likely that Being, Sameness, and Difference which belong to the category of the indivisible refer to the three kinds introduced in the *Sophist*. Indeed, since the soul is an intermediate mixture, the Demiurge will use these three kinds as well as their sensitive counterparts, so that the mixture possesses an intermediate nature between the sensible and the intelligible. The intelligible ingredients thus seem to refer to the three kinds of the *Sophist*, but what are Being, Sameness and Difference which belong to the realm of the divisible *which becomes* in bodies? The text says nothing about it, and only conjectures can be made on this matter. If the relation between the intelligible and the sensible is that of a *paradeigma* towards its *eidolon*¹², then it is necessary that divisible Being, Sameness and Difference are the sensible images of intelligible Being, Sameness and Difference. In other words, we would have to deal here with the sensible exemplifications of the three kinds of the *Sophist*.

The conjecture can still be pursued with regard to these three sensible ingredients: what is the sensible image of the intelligible Being? The latter represents the accomplished mode of existence of the Forms insofar as they themselves by themselves, eternal and perfect. It is the realm of absolute permanence. Consequently, the being of the image of the intelligible is what Plato calls *becoming*, the realm of that which has no permanence, which is a deficient reflection and depends on the model to be what it is. As far as the images of the Sameness and the

¹¹ It seems as such that Motion and Rest are not on the same level at the three other kinds, since the *Sophist* (254d-255a) teaches us that those two kinds are not participated in by all other Forms. Furthermore, they exclude themselves since Motion does not communicate with Rest and Rest with Motion. See 248d-249d.

¹² See *Timaeus* 52d-53c

Difference are concerned, we must ask ourselves how the notions of identity and difference appear in the sensible. In other words, what does it mean to say that, for example, Socrates is the same as Socrates or Socrates is different from Phaedo. This cannot mean that Socrates possesses the same identity to himself as the Form of man possesses in relation to itself, or that Socrates exemplifies the same difference with respect to Phaedo as the Form of man in relation to the Form of fish. Indeed, if the *Sophist* acknowledges that an image has its proper mode of being (it is *really* an image: cf. 239d-240d), Timaeus subsequently asserts that an image is only the fugitive and transient appearance of the *mimemata* of the Forms in the Receptacle (52c-d). Thus, the Divisible Sameness and Difference represent what must correspond to notions of identity and difference within the realm of sensible things. Socrates, despite the fact that he is constantly changing and does not possess the stability of an intelligible Form, is identical or perhaps *similar* to himself and yet different or perhaps *dissimilar*¹³ from the other men who all participate in the Form of man.

One last question: how seriously should we take the process of artisanal fabrication of the World Soul? In his desire to produce an intermediate mixture, it seems that the Demiurge makes use of two types of ingredients reciprocally belonging to the intelligible and the sensible. As regards the former, there is no doubt that the demiurge must use ingredients in the intelligible model, which is co-existing with him (*Timaeus*, 29d-30d). As far as the sensible ingredients are concerned, a literal reading of the passage poses a problem, since Timaeus has affirmed a few lines before that the soul, unlike the sequence he proposed in his speech, was fabricated before the World body (34b10-c4) because the body depends on the soul and therefore must have been designed after it. If the body does not exist when the soul is constituted, then the sensible cannot exist either, and the Demiurge does not have at his disposal sensitive ingredients in order to constitute an intermediate mixture. Some, like Cherniss¹⁴, believe that the Demiurge can find these sensitive ingredients in the Receptacle before he has ordered it by means of the geometrization of the elementary triangles (52d-54d). In short, the sensitive ingredients of the World soul would be the traces (*ichnê*, 53b2) of the Forms which appear in the Receptacle and which are described as quasi-elements (52d-e). But perhaps the analysis of the *eikos mythos* should not be carried too far.

¹³ Zeno asserted at the beginning of the *Parmenides* that sensible objects could not be both similar and dissimilar (cf. *Parmenides* 127e-3).

¹⁴ See Cherniss (1965).

Interlude: mathematical structure of the soul of the world

After having constituted the intermediate mixture, the Demiurge will again divide the whole blending, this time into as many portions as appropriate, each of these portions remaining, however, a mixture of the Sameness Difference and Being (35b1-2)¹⁵. It will in fact be a division of the mixture into seven portions according to the sequence 1, 2, 3, 4, 9, 8¹⁶, 27, which is obtained by combining two following geometric progressions: $2^0/3^0$ $2^1/3^1$ $2^2/3^2$ $2^3/3^3$. Between each of these seven numbers, which will later be associated with the orbits of the seven planets which gravitate around the earth, are inserted two new proportional progressions which are obtained by calculating the harmonic $((xa) = (xb) \ A / b)$ and arithmetic $((xa) = (bx))$ proportions which will fill the gaps between each of the seven numbers of the initial progression, avoiding any redundancy. Now, if we examine the two initial progressions, as well as the harmonic and geometrical proportions that have been inserted, between each of the numbers (integer or fractions), there remain only three types of proportions, namely $4/3$, $3/2$ and $9/8$, each of them corresponding to three musical intervals (fourth, fifth and tone). In order to obtain a complete musical progression, it is necessary to fill in the intervals which subsist between the three new fractions obtained by means of the intervals $2/1$, which corresponds to the octave and which fills the interval between $4/3$ and $3/2$, and $243/256$ (the *leimma*, what remains) which fills the interval between two tones ($9/8$).

What is the meaning of this mathematical division of the initial blending? Certainly, the demiurge seems to give it a mathematical structure, this seems undeniable, but the fact that the World soul is structured by means of geometrical and harmonic proportions does not necessarily mean that it is itself a mathematical entity¹⁷. The mathematization of the World soul will later be used to explain the laws that govern the regular motions of the planets, yet there is nothing in our text to indicate that the soul itself is a proportion, a harmony (excluded in the *Phaedo* 84c - 88b) or even a number (as Xenocrates defended). It should also be noted that in

¹⁵ Brisson (2001) reverses the order by placing first the division of the two bands which will form the circles of the Same and of the Different, and then dividing only the band of the circle of Different into portions. See also Brisson (1994), page 315: “Les deux termes importants de ce texte sont *diastéma* et *mesotês* qui, par ailleurs entretiennent des rapports mutuels. *Diastéma* désigne le rapport qui existe entre des termes consécutifs, aussi bien qu'entre les distances séparant des termes consécutifs.”

¹⁶ 9 comes before 8 because 3^2 comes before 2^3 in the order of the progression.

¹⁷ It is difficult to find such objects in the dialogues, except in the case of a very specific reading of the sectioning of the line in the *Republic* 509c5-511e5. On this question see Brisson (1994), p. 293, who is in agreement with Plutarch: the soul is constituted according to numbers and harmony, but this does not make of it either a number or a harmony, as Plato criticized in the *Phaedo* 84c-88b.

this mathematical structure, the notions of Being, Sameness and Difference do not appear. Although the mixture itself is made up of these ingredients, the mathematical division no longer uses the three fundamental concepts that have been introduced for the constitution of the soul. Undoubtedly, this can be understood since, in the case of mathematical relations, the concepts of equality and inequality, and not of identity and inequality, come into play. In other words, in order to structure the soul mathematically, the demiurge operate on the basis of geometrical and harmonic proportions which themselves are relations involving equalities and inequalities between numbers. As for the question of being, it does not appear directly in this mathematical structuring, not because the mode of being of the soul is that of a mathematical object, but more simply because the soul has an intermediate nature between being and becoming and its mathematical structure lies at the level of what is between being and becoming.

The moving function of the World soul

After having divided the blending which constitutes the World soul according to the proportions mentioned above, the Demiurge continues his artisanal work:

*This whole fabric, then, he split lengthwise into two halves; and making the two cross one another at their centres in the form of the letter X, he bent each round into a circle and joined it up, making each meet itself and the other at a point opposite to that where they had been brought into contact. He then comprehended them in the motion that is carried round uniformly in the same place, and made the one the outer, the other the inner circle.*¹⁸

The two circles in question are called the circle of the Same (*the outer one*) and the circle of the Different (*the inner*) (36c4-6). The Demiurge will give to the circle of the Same, which will remain undivided, a motion towards the right which will account for the total motion of the sphere of the World body, as well as that of the fixed stars. As for the Circle of the Different, its motion will be oriented to the left, it will be divided *in six places in order* to obtain seven

¹⁸ *Timaeus*, 36b6-c4: « ταύτην οὖν τὴν σύστασιν πᾶσαν διπλὴν κατὰ μῆκος σχίσας, μέσῃν πρὸς μέσῃν ἐκατέραν ἀλλήλαις οἷον χεῖ προσβαλὼν κατέκαμψεν εἰς ἓν κύκλῳ, συνάψας αὐταῖς τε καὶ ἀλλήλαις ἐν τῷ καταντικρὺ τῆς προσβολῆς, καὶ τῇ κατὰ ταῦτα ἐν ταύτῳ περιαγομένῃ κινήσει πέριξ αὐτάς ἔλαβεν, καὶ τὸν μὲν ἔξω, τὸν δ' ἐντὸς ἐποιεῖτο τῶν κύκλων. »

unequal circles, each representing the orbits of the seven planets (36d2-3) which are the Moon, The Sun, Mercury, Venus, Mars, Jupiter and Saturn. Of these two circles, it is the motion of the Same which has the preponderance because it is left without division (36d1: “ἄσχιστον”), whereas that of the Different is divided into seven circles operating reverse motions from one another, with three of them having similar speeds and the other four different speeds not only from each other but also different from that of the first three circles. However, the motions of the circle of the Different are moving according to a ratio (36d4-d8). Timaeus can conclude that:

When the whole fabric of the soul had been finished to its maker's mind, he next began to fashion within the soul all that is bodily, and brought the two together, fitting them centre to centre. And the soul, being everywhere inwoven from the centre to the outermost heaven and enveloping the heaven all round on the outside, revolving within its own limit, made a divine beginning of ceaseless and intelligent life for all time.¹⁹

Plato's intention in these lines is certainly to justify the complex and regular motions of the planets by means of the hypothesis of the World soul. Now this soul which i) is constituted by two circles, that of the Same (undivided) and that of the Different (divided into seven circles) and ii) takes part in reason and harmony (36e6-37a1: “λογισμοῦ δὲ μετέχουσα καὶ ἁρμονίας ψυχῇ”), seems to be described in 37b5 as a self-moving principle (“ἐν τῷ κινουμένῳ ὑφ' αὐτοῦ”). This self-moving function of the World soul is directly associated with the notions of sameness and difference. We might wonder why the Demiurge does not use two other concepts that might seem more likely to explain the motions of the planets, namely Motion and Rest, which are two of the five kinds described in the *Sophist*²⁰. We must first see that there is no direct identification between Same and Motion on the one hand, and between Difference and Rest on the other, since it is evident in Timaeus' discourse that the two circles are introduced in order to account for the complexity of the motions of the universe as a whole. The circle of the Same will indeed dominate *all* the motions of the planets, but that of the Different is also responsible for the motions of the planets, which, although diverse and different, are

¹⁹ *Timaeus*, 36d7-36e5 : « Ἐπεὶ δὲ κατὰ νοῦν τῷ συνιστάντι πᾶσα ἡ τῆς ψυχῆς σύστασις ἐγγένητο, μετὰ τοῦτο πᾶν τὸ σωματοειδὲς ἐντὸς αὐτῆς ἐτεκταίνετο καὶ μέσον μέση συναγαγὼν προσήρμοσεν· ἡ δ' ἐκ μέσου πρὸς τὸν ἔσχατον οὐρανὸν πάντη διαπλακεῖσα κύκλῳ τε αὐτὸν ἔξωθεν περικαλύψασα, αὐτὴ ἐν αὐτῇ στρεφομένη, θείαν ἀρχὴν ἤρξατο ἀπαύστου καὶ ἔμφορος βίου πρὸς τὸν σύμπαντα χρόνον. »

²⁰ See Brisson (1994), page 399.

nevertheless regular. Yet the question persists: in what sense do the notions of Sameness and Difference allow us to account for astronomical motions?

The World soul is also described as perfectly rational. If the celestial bodies, which are good and rational gods (*Republic* III, 379b), are in motion, then they must necessarily possess the motion most related to intellect and thought (34a2- 3: “τῶν ἐπὶ τὴν περὶ νοῦν καὶ φρόνησιν μάλιστα οὔσαν”), the most perfect motion, namely circular motion, which is most probably the most perfect motion since it is simple, regular and permanent. However, in order to account for the complexity of the motion of the planets by means of circular motion, Timaeus must introduce an ordered multiplicity of motions, a multiplicity that is explained by two fundamental motions: the preeminent and unique motion of the circle of the Same, and the multiple and varied motions of the circle of the Different. In short, the Same and the Different are used as the two fundamental principles (one would not have been sufficient to provide an account of the multiplicity and more than two would not have been economical), which allow us to explain the ordered motions in the universe and, above all, those of the planets and the fixed stars. It is from these two fundamental motions that the diversity, as well as the apparent irregularity of the motion of the sublunar world, will be explained. However, the World soul does not seem to be the cause of all the motions that exist in the universe since there are motions that seem not to be caused by the soul, these motions are described as chaotic and highly irregular. In the account of Timaeus, they are discussed in the description of the Receptacle of becoming *before or without* the intervention of the Demiurge. In 52e-f, Timaeus describes the motions that can be found in the *milieu* of the becoming: these motions are those of properties that are neither similar nor balanced (52e1-2: “διὰ δὲ τὸ μήθ' ὁμοίων δυνάμεων μήτε ἰσορρόπων”), the traces (53b2: ἵχνη) of the four elements. These traces are swayed unevenly (52 e3-4: “ἀνωμάλως πάντῃ ταλαντούμενην”), shake (52e4: “σειέσθαι”) the Receptacle, which is then shaken by them in turn. In the manner of winnowing-baskets (52e6: “ὥσπερ τὰ ὑπὸ τῶν πλοκάνων”), the quasi-elements, which are set in this way in motion (52e5: “κινούμενα”), being without proportion and measure (53a8: “ἀλόγως καὶ ἀμέτρως”), are separated and are carried to different parts of the Receptacle and settle there (53a2: “ἵζει”). This is the situation when the god is absent (53b3-4: “ὥσπερ εἰκὸς ἔχειν ἅπαν ὅταν ἀπῇ τινοῦ θεός”).

Therefore it seems plausible that the World soul by means of the circles of the Same and of the Different is the cause of the *ordered* and *harmonious* motions of the *cosmos*. Without it, and before the mathematization of the four elements by the Demiurge, it is possible to identify

chaotic and disorderly motions in the Receptacle²¹. As such, the moving causality of the World soul, insofar as it is associated with order and regularity, seems to correspond to the notions of intelligibility and rationality. Whether these two notions are intimately connected with those of Sameness and Difference will become even more evident in the case of the description of the cognitive function of the World soul.

The cognitive function of the World soul

After describing the moving function of the World soul, Timaeus explains how this soul takes part in knowledge:

Seeing, then, that soul had been blended of Sameness, Difference, and Existence, these three portions, and had been in due proportion divided and bound together, and moreover revolves upon herself, whenever she is in contact with anything that has dispersed existence or with anything whose existence is indivisible, she is set in motion all through herself and tells in what respect precisely, and how, and in what sense, and when, it comes about that something is qualified as either the same or different with respect to any given thing, whatever it may be, with which it is the same or from which it differs, either in the sphere of things that become or with regard to things that are always changeless. Now whenever discourse that is alike true, whether it takes place concerning that which is different or that which is the same, being carried on without speech or sound within the thing that is self-moved, is about that which is sensible, and the circle of the Different, moving aright, carries its message throughout all its soul - then there arise judgments and beliefs that are sure and true. But whenever discourse is concerned with the rational. and the circle of the Same, running smoothly, declares it, the result must be rational understanding and knowledge.²²

²¹ For the hypothesis of an irrational soul see Brisson (1984), pages 295-299

²² Timaeus 37a2-c3: ἄτε οὖν ἐκ τῆς ταυτοῦ καὶ τῆς θατέρου φύσεως ἕκ τε οὐσίας τριῶν τούτων συγκραθεῖσα μοιρῶν, καὶ ἀνὰ λόγον μερισθεῖσα καὶ συνδεθεῖσα, αὕτη τε ἀνακυκλουμένη πρὸς αὐτήν, ὅταν οὐσίαν σκεδαστήν ἔχοντός τινος ἐφάπτηται καὶ ὅταν ἀμέριστον, λέγει κινουμένη διὰ πάσης ἑαυτῆς ὅτῳ τ' ἂν τι ταυτὸν ᾗ καὶ ὅτου ἂν

While this description may seem rather obscure, especially because of its delicate grammatical construction, it seems that some important elements can be emphasized here:

- In the first place, the direct connection between the notions of motion and knowledge must be stressed²³, since it is by the motions of the circles of the Same and of the Different that the soul knows. In other words, if the soul can be defined by mean of the notion of circular motion, and if this movement is, as we have seen, necessarily associated with the notions of rationality and regularity, then the World soul must necessarily possess knowledge.

- What is the object of knowledge of the World soul? The text is explicit: it is i) things that have a dispersed being and ii) things whose being is indivisible, which will be identified with the sensible (“περὶ τὸ αἰσθητὸν”) and the rational (“περὶ τὸ λογιστικὸν”). The first lines of this passage also remind us that the World soul consists of three basic ingredients which represent universally exemplified properties by the intelligible and the sensible. Every intelligible Form, as we have said, possesses these three properties, and consequently any sensible object may also be characterized by the sensible counterpart of these properties. If the World soul must be able to have access to the sensible and the intelligible, then it seems plausible that it must be constituted by these same elements. Aristotle²⁴, when he comments on this passage in *De Anima* 404b17-18, interprets the Platonic doctrine as based on the principle, shared also by Empedocles, that like is known by like (“γινώσκεσθαι γὰρ τῷ ὁμοίῳ τὸ ὅμοιον”). It therefore seems coherent that, if i) the World soul must have access to the intelligible and to the sensible, through their most universal properties, and ii) the like knows the like, then necessarily the World soul will be composed of Being, Sameness and Difference.

- Once again the *Sophist* will allow us to better understand the use of these three ingredients within the framework of the cognitive function of the World soul. Indeed, this dialogue affirms that any philosophical discourse can be reduced to an affirmation or a negation about a Form. In 253d1-3, dialectical science is assigned the task of dividing according to the kind and not

ἕτερον, πρὸς ὅτι τε μάλιστα καὶ ὅπη καὶ ὅπως καὶ ὅποτε συμβαίνει κατὰ τὰ γινόμενά τε πρὸς ἕκαστον ἕκαστα εἶναι καὶ πάσχειν καὶ πρὸς τὰ κατὰ ταῦτα ἔχοντα αἰεί. λόγος δὲ ὁ κατὰ ταῦτὸν ἀληθῆς γινόμενος περὶ τε θάτερον ὄν καὶ περὶ τὸ ταῦτόν, ἐν τῷ κινουμένῳ ὑφ' αὐτοῦ φερόμενος ἄνευ φθόγγου καὶ ἡχῆς, ὅταν μὲν περὶ τὸ αἰσθητὸν γίγνηται καὶ ὁ τοῦ θατέρου κύκλος ὁρθὸς ἰὼν εἰς πᾶσαν αὐτοῦ τὴν ψυχὴν διαγγείλῃ, δόξαι καὶ πίστεις γίνονται βέβαιοι καὶ ἀληθεῖς, ὅταν δὲ αὐτὸ περὶ τὸ λογιστικὸν ᾗ καὶ ὁ τοῦ ταύτου κύκλος εὐτροχος ὢν αὐτὰ μηνύσῃ, νοῦς ἐπιστήμη τε ἐξ ἀνάγκης ἀποτελεῖται· »

²³ See *Laws* 896e-897a et *Republic* 353d3-7

²⁴ See Brisson (1994), pages 307-310.

taking the same Form for another or another Form for the same (“Τὸ κατὰ γένη διαιρεῖσθαι καὶ μήτε ταὐτὸν εἶδος ἕτερον ἡγήσασθαι μήτε ἕτερον ὄν Ταὐτὸν μῶν οὐ τῆς διαλεκτικῆς φήσομεν ἐπιστήμης εἶναι;”). In order to determine the true nature of a Form, the dialectician must define what this Form is in itself and how it differs from the other Forms. Taking a Form for what it is not, i.e. for another Form will necessarily lead to an untrue judgment²⁵. Now the description of the *Timaeus* is very similar to that of the *Sophist*, except that the latter not only concerns intelligible Forms, but also includes sensible things as objects of judgment. It is quite significant that the World soul is capable of delivering correct judgments both in regard to the intelligible and to the sensible²⁶, which evidently stem from its intermediate nature between the two ontological zones.

Thus the World soul has access to the two types of objects that make up the *cosmos*, the sensible and the intelligible, it can form discourses (without noise!) about them regarding both how they are identical and different, and their different aspects (relativity, mode of being, temporality). From this assertion it seems that we must accept the idea that the World soul can neither form irrational discourses nor incorrect discourse about the sensible and the intelligible. If the World soul is, as we have said, cause for the orderly and regular motion of the *cosmos*, then the knowledge which characterizes it can only be exact and reliable with regards to both the sensible (solid and true opinions and beliefs) and the intelligible (intellection and knowledge). It is for this reason that the *two* circles contribute to knowledge. It seems difficult to maintain, as Cornford²⁷ did, that the Circle of the Different is responsible for a certain irrationality within the soul and this through its access to sensible objects. Just as the two circles are responsible for the regular motions of the planets (although it is true that the seven circles of the Different explain the heterogeneity of the motion of the planets and their apparent erratic motions, forward and backward, decelerating and accelerating), they are similarly involved in the knowledge of World soul which enjoys a whole rational life (36e4)²⁸. Besides, the circle of the Different produces in the World soul opinions and beliefs that are solid and true (“δόξαι καὶ πίστεις γίνονται βέβαιοι καὶ ἀληθεῖς”) which are necessarily so because they relate to what is a beautiful image of the intelligible, namely the sensible. Thus the judgments of the World soul

²⁵ See also *Timaeus* 44a concerning the judgments of individual souls.

²⁶ Individual souls, too, will provide such judgments, except that they will find the motions of their two circles destabilized by external influences, whereas for the World soul, although united with the World body, no external influence can disrupt it (see 47c).

²⁷ Cornford (1937) 209-210

²⁸ See Brisson (1994), pages 350-354.

are always true and this is because they are provided by the cooperation of the circles of the Same and of the Different, the first governing the second, without implying that the latter participates somehow in irrationality²⁹.

Conclusion

It seems that it is the two functions of the World soul that justify why it possesses the structure of an intermediate mixture constituted from Being, Sameness and Difference. As such, it is the proper causality, its finality that determines the auxiliary causality, namely the structure of the World soul. Keeping in mind the *Sophist's* theory of the Great Kinds and the intermediate nature of the soul, it has emerged that (i) the World soul as a rational principle must have access to both the sensible and the intelligible, which, for Plato, will be possible only if it is composed of the most universal Kinds, Being, Sameness and Difference, and (ii) if rationality is associated with the most perfect motion, circular motion, and if the World soul is conceived as a self-moving principle, the cause of the motion of the living being, then it will be coherent to operate a modulation of the two categories associated primarily with rational knowledge, Sameness and Difference, exemplifying the soul's two circles which enable to account for the diversity of the regular and circular motions of the planets in the *cosmos*.

Nevertheless, certain crucial problems remain, and deserve to be mentioned in conclusion: first, in the case of the moving and cognitive functions of the World soul, the use of the *Sophist's* Kinds seems to be limited to Sameness and Difference. Why is there no circle of Being, since it is doubtless as important to be able to judge the existence of an object as these dimensions of identity and difference? Perhaps it is possible to suppose that in a certain way Being is implicitly present in the description of the functions of the soul, but *Timaeus* does not mention it directly.

Then, and this is connected with the first question, it has to be noted that the circles of the Same and of the Different are both composed of Being, Sameness and Difference. This implies, for example, that the circle of the Same possesses difference (and being) as constitutive ingredients of its composition. Is it necessary to take this process of demiurgic fabrication seriously, or are

²⁹ More should be said about the relation of the two circles in case of human knowledge. In that case, the body plays a decisive role in the disruption of knowledge (as for example in the case of children (43e)).

we confronted, again, with the limits of the *eikos mythos*? Wouldn't it be absurd to have to suppose that there is more sameness in the circle of the Same than in the circle of the Different and vice versa? The text says nothing about it. In any case, it seems hardly possible to identify the circle of the Different with an irrational principle, since it is itself a mixture of the *three* ingredients.

Finally, what is the relationship between the mathematization of the World soul and its ontological constitution? The two moments follow each other in the text, but is it possible to articulate them more precisely? Is there a relation between the fact that the World soul is described as an intermediate blending of Being, Sameness and Difference and the fact that the Demiurge then imposes to the blending a mathematical structure, a structure that will be used to describe the different *ratios* of the orbits of the planets? Can we fully understand the plethora of elements that serve to give an account of all the diversity and complexity introduced by Plato in this description? Perhaps not (today).

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