Physics and Philosophy of Nature in Greek Neoplatonism

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Despite an ever increasing volume of recent publications on the topic, Plotinus’ philosophy of *nature* is in general not a field scholars of ancient philosophy are particularly familiar with. By and large, Plotinus is much better known for his aesthetics or the loftier architectonics of his metaphysics, and many publications that explicate Plotinus’ fundamental doctrines of how Reality, Reason, and Life emanate from the principle of Unity are much more eloquent about the structure and dynamics of the lower regions of the Plotinian universe, and about how precisely the ever-changing realm of nature depends on *its* ontological principles.

Take, for example, the seemingly simple question whether or not Plotinus subscribed to hylomorphism: it is not at all straightforward to give a concise and unequivocal answer. To be sure, Plotinus is happy to use the *discourse* of hylomorphism (with terms like matter, form, substrate, and substance), thus betraying the considerable influence the Aristotelian tradition of natural philosophy had on him. However, the crucial component terms of the Peripatetic doctrine, matter and form, have been given meanings so idiosyncratically Plotinian that attributing Aristotelian hylomorphism to Plotinus would be misleading; in fact, given the way in which Plotinus criticises Aristotle’s most important instantiation of hylomorphism (the togetherness of body and soul), it would probably be wrong to do so. I shall revisit the question briefly below, but further and more extensive research in this area of Plotinian philosophy remains, I would say, a desideratum.

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1 One can encounter such language everywhere in the *Enneads*, but a particularly striking example would be II.4 [12] 6, where Plotinus seems to endorse what Armstrong called ‘an accurate exposition of Aristotle’s doctrine of matter, in Aristotelian language’ (Armstrong [1966] 117 n. 3).


3 Cf. the verdict pronounced by Deck (1967) 75: ‘The impassibility of matter rules out any true union between matter and form in Plotinus’ sensible world.’
Why is it that Plotinus’ natural philosophy received relatively little attention in comparison to the natural philosophy of, say, Plato, Aristotle, the Stoics, or even the later Neoplatonists of the 6th century? One important reason for this situation, it seems, is the fact that Plotinus’ thoughts about the physical world did not have had much of an impact, not even in antiquity and within the confines of his own school—which is surprising, given that Plotinus was and remained such a towering figure in the collective imagination of all subsequent Neoplatonists. In the centuries after Plotinus, his successors and followers studied the *Timaeus* or the detailed and fully worked out physical doctrines Aristotle had offered in his cycle of lectures—and they evidently preferred them to the allusive sketches we find in the *Enneads*. Proclus’ *Elements of Physics*, for example, reads like an epitome of Aristotle’s lectures and not at all like a continuation and development of Plotinus’ views in the second and third *Enneads*. Proclus even repudiated Plotinus on certain points, notably the conception of matter, thus developing a strain of intramural critique that went back all the way to Iamblichus and perhaps Porphyry. But if one rejects Plotinus’ radical view of matter, many other pieces of Plotinus’ natural philosophy, with its enormously suggestive idealistic and moral implications, become objectionable too.

Another reason for a widespread lack of familiarity with Plotinus’ philosophy of nature seems to be the prejudice that Plotinus was a hard-core metaphysician who had little or no interest in natural science. Although it would certainly be false to say that Plotinus was a natural scientist in the same sense in which Aristotle, Galen, or Ptolemy can be called ‘scientists’, it seems nevertheless right to affirm both that Plotinus was a keen and shrewd observer of the phenomena, and that he tackled fundamental questions of natural philosophy in earnest, if in his own idiosyncratic way. And it is perhaps this ‘idiosyncratic way’, above all, that has stood in the way of Plotinus being read by scholars interested in ancient philosophy of nature. Plotinus requires

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4 Although recent years have seen an increase in publications on Plotinus’ natural philosophy; in addition to the older study by Deck (1967) see now Brisson (2000), Corrigan (2005), ch. 3, Majumdar (2007), O’Meara (1985), Wagner (1986), (1992) as well as the various contributions in the edited volume by Wagner (2002).

5 See Proclus treatise on evil translated and introduced by Opsomer and Steel (2003).

6 See the remarks by Hathaway (2002) 5.

7 Cf. Lee (2002) 23–26, who points out the dependency, in Plotinus, of physics on dialectic.
from the historian a hermeneutical approach that differs from the way in which one can hope to obtain an adequate understanding of almost any other figure in the history of philosophy. In those other cases, it usually suffices to lay out the doxography along with the scientific and epistemological principles that ground it in order to get a sense of a philosopher’s physical theory and the rationale behind it. That way of ‘outlining’ a body of thought does not work so well for Plotinus. By simply revealing the skeleton of his ideas, one puts him more likely at a distance, far enough to allow scores of historians of philosophy to gloss over the profundity of his views and to dismiss them lightly. Similarly, if one slips (as some modern interpreters of Plotinus are wont to do) into a mode of exegesis that revels in supercharged paraphrases and allusive obscurantism, one’s exposition threatens to become palatable only to those who have already had a long training in absurdity. Only when we make the effort to read Plotinus’ idiosyncratic prose carefully, to follow the leads of his many suggestions, and to think the issue through with him, it may turn out that Plotinus opens up startling new vistas and refreshing perspectives that seem more powerful and cogent as well as less dated and outmoded than anything else in ancient philosophy. This is a hard thing to do, and I am not claiming that this essay succeeds to meet that goal. But unless we take aim at it, we will never rescue Plotinus’ natural philosophy from the realm of relative obscurity in which it still languishes.

II

The very beginning of Ennead III.8 [30] (On Nature and Contemplation),—the first part of an anti-gnostic Großschrift that comprised, apart from III.8, V.8 (On the Intelligible Beauty), V.5 (That Intelligibles are not outside the Intellect), and II.9 (Against the Gnostics),—takes us straight to the heart of Plotinus’ philosophy of nature. What Plotinus offers us here is a dazzling view of the natural world, one that turns his philosophy into the purest form of objective idealism devised in ancient philosophical history. The material, phenomenal world, or Nature, is understood not

8 These are treatises 30–33 in the chronological list of Plotinus’ works and belong to the period of six years during which Porphyry studied with Plotinus at Rome. Plotinus was then in his early sixties.
as a realm of reality in its own right, but as the external and derivative aspect of an ideal world constituted by the generative power of a transcendent principle of Unity, Being and Goodness. This power expresses itself in three different manifestations, Intellect, Soul, and Nature, in axiologically and aetiologicaly descending order. Physical matter, on which more later, appears at, and is involved in, that stratum of the ontology at which the information contained in Intellect ceases to be spiritually productive and becomes physically manifest instead, breaking up into fragmented copies and partial images scattered in space and time, like traces of rays of lights dissipating into an empty darkness, sporadically illuminating it here and there. Except that these traces and images do not dissipate just like that, in some haphazard fashion and without rhyme or reason; before they decay and disappear, they become, for a time, part of a coherent living being, our cosmos, a grand kaleidoscope of ever shifting shapes, colors and qualities. How can this be?

Plotinus’ answer in the treatise On Nature and Contemplation, presented more as bold hypothesis than solid doctrine, is that Nature, i.e. the sum total of the natural world, and every natural being in it, dead or alive (although nothing is really dead), is engaged in quiet contemplation of what really exists, the ideal entities; furthermore, this thought process originates in Soul (which in turn is a thought of Intellect), and the natural world we are familiar with is nothing but an effortless fallout of the quiet act of Nature’s contemplation.

So much for doxography. How can we possibly appreciate this strange point of view more fully? Let us first assume the perspective that we already possess, that of historical distance. Looking at the earlier history of Greek and Roman philosophy, we have become accustomed to a variety of attempts to understand the physical world either in a bottom-up or top-down kind of fashion: on the one side, we encounter thinkers who posit roots, elements or atoms as the basic building blocks; from them, the material world emerges by means of complex and laborious processes of elemental aggregation and rearrangement. On the other side, there are those thinkers who let the world come to be by an act of temporal or eternal creation in which a powerful divine mind or craftsman imposes form on a pre-existent soup of indistinct space-matter. Plato and the Stoics are the archetypal top-down thinkers, albeit in entirely different ways, whereas the atomists Epicurus and Lucretius along with most of the Pre-Socratic philosophers very much belong to the category of bottom-up thinkers. Aristotle is characteristically difficult
to file away with the help of some such superficial categorization. To be sure, the prime mover is the supreme principle in his ontology, and we do get a sense how the prime mover, as an object of universal desire and understanding, makes the world go round on a cosmic scale. But what kind of work precisely the prime mover does in the natural habitat of our backyard is quite difficult to decipher, at least from Aristotle’s extant writings. Probably none, for according to Aristotle, here, in the sublunary world, the principle of motion is Nature herself, or rather the nature of each natural thing, whatever it is, bringing the nascent embodied form to its mature τέλος. What we encounter in Aristotle is, in fact, a plethora of moved movers operating in different modes of causality and on various levels of complexity. The four elements interact with one another according to quasi-chemical laws to produce all kinds of homoeomeric aggregates suitable for higher forms of organization and life, both flora and fauna. Living organisms can be understood as material substances each functioning in a certain way, and expressing, in this functioning, their particular τέλος. In a sense, we can see how the highest and the lowest levels of Aristotle’s ontology complement one another in such a way that an understanding of the whole necessarily presupposes that the philosopher understands the principles and causes at both ends of the ontological spectrum. Qua natural philosopher, Aristotle is very much at once a top-down and a bottom-up thinker, although it often remains unclear how well his purely teleological top-down perspective and his story of a multifaceted bottom-up causality interface with one another.

One would not go wrong in saying, in a preliminary way, that Plotinus squarely belongs in the department of top-down philosophers, although, as we shall see, he does share with Aristotle a certain aetiological ambiguity of both ‘bottom-up’ and ‘top-down’. But above all, Plotinus invests his ontology with breathtaking elegance and simplicity, in such a way that, in contrast to Aristotle, the bottom-up view is intimately wound up with and connected to the top-down view of reality. Perhaps they are even the same thing under different descriptions. As he puts it at one point: ‘The administration of the universe is like that of a single living being, where there is one kind which works from the outside and deals with it part by part, and another kind which works from inside, from the principle of its life.’

One way to understand Plotinus’ general picture is to assume that he takes Aristotle’s famous suggestion of *Metaphysics* XII very seriously, i.e. that the unmoved prime mover, νοῦς, is a final cause and moves (transitively) the universe just as an object of thought and desire would move a mind that thinks or so desires (XII.7 1072 a 26). However, instead of then following Aristotle into a detailed study of efficient, formal and material causalities operative in the sublunary region, Plotinus simply universalizes the Aristotelian insight: it is not only the case that the celestial spheres desire to emulate the prime mover’s rationality with the regularity of their motion, and that human behaviour, driven as it often is by more or less well conceived aspirations, can be explained best by invoking teleological motives, but rather (and this is Plotinus) the whole realm of Nature animates and regulates the phenomenal world in precisely this way, by contemplating (θεωρεῖν) that which is above it in an effort to come to know it, to the extent to which it is capable of so doing. Here, as on any level of Plotinus’ ontology, the top-down process of emanation is fielded by a bottom-up response of the lower hypostasis. In fact, it is precisely this cognitive about-turn which makes any spiritual entity that what it is: Soul and Nature are thoughts of Intellect, and if Intellect exists, they necessarily exist as well; but in order really to be what they are, viz. living and life-giving rational principles on lower levels of ontology, their consciousness and inner life have to turn back to the source and become aware, somehow, of the rich world of archetypes in Intellect.

To illustrate the point by a simple example: what Plotinus seems to claim is that everything comes to be what it is in a way that is comparable, for example, to the ways a musician or mathematician come to be, and then are a musician or mathematician. Artists and experts of this kind have to pay a great deal of studied attention to the mathematical axioms and theorems, or to notes, melodies, and musical theory, and so on. The artist or scientist becomes a practitioner of the art or science by becoming, and being, a knower of the art or science in question. Their minds have to ‘turn around to’ something that is quite independent from, and prior to, the cognitive activity required to exercise the art or science. So why not, Plotinus suggests, think about all the life-forms of nature, collectively and individually, in just the same way? Whenever something comes to be naturally what it is naturally supposed to be (a bee or a bird or a tree), it does so in virtue of something thinking of, or ‘contemplating’, something else that is prior to it.
A strange thought, and Plotinus is well aware of the suggestion’s oddity. In III.8 [30] 1 we witness how Plotinus attempts to bring his students round to this perspective by inviting them to think along with him in a light-hearted and playful manner:

So, what if we played around at first, before trying to be serious, and said that all things aspired to contemplation and that they had an eye on just this end—not only rational but also irrational living things as well as the nature in plants and the earth that bears them—and that all had contemplation to the extent they were able to by nature, with different things obtaining contemplation in different ways, some genuinely, others in virtue of a mimetic image of it? Could anyone tolerate the strangeness of this idea? Well, why not? It has come to us, and there is no danger in playing with one’s own ideas.¹⁰

His students are supposed to find themselves entertaining a half-serious, suggestive thought that at first commands no serious commitment (notice the 1st person plural λέγοι and the curious δή in the opening phrase παίζοντες δή)¹¹—before they are supposed to realize its powerful economy and clarity. Plotinus does here what he is best at doing: not the introduction of original philosophical doctrine by means of a nomenclature of custom-made terminology and novel assumptions, but rather some radical shifting and destabilization of our familiar perspective, an unsettling that relies, initially, on entirely familiar concepts and circumstances. Imagine the situation: The group of students he addresses are aspiring philosophers who, of course, listen to him, read him, striving all the while to θεωρία, to a conscious understanding and awareness of reality; they themselves engage in θεωρία, no doubt, and are then told to their surprise and initial amusement that, in a manner of speaking, the whole of nature is just like them. What

¹⁰ Enn. III.8 [30] 1.1–10: Παίζοντες δή τὴν πρώτην πρὶν ἐπιχειρεῖν σπουδάζειν εἰ λέγομεν πάντα θεωρίας ἐφίεσθαι καὶ εἰς καὶ εἰς τέλος τοῦτο βλέπειν, οὐ μόνον ἄλλακα ἄλλακα καὶ ἄλλακα ζῶα καὶ τὴν ἐν φυτοῖς φύσιν καὶ τὴν ταῦτα γεννῶσαν γην, καὶ πάντα τυχάνειν καθόσον οἶνον τε αὐτοῖς κατὰ φύσιν ἔχοντα, ἄλλα δὲ ἄλλας καὶ θεωρεῖν καὶ τυχάνειν καὶ τὰ μὲν ἄλλως, τὰ δὲ καὶ τὴν τοῦτο λαμβάνοντα—ἀρ’ ἄν τις ἀνάσχοιτο τὸ παράδοξον τοῦ λόγου; ἢ πρὸς ἡμᾶς αὐτοῦ γινομένου κίνδυνους οὖδεὶς ἐν τῷ παίζειν τὰ αὐτῶν γενήσεται.

¹¹ δή in second position has here clearly no connective force (for all we know, this is the very beginning of a long tractate), but rather lends ironic emphasis to the participle.
they are supposed to understand about nature is no more and no less than what they are supposed to understand more fully about themselves and practice: the seemingly elusive but in reality powerfully productive process of contemplation.

The English term commonly used in this Plotinian context to translate the Greek θεωρία, ‘contemplation’, is in fact entirely appropriate, unless it is understood in its new age sense of ‘meditation’, as a Zen Buddhist might be said to contemplate the tip of a pine tree to induce an altered state of subjective consciousness. Rather, to contemplate something (contemplari) is to observe something with focused attention from a vantage point (templum); moreover, when one contemplates something, one might well do so with a view to intending it such that it becomes manifestly present, either now or in the future. In the light of what Plotinus says at III.8 [30] 6.33, where he associates ‘thorough learning’ (κατάθησις) with θεωρία, it seems that for Plotinus θεωρία primarily involves the beholding of a concept or an intellectual reality in such a way that one aims at, and gradually succeeds in, understanding it. But there he is talking about θεωρία found in more developed, conscious forms of life; when Nature is said to ‘contemplate’, what is meant is a sort of (presumably) non-propositional intro-spection and puposeful ex-pression wrapped up in one. One could say, perhaps, that Nature exercises a holistic, albeit rudimentary but nevertheless pervasive awareness of the ‘phenomenal’ possibilities contained in the realm of Soul (and by implication Intellect) so as to bring them about in the physical world. ‘Phenomenal’ here both in the philosophical and colloquial sense.

So let us suppose, Plotinus suggests, that it is not just us (qua scientists, artists, human beings) who are ‘contemplators’, but that everything else in the natural world, qua integral part of Nature, is likewise engaged in θεωρία of some form: animals and plants in whatever they are doing, and every item in the inventory of Nature. Startling as the idea may be, it does not take long to get used to it, for its oddity lies not in its

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12 The German word ‘Betrachtung’ used by Harder seems less appropriate, except that it nicely captures θεωρία’s connotation as an act of seeing.

13 Deck (1967) 68 f. argues with some justification that Nature’s contemplation is self-directed: ‘Plotinus seems to be describing nature as a knowing power, one which possesses its object internally, and whose object is itself’. This is true, except whatever Nature has in itself to contemplate is given to it by the aetiological prior hypostases.
inherent implausibility, but in the simple fact that it bears the hallmark of unfamiliarity: no one has stated the matter in quite this way. It is not only us humans who are gifted with the desire to understand so famously advertised by Aristotle, but all of Nature; and again, it is not the case that Nature is in the benevolent grip of divine reason, as the Stoics supposed, and has become an orderly cosmos because of that, but rather every piece and part of the natural world bears the signature of contemplation—not all of them in the same way and to the same degree, of course, but nevertheless, they all contemplate, down to the last rudimentary organism.

One problematic consequence of this thought seems to be that a whole lot of what we humans do, both as children and grown ups, and what we would commonly not classify as acts of contemplation, would, on Plotinus’ strange idea, turn out to be actions that are in some meaningful way linked to contemplation, ‘playing’, for example (1.10), or ‘action’ (πρᾶξις), regardless of whether this is something we have to do or something we want to do (1.15 ff.). Plotinus embraces this consequence and boldly asserts that, indeed, whatever we humans do, either in play or in earnest, is part and parcel of Nature’s θεωρία and must be construed as ‘a serious effort towards contemplation’ (1.15). In passing, Plotinus directs our attention to the important relationship between contemplation and action, a relationship to which he will return later. Here he pushes on, gets deeper into a host of questions that his playful idea gives rise to. And so, the last lines of III.8 lead us directly into a serious discussion of Plotinus’ philosophy of nature: the playful opening remarks suddenly turn into a series of difficult questions of fundamental philosophical importance. Since the narrative progression of the beginning of this treatise illustrates so well on a literary level the very point Plotinus is trying to make, it is obvious that the opening of III.8 is a very carefully composed text indeed.

It is worthwhile to linger over the last lines of this first chapter, where Plotinus lays out the full scope of the problems that have been raised by his ‘playful’ idea. Unfortunately, the text is somewhat obscure at this point. If one accepts the text as emended and understood by
modern editors, one could translate lines 1.18–24 with Armstrong as follows:

But we will discuss this later: but now let us talk about the earth itself, and trees, and plants in general, and ask what their contemplation is, and how we can relate what the earth makes and produces to its activity of contemplation, and how nature, which people say has no power of forming mental images or reasoning, has contemplation in itself and makes what it makes by contemplation, which it does not have.  

To begin with, editors commonly agree that the strange locution καὶ πῶς at the end of this passage must have originated as a marginal gloss and should be deleted. Likewise it is supposed that the equally bizarre relative clause just before καὶ πῶς cannot be understood straightforwardly, as that would create a direct contradiction: the hortatory clause ‘Let us state how nature contains contemplation, which it does not have’ seems to make little sense. So Dodds, in a philological article published in 1956, suggested that the last clause ought to be understood as alluding to the opinion of Plotinus’ opponents implicitly referred to in 1.22 (φασί); all one has to do is slip in a ‘supposedly’, or ‘ostensibly’, or ‘angeblich’ in German.  

Dodds’ suggestion smoothes over an apparent paradox, but it introduces a nuance that is plainly not in the text although it easily could have been. I therefore wonder whether the passage was not supposed to sound enigmatic and paradoxical, in a spirit of continuing the playful and baffling tenor of the opening of this work. Since the Greek does not seem to be impossibly convoluted or ungrammatical, and since the text is solidly supported by the manuscripts, nothing prevents us from translating what the Greek says and follow the sense wherever it may lead us. And so, what the Greek says is:

14 Enn. III.8 [30] 1.18–24: ἀλλὰ ταῦτα μὲν ὑστὲρον· νῦν δὲ λέγωμεν περὶ τε γῆς αὐτῆς καὶ δένδρων καὶ ὅλως φυτῶν τις αὐτῶν ἡ θεωρία, καὶ πῶς τὰ παρ’ αὐτῆς ποιούμενα καὶ γεννᾶμεν ἐπὶ τὴν τῆς θεωρίας ἀνάξομεν ἐνέργειαν, καὶ πῶς ἡ φύσις, ἣν ἀφάνταστον φασί καὶ ἄλογον εἶναι, θεωρίαν τε ἐν αὐτῇ ἔχει καὶ ὡς ποιεῖ διὰ τὴν θεωρίαν ποιεῖ ἡν ὡς ἔχει, καὶ πῶς. Henry-Schwyzer as well as Armstrong propose the deletion of καὶ πῶς at the end, following Müller.


16 Armstrong therefore does not translate καὶ πῶς, and Corrigan (2005) 86 brackets it.

17 See Dodds (1956). Deck (1967) 118 seems to accept Dodds general interpretation of the sentence. The alternative suggestion, to read καὶ πῶς (enclitic) and to translate ‘which it also in some sense does not have’ is rejected by Dodds as impossible Greek, even impossible Plotinian Greek, and I tend to agree with that.
But more about that later; as to now, (a) let us state with regard to the earth itself and the trees and plants in general what their contemplation is, (b) how we shall trace back what is made and generated by Nature to the activity of contemplation, and how Nature, which they call incapable of forming mental images and devoid of reason, both (c) possesses in itself contemplation and (d) makes what it makes by a contemplation it does not have, and how that is so.

As to the last few words of the passage, I take it that the relative clause ἡν οὐκ ἔχει is defining rather than descriptive (as Armstrong and Corrigan take it when they separate the clause ‘which it does not have’ from ‘contemplation’ by a comma). That is to say, we are not talking about Nature’s θεωρία of which some people happen to think that Nature has no such capacity; rather, Plotinus announces two points he wishes to make (τε...καί), first that Nature does have within itself a capacity to contemplate and that there is another θεωρία it does not have, but on account of which Nature is nevertheless productive. Since this latter form of θεωρία too needs to be clarified, I take it that the last two words καὶ πῶς, unless they really do form an intrusion, would have to refer to what has just been stated so paradoxically (that nature produces on account of something it does not have), i.e. the phrase promises clarification of the puzzling relative clause, rather than being a redundant repetition of the καὶ πῶς in 1.22. Plotinus is in the habit of tacking just this kind of isolated phrase on to a sentence, indicating that he is about to make the transition to the explanatory mode.

What the passage so understood promises is a clarification of exactly four separate though related questions: 1. What is the cognitive activity of things like earth and plants? 2. How can we understand Nature’s products as products of a cognitive ἐνέργεια, i.e. how does the θεωρία in Nature function? 3. How does Nature come into the possession of this kind of contemplation, and, finally, 4. how is it to be understood that Nature produces on account of another contemplation which it does not have?

These multiply nested questions anticipate the complexity of the discussion that follows in which we hear a great deal not only about the rudimentary cognitive ability of Nature, but also about the superior cognitive activity of the higher hypostasis Soul. I take it that question 1 (establishing the cognitive aspect of the activity of Nature) is answered

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in the immediately following chapter 2; Question 2 (how contemplation becomes productive) is discussed in chapter 3; Question 3 (Where does this contemplation come from?), *i.e.* the difficult point that Nature’s contemplation is not autonomous but itself the product of another, higher form of contemplation, is discussed in chapter 4; and finally, how precisely it is that contemplation on a higher level becomes productive on a lower level while retaining the character of contemplation, albeit an inferior one, is spelled out in chapter 5. Chapter 6 then reaffirms the doctrine of the dependency of action on contemplation on the human level, and chapter 7 universalizes the view expressed so far: ‘All things come from contemplation and are contemplation.’ (7.1 f.)

V

What stands in the background, and supports the whole argumentation as a foundational assumption, is the doctrine laid out in III.8 [30] 6 (the section in which Plotinus becomes ‘serious’, 6.16) that any kind of πρᾶξις or activity, be it purely theoretical or practical, involves introspection, observation, contemplation, whatever we may call it, in short θεωρία. In case this still sounds counterintuitive because contemplation might appear to be the very opposite of production and outward directed action, Plotinus insists that consciousness is both the starting point of any kind of activity and in an important sense also its end point. Every action necessarily originates in some sort of prior conception of what the action is supposed to be about, and this very action in turn makes something visible that can again become an object of θεωρία, either one’s own or somebody else’s. Examples for this kind of nexus abound in the human realm: an artist’s painting is not just the expression of an artistic idea, but the painting itself becomes an idea, an icon, a vision in the consciousness of the beholder. And so with any other kind of πρᾶξις. In each case, it is these idealistic end points of actions, their inception in consciousness and their appreciation by consciousness, that Plotinus asks us to focus on and to agree to his thesis that every activity and process, no matter how basic, natural and instinctive, is of this kind, arising out of, and resulting in, contemplation.

If this is how things are supposed to work in theory, how will they work in actual practice? In the example just broached (painting), the whole process of artistic production involves four aspects: the initial act of cognition (the plan, if you like), the agent artist, the finished piece,
and eventual the act of cognitive art appreciation. When we turn to III.8 [30] 2, we learn that in the case of Nature matters are actually more immediate and simple. For one thing, the craftsman/artisan analogy of creation does not apply: even if we grant that, just as the studio of the artist, the studio of Nature is as filled with the products of a cognitively active agent, what we don’t see in Nature are the hands and limbs that incessantly toil with their tools to produce the staggering variety of natural items. Plotinus rejects the idea of a Timaean creator deity by slight of hand: the thought of a craftsman producing the natural shapes and colours of every kind by thrusting and levering (2.1; 2; 5 f.) is hugely implausible; there is no such agent.

But if the content of the cognitive principle is not imposed on matter by the agency of intermediate craftsman-like agents, then it must be the case, as Plotinus sees it, that Nature itself is or has just this ability to form and foster, either on account of some local forming principle that informs an individual natural substance or on account of a forming principle that inheres in the sum-total of Nature. The activity of these principles, then, must be the kind of θεωρία nature has, in answer to the first question: a certain cognitive and purely formal dimension, what Plotinus calls a λόγος, so as to take an object of cognition and impose it directly on matter where it appears as perceptible phenomenon. We need to return to this fascinating picture below.

For the moment, let us note that Plotinus chooses his words very carefully in these passages; he has evidently grappled hard with the difficulty of attributing a meaningful noetic capacity to Nature, the principle that animates the natural world. In a discussion in another great work, IV.3–5 [27–29], composed just before the present treatise on Nature and contemplation and entitled by Porphyry Difficulties about the Soul, Plotinus makes it clear that the noetic capacity that belongs to Nature (and he avoids the language of θεωρία in this context) involves neither φρόνησις nor φαντασία (roughly translatable with ‘intelligence’ and ‘imagination’), see Enn. IV.4 [28] 13. Still, he insists that Nature is an ‘image of intelligence (ἰνδιάλιμα φρονήσεως) in virtue of which it does not ‘know’ (οὐδὲ οἶδε), but only ‘makes’ (μόνον ποιεῖ). Having (in a manner of speaking) clarified this, we have already moved along a fair way to answering the second question, viz. how does the θεωρία of nature function? If the θεωρία of nature turns out to be the activity of a forming principle, a λόγος, then Nature simply ‘informs’ things in the realm of perception, since that is just what a forming principle does: to form matter in such a way as to express,
as far as possible, that which the λόγος stands for. Since the outcome of this kind of contemplation is the ever-changing iconography of the physical world, and not science, the kind of contemplation we need to attribute to Nature is only of a rudimentary sort, as Plotinus goes on to explain in III.8 [30] 3. To use a modern analogy, we could say that it amounts to no more and no less than enzymes ‘reading’ a cell’s genetic code and determining the cell’s functioning accordingly. Plotinus does of course not speak in those terms, but I suppose he would not have been disinclined to draw attention to this analogy—if it is just an analogy and not rather part of what is actually going on. For us, it seems nearly impossible not to understand Plotinus’ ‘forming principle’ in each living organism as an anticipation of the discovery of the genetic code and the mechanisms by which it is translated into features of the living cell. When the information contained in the long permutations of the code is deciphered by different chemical substances and expressed in the appearance and functioning of the organism, the process does seem to possess traces of what it is to think and to make; yet it involves no reasoning, deliberation, or even imagination. However precisely this transition from pure code and aphenomenal information to the living phenotype is to be understood—one could do worse than describe it with Plotinus as an activity that looks very much like introspection and expression, in short θεωρία.

At this point, and before we move to trace Nature’s contemplation back to the noetic activity of the higher hypostases, we need to pause to take in the striking oddity of Plotinus’ thesis: the idea that thought does not require or presuppose a brain that does the thinking, but that thought is prior to it, is familiar enough from other areas of Plotinus’ philosophy. However, here we are invited to accept the further view that thought also does not require an agent to become an action. How can this be? Plotinus of course has an answer, but it is not quite to be found here in our text. In fact, we might well note a serious omission on the part of Plotinus in this discussion. For how can this fundamentally idealistic thesis, that a rudimentary and blurred cognitive activity of Nature immediately expresses itself in the perceptible world, effortlessly and without the intervention of a divine craftsman, be at all plausible? Where it runs up against our intuitions is, of course, precisely at the point at which the mental is supposed to flip over into the phenomenal, where the sensible world emerges. What precisely facilitates this ontological quantum leap?
To a large extent, the plausibility of Plotinus’ version of an objective idealism outlined in the first chapters of III.8 [30] rests on the plausibility of his conception of matter. For it is of course when forms come to be in matter, or are somehow joined to matter, that the natural world appears. In III.8 [30] 2, Plotinus only broaches the concept of matter briefly without properly explaining what he means by it and how it facilitates the sensible appearance of immaterial form. All he says here is that ‘there is a need of matter on which nature can work and which it forms’ (2.4 f., trans. Armstrong). Evidently, the doctrines expressed in the early treatise On Matter (Enn. II.4 [12], esp. chapters 8–12) and elsewhere in the second Ennead are of crucial importance for an understanding of how all this is supposed to work.

In that earlier treatise on matter, Plotinus adopts a radical position that has traditionally been associated with Aristotle (although this association is highly problematic) rather than with Plato: the material substrate of the physical world is not some kind of unqualified or disorderly mass extended in space and functioning as the ‘receptacle’ of form, nor a quasi-substantial substrate that is the carrier of the physical attributes which, for their own existence, depend on it. Rather, matter is wholly unspecific and non-descript, something entirely devoid of any quality, quantity, form whatsoever, even corporeality. Since matter has not even traces of any kind of feature, it is unfortunately quite impossible to form a clear concept of it.

Nevertheless, in order to understand Plotinus’ philosophy of nature, we need to press the issue and to inquire somewhat further into matter, and also into the relationship between matter and the previously mentioned λόγοι that play such a crucial part in Plotinus’ lower ontology. One thing that is clear about the matter that underlies the physical world is that it is not a corporeal, three-dimensional substrate (as in later Neoplatonists), but something that is per se deprived of any kind of feature, be it qualitative or quantitative. The other, more difficult point to grasp about matter is that Plotinus thought of it as a correlate to form, in fact as a necessary consequence of the process of emanation from

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19 Cf. also II.7 [37] 2.30–32 where this is stated in the context of an argument that both matter and the formal qualities that appear in its domain are incorporeal.
20 See De Haas (1997) and also G. Van Riel in this volume.
the One.\textsuperscript{21} For Plotinus, it is the very concept of ‘form’ that implies that there be something ‘formless’, that which is ‘other’ than the form and remains when one abstracts from it. At one point he says that it is ‘Otherness’ which ‘produces’ (ποιεῖ) matter, II.4 [12] 5.28 f.

One way to clarify this radical view is to draw on one of Plotinus’s own analogies:\textsuperscript{22} think of the duality of form and matter as one ought to think about the duality of, say, light and darkness. First, here is how not to think about them: what immediately comes to mind is an image of a light shining in the darkness and illuminating it. In a spontaneous kind of way we tend to think that light and darkness are two quite independent states of affair: there is light over here, and there is darkness over there. But this is a wrong-headed (Gnostic) way to think. What we have to understand is the apparent paradox that it is in fact the light’s shining that creates darkness. Imagine a state of affairs where ‘light’ is entirely unknown, unheard of, and non-existent: it would be wrong to say that everything else, whatever there is, is cast into darkness. It is cast in whatever, but most certainly not in darkness, because darkness is the light’s absence; but \textit{ex hypothesi}, there was no such thing as light. Hence there will be no such thing as darkness. In the same vein, it is sound that creates silence, motion rest, sameness difference, life death, and in general, all the negative, privative states are necessarily constituted by their positive counterpart. And so, matter arises at once with the constitution of the world of forms, as its logical implication\textsuperscript{23} (cf. II.4 [12] 4): matter is that which Forms form.

One upshot of this view is that it requires the assumption of matter in the intelligible world as well, since there most certainly are forms. And indeed, Plotinus embraces this doctrine:\textsuperscript{24} matter exists in the intelligible realm also, intelligible or divine matter, or simply matter ‘there’, as he calls it in his discussion II.4 [12] 2–5. In fact, \textit{qua} matter there does not seem to be anything that distinguishes matter in the realm of Intellect.

\textsuperscript{21} The question whether matter exists independently or is generated by the One, and how, is controversial and has been discussed vigorously in recent years. See the forceful statement by O’Brien (1991) and the various publications of his sparring partners, both earlier and later: Schwyzer (1973), Narbonne (1993), Carroll (2002), Corrigan (1986), (1996a), (2005) esp. 116 ff. with further references.

\textsuperscript{22} The analogy of light is frequent in Plotinus; for our immediate context see \textit{e.g.} II.4 [12] 10.

\textsuperscript{23} Cf. the whole of chapter II.4 [12] 4, where he says at one point, 11: ‘How can you have form without something on which the form is imposed?’

\textsuperscript{24} Smith (2004) 57 f. suggests that Plotinus is developing here a notion already present in the tradition.
from matter in the realm of Nature; for what could this distinguishing characteristic be, given that matter possesses no features whatsoever? The difference is, rather, that one matter is informed by intelligible life and therefore transfigured into ‘substance’, whereas matter here is the carrier of fleeting shapes and mere images—a decorated corpse (II.4 [12] 5.12–18).25

Now, Plotinus claims that (physical) matter makes a crucial contribution to the formation of bodies;26 however, remarks such as these should not distract us from the more important role played by what Plotinus calls λόγοι. Matter as such is in and of itself of course utterly indistinct and indefinite (ἀόριστος, cf. II.4 [12] 10); all it offers is supreme malleability when confronted with form (ἐυάγωγος εἰς ἀπάντα, II.4 [12] 8.21). The hard work of bringing about what we perceive as physical reality is done by a host of dynamic principles that make up the sum total of the realm of Nature. The Lexicon Plotinianum, quite appropriately trying to capture the wide range of meaning of this term even within this very specific context of natural formation, defines λόγοι as ‘rational, creative, formative principles, often as embodied in matter, often equated with εἶδος and μορφή’.27 In Plotinus’ view, the world, such as it is, is not offering us a stable and tangible habitat in space and time because there happens to be matter; rather, that world emerges on account of innumerable individual formative principles that impose the information they are the bearers of onto the realm of pure possibility. Again, what we have to understand about these λόγοι is that, qua clusters or bundles of structure and form, they are not the attributes of other entities, say substances, which then bear their formal features; rather, the λόγοι are particular extensions of different aspects of the noetic realm, some simple, others exceedingly complex; they function like ‘abstract particulars’28 that bring about those ontic items we take to be substances, as well as their many features. Even mass

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25 For a more detailed discussion of the origin of matter and the various distinctions scholars have discerned in Plotinus see most recently Majumdar (2007) 106–114.
28 ‘Abstract’ in the sense that they are non-material. I am borrowing the term from Keith Campbell’s influential book (1990) and mean to suggest that Plotinus’ ontology of the natural world in certain respects resembles modern attempts to overcome a dualistic ontology constructed around the notions of substance and attributes.
and solidity can be accounted for in just this way: In II.7 [37] 3 (On Complete Transfusion) Plotinus makes it clear that corporeity (σωματότης) too is either something constituted by this structured conjunction of forms, or itself a form. It would be a mistake to think that this idealistic ontology somehow implied that the physical world is a mere illusion and not ‘real’. Far from it; according to Plotinus, it is certainly as real as it possibly can be.

VI

It is now necessary to move on to another, equally difficult question, viz. how we are supposed to understand the suggestion, also made at the end of III.8 [30] 1 on the literal reading of the transmitted Greek, that the reason why nature produces by way of contemplation is to be sought in another kind of contemplation it does not have. Plotinus opens the discussion of this question at the beginning of III.8 [30] 4 and immediately answers it with a most startling piece of direct speech that comes right out of the mouth of Nature herself, Enn. III.8 [30] 4.1–15:29

And if someone were to ask Nature why it makes, and if it cared to listen to the questioner and cared to talk, Nature would say:

It would have been necessary for him not to ask but to understand in silence, just as I am silent and not in the habit of talking. To understand what? That what comes to be is a vision of mine as I am silent,30 an

29 Enn. III.8 [30] 4.3–15: ἐχρῆν μὲν μὴ ἔρωστάν, ἀλλὰ συνιέναι καὶ αὐτῶν σιωπῆ, ώσπερ ἐγὼ σωμάτω καὶ οὐκ εἰθισμαί λέγειν, τί οὖν συνιέναι; ὅτι τὸ γενόμενον ἐστὶ θέαμα ἐμοῦ σοφίσσης, καὶ φύσει γενόμενον θέωρησα, καὶ μοι γενόμενη ἐκ θεωρίας τῆς ὤδη τὴν φύσιν ἔχειν φιλοθεάμαν ὑπάρχει, καὶ τὸ θεωροῦν μου θεωρήμα ποιεῖ, ώσπερ οἱ γεωμέτραι θεωροῦντες γράφουσιν· ἀλλὰ ἐμῶν μὴ γραφούσης, θεωρούσης δὲ, ὑφίστανται αἱ τῶν σωμάτων γραμμαί ὑσπερ ἑκπίπτοσα, καὶ μοι τὸ τῆς μητρὸς καὶ τῶν γενιμένων ὑπάρχει πάθος· καὶ γὰρ ἐκεῖνοί εἰσίν ἐκ θεωρίας καὶ ἡ γένεσις ἢ ἐμὴ ἐκείνων οὐδὲν προξάντων, ἀλλὰ ὄντων μειζὸν λόγων καὶ θεωροῦντον αὐτοὺς ἐγὼ γεγέννη. Textual variants: 5 ἐμὸς σοφίσσης Coleridge: σοφιστῆς Creuzer, Dodds, Beutler: ἐμὸς, σωφίστης codd. et Henry-Schwyzer, ed. minor 7 ὑπάρχειν Ἐξυ, ed. 30 There is a considerable textual problem here. The transmitted form σωφίσσης is difficult to accommodate syntactically and philosophically. If one kept the text unaltered, one might translate: ‘That what comes to be is my vision, a silent plan [taking σωφίσσης and θέωρησα as a hyndiadys] that comes to be naturally (or: a silence, and a plan that comes to be naturally).’ The problem with that reading is that it makes the product of Nature’s introspection silent, which it evidently isn’t.—In addition, the possessive pronoun ἐμὸς in predicative position after θέωρησα is grammatically suspect (unparalleled in Plotinus; I have also not been unable to find a similar construction in Plato). It seems better to follow a suggestion made by Samuel Taylor Coleridge
object of contemplation that comes to be naturally, and that because I came to be from a contemplation of this sort it belongs to me to have a natural inclination towards contemplation. And my act of contemplation gives rise to an object of contemplation, just as geometers draw figures when they contemplate. I don’t draw, but I do contemplate; even so, the lines of bodies arrange themselves and become real as a fall-out. I share the experience of my mother and the beings that generated me; for these too come from contemplation, and I came to be not because they did anything; rather, since they are greater rational principles I came to be when they contemplated themselves.

Nature, of course, would never say such a thing because, being caught up in her untrammeled interior vision, she neither pays attention to noise-making humans nor would she be in a position to reason with any one of them. Who is speaking, of course, is no other than Plotinus himself, and if we listen carefully, we may even discern the voice of a somewhat arrogant late-antique sage who reprimands the inquisitive student, essentially saying: ‘Si tacuisses, philosophus mansisses’.\(^{31}\) The impression of aloofness is heightened by the indirect and impersonal mode of address ἐχρῆν μὲν μὴ ἔρωσϊν, ἀλλὰ συνιέναι καὶ αὐτόν).

Another interesting feature of this passage is the way in which Plotinus explains by an analogy how the objects of nature effortlessly fall out of Nature’s contemplation: this happens just as the lines drawn by geometers in their illustrations seem to ‘fall out of’ their mathematical reasoning. And indeed, there seems to be something inseparable about this type of geometrical calculation and its physical counterpart, where the abstract reasoning goes hand in hand with the physical illustration, and vice versa. In just this way, so Plotinus claims, do the limits of bodies, their peculiar quantities and qualities, ‘fall out’ of Nature’s contemplation. If we assume that Nature’s contemplation is nothing but the sum total of the activity of its formative principles (λόγοι), then we have already seen how this fall-out is facilitated by the boundless malleability of matter.

\[^{31}\] I propose to understand ἐχρῆν without ἄν as a counterfactual of the past (which is perfectly possible), rather than as a general prohibition.
The most important point made in the passage just cited is the claim that Nature contemplates in this way, and is empowered to do so, because it is the offspring of a higher soul and its inner life, which is constituted in turn by the living formative principles contained in Intellect:

I share the experience of my mother and the beings that generated me; for these too come from contemplation, and I came to be not because they did anything; rather, since they are greater rational principles I came to be when they contemplated themselves (III.8 [30] 4.10–14).

Plotinus repeats this point in III.8 [30] 4.27–29: ‘Nature’s contemplation is silent, but rather blurred; for there is another contemplation, clearer in sight, and Nature is an image of <this> other contemplation.’

The beautiful idea that Nature rests in silent contemplation we are already familiar with, but there are two further thoughts that demand explanation: first, the suggestion that Nature’s nature-forming contemplation is inferior to another kind of contemplation; and second, that this higher kind of contemplation is causally involved in bringing about Nature’s contemplation. How precisely is all this supposed to work? Plotinus does not spell it out, which is unfortunate, since the issues raised are among the most difficult aspects of Plotinus’ philosophy. What he does do is give us examples, or analogies, that aim to make us see, somehow, what he is driving at.

The first thought, that Nature’s contemplative productivity is an inferior sort of activity, is exemplified by a human analogy:

For this reason, what is produced by <Nature> is weak in every way, because a weak contemplation produces a weak object. Men, too, when their power to contemplate weakens, make action a shadow of contemplation and reasoning. Because if contemplation is not enough for them due to their souls’ being weak and incapable of grasping the vision sufficiently, when they are therefore not filled with it but nevertheless strive to see it, they are drawn to action, in order to see what they cannot see with their minds. So, when they make something, they themselves want to see it and contemplate it, and they want others to perceive it too…

Who, capable of beholding what is genuine, would deliberately go after its image? Witness too the duller children, who have impossible difficulties

with theoretical learning and turn to crafts and manual labor (Em. III.8 [30] 4.31–38; 43–47).

Embedded in this text is the universal claim (4.39 f.) that everywhere action is either a by-product of contemplation or a weaker substitute for it. This is an empirical claim and impossible to establish deductively from previously granted premises. All one can do, and all Plotinus does, is appeal to a commonly familiar example from which we can somehow see, universalizing, that the claim commands respect. Action certainly seems to be derivative, as it necessarily presupposes some kind of intention or plan that makes a ‘doing’ an ‘action’, and not merely a random activity. But action can also be a way to figure something out, learning by trial and error and practice. That kind of action is evidently inferior to contemplation, but what it aims at, equally evidently, is some sort of insight that the soul will have once the action has been carried out successfully.

So let us grant that if Nature’s activity and action (which, as we have seen, is at once cognitive and creative) is dependent on some other form of cognitive activity, then it will turn out to be something that is ontologically posterior. But why should Nature be so dependent? Why is it not rather the case, as in Aristotle’s system, that Nature is some kind of (relatively) independent and autonomous principle of motion and rest? The thought that Nature qua active formative principle is the product of the contemplative activity of Soul is not explained (at least not in this context); moreover, it does not seem to be an empirical claim either, a claim that could be supported by a few salient and well-chosen examples. And yet, what we get from Plotinus is yet another analogy to illustrate his point:

But, since we have stated the way in which, with regard to Nature, generation is contemplation, let us proceed to Soul, which is prior to Nature, and say how its contemplation, its love of inquisitive learning and the full result of what it has come to know have turned it into a vision entirely and made Soul to produce another vision. Just so art produces: whenever each art is complete, it produces another, smaller art, as it were, the size of a toy which has a trace of everything in it (Em. III.8 [30] 5.1–8).

It would be too easy, and presumably unfair, to censure Plotinus for not spelling out how precisely this process of the propagation of mind and thought is supposed to unfold. For what we are looking at here is an axiomatic principle, a statement about what mind is and how mind works as ἀρχή of everything. But what are we supposed to understand
about the nature of Mind and Soul when Plotinus says that it produces just as art produces, and that whenever each art is complete, it produces another, smaller art, as it were, the size of a toy which bears traces of the entire art in it?

Perhaps one could illustrate the point again by means of an analogy of our own, music. It is one thing, and the prerogative of our highest intellectual powers, to compose music; another, to be able to read music with such brilliant clarity as to literally ‘hear’, in one’s mind, the music by simply taking in the score; it is a third thing to practice and play that same music on an instrument, and yet another thing to appreciate it passively in the concert hall or living room, and to be moved by it emotionally. All these activities involve different levels of our cognitive faculties, appreciations and desires. Moreover, even if these different levels of cognition occur in different persons, they are by no means independent from one another. It is certainly not the case that the lowest form of musical appreciation (snapping one’s fingers, say) evolves somehow into the highest and most accomplished manifestation of the art (composition); rather, and quite clearly, the order of ontological dependency works the other way round: people share and appreciate music on an emotional level because there are composers of songs and operas and symphonies that are played by gifted performers. You can have the higher activities without the former, but not the other way round. The same goes for Plotinus’ ontology: we have the mass productivity of Nature because of formative principles that are themselves not part of Nature but belong to and exist on a higher ontological plain.

What kind of ‘because’ are we dealing with here? According to Plotinus, the causal relationship cannot just be a formal or a final one; efficient causality must be involved as well. What we can gather from the example is that the more privileged cognitive activity somehow establishes and devolves into lower forms of essentially the same kind of activity. It is not in the nature of a melody or song, once conceived, not to be played or sung, not to be written down, and not to be taken up by others in the spirit of imitation and interpretation. A song’s inherent power (or lack thereof) establishes the degree of its reception and the frequency of its repetition. And so with everything else: once conceived, invented or clearly understood, the conceptual gravitates towards becoming an affair external to the mind who so conceived it; it wants to be taught, propagated and communicated—become part of the larger ‘phenomenal’ world. If this is the way the mental operates,
it follows that any orderly and formally regulated process in the phenomenal world can be understood as the expression, or emanation, if you like, of some higher, more privileged, yet less tangible cognitive momentum. As Plotinus puts it elsewhere, the soul ‘receives from There and at the same time distributes here’ (Enn. IV.8 [6] 7.30).

On this model it becomes not only attractive but quite natural to see contemplative and productive Nature, *natura naturans*, as the offspring of a higher form of psychic activity.\(^{33}\) This spiritualization of the entire universe, both from the top down and from the bottom up, is the core commitment in Plotinus’ natural philosophy; in a sense, it is the apex of ancient Greek speculation about nature, a long time after it began with the crude materialism of the Ionians. This is true, even if, under the overpowering influence of Aristotle’s *Physics* and Plato’s *Timaeus*, Plotinus’ successors reverted to an essentially non-monistic view of the world populated by radically different kinds of principles such as universal forms, creating deities, and a material substrate once again endowed with an ontological status in its own right.

\(^{33}\) In a general way, O’Meara (1985) is right to point out the importance of Aristotle’s conception of the prime mover for Plotinus’ entire ontology, but I think it is misleading to say that ‘Nature, the lowest level of soul, emerges in III, 8 [30], chapter 2 very much as a sort of unmoved mover’ (261). On the contrary, Nature’s contemplation is moved and motivated by the higher intelligible reality of the Soul.