

## The grammar of causation in Plotinus

### *Ennead III.8 [30]*

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#### Introduction

The aim of my paper today is to look closely at how Plotinus discusses causation and causal relations of a certain kind, namely causation that pertains to the natural world. How, for instance, according to Plotinus should we understand the causation of an apple tree that produces apples, of a plant that seeks sunshine, of an animal that gives birth to an offspring, or of an living organism that brings about and undergoes various kinds of changes, such as nourishment, metabolism, movement etc. Such causal relations are characteristic of the natural world. Ancient philosophers since Aristotle were claiming that nature is an agent that accounts for such causal relations. Aristotle actually describes nature as a kind of craftsman that brings about changes in the natural world that are intelligent, purposeful and beneficial for the world.<sup>1</sup> Despite their differences, also the Stoics maintained that nature is a causal agent that operates like a craftsman<sup>2</sup> and is responsible for everything that happens in the natural world.

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<sup>1</sup> εἰ οἰκία τῶν φύσει γινομένων ἦν, οὕτως ἂν ἐγίνετο ὡς νῦν ὑπὸ τῆς τέχνης. εἰ δὲ τὰ φύσει μὴ μόνον φύσει ἀλλὰ καὶ τέχνη γίγνοιτο, ὡσαύτως ἂν γίνοιτο ἢ πέφυκεν (if a house were made by nature, it would come into being as it now does by craftsmanship. And if those things that nature produces were not generated only by nature but also by craftsmanship, they would be generated as they are by nature). *Physics* II.8, 199a12-14.

εἰ ἐν τῇ τέχνῃ ἔνεστι τὸ ἕνεκά του, καὶ ἐν φύσει. μάλιστα δὲ δῆλον, ὅταν τις ἰατροῦ αὐτὸς ἑαυτὸν. τοῦτω γὰρ ἔοικεν ἡ φύσις. (If purpose is inherent in art, so is it in nature too. The best illustration is the case of a man being his own physician, for nature is like that, agent and patient at once. (*Physics* II.8, 199b30-32, trans. Loeb).

ὡσπερ γὰρ οἱ πλάττοντες ἐκ πηλοῦ ζῶον ...ὑφίστασι τῶν στερεῶν τι σωματῶν...τὸν αὐτὸν τρόπον ἡ φύσις δεδημιούργηκεν ἐκ τῶν σαρκῶν τὸ ζῶον (as those who make an animal from clay...they create a certain solid body, similarly nature creates the animal from flesh). *De partibus animalium* 743b23-24,  
<sup>2</sup> ἡ τῶν ὅλων φύσις ἐκ τῆς ὅλης οὐσίας ὡς κηροῦ νῦν μὲν ἰπάριον ἐπλασε, συγγέασα δὲ τοῦτο εἰς δενδρύφιον συνεχρήσατο τῇ ὕλῃ αὐτοῦ, εἶτα εἰς ἀνθρωπάριον, εἶτα εἰς ἄλλο τι. (The nature of the whole out of the substance of the whole as out of wax, molds at one time a horse, and breaking up the mold kneads the material again into a tree, then into a man, and then into something else; Marcus Aurelius VII.23.1, trans. Loeb).

Plotinus reacts against that tendency. He does not deny the causal role of nature, but he does deny its causal primacy when it comes to explaining natural events. He sets out to do this especially in his treatise III.8 that bears the title *On Nature, Contemplation and the One*, on which I aim to focus today.

Now that we have reminded ourselves of the title of Plotinus' treatise, we would do well to forget about it, so to speak. The reason is not the fact that this, like all titles of Plotinus' treatises, are not his own, but rather Porphyry's; for Porphyry, as we know, was an intelligent editor of Plotinus' work. The reason rather is that this title is in my view unique in giving us the wrong impression that this treatise deals with three things, as it were, nature, contemplation (*theôria*) and the one, whereas it does not; the treatise rather deals with how nature contemplates and the view that Plotinus advances is, roughly speaking, that nature does not contemplate autonomously but rather is guided by other principles in its *theôria*, such as the soul, the intellect and ultimately the One, and that the *theôria* of nature, dependent as it is, is weaker compared to that of the principles from which nature depends. In this sense the treatise is not about nature, contemplation and the One, but rather about the specific kind of nature's contemplation that is dependent and guided. We still have to see what all that means, but one first step in this direction is to acknowledge the inadequacy of the title, I think. Actually Porphyry himself says in *V.Plot.* 5.26 that his preferred title (*kratousa epigraphê*) is *On Contemplation (Peri theôrias)*.

The second reason why the title of *Ennead* III.8 should rather be left aside is because this treatise is part of a longer work, Plotinus' *Grossschrift* that encompasses *Enneads* III.8, V.8, V.5, and II.9 (treatises 30-33 in chronological terms). That is, the original work of Plotinus was split into four parts by Porphyry. We can still discern the joints of the long work; the beginning of V.8 refers us back to the end of III.8, the

beginning of V.5 resumes the topic of the end of V.8, namely regarding the intellect, and the beginning of II.9 continues the argument of V.5 regarding the causal role of the good (*agathon*). The *Grossschrift* is often said to be targeting the Gnostics—as the title of the last part of the treatise, II.9, suggests. This, however, is again somewhat misleading; for in it Plotinus also criticizes other misguided views about the natural world, such as those of Aristotle and the Stoics. In the *Grossschrift* Plotinus argues for what he considers to be the correct appreciation of the principles that operate in the natural world and make it an ordered, harmonious, and beneficent whole. The Gnostics deny the latter, but others, like Aristotle and the Stoics who accept the order and beauty of the world, do not have according to Plotinus the right idea about the principles that are active in it.

I will limit myself to *Ennead* III.8 that examines the role of nature and how it is related to other principles. I will focus in particular on the first five chapters that deal specifically with nature and the kind of work nature does and how it depends on other principles. In the rest of the work, chapters 6-11, Plotinus explains which these principles are and why they have the status he attributes to them.

Now, although this treatise is only one part of a much longer tractate, it is fortunately the beginning of it. I say “fortunately” not only because this treatise enjoys a relative autonomy as a first part, but also because the start is a significant one in many respects, as we will see.

Plotinus starts such a long and complex work in a rather playful way, as he himself says. Plotinus uses the term *paizô*, *paizontes* 7 times in the first section of the treatise, which he systematically contrasts to *spoudazein*.<sup>3</sup> And he refers quite

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<sup>3</sup> Παίζοντες δὲ τὴν πρώτην πρὶν ἐπιχειρεῖν σπουδάζειν εἰ λέγοιμεν πάντα θεωρίας ἐφίεσθαι καὶ εἰς τέλος τοῦτο βλέπειν, οὐ μόνον ἔλλογα ἀλλὰ καὶ ἄλογα ζῶα καὶ τὴν ἐν φυτοῖς φύσιν καὶ τὴν ταῦτα γεννῶσαν γῆν, καὶ πάντα τυγχάνειν καθ’ ὅσον οἶόν τε αὐτοῖς κατὰ φύσιν (5) ἔχοντα, ἄλλα δὲ ἄλλως καὶ θεωρεῖν καὶ τυγχάνειν καὶ τὰ μὲν ἀληθῶς, τὰ δὲ μίμησιν καὶ εἰκόνα τούτου λαμβάνοντα—ἄρ’ ἂν

explicitly in plural to those making up his circle (ῥημᾶς, l. 9, ῥημεῖς, l. 10), wondering whether we are playful or serious when we contemplate. What's the point of such a playful start? Surely Plotinus is not a writer who aims to entertain or amuse his readers or his audience.

The point of Plotinus' playful jest is twofold in my view. First, he aims to underline the oddness of the philosophical question he is going to address. The question concerns the sense in which all things in this world, animate and inanimate alike, engage in *theôria*. What does it mean to say that plants and animals but also the earth itself engage in *theôria*? This is so weird that we should rather take it as a playful jest, Plotinus suggests. It also sounds weird to say, what Plotinus says, that all action is the result of *theôria* and has *theôria* as its end. For we remember that Aristotle clearly distinguished *theôria* from action (*praxis*) and production (*poiesis*) in *NE. X*.<sup>4</sup> Plotinus goes on the opposite direction, as the rest of his treatise confirms. In ch. 6 he will argue that all activity involves or presupposes *theôria*. Plotinus then does not only aim to raise an *aporia* through this playful start, but also aims to signal his departure from well established assumptions about *theôria*, such as those we find in Aristotle, for instance. This is not surprising. Plotinus sets out to redefine *theôria* in the same way he did with concepts such as *dynamis* and *energeia*, matter, *eudaimonia* etc. Ultimately the two objectives, redefining and raising an *aporia*, are closely

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τις ἀνάσχοιτο τὸ παράδοξον τοῦ λόγου; ἢ πρὸς ἡμᾶς αὐτοῦ γινομένου κίνδυνος οὐδεὶς ἐν τῷ παίζειν τὰ αὐτῶν γενήσεται. ἄρ' οὖν καὶ ἡμεῖς παίζοντες ἐν τῷ (10) παρόντι θεωροῦμεν; ἢ καὶ ἡμεῖς καὶ πάντες ὅσοι παίζουσι τοῦτο ποιῶσιν ἢ τούτου γε παίζουσιν ἐφιέμενοι. καὶ κινδυνεύει, εἴτε τις παῖς εἴτε ἀνὴρ παίζει ἢ σπουδάζει, θεωρίας ἕνεκεν ὁ μὲν παίζειν, ὁ δὲ σπουδάζειν, καὶ πρᾶξις πᾶσα εἰς θεωρίαν τὴν σπουδὴν ἔχειν, ἢ μὲν (15) ἀναγκαῖα καὶ ἐπιπλέον, τὴν θεωρίαν ἔλκουσα πρὸς τὸ ἕξω, ἢ δὲ ἐκούσιος λεγόμενη ἐπ' ἔλαττον μὲν, ὁμῶς δὲ καὶ αὕτη ἐφέσει θεωρίας γινομένη. ἀλλὰ ταῦτα μὲν ὕστερον· νῦν δὲ λέγομεν περὶ τῆς γῆς αὐτῆς καὶ δένδρων καὶ ἄλλων φυτῶν τίς αὐτῶν ἡ θεωρία, καὶ πῶς τὰ παρ' αὐτῆς ποιούμενα (20) καὶ γεννώμενα ἐπὶ τὴν τῆς θεωρίας ἀνάξομεν ἐνέργειαν, καὶ πῶς ἡ φύσις, ἢν ἀφάνταστον φασὶ καὶ ἄλογον εἶναι, θεωρίαν τε ἐν αὐτῇ ἔχει καὶ ἂ ποιῆ διὰ θεωρίαν ποιῆ, ἢν οὐκ ἔχει καὶ πῶς. (*Enn.* III.[30] 8.1.1-15).

<sup>4</sup> τῷ δὴ ζῶντι τοῦ πράττειν ἀφαιρουμένου, ἔτι δὲ μᾶλλον τοῦ ποιεῖν, τί λείπεται πλὴν θεωρία; (If we eliminate action from a living being and we also eliminate production, what is left except contemplation?). *NE.* 1178b20-21.

connected. The raise of an *aporia* prepares the audience for a radical conceptual shifting.

It is at the end of the first chapter that Plotinus formulates the set of specific *aporiai* he is going to investigate. Unfortunately the text here is doubtful and some caution is needed. The first *aporia* is about the contemplation of earth, the trees, and the plants –νῦν δὲ λέγωμεν περί τε γῆς αὐτῆς καὶ δένδρων καὶ ὅλως φυτῶν τίς αὐτῶν ἢ θεωρία- , namely what their *theōria* is, what it means to say that they engage in *theōria*. The second *aporia* is how nature itself engages in *theōria*, and more specifically, how nature creates through *theōria* – καὶ πῶς τὰ παρ’ αὐτῆς ποιούμενα καὶ γεννώμενα ἐπὶ τὴν τῆς θεωρίας ἀνάξομεν ἐνέργειαν. The third *aporia* is how nature, which the Stoics claim to be with no power of forming mental images, *phantasiai*, and reasoning, possesses *theōria* – καὶ πῶς ἢ φύσις, ἣν ἀφάνταστόν φασι καὶ ἄλογον εἶναι, θεωρίαν τε ἐν αὐτῇ ἔχει. The final, fourth, *aporia* is how nature creates or produces in virtue of a kind of contemplation that does not have –καὶ ἃ ποιεῖ διὰ θεωρίαν ποιεῖ, ἣν οὐκ ἔχει. I understand the relative clause ἣν οὐκ ἔχει not as explanatory but as defining. Plotinus suggests that nature does create in virtue of *theōria* but not of any kind of *theōria*, for there is one kind of *theōria* that nature does not have and yet it is in virtue of this that nature creates or produces<sup>5</sup>. If this is correct, then the final καὶ πῶς may well have a role to play, namely to alert the reader about the last tag of the aporetic framework, which is less clear if we allow for only one καὶ πῶς at l. 22, for this signals *aporia* nr. 3 as it were, which is, as I said, different from *aporia* nr. 4, that also needs to be flagged. Here

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<sup>5</sup> πῶς δὲ αὕτη ἔχει θεωρίαν; τὴν μὲν δὴ ἐκ λόγου οὐκ ἔχει. λέγω δ’ ἐκ λόγου τὸ σκοπεῖσθαι περὶ τῶν ἐν αὐτῇ. (But how does this nature possess contemplation? It certainly does not have the contemplation that comes from reasoning. I mean by “reasoning” the research into what it has in itself.). *Enn.* III.8.3.12-14

Plotinus sets the aporetic framework for the investigation Plotinus is going to pursue.

*Aporia* nr. 1 is discussed in chapter 2, *aporia* nr. 2 in chapter 3, *aporia* nr. 3 in chapter 4, and *aporia* nr. 4 in chapter 5.

But we cannot make sense of this aporetic framework and of Plotinus' entire project in this treatise unless we first shed some light on the way *theôria* is here used. This is not an easy task, because as we have seen, Plotinus distinguishes kinds of *theôria*, which means that the term will be specified gradually in the treatise. Prior to this question, though, is that about what Plotinus means by nature.

We need to distinguish here between how Plotinus conceives nature and what he means by it, a distinction, which applies also in the case of *theôria*, but in that case it is clearly the content of the concept that matters, not the sense of the term, and yet the latter is determined by the former. With regard to nature, though, the question about what Plotinus means by nature is relative easy to answer, while the second about the content of the concept of nature is tied to the concept of *theôria*, and I hope to come up with a suggestion at the end of my paper. Like earlier ancient philosophers, Plotinus certainly distinguishes between the nature of x, man or fire, and nature in an absolute sense, that is, a principle not of individual things but of all things of a certain kind, namely of the natural world. Of course the crucial question is what kind of principle this is. One thing that we already know is that it is a principle that creates or produces and in this sense it is responsible for the things that come about in the natural world, such as plants, animals, but also the sea, the lakes, the earth, perhaps the planets too. But how exactly nature does all this is a major question that is tied to the role of *theôria*, to which I now turn.

We know that both Plato and Aristotle use the term often, Plato in his middle dialogues like the *Phaedo*, *Phaedrus*, and the *Sophist*, Aristotle in his *Metaphysics*

and in the *Nicomachean Ethics* X.6-8. Plato describes as *theôria* the highest cognitive state of the soul, namely that of the acquisition of Forms, while Aristotle speaks of *theôria* as cognitive state opposite to that of production (*poiesis*) and action (*praxis*; *NE* 1178b20-22). Plotinus on the other hand uses *theôria* in association with *poiesis*, production; the latter is a consequence of *theôria*, not its opposite. Plotinus claims that nature makes, produces or creates, through contemplation. But what does this mean? And what does it mean to say that plants and animals and earth engage in *theôria*?

One possible answer here is that animals and plants cognize what goes on in themselves and in their surroundings, and this is the case with the world as a whole. This is after all what Plato maintains in the *Timaeus*, namely that the world and everything in it has cognitive powers, since the world is permeated and guided by the world soul that accounts for cognition among other things. World entities, let alone animate ones, distinguish between hot and cold, wet and dry, and react accordingly. A living organism distinguishes what is healthy from what is unhealthy, and reacts accordingly, when for instance a virus enters the living body. One can legitimately claim that individual natures cognize and that that nature as a whole cognizes. But if *theôria* amounts to cognition, how does it account for creation?

Clearly for both Plato and Aristotle *theôria* is more than cognition; it is a cognitive state of the intellect, human or divine, according to which an intellect cognizes, understands, plans and designs. Aristotle in *De anima* uses the term *theorein* in connection with the activity of a scientist or of an intellect and associates *theoretikê dynamis* specifically with *nous* (413b25). The term *theôria* and its cognates occur also in other parts of Plotinus' work, and one thing that such passages make clear is that *theôria* is the opposite of perception, *aesthesis*, and, like in Plato and Aristotle, akin to intellectual activity. Such an intellectual activity involves mental

images. Aristotle in *De anima* III.8 claims that when *nous* engages in *theôria* there must be a *phantasma* as object of *theôria* (432a8). But how an intellectual activity that involves mental images can account for production? Plotinus does not make that clear. I will try to explain this with an example.

Consider for instance a painter, a sculptor, or any craftsman who thinks about crafting a new piece of work. Such a person forms a mental image which he or she develops, articulates, fills it with details, while also considering possible alternatives, objections, problems that such a project may give rise to. This mental activity that involves cognition and planning may lead to designing something, or making mathematical calculations, when envisaging for instance building a house or a ship or something similar, or directly producing something. This is one scenario in which *theôria* can account for the creation of something.

There is, however, also an alternative scenario. It may well be that the artist or craftsman involved has an assistant or a student, who learns the art of x. The master artist conceives a project and has a plan about how it should be realized, but leaves its execution to his assistant. The master explains to him what the idea and its main features are, even the critical details, and then he withdraws, leaving his assistant alone to materialize the project. The assistant has to endorse the vision, the design, of the master, in order to bring it about. That is, he needs to adopt the mental image of the master and understand it to some extent, for otherwise its successful application is impossible. But this does not mean that the assistant understands all the details of it, let alone how this came about and why this is a great or ingenious mental image that makes up for a great piece of work. Moreover, the assistant need not understand the necessity or the reasons for engaging with such a project. In such a case the assistant also engages in *theôria* in so far as she adopts the *theôria* of her master.

One thing that is crucial about this example is that *theôria* can be transmitted from one to another and when this happens, *theôria* may become weaker. For the assistant does not understand the project he is engaged with in the way his master does. And this of course can go on. This, I suggest, is exactly what Plotinus claims when he says that *theôria* brings about *theôria* and when he speaks about degrees of *theôria*.<sup>6</sup> For he argues that that nature contemplates in this weaker sense, which means, as he explains, that the *theôria* of nature is not autonomous but rather dependent on someone else's *theôria*.

But there are problems with such a conception of *theôria* I just outlined. For in paragraph 2 Plotinus makes clear that nature does not engage in any toiling or crafting; nature, we are told, is unlike craftsmen and artists. Nature does not have hands and legs, neither does she use any instruments, as craftsmen do, Plotinus argues.<sup>7</sup> As I already said, this is how Aristotle portrayed nature, namely as a kind of demiurge, a view that we also find in Stoicism. But let us not forget here also the role of the demiurge in the *Timaeus*. Perhaps Plotinus implies here that he does not consider the demiurge as a kind of personification of nature.

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<sup>6</sup> ὥστε τὴν κατὰ τὴν θεωρίαν πρᾶξιν δοκοῦσαν εἶναι τὴν ἀσθενεστάτην θεωρίαν εἶναι. ὁμογενὲς γὰρ αἰεὶ δεῖ τὸ γεννώμενον εἶναι, ἀσθενέστερον μὴν τῷ ἐξίτηλον καταβαῖνον γίνεσθαι...καὶ θεωρία τὴν θεωρίαν ποιεῖ. (So what appears to be action according to contemplation is really the weaker form of contemplation, for that which is produced must always be of the same kind as its produces, but weaker through losing its virtue as it comes down...Contemplation makes contemplation). *Enn.* III.85.22-30

<sup>7</sup> Ὅτι μὲν οὖν οὔτε χεῖρες ἐνταῦθα οὔτε πόδες οὔτε τι ὄργανον ἐπακτὸν ἢ σύμφυτον, ὕλης δὲ δεῖ, [ἐφ' ἧς ποιήσει, καθ' ἣν ἐν εἶδει ποιεῖ, παντί που δῆλον. δεῖ δὲ καὶ τὸ μοχλεῦν ἀφελεῖν ἐκ τῆς φυσικῆς ποιήσεως. ποῖος γὰρ ὠθισμὸς ἢ τίς μοχλεία χρώματα ποικίλα καὶ (5) παντοδαπὰ καὶ σχήματα ποιεῖ; ἐπεὶ οὐδὲ οἱ κηροπλάσται [ἢ κοροπλάθαι], εἰς οὓς δὴ καὶ βλέποντες φήθησαν τὴν τῆς φύσεως δημιουργίαν τοιαύτην εἶναι, χρώματα δύνανται ποιεῖν μὴ χρώματα ἀλλαχόθεν ἐπάγοντες οἷς ποιοῦσιν. ἀλλὰ γὰρ ἐχρῆν συννοοῦντας, ὡς καὶ ἐπὶ τῶν τὰς τέχνας τὰς (10) τοιαύτας μετιόντων [ἔτι] δεῖ τι ἐν αὐτοῖς μένειν, καθ' ὃ μένον διὰ χειρῶν ποιήσουσιν ἅ αὐτῶν ἔργα, ἐπὶ τὸ τοιοῦτον ἀνελεῖν τῆς φύσεως καὶ αὐτοὺς καὶ συνεῖναι, ὡς μένειν δεῖ καὶ ἐνταῦθα τὴν δύναμιν τὴν οὐ διὰ χειρῶν ποιοῦσαν καὶ πᾶσαν μένειν. οὐ γὰρ δὴ δεῖται τῶν μὲν ὡς μενόντων, (15) τῶν δὲ ὡς κινουμένων - ἢ γὰρ ὕλη τὸ κινούμενον, αὐτῆς δὲ οὐδὲν κινούμενον - ἢ ἐκεῖνο οὐκ ἔσται τὸ κινοῦν πρῶτως, οὐδὲ ἡ φύσις τοῦτο, ἀλλὰ τὸ ἀκίνητον τὸ ἐν τῷ ὄλῳ. ὁ μὲν δὲ λόγος, φαίη ἄν τις, ἀκίνητος, αὕτη δὲ ἄλλη παρὰ τὸν λόγον καὶ κινούμενη. (20) ἀλλ' εἰ μὲν πᾶσαν φήσουσι, καὶ ὁ λόγος - εἰ δὲ τι αὐτῆς ἀκίνητον, τοῦτο καὶ ὁ λόγος. (*Enn.* III.8.2, 1-22).

Plotinus does not deny completely, however, that there are similarities between craftsmanship and nature's work. In both cases there must be and there is something stable (δεῖ τι ἐν αὐτοῖς μένειν, 2.12). The question is what is stable in nature, and furthermore, how nature produces, if not like a craftsman. Plotinus claims that nature does not move at all, does not actually do anything; for nature is nothing but form (*eidos*)- καὶ γὰρ εἶδος αὐτὴν δεῖ εἶναι καὶ οὐκ ἐξ ὕλης καὶ εἴδους (I. 22).

One question here is how we should understand the claim that nature is form. Another is how nature operates in that capacity. And a third question is how *eidos* relates to *logos*, which is also unmoved and mentioned in this connection. For nature below (in I. 28) is described as *logos* too.

Let me start with the last question. *Logos* is a principle that accounts for something being informed in a certain way. Plotinus claims that matter becomes informed by *logos*. Fire, for instance, is informed by a certain *logos*, a certain forming principle, that accounts for the distinct properties of fire (οὐ γὰρ πῦρ δεῖ προσελθεῖν, ἵνα πῦρ ἢ ὕλη γένηται, ἀλλὰ λόγον; 2.25-26). Plotinus describes this with the term λογωθεῖσα. The passive participle is intriguing here. Matter becomes of a certain kind, *eidos*, by receiving the relevant *logos*. This is, we are told, what happens also in the coming into being of animals and plants. Later on, in chapter 7, (7.18-20), Plotinus claims that when animals give birth, it is the *logoi* that produce this or the other part of the animal that comes to be (καὶ ὅταν τὰ ζῶα γεννᾶ, οἱ λόγοι ἐνδον ὄντες κινουῦσι, καὶ ἔστιν ἐνέργεια θεωρίας τοῦτου). The idea, an Aristotelian one, I take to be the following. It is a certain *logos* that accounts for the specific production and shaping of matter, namely of man or of elephant, and of its individual parts, man's or elephant's legs. Nature is both an *eidos* and a *logos*, namely form and forming principle. Fire is both form and forming principle, man is both form and

forming principle. Nature is a form, but in its productive activity it operates as a forming principle, such that it informs matter, which thus becomes of a certain kind, that is, it acquires properties, which otherwise does not have. For Plotinus, we need to remember, matter is nothing but what can be informed (*Ennead* II.4.4.7).

The question now is how nature operates as a forming principle of matter and how *theôria* is an important part of this activity. Plotinus spells out this *aporia* in paragraph 3 and then comes to an interesting suggestion. Nature, he says, does not do anything in particular in order to bring things about; rather, this happens because of her mere presence, because of the way she is, because of her being.<sup>8</sup> The being of nature suffices for her productive activity. This in way confirms that nature operates as *eidōs*; for an *eidōs* does not do something in order to produce something else, but rather this happens because of its mere presence, because of its being. The *eidōs* of man does not do anything when humans produce an offspring, but it is the *eidōs* that accounts for the kind of offspring they produce. But if this is so, then the analogy between nature and the craftsmen loses more of its weight; for nature, we are told, unlike craftsmen, does not do anything at all; it creates by virtue of its mere being. But if nature creates by its being alone, then the question is what the role of *theôria* in the creation caused by nature is.

Plotinus sets out to explain this in paragraph 4. In a rare display of literary abilities, Plotinus personifies nature. Nature comes out as a speaker and gives a short speech, in which she explains what its role is (*Ennead* III.8.4.1-22). Nature says that she engages in *theôria* in the way mathematicians do when they draw geometrical

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<sup>8</sup> τὸ οὖν εἶναι αὐτῆ ὅ ἐστι τοῦτό ἐστι τὸ ποιεῖν αὐτῆ καὶ ὅσον ἐστὶ τοῦτό ἐστι τὸ ποιοῦν. ἔστι δὲ θεωρία καὶ θεώρημα, λόγος γάρ. τῷ οὖν εἶναι θεωρία καὶ θεώρημα καὶ λόγος τούτῳ καὶ ποιεῖ ἢ ταῦτά ἐστιν. (Making, for it, means being what it is. But it is contemplation and object of contemplation, for it is a rational principle. So by being contemplation and object of contemplation and rational principle, it makes in so far as it is these things. (Armstrong trans.). *Enn.* III.8.3.17-20.

figures on board, for instance, with the only difference that nature does not do any drawing but she brings about things by mere *theôria*. How we should understand the analogy with the mathematicians?

When mathematicians draw, they do that in order to visualize a mathematical/geometrical problem and start working on it. The drawing is only the first part of the procedure. Trained mathematicians, however, hardly need to think about the how they should draw a triangle, say, or any other geometrical figure. What they rather have to think and deliberate about is how to proceed and finally solve a certain geometrical problem. Now one possibility is the following. Nature operates like the mathematicians when they draw geometrical figures in the sense that the latter do not at all think about how they should draw such figures; this is rather received wisdom. They know that from their training, from their manuals, and at any rate when they set out to mathematics they do not have to think particularly about that; they rather perform that automatically, so to speak. Of course, drawing a geometrical figure involves thinking and understanding, but this comes not so much from the agents themselves, the drawing mathematicians, but from the expertise of mathematics as a whole, from what they learned from their teachers etc. The analogy with nature is that nature also creates without thinking or deliberating, but rather applies received wisdom, received models of thinking, when she imposes *logos* in matter, which is what she does, as we have seen earlier.

How we should understand that, however? Plotinus does not explain and we need to squeeze his text in order to make some progress on this front. Plotinus suggests that the received wisdom that nature applies to the natural world in the way the mathematicians apply mathematical wisdom when they draw geometrical figures comes from higher thinking principles, namely first of all from the soul (*Enn.*

III.8.4.15f.) and later on, in chapter 8 Plotinus brings up the role of the intellect, on which the soul depends. There is a chain of principles engaged in *theôria* that generate or transmit *theôria* further. Plotinus, following Plato, maintains that cosmic order and everything in it indicates the causal agency of a thinking intellect, that has thought carefully about everything in the world, that is, what is best for every single thing, e.g. plant or animal, so as to live a good life and also about the world as a whole, i.e. how the world can be a coherent, harmonious unity. It is such an intellect, according to Plato in the *Timaeus*, who has designed the body of both the world and of human beings, and this is the view that Plotinus also endorses. But how does the work or the *theôria* of such a causal agent, such as an intellect, relates ultimately to nature? Why is not nature an intellect?

Plotinus uses another analogy, which also requires interpretation. He compares the role of the intellect and the role of nature in creation with that of a craftsman who builds a ship, for instance, and another who builds a toy-ship for children respectively (*Enn.* III.8.1-9).<sup>9</sup> The latter does not only rely on the craft of the former, but s/he should not even entirely understand how a ship functions or operates. The craftsmanship of a toy ship is dependent on that of a ship and not vice versa, for only the latter is a ship strictly speaking and not the former. In the same sense nature takes over wisdom or *theôria* from elsewhere and applies it to the natural world. And in this

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<sup>9</sup> Ἀλλὰ περὶ μὲν φύσεως εἰπόντες ὃν τρόπον θεωρία ἢ γένεσις, ἐπὶ τὴν ψυχὴν τὴν πρὸ ταύτης ἐλθόντες λέγωμεν, ὡς ἡ ταύτης θεωρία καὶ τὸ φιλομαθὲς καὶ τὸ ζητητικὸν καὶ ἡ ἐξ ὧν ἐγνώκει ὧδις καὶ τὸ πλήρες πεποίηκεν αὐτὴν θεώρημα πᾶν γενομένην ἄλλο θεώρημα ποιῆσαι· οἷον ἡ τέχνη ποιεῖ· ὅταν ἐκάστη πλήρης ᾖ, ἄλλην οἷαν μικρὰν τέχνην ποιεῖ ἐν παιγνίῳ ἵνδαλμα ἔχοντι ἀπάντων· ἄλλως μέντοι ταῦτα ὡσπερ ἄμυδρά καὶ οὐ δυνάμενα βοηθεῖν ἑαυτοῖς θεάματα καὶ θεωρήματα τὸ πρῶτον. (But, now that we have said, in speaking of nature, in what way coming into being is contemplation, we must go on to the soul prior to nature and say how its contemplation, its love of learning and spirit of inquiry, its birth-pangs from the knowledge it attains and its fullness, make it, when it has itself become all vision, produce another vision; it is like the way in which art produces; when a particular art is complete, it produces a kind of another little art in a toy which possesses a trace of everything in it. But all the same, these visions, these objects of contemplation, are dim and helpless sorts of things. (Armstrong trans.).

sense nature is an image of knowledge or wisdom that stems from elsewhere and is thus dependent, not autonomous.<sup>10</sup>

But the question why this must be so remains. Plotinus does not explain, does not give reasons why this must be the case and not the way Aristotle and the Stoics maintain. I will try to reconstruct an answer.

Take, for instance, the work that nature does in our body. Our lungs or kidneys, for instance, work in a very logical way. We figure that out when we study their functioning and especially when we need to imitate them, when for instance need to build artificial kidneys for patients suffering from chronic kidney disease. The medical machines we create aim to imitate the work of the kidneys. We need a huge amount of medical and other expertise in order to figure that out how to build such machines. That does not mean, however, that our kidneys or the nature behind them understand or know in whatever sense what they do when we build such machines. They clearly do not. Yet kidneys and lungs do have cognition abilities, for they distinguish, for instance, healthy from unhealthy bodies or substances, but they are not aware of the job they do. They do not have self-perception, or consciousness, as is the case with nature, as Plotinus says in chapter. What kidneys or lungs do, however, is highly intelligent, highly logical, and highly beneficial for us. Yet, the intelligence, logic, and beneficence with which they operate, is not theirs, but comes from somewhere else, or at least this is what Plotinus suggests. For they do not know what they do, they simply do without knowing.

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<sup>10</sup> Cf. ἵνδαλμα γὰρ φρονήσεως ἡ φύσις καὶ ψυχῆς ἔσχατον ὄν ἔσχατον καὶ τὸν ἐν αὐτῇ ἐλλαμπόμενον λόγον ἔχει, οἷον εἰ ἐν κηρῷ βαθεῖ διικνεῖτο εἰς ἔσχατον ἐπὶ θάτερα ἐν τῇ ἐπιφανείᾳ τύπος, ἐναργοῦς μὲν ὄντος τοῦ ἄνω, ἴχνους δὲ ἀσθενοῦς ὄντος τοῦ κάτω. ὅθεν οὐδὲ οἶδε, μόνον δὲ ποιεῖ. (For nature is an image of reason; nature is a being stemming last by the soul and thus has also the last part of its shining forming power, as happens in wax that a shape goes so deep that comes out at the other end, but in that only a dim trace comes about. For nature does not know, but only makes. *Enn.* IV.4.13.2-8).

But why do we need to presuppose such knowledge or awareness or consciousness so to speak? Why is all that necessary at a level prior to nature, on which nature draws? I do not see Plotinus answering that. But one possible answer is that the role that nature plays, when we focus on the work of our kidneys or our lungs, for instance, is understandable only by an intellect, such as our own, or, more especially, that of scientists. This procedure not only is understandable by an intellect but can be repeated by an intellect. It is only an intellect that can design a machine that can imitate the nature of such bodily parts. The machines are not intelligent strictly speaking but only to the extent that they perform what they have been programmed to. But this is not intelligence. For according to Plotinus the aim and objective of their work has been thought up by an intellect, it is not made up by the machine. Similarly with nature; nature *is not thinking* about what she does, or for the aim of what she does, in the same way that a life support machine or an artificial heart does not understand what it does. But what nature does certainly *involves thinking*, as also is the case with the life support machine. And according to Plotinus nature reflects thinking, which is the case with such a machine too. It is for this reason that Plotinus argues that the *theôria* of nature is an image, a reflection, an *eidôlon* (4.29-30), of another *theôria*, that of the soul, which relies on the *theôria* of the intellect (see *Enn.* IV.4.13.2-8 cited in n. 10). The analogy with an intelligent or a smart machine, as we say, is fitting because such a machine does something intelligent because an intellect provided it with the intelligence it has, which the machine uses but is not its own work.

This does need to be spelled out further, however. Plotinus apparently relies on the assumption that a lower kind of knowledge, such as knowledge without self-awareness, necessarily presupposes a higher knowledge, which involves self-

awareness. This epistemological postulate, I believe, plays an important role as argument for the ontological hierarchy of principles that we find outlined in *Ennead* III.8. What is the argument for such a epistemological postulate and hierarchy, however?

I can discern an empirical and a historical line of thought in the background. The empirical is that in our everyday life, we distinguish between a scientist and a mere technician so to speak according to the degree of understanding and also self-awareness of the knowledge that they have and operate with. And we find similar arguments about the epistemological status of *technê* in Plato, of course, (e.g. in *Gorgias*, or in *Republic* I) in which *technê* or *epistêmê* involves not just knowledge of the causes but also commitment to the right application of the knowledge for the good, which again presupposes self-awareness of the kind of knowledge that is at play. When there is no such higher knowledge and the necessary self-awareness, this has consequences. All kinds of mistakes can occur. And this is what happens with nature.

Nature operates with knowledge that aims at the good, but its diminished kind of *theôria*, that is, knowledge and awareness, can lead to mistakes. And indeed nature makes mistakes, as we know. This is probably what Plotinus implies when he claims that nature's weaker *theôria* accounts for weaker objects produced by it (*theorêmata*; ch. 4.31). The mistakes of nature are mistakes of mistaken application of the correct knowledge on which she draws. Nature sets out to create an eye and has the knowledge to do that, but at the end an eye with short sight comes about for some reason. We can help nature to amend the problem by using medical expertise, and indeed nature can adopt the improvement we impose and co-operate, which means that nature adopts knowledge and further applies it but does all that without awareness

and understanding. The mere fact that we understand the problem as a problem and figure out ways to fix it, supports further the view that there is knowledge superior to that of nature, namely intellectual knowledge, knowledge of an intellect. For the knowledge of medical scientist is like that of the intellect of Plotinus, geared towards the good. It is on such grounds, I believe, that Plotinus places nature at the end of his hierarchy of principles.

On Plotinus' view, then, nature is the last principle that engages in *theôria*, which by now I have defined as knowledge and understanding, from principles that are higher than nature on the grounds that they have higher degrees of knowledge and understanding than nature. And higher degrees of knowledge amount also to higher commitment to the good. The natural world is, however, for Plotinus nothing but a world of *theôria*, knowledge und understanding applied on matter. As Plotinus says, things of the world are *theôremata*, products of *theôria*. This is an innovative way in which Plotinus uses the term *theôrema*, which traditionally means "object of vision, of observation" or "rule or axiom of an art", for instance of mathematics. The term due to its ending in *-ma* signifies a finished product. As such a product qualifies anything in the natural world, plants and animals, the sea and mountains, in so far they are products of *theôria*, of the *theôria* of nature. All these products are products of inferior *theôria*, that of nature, and for this reason they are perishable, they bear faulty features etc.

But it is important that Plotinus understands the natural world and all natural entities as products of *theôria* and expresses this also grammatically, so to speak. Natural entities are *theoremata*, products of *theôria*, which derives ultimately from intellectual principles. When we are to account for natural causation, such as the coming about of an apple from an apple tree, of a human embryo, of a new plant etc.,

we need to know, Plotinus suggests, that this is the result of the application of knowledge in matter. The fact that *logoi* operate in matter is evidence of such knowledge. And according to Plotinus, *logoi* cannot but derive ultimately from an intellect or an intellectual entity. In this sense the natural world is nothing other than a world of *logoi*, a world of intellectual activity, that is, thought. <sup>11</sup>

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<sup>11</sup> Cf. *Ennead* V.3.[49] 5, 30-44, ἡ μὲν γὰρ νόησις οἶον περιέξει τὸ νοητόν, ἢ ταῦτόν τῳ νοητῳ ἔσται, οὔπω δὲ ὁ νοῦς δηλὸς ἑαυτὸν νοῶν. ἀλλ' εἰ ἡ νόησις καὶ τὸ νοητόν ταῦτόν - ἐνέργεια γὰρ τις τὸ νοητόν.