Zdeněk Kratochvíl

The Philosophy of Living Nature

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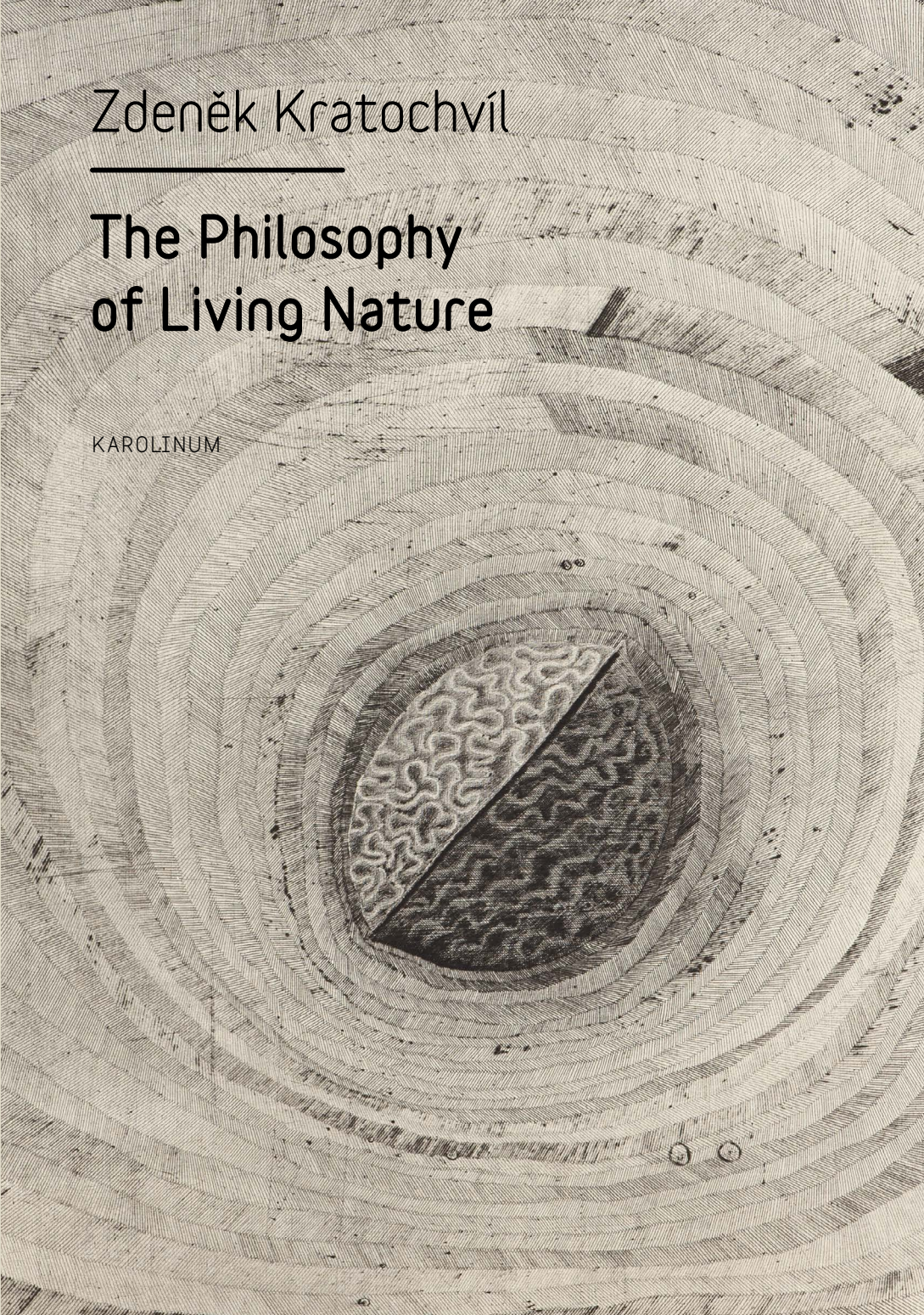

The Philosophy of Living Nature

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1. The philosophical concept of nature—*physis*. The traditionally problematic quality of natural philosophy. The decline and resurgence of a sense for *physis*

Our aim is to think about nature philosophically. Thinking philosophically means thinking for wisdom, and not for a particular end. For the European conception of philosophy it also means developing a conceptual language. How can conceptual language contribute to wisdom? Only by gradually revealing that which is shown to be properly thinkable. In European philosophy we call this revelation of the thinkable "truth," originally the Greek *aletheia*, that is, the situation when *lethe* (concealing, forgetting) is not omnipotent because it yields to thought. But are living nature and the natural so entirely transparent to thought—at least to thought that strives after wisdom? Can the experience of nature and natural experience be translated into a conceptual system of true statements? The scope of this question will only gradually become clear to us. Often we will have to be less ambitious, and instead of searching for and investigating the truth of nature, we'll have to search for and investigate the relationship between natural experience and conceptual knowledge. Our allegedly "natural" experience is always already somehow pre-formed by some structure of thought, thanks to which we perceive the experience in a certain way and can express it in words. But is a conceptual disclosure of truth the only route that a rationally ordered discussion can take when it leads its battle for sense in the name of wisdom?

In everyday speech we believe that we know what we mean when we use the words "nature" and "natural." In the most informal sense of the word, nature is what we see around us when we take a daytrip beyond

the city boundaries. It may have been despoiled, but it's still green in places. Everything unnatural is damaging to nature—everything technological, and this harms us as well (our nature) although we are willing to go about our daily work in the frame of such technology because of its results. For this reason it is often said that we are estranged from nature. Are we then estranged even from our own nature? And what kind of nature is that? Could correct hygiene (that is, different technology) help remedy our inner nature, just as ecological activities (again different technology) can remedy damaged nature outside?

We also have an array of sciences about nature: from physics and astronomy, through geology and chemistry to biology. Each of these sciences possesses a wide-ranging conceptual apparatus for describing a large experimental experience of certain properties of something in nature. Each of them describes a different side of nature, looks for a functional model of different classes of phenomena. Notably physics (the most general), astronomy (the most holistic and oldest, the most "cosmic"), and biology (penetrating into the most "natural," into the secret of life) all exist in a traditional symbiosis (or strife) with philosophy. Aren't we too bold, then, in wanting to philosophize about something, around which there are so many, so well established sciences? We are too used to the idea that philosophy thrives wherever there is a lack of knowledge. But even this idea holds some water, for traditionally philosophy grew from wonder, including wonder at the as yet unknown. Nevertheless, reasonable philosophers tend to have respect for the natural sciences; they stress that the concern of philosophy is *being* itself and that the perspective of philosophic exploration is essence *per se* and not a particular view of it. This is already stated in the customary definition (Aristotle's) of "first philosophy," ontology (of being *qua* being). Here lies the secret of philosophy; philosophy is inherently undisturbed by any science on the same subject, if only because what it concerns itself with is not a mere subject. Should the philosopher not then rather ask the physicist what he knows of *physis*; the astronomer what the cosmos is; the chemist what matter is; the biologist what life is, and then to generalize it to the highest degree and thus create the philosophy of nature? We regard attempts undertaken in this direction as so formidable, that it would be unfair to cite them.

Scientists really do know a lot, but what they know usually differs slightly from what interests the common man, and differs yet more from what is aimed at by the philosophical question. The question regarding the natural is a philosophical one. It is, in fact, one of the oldest

philosophical questions. It's at least as old, if not older than the word "philosophy" itself. The writings of the fifth and sixth century BC. Greek sages—the works of the pre-Socratics—tend on the whole to be given the same title by the authors of later antiquity: *Peri physeos*, *On Nature*. The starting points of philosophy are slowly established with these thinkers, and their fragmentary writings testify to a great attempt at thinking about nature. This attempt can be labeled as the widest-ranging protophilosophy, one in many ways far more substantial than the later systems of the metaphysical schools. It is precisely the unrepeatability of Anaximander's, Heraclitus', Empedocles', and Anaxagoras' cogitations that has prevented us from appropriating the title given to them, *Peri physeos*. But what happened to nature and the natural after we first rejected it as beneath us (during the Middle Ages), and then tried to press-gang it into our service, refashioning it in the image of our needs?

For the purposes of orientation, let us begin our return with an exploration of the meanings of words. Although etymology itself is not a source of philosophical knowledge—merely reflecting human linguistic traditions, it can alert us to certain connections, the relevance of which it will then become necessary to explore. Thus, the Czech word for "nature" ["*příroda*"] is allegedly very old, originally denoting "what was added by birth, the co-growth" ["*co se přirodilo, přírůstek*"] and later also "what comes to be without the interference of humankind" ["*co vzniká bez zásahu člověka*"]. Thus the natural is that which goes with birth, what belongs "to nature" and not in the sphere of the man-made or thought-up. Should we wish to abandon our dependence solely on our mother tongue, we can help ourselves with a detour through the mother tongue of philosophy, via the Greek word *physis*.

Physis is one of the oldest words in Greek. The first usage appears already in Homer, at least if the instance in question (*Odyssey* 10.303) is genuine. It would seem therefore, that *with physis* we are dealing with a pre-philosophic word. It is the post-verbal of the verb *phyomai*, which in this middle voice means "I am born." Thus *physis* is the "innate nature" of a thing. (Renaissance Czech translated *physis* yet more directly as "*přirození*" ["with birthing"], that is, until this Old Czech word became a euphemism for the sexual organs. But even then, the semantic shift still stressed a particular connotation of *physis*: a sign of nature is fertility, and *physis* points towards intimacy, spontaneity, and the power of transience.) In the Homeric epics and elsewhere, however, we usually meet *physis* in its verbal forms, alongside *phyomai* also the active *phyo*: "I give birth, I grow, I flower." In this way, of course, the word

physis takes on many further meanings as well (similarly to the later *phye*, a different derivation of the same word): "growth," "likeness," "aspect," "essence," or "living being." Generally then, it connects on the one hand to origins and the embryonic, and on the other to the act of distinguishing according to appearance. Surprisingly, even for the ancient Greeks, *physis* was the opposite of the city and its built-up surroundings, albeit differently than it is for us. *Physis* is "wild," rugged, "virgin nature," which wakes dread even in the midst of her beauty. It is the preserve of the goddess Artemis, the harsh maiden, beautiful provider and hunter of all that is natural, unmade and untamed. Artemis is the godly dimension of *physis*.

Indo-European linguistic associations can point yet further into the past. The Indo-European *bhu-* corresponds to the Greek root "*phy-*". And often accompanying this root in Indo-European languages are significations that range between being and plants. Consider for example the Vedic *bhuti*, "strength, success, riches"; in Czech "*býti*" ["to be"], in Greek *phyton* (perhaps *puta* in Mycenaean), meaning "plant." What is concerned is a relation to the power of being, which is perceived either vegetatively or generatively.

Another important point for the history of ideas was the Latin translation of the Greek expression *physis* using the word *natura*, or "that which belongs to birthing; has been born; moves towards birth." For a long time this word preserved the semantic range of the Greek expression *physis*. (The Old Czech translation as "*přirození*" provides evidence of this, for in the Czech conversational borrowing of the word *natura*, we read correctly another meaning present in the Greek *physis*: "disposition, constitution, the character of a living being.") Despite these facts, there is one essential, albeit indirect, difference between the Latin word *natura* and the Greek word *physis*. It results from later Latin opposing the adjective *naturalis* with the word *supernaturalis*—"above nature, supernatural." This concept was often used by Latin speaking Christians, yet for reasons other than merely linguistic ones, it is possible to conclude that it comprises not so much a basic concern of the Christian faith, but rather something that was missing from the Latin conception of the natural. This is because Greek Christianity knows no superior annex to what is natural. Despite its notable historic import, we will not dedicate ourselves to the opposition of the supernatural and the natural here, regarding it rather as a specific of Latin culture. Instead we will use the words "natural" or "innate," and "nature" in their original Greek sense, which, regardless of religious persuasion, does not allow the use of the

prefix "super-," since *physis* used in this sense envelopes even the sacral dimension.

Philosophizing about *physis* is thus an attempt to contemplate the natural, nature, growth, the character of a living being, spontaneity, and the vegetative and generative power of being. It is an attempt at a way of thinking, which touches on everything that comes to be and passes away, everything changeable—that is, on everything that acts out its own living character precisely by its continual flux, and looks for a form that is its own. It is an attempt at thinking about the relations between being and every individual entity that has heretofore emerged or grown up (and hence also its non being). Thus, as expressed by Martin Heidegger, it is an attempt at considering "ontological difference." Such a mode of thinking is, of course, nothing new, and we might ask why, after twenty-six centuries, we can't simply resume with the basic results of the thinker's work? Why can't we straightforwardly refer ourselves to the tradition of "natural philosophy" and continue in it? Why? Because this tradition has enormous discontinuities, and mainly because "natural philosophy" has gained a bad reputation.

In early antiquity, natural philosophy (albeit this term is anachronistic here as it was introduced only at a later date) was, apart from the Eleatic school, almost the only kind of philosophically directed thought. These initial attempts at a particular type of thought were first seriously called into question (leaving aside Parmenides for a moment) by the enlightened generation of early classical Greek sophists. Their thought was aimed at human concerns, towards what was going on in homes and in town squares, at courts and at the assembly. This is not the domain of *physis* but rather the domain of customs, agreements, deals and arguments, of everything the Greeks called *nomo* (dative sg. from *nomos*). Human society is run, and functions, thanks to that which is *nomo*, i.e., thanks to everything that follows from custom, agreement and law, which is thus given. All this can be expressed unambiguously, and so it's also possible to argue about it logically. We can reliably express it and argue about it because, in a sense, it's in our power as immobile. Custom, agreement, and law may well change, but we can talk of them, particularly of agreement and of law, as if they were, for the period of their application, immobile. This possibility arises in the very formulation and origin of an agreement or law. It is an "act of speech" and not a birth or a growth. (Albeit that from a less formal viewpoint even law can share the destiny of everything natural: to be an expression of being, to change itself even with mere interpretation, to pass away.) With the

sophists, then, the realm of that which is *nomo* was disclosed as opposite to everything that is *physei*, that is, to everything that comes "from nature," that grows, dies, or changes itself without us having to touch it, and often without us even being able to know about it. The realm of laws and agreements was distinct, and one could therefore consider it precisely, describe it, and pass judgment on it, whereas the realm of nature and the natural appeared as wholly uncertain and of little interest. What the sophists represent, therefore, is a first model for the later division of thought (sciences) into the natural, and the social or humanitarian—the latter of which were placed first at that time because of the benefits of knowledge related to human concerns.

Xenophon's references to Socrates are particularly resonant here. According to Xenophon, Socrates criticized the study of nature, the cosmos, and the gods as being unreliable, and for this reason put the exploration of human questions first. Socrates asks, for example, "whether, just as those who study human nature expect to achieve some result from their studies for the benefit of themselves or of some other selected person, so these students of divine matters expect that, when they have discovered the laws that govern various phenomena, they will produce at will winds and rain and changes of season or any other desired effect [?]" "He himself" explains Xenophon, "always discussed human matters, trying to find out the nature of piety and impiety, honour and dishonour, right and wrong . . ."[1]

Although, unlike the sophists, Socrates' heirs would return to questions of nature and the natural, they did so within the frame of metaphysical philosophy. This philosophy places so much faith in the clarity of truth and the surety of identity, that it sees everything mobile as necessarily lower than the static. In this frame, of course, it is possible to think of *physis* only with difficulty. The loss of understanding for natural philosophy and the complete semiotic transformation of many of its connected expressions can be seen, for example, in Aristotle's term *physiologoi*: "physiologists." This term originally applied to the pre-Socratics in the sense of a "student of nature," but it now means something wholly different. If this were a study of the historical dimension of the philosophy of nature, then we would now turn to an interpretation of Aristotle's *Physics*, and particularly the *Physics* of Chrysippus, that is, to the natural philosophy of the Greek stoics. This shift in meaning was all

1 Xenophon, *Conversations of Socrates, Memoirs of Socrates* (London: Penguin, 1990), 71 (1.1.8–16).

the more noticeable in Latinate philosophy because Latin speakers tied on to the Greek sophists in many ways through their pragmatism and formalism, and it was the later Latin speaking Christians that dedicated themselves to "supernatural" concerns. With the single exception, perhaps, of Lucretius Carus, *Physis* is neglected by both Latin pre-Christian and Christian thought.

It was only the syncretism of late antiquity that saw a renewal of natural philosophy in the context of a more general renewal of different kinds of thought. The thinkers close to Hermetism (Poseidonius c. 100 BC) and the writings themselves of the Greek Hermetic corpus testify to this renewal. But with this development, natural philosophy stepped gradually into the sphere of mysterious religiosity, of gnoses and the occult schools, such as alchemy (Zosimus) for example. It became part of an undercurrent, later fed by both Christian and heterodox mysticism. We find it surfacing in the writings of certain Greek ecclesiastical fathers, Latin mystics, and ostensible heretics. Notably, a school of natural philosophy appeared in Chartres in the twelfth century and one at Oxford in the thirteenth. And in this way, it came to see, as part of the Hermetic disciplines of the Renaissance, a new epoch that was interested in everything old and seen from a new perspective, and especially in those things which were obscure.

Among the most philosophical fruits of Renaissance natural philosophy were Ficino's Latin translations of the Hermetic writings. Apart from these, natural philosophy lived also as part of alchemy and astrology. Even the one aspect of Renaissance thought that survived into modernity and defined it—nascent modern science—was often inspired by natural philosophy in many areas of its emergence. On the whole, this inspiration was Pythagorean.

At that time, Pythagorean natural philosophy and Pythagorean science already represented two thousand years of controversy, of opposition to the flow of the rest of philosophy and science. While the rest of natural philosophy was content to be self-contained and not inform the sciences and the polis, Pythagorean thought always aimed directly for philosophy's inherency in biology and politics. So for example, Pythagorean heliocentrism was the result of mystical intuition and the considerations of natural philosophy, not the result of astronomical measurements and calculations. As such, the Alexandrine astronomers would dismiss it from a scientific perspective (Hipparchus), for it did not agree with their observed phenomena. In the late Renaissance, Pythagorean inspiration sought laboriously for its own scientific likeness. Where

it did not succeed, it was labeled with the charge of occult obscurantism. (Incidentally, already the archaic Heraclitus protested against the peculiar belligerence of Pythagorean thought.)

Modernity, which began fully only after the formulation of the term "natural law" (by Descartes and his circle) and only after Descartes's separation of soul from bodily things and identification of subject with ego, became badly inclined towards natural philosophy. Natural philosophy represented a dubious relic, hard to classify anywhere, except at best perhaps as charlatanism. After all, even nature was now subject to a "law"! Traditional German philosophy (Schelling), Goethe's spirit-based science, and the philosophically oriented romantic poets in the forefront with Novalis did still attempt a fundamental resuscitation of natural philosophy. But, all of this flowed more readily into theosophy or anthroposophy than into university philosophy, or academic science.

In a newly set-up university lecture course on the philosophy of nature, this sketch of the history of natural philosophy can be distinctly off-putting. It is no accident that in the German speaking sphere, it's often said disdainfully of any pleasing creation of the spirit, that it's some sort of "Naturphilosophie," meaning that it's something unreliable: neither philosophy nor science. It is for this reason also that our title is more cautious. Does this mean then, that we can lean on nothing from the past tradition other than the unquestionable greats such as Anaximander, Anaximenes, Heraclitus, Empedocles and Anaxagoras?

The majority of these ancient thinkers began with natural philosophy in the context of their diverse "investigations" (*historia*), in particular their explorations regarding nature. Can we not then also help ourselves now by using the context of contemporary enquiries made by natural sciences? Can't we utilize the experiences of our current natural sciences? Not so much their results (especially not by generalizing them), but more their heuristics and inner difficulties, their limits and new ideas? Most probably we can, but such a philosophy, showing the relevance of something in science, can only be carried out by someone with a better inside experience of science. In addition, we have, in the 20th century, a hugely expanded philosophy of science in both epistemological and cognitive conceptions, but no-one so far has managed to bring this into a connection with anything experientially natural and simultaneously philosophical; with nature or natural thought.

We will, then, remain on philosophical ground. We can accept help from those philosophers who have shown the deficiency of the modern understanding of nature and the natural in the 20th century: Husserl's

phenomenological critique of modern science; Kuhn's structuralist criticism; Heidegger's existential conception of science. And we will regard Patočka's attempt at searching for the "natural world" as the direct precursor of our explorations.

Something has happened to our European humanity. Apart from anything else, we have covered up our own nature and that of others. The natural world now poses an extremely difficult philosophical problem for us. We can clearly see what has happened in the devastated external nature around us. There, it is evident even to those who do not particularly wish to see, or cannot see. We regard it, however, as just one aspect of what we have done to nature, to every form of nature, even for instance to the nature of our own thinking. For our thoughts are equally susceptible, not to mention our feelings. Our main aim is not so much to find a culprit, be it the Latin conception of Christianity, modern science, technology, politics or advertising. Let others solve this ethical problem. Rather, the goal of these enquiries is a philosophical critique of this state, that is, a reasoned understanding and not a judgment—and foremost an attempt at a philosophical contribution towards its repair, not a methodical directive.

What we Europeans (and then everyone else) have committed, was once aptly termed by Zdeněk Neubauer as "the denaturing of *physis*." What this oxymoron suggests is that everything apparently still works for us; denatured matter has only that capacity which we demand of it, and thus work with it is much more secure; but nature and the natural (*natura*) have been sequestered from themselves, from their inner life and spontaneity. Let us hope that the process is not complete and without vestige, at least as regards our thinking. Let's hope that *physis* itself is more powerful than every denaturant.

Novalis championed a similar insight much earlier in a vivid anecdote known to us here through the mediation of Emanuel Rádl, the founder of the Department of Philosophy in the Natural Sciences Faculty at the Charles University:

Allegedly, bodies for the first public autopsies were provided by the hangman, who carefully drowned a chosen convict. The story tells of how, during one such autopsy, an insufficiently carefully drowned convict wakes up and opens his eyes. A wave of panic sweeps across the town square. This horrific scene can be used as an analogy: we dissect not only convicts, but almost everything on earth. We dissect the earth, which we have drowned so carefully that nobody notices it. What terror awaits us then, when the poorly drowned world awakes, what will we

read in its face? And what terror awaits, should the world indeed be well drowned?

In order to escape from such strongly romantic gestures, we will, rather than talking of a drowned world, discuss a loss of a sense for *physis*. Doing so is simply more convenient, and no less terrifying. Consider, for instance, that it's possible to make robots even from people relatively easily and serially, through basic education, or ideology or fashion; out of animals and plants it's possible to create the pieces of an agricultural production cycle by a new form of domestication—domestication to the image of the person who has already domesticated himself; and from the rest of the world it's possible to make a storehouse of materials and energy, and a dump. Still, talking about having lost a sense for *physis* not only brings some hope, but it is also in agreement with the ancient image of *physis* as something that grows out of an abyss into which no instrument can reach; from a boundlessness which no tricks can exhaust.

Losing one's sense for *physis* does not necessarily testify to some form of willfulness. A sense for *physis* is somehow lost when we do nothing other than simply follow our quotidian worries and contingent needs for too long, when, in the words of Plato and Patočka, we do not tend to our souls. In the words of Heidegger: when we do not present ourselves to the emerging field of *Dasein* as existences. Sometimes we lose our sense for *physis* ourselves, at least for a little while, out of sensible and respectable reasons such as a fear of the depth of its abyss, of its spontaneity, of its finitude that points us towards death. We fear all of these things. And indeed, it is not wise to play around with these forces. We forget however, that with every fear-driven loss of a sense for the natural our nature is also completely and continually lost. All the more when, running away from the dangers of *physis* we take refuge in the sterile isolation of the safety and comfort of the everyday. Spontaneity that has been thus lost then expresses itself uncontrollably and in spite of calculations. In this way Patočka explains the destructive explosion of nationalism and the wars of the twentieth century. It is only perhaps through such an overlooking and undervaluing of matter that it's possible to explain the rise of modern "materialism," including the enormous enthusiasm surprisingly associated with it.

Thus, in further enquiries we will attempt to rediscover our sense for *physis*. We will draw on our own natural experiences; on the oldest natural philosophy; on phenomenological, structuralist, and poststructuralist analyses of the modern natural sciences within contemporary philosophy.

What we will not do:

We won't form scientific hypotheses, as the Pythagoreans did.

We won't advise the scientists how they should practice science, as certain methodologists do.

We hopefully won't confuse the criticism of science with the damnation of science, as did certain natural philosophers of late modernity.

We won't rely on science in philosophy; only thus can it be philosophical thinking, beneficial to scientists as well.

2. Individual nature. *Physis*. A thing as a grasping of *physis*. The subsoil of phenomena and things. The constitution of things. Things in the world. Things and matter, space, time. Knowledge and reduction. Exemplary entities

Physis is everything that passes through a process of birth and death, coming to be and passing away. Nature includes also its relations, its context. Nature hides itself in its relations to other natures. Across these it relates to the whole, to the connectedness of everything—and it's precisely thereby that nature is natural. It is true on the level of *physis* that "everything depends upon everything else." Although a sentence like this is full of emotive charge expressing a relation to being, it does not convey any information; by itself it means no more that the sentence "nothing does not depend on anything," at least as long as we cannot show "how" and hopefully "in what direction chiefly" this "everything depends on everything" takes place. And so, before we advance to further enquiries, we will attempt to define more precisely the meaning of the word *physis* by referring to one of the thinkers who first brought it under consideration, one who did so straight away in a remarkable fashion: Heraclitus of Ephesus. We will, then, attempt to hold onto this Heraclitus' definition of the word *physis*, despite the fact that what it will signify each time is constantly changing.

Heraclitus' fragment B1 is framed by an exposition of the difference between our human lot of incomprehension and the work of the philosopher. This difference is determined firstly in relation to essential language and secondly in relation to *physis*. It's the second of these approaches that will interest us here.

As uncomprehending beings, our everyday human fate is compared to sleep: ". . . men are oblivious of what they do awake, just as they