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Nature After Nature, or Naturephilosophical Futurism[1]

Abstract: This paper interprets Schelling's "Weltgesetz" as a manifesto for philosophical futurism. As the Law of the World, the *Weltgesetz* is neither imposed upon nor summative of a world. Rather, as both systematic and open-ended, it cannot be satisfied by any one state of any given world, but only, on a principle of radical non-exclusion, by all. Viewed as such, the quest for an objective ontology is not a quest for the objective furniture of the world. Schelling, instead, favours a first philosophy as ontogeny, or an account of the becoming of being. "World" for Schelling is thus not synonymous either with "planet" nor with "the entire universe." Rather, the term means, in an important sense, that there will be no whole – not even a paradoxical one including itself – because a world was never not what creation will become.

Schelling reports that "world (according to the Old High German term) means a standing, duration, a definite period of time."[2] 'World' on this account is neither synonymous with 'planet' nor with 'whole,' insofar as planets gravitationalize as well as perdure, and because, being local with respect to time so qualifies a Whole, an All, or a One as always to render it instead a part. That is, 'world' means: there is no whole (even including the whole that includes the whole and that which it is part of) that includes a final environment. It is the world turned inside out and the center thus dispersed. Yet Schelling also discusses pre-worldly and post-worldly states, thus augmenting the non-included systems amongst which 'world' figures.

If we ask '*how* does the world so figure?' we may imagine this figuring as the drawing of a line. No line may be drawn that does not create three spaces: this side, that side, and the line itself. For this reason, it is a mistake to think that one line is sufficient to forge a division, which does not occur unless that one line is situated within a pre-delimited space. Were there no such pre-delimited space, the line remains a line, not a division, and becomes one space among (at

1 A version of this paper was first delivered at St. Johns University, Newfoundland, Canada, in August 2013. My thanks to Sean McGrath for the invitation, and to the students and staff of the Philosophy department there for their astute taxing and enthusiastic questions.

2 "*Welt* (*nach dem altdeutschen Worte*) *eine Währung, eine Dauer, eine bestimmte Zeit bedeutet*" (Schelling 1998, p. 15).

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least) three (in non-delimited space, there is no limit to the number of spaces because there is no 'in' in it). Similarly, an occurrence – a world in the above sense – does not arise *in* one time; rather, because it arises, there are three times: pre-worldly, post-worldly and worldly. It is, according to this explication of 'world', geogeny itself that individuates time-systems.

That 'world,' 'pre-world,' and 'post-world' are individual systems does not, I will argue, entail a larger 'meta-world' system these individual systems compose – that is, they are not themselves parts of a larger system such as a continuous 'time' running through them; their existence at all, rather, entails their non-obtaining. My claim is that nature obtains when there is an open-ended number of systems to which their non-obtaining may always be added. Such a view has consequences regarding how the situatedness of abstract entities in nature is conceived, which in turn has consequences regarding how nature is conceived. If, that is, nature is reformulated as a non-exclusive category, then not only is there nothing in particular that nature is, but more importantly, neither is there any thing that nature is not.

1 Nature and Thought

Frege says "there are thoughts" in the full Platonic sense. But where? We know that brains are organs that form the thinking we call ours, and we know that brains occur "naturally." It is not false therefore to state that nature thinks. Firstly, however, nature performs many tasks, very few of which resemble, at first glance, thinking. What is the significance of the claim being made, therefore, when it is said that nature thinks? Might there be a species of naturalism so idealistic as to assert that thinking is in fact all that nature does, even when it *may seem* that nature is "mountaining" or "planetizing?" Yet secondly, what warrants restricting the extension of "thinking" to the thinking I recognize myself and other sapient mammals as having, being, or hosting? The assumption that thought is substrate-independent is effectively a transcendental and a material condition for modelling Artificial Intelligences. The assumption is that the prospect that thinking may occur in environments compositionally and chemically unlike than that in which mine does is a genuine one. Yet surely such a prospect, if it is thus agreed that it is one at all, obtains not only for such environments as experimental engineers might manufacture, but also for others than those supporting a thinking we currently call 'natural'? Such a prospect entails acknowledging that the forms and media for the expression or actuation of thought need not resemble one another, save in one crucial respect: that there be repeatable structure.

To address, as I intend to here, nature *and* thought does not mean that *all* that is thought is *all that nature is*, but rather something like the following: the "nature" that is in thought *is* also the "nature" that is in *nature*, save that if it is true that nature precedes thought – if it is true, that is, that the cosmos is not a late acquisition of thinking, but rather the converse: that thinking is a later acquisition of the cosmos – then the "nature" that is *in* thought is a consequent one, or, as we may call it, a "nature after nature."[3]

Nor does "nature is thought" amount to a judgment that all of nature is or will be thought. Such a judgment, if thought is consequent upon nature, would amount to the elimination of natural history or thought's recovery of initial conditions that never belonged to it but which eventually enabled its existence. Such conditions, whatever they were, would have been the very beginning of nature itself, before there was any thought about it whatsoever and, we might add, therefore before there was any nature – unless, that is, the "not-being" of nature is a necessary element of what nature is.

More simply and more positively, by "nature is thought" I mean: when there is thinking, it is an event *in* nature. What difference this makes and how this situation ('thought is in nature') is to be conceived will be addressed in what follows.

So stated, the alternatives to this view are, it seems to me, untenable. Amongst these alternatives is the claim that 'thought is *not* natural' but belongs to an impersonal and abstract "third realm," a *kōsmos noetōs* or an isolably intellectual world. Such a world could have, in principle, no connection with the world in which it arose.

There are two ways of parsing this dualistic claim: firstly, it could be argued that the difference in kind between thought and nature makes their identity of origin irrelevant. The laws of thought are entirely separable not only from this but from any particular physical-physiological substrate. No matter what is going on brainside, so to speak, thoughts do not obey electromagnetic, but rather logical laws. Since the latter are properly supervenient upon the physical substrate, they are irreducible to it in turn. Therefore *thought is just not natural*. This account, however, mistakes irreducibility for independence, since it is no more the case that thought arises *ex nihilo* than that particular thoughts may be replaced by their causally underpinning brain states without loss of meaning.

3 "'Nature after Nature" was the title of an exhibition at the Friedericianum, Kassel, curated by Susanne Pfeffer in July 2014, and in which I participated. The 2013 Newfoundland version of this paper, however, was called "Nature after Nature," showing that we had arrived at this usage independently and, moreover, that we were both keen to exploit the phrase's ambiguity, since it refers both to imitation and consequence.

Thought may enjoy autonomy with respect to its precursor states, of whatever kind these may be; yet it remains irreversibly and inseparably dependent on such states occurring.

Yet perhaps all this talk of brain states and physical and logical laws mistakes the essential in matters of thought. Thus, the second way of parsing the cosmological dualism between thoughtworlds and thingworlds would begin from the fact that the thought of what a brain, computer, or river bed (I will explain this below) are doing when they are thinking differs in kind from what such entities are in fact doing. That is, the addition of thought is not like the addition of the *n*-th pebble to a cairn, but rather places the events thought about into a context to which they would otherwise have no access. Accordingly, the functions and operations to which thought has access bear no logical relation whatsoever to events of a non-thought kind. Thus, *the nature that is thought is not the nature that is nature*.

Yet why is this meta-physical functionality not precisely part of the natural history of thought? Firstly, nothing will undo the natural historical fact that this is precisely what thought has done. Secondly, surely the account just given remains dependent on the bond thought establishes with the earth, whence it arises if the events thought deems irreplaceably thought-like are to be claimed to be elsewhere undiscoverable. Yet doesn't this contrastive bond disprove what it sets out to prove, namely, that thought operations are irremediably contextually different from other types of operations? For if this were true, no such contrast could be judged or thought to obtain without violating the principle it seeks to establish.

On both accounts, then, it is false that there is a world of stones on the one hand and a world of thoughts on the other. Whatever the *kōsmos noetōs* might be (I have considered it here only according to more or less contemporary paradigms, yet historically it has been treated as the world made by the thoughts of God,[4] a world to which, if God were the world's creator, this world would in fact belong) it is not the case that it amounts to a "second nature" (Kant, McDowell) or "third realm" (Popper) which is *not* a physical cosmos. Because the idea of an "intellectual cosmos" sums this up, and because this phrase *does not occur in Plato*,[5] I call these emergent dualisms "false Platonism;" and there is one further example, weaker than the other two, but nevertheless pervasive.

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4 See Philo of Alexandria (1929).

5 According to both Paul Shorey (in a note to the second volume of his Loeb translation of Plato's *Republic*. Cambridge: Harvard University Press, 1935, p.130*a*) and, more recently, Hermann Krings (in his edition of Schelling's *Timaeus* (1794). Stuttgart-Bad Canstatt: Frommann Holz-

Thought and nature are *opposed*, it may be argued; yet if so, how? What term belongs to the one that cannot belong to the other and yet divides them? How can the absence of matter qualify one species of entity while its presence qualifies another? And would such a division occur *in nature* or *in thought?* If in nature, nature is divided and that's all there is to it. There is a domain called, perhaps, "hyper" or "super" nature, depending on choice, in which entities belong if they have neither place in nor contact with nature. If, by contrast, the division occurs in thought, then does it also occur in nature? If not, then we only *think* that thought and nature are opposed, so that in nature, no such opposition obtains.

I do not want to resolve or reopen the problems of dualism in the philosophy of mind; my purpose is simply to point out that it is more prevalent than we might imagine, even in this "Age of Science" (Putnam 2012), and that it is implicit whenever thought is asserted not to be a natural occurrence. Nor yet have we asserted what it is that nature is – does it consist, for instance, in what the best of our natural sciences tell us it does? Even were this the case, would this exhaust the problem of what nature is, that is, the ontological problem of nature? It is to this that we proceed next.

2 Systematicity and Depth

An ontology in which nature *figures*, that is, the thinking of the being of nature or of nature as Being, cannot simply reproduce nature in thought, for two reasons. First, were nature thus "embraceable in thought," as John McDowell likes to say, then thought would be not only the larger of the two domains, but also the more grounding. Nature would be the issuance of thought, rather than the other way round, but by the same token, the difference in kind between them would evaporate so completely as to eliminate nature from ontology. The ontology of nature would have its elimination as its consequence. Second, should thought (*per impossible*) repeat nature so completely as to be indistinguishable from its object, then neither can thought be distinguished from nature. Thus, nature would have had no consequence whatsoever.

Yet naturephilosophy, which I will define as the philosophy of the nature in which ontology figures, does not demand nature's reproduction as if this were to consist in a stand-alone or autonomous image. Rather, it requires that nature's

boog, 1994, p.82). For a discussion of this point, see my *Philosophies of Nature After Schelling*, ch.2.

reproduction be itself an instance of nature doing what nature does. That is, a nature that has philosophy in it requires that the latter be consequent upon a nature that was without it, but also that it reiterate, by some means, this process in its turn, since unless it were to do so, it would not be *being* nature, or doing what it is that nature does. If we accept, then, that a system that is the cosmos is also a system that is thinking, the question inevitably arises as to the precursors and/or ultimate consequents of this nature or self-iterating cosmos. How, in other words, did this system of antecedents and consequents arise? This is the question with which Schelling began his celebrated *Stuttgart Seminars* in 1810:

> To what extent is a system ever possible? I would answer that long before man decided to create a system, there already existed one, that of the world-system or cosmos. (Schelling 1994, p. 179)[6]

That thought is consequent upon nature is, again, clearly asserted. Yet the passage says more than this. It states that no system that is thought is reducible to thought because it is antecedent to thought. As per Schelling's claim, that is, the system in the thinking is, *qua* system, the system in the cosmos; or the system that is the cosmos is the system that is thinking.

Far from boiling down to a macrocosm-microcosm relation, Schelling's point induces a serial operation into the concept of system as *itself* having a natural history, both "pre-worldly" and "post-worldly," as he elsewhere puts it (Schelling 1946, pp. 21, 120).[7] Although the thought of the natural history of systems has become commonplace amongst the contemporary sciences, it is here introduced philosophically, which means both that it answers questions concerning the conditions of possibility of systems; and that the operation it identifies, if it obtains at all, should also iterate beyond the situation it describes, into the pre- and post-worldly, or pre- and post-cosmic.

If, that is, a system is at all identifiable, and if this identifiable system is consequent upon a system already having obtained, then it follows either that (1) there is a system of eternity or (2) that system is an item consequent upon some other. If (1) were true and this system always obtained, then in what sense would system be consequent at all? If, conversely, it is true that identifiable or thinkable system is consequent upon cosmological or worldly systems, it

6 The German text: Friedrich W. J. Schelling, *Stuttgarter Privatvorlesungen* (Schelling 1856 – 1861, I/1 – 10; II/1 – 4; here: I/7, p. 421).

7 The terms derive from the first (1811) and second (1813) versions of the *Weltalter* typescripts but do not occur in the third (1815), printed in Schelling (1856 – 1861, I/8).

must be the case that these, too, are consequent upon some other, since otherwise (1) remains true and there is no consequence.

If we accept the non-eternity of systems, whether cosmological or thought-ish, then it follows that system must be consequent upon something that is not it, just as thought is consequent upon the nature that, until there was thought, nature either *was* not or *did not produce*. So system is only consequent if there previously existed not-system or "asystasy." Asystasy is that of which there may be no system and is therefore the negation of systems. But 'not-system' is an insufficient ground if we want the grounds of system to have some relation to that ground which makes a system's emergence from it at least retrospectively knowable. The prejudice here, however, is that grounding is equivalent to determination or, if you prefer, that causality occurs only on a 'push' rather than on a 'pull' model. If, in contrast with push-modelled causality, a pull model is assumed, then the future will determine a past as being the past of that future, on two conditions.

The first of these is that the future does not resemble its past. If this were not the case, nothing could ever happen other than what already had. The second is that the consequent character of the future does not proceed towards a goal, but changes the direction that the past would have assumed had no consequent occurred. If both conditions are met, then nature amounts to stratified remains of futures, each of which cancels the direction that what becomes their past would have taken had these remained unchecked by a future they do not resemble.

If geogeny did not individuate times, as Schelling argues, there would be a first system of time at the root of all times, and the question of how far our excavations of the past would need to extend in order to reach the very *first* first would follow the dimension of depth alone. Yet the beginning is a time in which that whose beginning it is, by definition, is not there. The deep past is inhabited by firsts and earliests – it is palaeontological; but the pre-worldly is simply uninhabited. Thus the impoverished question, "How can I know the past?," reveals not simply its species-parochialism (can there be no other imaginable knowers but the ones we happen, as a matter of fact, to know?),[8] but more importantly its locality as consequent upon a geogeny by which world is a system and which is not that of the pre-worldly. For such an account as this, it is not locality but *universality* that is the problem: if there is just one universal system,

8 Species-parochialism receives its defining formulation in Thomas Nagel's answer to his otherwise excellent question, 'What is it like to be a bat?,' which is: "there is nothing that it is like to be a bat, since a bat lacks the means of contrasting its own sensibility with that of others." What this proves is that *Nagel* lacks what he accuses the bat of lacking, thus rendering his conclusion solely a matter of a self-reflection.

how can it have consequents? Moreover, what would 'universality' be if not the hypothesis of a single universe? If so, then there is no universality, since the universe is unrepeatable according to that hypothesis, meaning that nothing actually has nor can have in principle the same extension as the universe without being it.

If by contrast we start the other way round, by asserting that there are consequents, that there is, therefore, a future, then it follows that individuation is the ambit of locality as such, and that individuation consists in the generation of a system consequent upon one as an element of which it did not figure. If this is accepted, the question now turns to *what* is individuated if individuation is thus systemic.

3 Consequence and Locality

That there are consequents means that a difference has been introduced with respect to antecedents. But antecedents are not such by nature, so to speak. Rather, they become antecedents just when consequents obtain, and not because they contain their consequents. If they did contain their consequents, then in what sense could consequence be said to obtain?

The terms 'antecedent' and 'consequent' are susceptible of both a logical and a natural reading. According to the former, the medieval terms 'antecedent' and 'consequent' are replaceable by the modern nomenclature for the parts of the proposition, namely 'subject' and 'predicate.' According to the natural reading, however, antecedent and consequent are localities such that what is true of the former may not be of the latter, and the latter is not merely "said of" the former as in predication. It is important to take this natural account of locality in all its dimensions.

Firstly, that it is natural does not mean, as we have seen in part 1 of this essay, that it is therefore not logical; rather, that it is logical entails that it is natural. According to the natural reading of antecedence and consequence, sequence is entailed by their conjunction, not because the resultant proposition is of some state of affairs whose merely formal echo it is, but rather because the operation it describes is the operation it performs. Sequence, that is, occurs. This means that the logical reading of antecedence and consequence is unwarrantedly reductive of the operations of which they treat.

Secondly, that it is natural, or perhaps we might say 'worldly,' location that we are dealing with does not mean that locality is to be determined spatially according to this or that system of coordinates. We may say instead that natural locality is distributed precisely as antecedent and consequent as successor tempo-

ral systems (not as parts of the one temporal system, as we saw in section 2). It is not the locality of the proposition's referents, but the locality that the individuated elements of the proposition have, and the locality that the proposition as a whole has, in relation to time.

Thirdly, the individuation it therefore performs is, at its most general, that of the *locality of the operation*, where this operation consists in individuation, that is, in the local distribution of localities. That is, the locality of the operation is not a 'place in time' because locality is, rather than *contains*, the unfolding of the operation.

Fourthly, we cannot derive from this 'general' nature pertaining to the operation a 'most general' and therefore 'universal' natural operation, because such an operation would then be all that nature is or could be. It would be done in advance, no sooner started than finished. That is, if the general operation is individuation, then at root, what is individuated by 'antecedence' and 'consequence' is precisely individuation operations, or localities.

Fifthly, were consequence universal, it would entail consequence "all the way down." But consequence all the way down would not be consequent upon anything if it were universal. Therefore, consequence is itself local if there exists consequence at all. Moreover, this means that locality is not consequent upon universality – it is not a space picked out within a larger one; therefore locality is only consequent *once* there is consequence, i.e. *futurally*. Strictly speaking, therefore, there are not localities but only *consequent or futural localities* that will be only once consequents have occurred.

Finally, consequence is locality also when it is non-exhaustive. This means contrastive cases must occur, i.e. instances in where there is no consequence. One such instance would be a past so deep as not yet to have had consequences, a past, that is, following which nothing 'first' has yet been deposited, a Big Bang without an ensuing expansion, or an emanation without anything having emanated. Such a past is not yet antecedence, for such would obtain only relative to a consequence. Nor, therefore, can it be said to be the beginning of antecedence, the first crack of the Big Bang, or a dissonance in the One prior to emanation. Unchecked by futurity, the past telescopes because it is not, as such, part of any consequent. Beginning *per se*, that is, is not the beginning of anything. Creation, finally, is misconceived if it is considered as a simple locality. Identified creation is at the very least located or posited locality. Rather, creation occurs in the growth of consequent locality, or 'metalocality.' This growth is not without limits, but rather itself a local concatenation of localities, or the issuance of locality from localities.

Nature thus comprises a "palaeontological" system of beginnings and a futurist system of consequences. The antecedents created by the latter are not

members of the system of the former, since they *will be* the antecedents of what consequents are to occur. That is, the locality we have been examining applies both intra- and inter-systemically. We may treat of each system separately or of both together, provided that the latter case remain local in the sense discussed. Minimally, that is, the union of the two systems differs from either system on its own. Moreover, the idea of a beginning is local with respect to the system of beginnings, just as that of an end is local to that of antecedents and consequences. In other words, there is no extra- or meta-systemic beginning or end *of all things*. Thankfully, biology provides an illustration.

4 Morphogenesis and the Cuticle

According to Alessandro Minelli's *Forms of Becoming*, the twin errors of comparatism in contemporary evolutionary developmental biology are

1. the assumption of discrete processes in organic development (cerebrogenesis, hepatogenesis, etc.); and
2. the finality assumption in morphogenesis, i.e. the assumption of "programmed adulthood."

A process is "discrete" when it is said to terminate in the achievement of a specific end, and morphogenesis correspondingly discrete when an organism achieves adulthood. The systems of antecedence and consequence are not discrete in this sense, since their iterability entails that ends are locally relative. Locality, in other words, is general but not universal, while discreteness is non-repeatable particularity. A process is discrete when it retains its identity regardless of when it occurs. By contrast, a process is local if its individuation is itself consequent, and will suffer consequents different from it. The generation of brains, for instance, remains currently local to animal life, but need not remain so. Moreover, it is consequent upon the emergence of life as such, which is consequent upon planetary, solar, and cosmological formation. If nature undermines process-discreteness, our sciences ought to reflect this.

Minelli's attempt at precisely this is achieved by dropping the assumptions of process-individuation ('discreteness') and finality. In consequence, he advocates searching not for completed individuals between which to establish homologies, as Richard Owen[9] or Lorenz Oken (1847) did in nineteenth-century compa-

9 See, for example, Phillip R. Sloan's 'On the edge of evolution' (1992).

rative natural history. By contrast, evolutionary developmental biology shifts its attention from finalistic programming, or a consequent without consequence, towards *elementary operations and non-specific tools*.[10] Thus, just as animal appendages (legs or antennae) are iterations of the central axis of an animal's body but lack an individuated "internal leaflet" or digestive tract such as animal bodies possess, so the operation that initially constructs "polarity" across the "anterioposterior axis" of a bilateral or symmetrical animal body (mouth-anus, as determined by the pole that encounters new location; geophiliac-geophobic, as determined by that surface that maintains contact with the substrate), also constructs additional dimensions (rotation about an axis perpendicular to the anterioposterior; raising and lowering; exploration of as yet unoccupied loci, etc.).[11] For Minelli, genes are not plans but positions, locating the branching of appendages from an animal axis and, given a moult-series in insects, for example, the quantity of the iteration of segments. In keeping with the hypothesis of natural logics, genes are, so to speak, copulae conjoining any nonfinal morphogenetic stages (e. g. in the centipede, larva-segment iteration), which stages in turn constitute a copula to the second power (segment-appendage iteration). Thus, in place of "uniquely defined units" such as 'segment' or 'tissue,' "whose evolution we can study or whose generative processes we can highlight, [a] plurality of structures, each one the result of intertwined developmental processes, now corresponds to each of these concepts" (Minelli 2009, pp. 107–108).

Because finally eliminating finality indifferently makes forms into media depending on the sequencing of antecedence and consequence; and because the same "indiscrete" ontogeny[12] applies also in the case of putatively individuated processes, development finally abandons the reflective principle of process and product. Thus, Minelli criticizes the "biogenetic law" with which, *inter alia*, Carl Friedrich Kielmeyer is associated, on the grounds that it fails to account for novelty.[13] In the case, that is, of perfect and linear recapitulation, ontogeny or individuation runs through exactly those stages passed through by phylogeny or spe-

10 See Alessandro Minelli (2009). On non-specific organic genesis, see p. 129; on "finally getting rid of finality," see pp. 89–90; on elementary operations and non-specific tools, pp. 192–193.
11 Minelli 2009, p. 47: "In these animals [Bilateria], the front is the extremity with which the animal always encounters new locations, and the top is the side opposite the one the animal, if it moves on the ocean floor or on the ground, uses to remain in contact with the substrate."
12 For "indiscrete ontology," see Hogrebe 1992, pp. 116–119. For ontogeny as locally supplanting ontology, see the 'Preface to the Italian Edition' of my *Philosophies of Nature After Schelling* (2017).
13 I argue this is a false account of the so-called biogenetic law, which is mere shorthand for the theory of recapitulation, in chapter 4 of *Philosophies of Nature After Schelling* (2008).

ciation. A *principle of sufficient reason*, that is, that "the full cause is equivalent to the entire effect,"[14] is undone precisely if the case for the individuation of either is not merely epistemologically, but rather ontologically moot. If, as we have argued, no function is process- or product-specific (that the 'function of the eye is to see'[15] is a virtue operated equally by the camera NASA attached to a blind man's brain in 1966), the problem of individuation is condensed from entity to iterative quantity: *how many iterations can a process undergo?* Thus, the primary outcome of Minelli's evo-devo (as "evolutionary developmental biology" is nicknamed) lesson, is that morphogenesis (the development of form), *is inseparable from locality, just as an individual is from the ecosystem of which it is itself a local expression.*

In morphogenesis, locality turns out to have a complex relation to process-iterability: there is no discrete process whose archetype rests at the root of nature, driven to expression by internal pressures. Rather, individuation, or a morphogenetic episode, arises when metalocality, i.e. the consistency of consequence upon consequence, like drawing a line, possesses an iterative quantity. As in creation itself, *einmal ist keinmal.*

Yet if a consequence is one only when it differs from its antecedent, it would seem that the only consistency to be had in iterative quantity or individuation is that there is differentiation. Surely, moreover, once this is said to apply also at the inter-systemic level, the consequence that there are several systems, each of which is systemic yet of which there is no system in general, effectively makes systematic organization asystemic? Isn't this simply a contradiction?

5 How Many Natures?

The question of the number of natures does not seem, at first sight, to be one much asked. Yet that there is a particular number of natures is often asserted, and varies generally between "only one" and "two," the second being dominant. There is a virtue in the latter conception that is vitiated by its finalism, as I shall show below, but my purpose here is to rescue its virtue.

> The science with which we are concerned knows no other law than that all possibilities are fulfilled and none suppressed. (Schelling 1856–1861: II/1, p. 492)

14 I use Isabelle Stengers' concise formulation, from *Power and Invention* (1997, p. 25).
15 On functional specificity and realism, see Maurizio Ferraris, "Sum ergo cogito. Schelling and Positive Realism" (2013, pp. 187–189).

In this sentence, Schelling defines what he calls the *Weltgesetz*, the Law of the World. Why, we might ask, is it "worldly" or natural that all possibilities be fulfilled? One solution would be to identify nature with the sum-total of possibilities and to say, with the Schelling of four decades prior to positing the *Weltgesetz*, that "anything whose conditions simply cannot be given in nature, must be absolutely impossible" (Schelling 1856 – 1861: I/3, p. 571). In this case, however, the equation offers a reduction of possibilities only if we already know what it is that nature is, and how to differentiate it from other entities. If, that is, it is proposed that nature is as physics describes it, then amongst the host of entities contrasting to nature are plants, numbers, and persons. Yet the consequence of this would be that Schelling would be asserting that plants, numbers, or persons are impossible, which is far from true.

If by contrast a broader concept of nature is adopted, and if it is, as *per* the hypothesis, possible in nature that there are contradictions, this has the advantage that contradictions, hitherto regarded as reducibly logical entities, are naturally occurring. Moreover, since all that we thus know is that contradictions occur *in* nature, we may say both that nature is such as to embrace contradictions and that the latter are therefore local events within the former, rather than the reverse. This means that any state of affairs belongs in nature only if its contrary is admitted as a possibility. The law of the world now states: *if* it is a possibility that nature is that domain in which an entity may and may not occur, then it is also a possibility that nature is not that domain. If by that law all possibilities are fulfilled, it follows that both the obtaining and the not-obtaining of that state of affairs belong to nature.

By the same law, however, it follows that nature might not obtain. It is important to recognize that this is not a merely logical possibility, amounting to the assertion of the contingent fact that nature does exist. Rather, its contingency consists not in its obtaining at some time, i. e. locally, but rather in the sequencing of its obtaining and not obtaining. Because both must occur, it follows from Schelling's law of the world that ontogeny supplants ontology as first philosophy.

Given this pattern of reasoning, let us make it more concrete and ask: how many natures are there? If there were just one, then the possibilities of its non-obtaining in the future or having not obtained in the past are eliminated. Perhaps, then, there are two: nature insofar as it exists, and nature insofar as it does not. Yet were this the case, then there would be at least three possibilities: (1) that nature obtains; (2) that it does not, and (3) because contradictions are possible and therefore must be satisfied, that nature both obtains and does not. Minimally, there will therefore be three natures.

But this does not mean nature is *all that is*, because its obtaining includes its own not-being. Nature is all that is only if it is (a) complete and therefore (b) no consequences obtain. But if (b) is the case, then consequences could never have obtained, since then nature would not have been and now is, contradicting the claim. Or, if nature is completed and no consequents obtain, then nature is eliminated. If nature obtains, its non-obtaining must also obtain, and one must be consequent upon the other (even should nature's elimination be this consequent), from which it follows that nature is not all there is. Does this, nature's locality, mean in turn that there is something that is not-nature? No: it means that *if* there is nature, this is the case just when there are consequents, and when there is no upper limit to the number of consequents, and therefore the number of natures, which can obtain.

Moreover, this means that the *Weltgesetz* is satisfied by no *Weltgesetzt*, no world or cosmos posited as past with respect to the positing. It is at this point that the law of the world bites against the much discussed possibility of a "second nature." What is intuitively wrong about the claim that a second nature can exist is that it is merely second, i. e. that it stops there and, moreover, stops nature. In general terms, the philosophical content of second nature is *our*, and therefore, rather optimistically according to its proponents, *moral*, our *educated* or *educable* nature that supplants the nature upon which this plastic morality is consequent. It is clearly intuitively wrong to posit such a second nature since it, the consequent, is larger and more powerful than the nature prior to it. Moreover, the seond nature worldly-posit has no bite whatsoever unless, to counter Kant's fears of terrestrial disturbances eliminating the Kingdom of Ends, it is final with respect to the nature preceding it. Or it might be final in the sense that it forms the outcome of all natural outcomes, a consequent that envelops its predecessors and consumes the past as its own, as opposed to the past retaining its efficacy in respect of any and all antecedents and consequents.

Such a nature is as absurd as it is instrumentalist: it fails to discover the locality it perforce articulates just as it denies consequents, whereas, even should the nature that nurtures humanity be eliminated, nature will remain just insofar as there are consequents, even if these are neither humans nor, for instance, the crustaceans H.G. Wells forecast as our far future replacements in *The Time Machine*.

That no posited nature is final with respect to the nature preceding it does not mean there are no posited natures, but only that these are amongst the innumerable consequents nature has as its function to produce once there is nature, i. e. consequence, at all. On this basis – and this is the virtue of a naturalistic account of second-natural naturalism – not only does ontogeny supplant ontology, but naturephilosophy becomes futurism, just because the worldly

posit is nonfinal and philosophy local to the nature whose philosophy it is does not mean that the quantity of its posits' iterability is set in advance. Since consequence is what determines antecedence as the antecedence of *that* consequence rather than another, it follows that futurism is not prediction, but nature's conceptual reengineering of its local efficacy. Amongst the consequences of the two dimensions of the locality of thought in nature (the denial of which, as we saw in section 1, was philosophically untenable) – namely (1) its antecedent embeddedness in nature when (2) it is a consequent articulation of nature, i.e. a movement of which it was hitherto incapable – are the following.

First, if logic is simply a pattern occurring in nature, then it is one amongst many: there are the desiccated riverbeds of the Baja peninsula, for example, which are manifestly amenable to fractal formalisation, or the branching or *Entzweiung* patterns developed by particular trees; the rivers of methane on Titan, or the fractured surface of Europa; each amounts to a thought otherwise unarticulated. Here we have the basis for a properly philosophical ecology premised not on the elimination of moral animals but on that of thoughts nature was once capable of having, but no longer is. How many have thus passed? Here the question of a system of systems achieves new purchase: is there a natural tower of Babel, a system of all systems that permits their universal translatability?

Secondly, if it is consequence that determines the antecedent as the antecedent of that consequent, then the past is overrated as determinant. To grasp this fact entails the reorientation of conceptual activity in accordance not with where nature is, but where it will be. Philosophical futurism is therefore part of the determination of what it was that nature will have been, not globally or universally, but locally, as befits any of nature's many products.

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