

Everything is Primal Germ or Nothing Is. The Deep Field Logic of Nature¹

Iain Hamilton Grant, University of the West of England, Bristol UK

Introduction

Why did Schelling not write a book of logic? In fact, he did, although there are no logics in Schelling that are not environed by ‘interconnected resistants’ (*zusammenhängende Gegenstände*), as the *Freiheitschrift* states,² no systems not embedded in others, according to the *Stuttgart Seminars*³ and the lecture ‘On the Nature of Philosophy as science’.⁴ Yet if logics are so embedded, what becomes of their isolability as logic? What is logic *per se* if, in order to be one, it must be systematic, and systematicity entails that nothing be left out? What is it that leaves nothing out? Not the ‘universal’, if this remains an isolably logical creature, but the universe, which does not (if there is one).

The *Naturphilosophie* in general constitutes a long and repeated series of the extractions of the “logic indwelling in nature”⁵ from it. The *Exhibition of Natural Process*, for example, does not simply purport to supply an account of this or that aspect of the natural process (e.g. biology,

¹ A version of this paper was delivered at the second annual conference of the *North American Schelling Society: the Futures of Schelling*, in London, Ontario, in September 2013. My warmest thanks to Tillotama Rajan and Ben Woodard for organizing that excellent event, and, for the introduction to the present essay, to Sean McGrath for asking what on earth I thought I was doing.

² F. W. J. Schelling, *Philosophische Untersuchungen über das Wesen der Menschlichen Freiheit und die damit zusammenhängende Gegenstände*, in *Schellings Werke* (hereafter SW I-XIV), ed. K.F.A. Schelling. Stuttgart and Augsburg: Cotta, 1856-61, tr. J. Gutmann as *Philosophical Inquiries into the Essence of Human Freedom* (Chicago: Open Court, 1936)

³ SW VII: 421-84, here, 421; tr. T. Pfau in *Idealism and the Endgame of Theory. Three Essays by F. W. J. Schelling* (Albany: SUNY, 1994), hereafter SS, 197: “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 cosmos [*System der Welt*].”

⁴ SW IX: 207-246, here, 209, tr. M. Weigelt as ‘On the nature of philosophy as science’ in R. Bübner, ed., *German Idealist Philosophy* (Harmondsworth: Penguin, 1997), 209-43, here 211: “all exclusive systems have in common that they are not the system and that they are therefore something partial or subordinate...”

⁵ SW XIII: 103, tr. B. Matthews as *The Grounding of Positive Philosophy. The Berlin Lectures* (Albany: SUNY, 2007), hereafter GPB, 161.

chemistry, geogony), but is *Universal* like the *Deduction of the Dynamic Process*⁶ four decades earlier. The function of exhibition is to extract the whole from itself, i.e. to recapitulate precisely the morphogenetic process involved in natural production in its exhibition, presentation, outline or Idea. Nature natures when it is an ectype of itself, such that its ectypes are insuperably environed.

To the extent that the late Schelling considered “all systems that explain everything by sheer logical interconnection”⁷ *negative*, in that they start from a negation of whatever process is not thinking, the procedure of logical extraction, the *paring of nature to the bone*, belongs to that philosophy. Yet to the extent, contrastively, that the starting point of an exhibition, i.e. of a thinking made sensible, is not itself thinking, but what unprethinkably exists,⁸ that philosophy is positive. Since, however, whatever is un-*pre*-thinkably exists, it is thought after the fact as existing, and thus logically as the position of a position. Hence the *Naturphilosophie* can be considered positive to the extent that, as its very title suggests, it is nature that environs philosophy, rather than the converse. The extraction or exhibition of nature’s process from nature remains positive, as we shall see, at the point when the copula is no longer a logical, but also a real creature, or when the measure of universality is the universe. It is to this project that I take the problem of the nature of the copula addressed in OR to be contributory. Hence the question that opens EN: “What am I thinking when I think what exists” (SW X: 303) simultaneously invites the enveloping of the “what” that I am thinking in the thinking of it, and, in so producing its downstream, remains open towards its upstream. It thus, exemplifies the “point that *Naturphilosophie* is again taken up in the higher, positive system” (GPP: 365): higher,

⁶ Both the *Exhibition of the Natural Process* (SW X: 303-390; hereafter EN) and the *Universal Deduction of the Dynamic Process* (SW IV: 1-78; hereafter UD) are forthcoming, tr. I. H. Grant, in *On the World Soul and Other Naturephilosophical Writings* (Albany: SUNY, 2015).

⁷ F. W. J. Schelling *Grundlegung der positiven Philosophie. Münchener Vorlesungen 1823/33*, ed. H. Fuhrmanns (Turin: Bottega d’Erasmus, 1972), 14-5.

⁸ SW XIV: 337. The *Andere Deduktion* paraphrased above is a concise source for Schelling’s account of what is positive in positive philosophy.

because the knowing of the unprethinkable entails that its being thought *as* unthinkable is additional to the insuperable remainder.

Thus Schelling's logics are *field logics* dependent in turn on *deep field logics*, those concerning matters where "only deep ignorance is appropriate",⁹ and where this ignorance is known¹⁰ without raising the depths into science, but rather driving knowing to a "deeper ignorance".¹¹ What is being contested here is the positivity of what is against a philosophy that, if premised on what is known, negates what is in order to make the knowing prior. It is the purpose of this paper to exemplify this field logic at work in Schelling's account of the copula in 'On the Relation between the Real and the Ideal in Nature'.¹² In brief, a logic is a field logic by virtue of those resistants on which it connectedly dependent, and that therefore environ it, in a sense to be unpacked below. What a field logic contests is that it can be withdrawn from its environment, its upstream, so as to be complete in itself. In other words, it contests the entailment of the transcendental that whatever *is* must meet it on its ground, rather than the transcendental emerging from what is. This entailment has been bought, by amongst other methods, the critique of givenness insofar as this involves two things: first, the non-constitutedness *by* the recipient of whatever it is that is said to be given,¹³ violating what I shall call the Kantian axiom that "he who would know the world must first manufacture it"¹⁴ in the interests of making 'what is'

⁹ SW X: 332, tr. I. H. Grant as *Exhibition of the Natural Process*, in *On the World Soul and other Naturephilosophical Writings* (Forthcoming, Albany: SUNY, 2015).

¹⁰ SW VIII: 223, tr. J. M. Wirth as *The Ages of the World* (Albany: SUNY, 2000), hereafter WA: 16, t.m.: "The beginning of all science [*Wissenschaft*] lies in the cognition [*Erkenntniß*] of our unknowing [*Unwissenheit*]." Hence Schelling's concentration on Socrates' *acknowledgment* of his ignorance, the meaning of which Schelling gives, e.g. in the *Philosophie der Offenbarung 1841/42*, ed. M. Frank (Frankfurt: Suhrkamp, 1993), 403: "Apart from that logical science that wants to explain actuality, Socrates posits a knowing science. With this, the acknowledgment of his ignorance first takes on a positive meaning." Schelling acknowledges in turn his debt to J. G. Hamann's *Sokratische Memorabilien* (Amsterdam: Hartung, 1759), 51, citing it at SW XI: 526: "The seed-corn of our natural wisdom must degenerate and pass into ignorance so that from this death, from this nothingness, the life and essence of a higher knowing must germinate and be created anew."

¹¹ Such as the inquiry into the ground of freedom or the world, according to the first lecture of the *Philosophy of Revelation*, SW XII: 106.

¹² SW II: 359-78, tr. I. H. Grant in *On the World Soul and other Naturephilosophical Writings* (forthcoming, Albany: SUNY, 2015), hereafter OR.

¹³ Wilfrid Sellars, *Empiricism and the Philosophy of Mind. With a Study Guide by Robert Brandom* (Cambridge: Harvard University Press, 1997), 14: "Many things have been said to be "given": sense contents, material objects, universals, propositions, real connections, first principles, even givenness itself."

¹⁴ Immanuel Kant, *Opus postumum*, ed. and trans. Eckart Förster (Cambridge: Cambridge University Press, 1993), 240.

consequent upon the knowing of it, or of making ontology consequent upon epistemology. Strictly observed, the net result of that procedure would be that the known *is* not, while only what is not known *is*, or that ‘what is’ is entirely knowing-dependent in the manner the late Kant recommends.

Second, the short-circuiting of nature that is the presupposition of givenness demonstrates a physiocidal tendency as evident in contemporary philosophy as in Schelling’s day.¹⁵ That is, *x* is ‘given’ just if it is already there (although where ‘there’ is, is moot). In the guise of a critique of empiricist epistemology, the critique of the given, on certain readings, eliminates any ontology for which being is inseparable from thought. Since thought is amongst what is, I do not intend to contest the connectedness of thought and being, but their inseparability risks an equation without remainder, which, I claim, is ontologically vicious. Thus, in revisiting the problem of the conceptual constructedness of what is, rather than worrying about egress from the transcendental to some non-conceptual reality, I have in my sights something like the following. If the force of the critique of givenness rests on a theory of the ready-made, then while its supposed virtue is the inconsistency of beginning conceptually with what is not conceptual, thus demonstrating the essential autochthony of a space of reasons, its vice is that it is a Dadaist prank on the environedness of the posit, proposition, or judgment. In positing, for example, that ‘some *S* are *p*’, the ontological commitment to its environment extends only downstream, not up, so that the entire *natural history of the posit*, how it came to be, is eliminated. Perhaps this is what Schelling had in view when he wrote that “Idealism... consists in the denial and non-acknowledgment of that negating primordial force [and] is the universal system of our times.”¹⁶

¹⁵ See, for example, John McDowell’s response to Robert Pippin in N. H. Smith, ed., *Reading McDowell on Mind and World* (London: Routledge, 2002), 277: “Once my reminder of second nature has done its work, nature can drop out of my picture too.” This confirms Markus Gabriel’s observation, in his *Transcendental Ontology. Essays in German Idealism* (London: Bloomsbury, 2011), xii that McDowell “hardly ever mentions the world in his book *Mind and World*”. See also Daniel Dennett’s critical review of Robert Brandom’s *Making it Explicit* (Cambridge: Harvard University Press, 1994), in ‘The Evolution of Why’, available at: <http://ase.tufts.edu/cogstud/dennett/papers/Brandom.pdf>.

¹⁶ F. W. J. Schelling, SW VIII: 212; tr. J.M. Wirth as *Ages of the World* (Albany: SUNY, 2000), 7. Hereafter WA.

As an example of such a field logic, the question of the copula,¹⁷ to which OR, the essay adjoined to the second and third editions of *Of the World Soul*¹⁸ is devoted, is clearly a logical matter. Yet it is not reducibly so, but arises from a naturephilosophy, as is already evident from its title, and is explicit in its opening problem: how does matter come to be? Why then does a logical treatise open with a discussion of the source of matter? There are many reasons for this.

First, if Schelling's logic is a field logic, it cannot begin with the assumption of entities isolated from one another, complete and independent *ab initio*, and so poses the question, "How does 'isolation' come about?" Amongst parts of the answer are: from matter, the child of gravity and light; from the solid, the gaseous and the liquid, or the forms of chemistry, and the forms of thought. Thus logic issues from a deep field into which its connections extend, or with which it is intimate at one remove. The 'copula' serves not only therefore to connect the elements of a proposition, but to connect the ideal (the proposition) to the real "in nature". It is universal just in so far as the standard a universal must meet is obtaining in the universe. If it did not, there would be at least one domain in which it failed to obtain, namely, the universe. Yet the nature of the copula is not simply coextensive with the universe or the maximal environment of things, because if it 'is' at all, it too is environed, or is an ectype, a consequent. Yet since "what is true of the copula is true of the universe" (OR: 366), the production of the isolated copula – the emergence of expression – additionally bonds that outside of which nothing is, i.e. the infinite, with the isolated or the finite. Hence Schelling's exploration, in what follows, of the nature of their bond.

Second, therefore, if complete isolation is impossible, the copula is universal. But universality, as noted above, cannot only consist in the saturation of all instances, as when I say "everything is matter", if the expression of this state of affairs is not itself counted amongst those states of affairs. Universality thus entails a kind of curvature in its assertion, such that

¹⁷ Mark J. Thomas recently gave an excellent paper on 'The Mediation of the copula as a fundamental structure in Schelling's Philosophy' at *Evil, Freedom, and Time: A Conference on Schelling's Freedom essay and Ages of the World* (University of Warwick, May 30, 2014).

¹⁸ SW II: 345-584; tr. I. H. Grant as *On the World Soul. An Hypothesis for a Higher Physics*, in *On the World Soul and Other Naturephilosophical Writings* (forthcoming, Albany: SUNY, 2015), hereafter, WS. The first edition of the *World Soul* was published in 1798, the second, to which OR is adjoined, in 1806, and the third in 1809.

universalization also particularizes that universalization. Thus ‘all things are x’ does not exhaust all things, but reproduces them, so to speak, as the x that they are.

Third, the nature of the universe was Schelling’s concern from beginning to end. The essay on the copula is therefore, as well as being a logical treatise, a member of the series of “exhibitions” or *Darstellungen* of what he lately called, recalling the complex topology presented by the copula. the ‘uni-versio’.¹⁹ Indeed, copula *is* ‘universio’ to the extent that it is, so to speak, the monofilament medium that ‘the all’ becomes in all forms. The problem, therefore, of locating the universal is that of the “unknown root” of the universe because the individuation of the root is a consequent exercise. Moreover, if it is the root of “all the forms and living phenomena of matter” (OR: 359), then it must always and never be found, because if it were found just once, but is the root potentiated in all, it must always be found; but if it must always be found, the root itself, as a separable entity, will never be found. Hence the “darkness” of matter is not incidental or merely descriptive, but plays a constitutive role for Schelling’s deep-field theoretical ontology insofar as the universe is not cleanly divided into the sensible and the intelligible, but also the dark. Darkness, like the *Freedom* essay’s “unground”, supplies the surd that renders the asymmetry, entailed if there is emergence, insuperable.

It is, accordingly, not enough to have ‘what is’ issue from a positing, since although this is true of what issues downstream from it, to posit the posit as source eliminates the upstream from which it is in turn issuant. Expression is a late acquisition. Moreover, if individuation occurs in nature, the difference between the physical and the logical production of the isolate, of the finite, is not a difference in kind but only of degree, or of the quantity of the universe enfolded in the particular. Thus, just as, if ‘everything is matter’, the universal is in the particular, or the particular is a universe in the universe, so the knowing of this is (a) material and (b) *more universal than other matters*, since thought is, like its resistants, the universe in the universe and

¹⁹ *Darstellung des Naturprozesses*, SW X: 311, tr. I. H. Grant as *Exhibition of the Natural Process*, in *On the World Soul and Other Naturephilosophical Writings* (forthcoming, Albany: SUNY, 2015). Hereafter EN.

knows the containing of the universe in the universe. Thought is not therefore ‘transcendental’ in a manner in which its environment is not, just more so.

1. ... X: Late Acquisition

Schelling opens the 1844 *Darstellung des Naturprozesses* with the question, “What am I thinking when I think what exists?” It is one of a series of questions that position the situation of inquiry *in the midst* of something else that *environs* the question. The *Stuttgart Seminars*, for instance, begins with the question “To what extent is a system ever possible?”²⁰ the immediate answer to which is that there already is one. Similarly, from the state of affairs that the world is “caught in the nets of reason”, the question arises: “how did it get there?”²¹ The form of these questions indicates, first, that the state of affairs antecedent to the thinking of it environs the thinking of that state of affairs, and that this remainder is, according to the famous passage “irreducible” (SW VII: 360; PIN: 34) or insuperable (*nie aufgehende*). Second, there is travel in both directions: because thought, the system of science, and reason are late acquisitions, just as any proposition answering the question “what am I thinking” remains open with regard to its upstream, because its being thought is consequent upon what it is that is thought, so too thought, science and reason remain open to their downstream, insofar as, while dependent on a source that is not and cannot be thought – not merely as content, but also as regards kind – is autonomous with respect to it, i.e. precisely *not* its antecedent.

²⁰ SW VII: 421, tr. T. Pfau as *Stuttgart Seminars in Idealism and the Endgame of Theory. Three Essays by F. W. J. Schelling* (Albany: SUNY, 1994).

²¹ The question recurs in F. W. J. Schelling, *Grundlegung der positiven Philosophie*, ed. H. Fuhrmans (Turin: Bottega d’Erasmio, 1972), 222, and at SW X: 143; tr. A. Bowie as *History of Modern Philosophy* (Cambridge: Cambridge University Press, 1994), 147.

Second, the envired character of thought indicates that it issues from a *topic*, a place rather than a principle, or that it is not demonstrative, but dialectical.²² Hence, in the question “What am I thinking when I think what exists”, the thinking repositioned by Schelling’s topic: the cogito does not accompany representations, but follows from its source not as a representation, but as a production. Hence to Aristotelian topics Schelling adds the dimension of emergence: dialectic does not demonstrate but generates.²³ The emergent (what I am thinking when I think) is dependent on its source (what exists) while nevertheless autonomous in respect to it, since if it were not so autonomous, no generation would have occurred. Thus the thinking neither represents nor repeats what exists but adds a dimension to existence. This is because, in the case that I am thinking what exists, the thinking of what exists that arises in existence, is “spoken out into nature”,²⁴ and is therefore an additional element in what exists, not the exhaustion of it. Since therefore the existence with the predicate ‘I am thinking it’ is not the existence that was asked after, the ‘what exists’ asked after in the question does not recover that existence in thought. After all, more exists than I am thinking, so that Schelling’s famously insuperable remainder,²⁵ remains.

Precisely because reason does not saturate what is, the thinking of what is does not consist in the projection of a plane of reason onto the plane of being *more geometrico* (SW VII: 395-6; PIN: 75). Geometry is insufficient to address the “universe of forms” (OR: 362), which requires the greater topological complexity exhibited by the copula. Hence the möbius-like figure of the uni-versio, the monofilament that forms all forms, or the identity that is the universe, without the universe being *reducibly* that.

²² Aristotle, *Topics*, tr. E. S. Forster, in *Posterior Analytics, Topics* (Cambridge: Harvard University Press, 1960), 100a: “Reasoning is *demonstration* [*apodeixis*] when it proceeds from premises which are true and primary.... Reasoning is *dialectical* which reasons from generally accepted opinions.”

²³ SW XI: 330: “The dialectical method is, like the dialogical, not demonstrative but generative; it is that in which truth is generated. Experiment is ruled out or admitted only in a subordinate manner, from demonstrative science. But to know what it is that is being (and this in the end is alone what it is concerned with), one must, as we said, actually attempt to think it, so that we experience what it is. *Tentandum et experiendum est.*”

²⁴ SW VII: 395; tr. J. Gutmann as *Philosophical Inquiries into the Nature of Human Freedom* (Chicago: Open Court, 1986), 74, translation modified. Hereafter PIN.

²⁵ SW VII: 360; PIN: 34: “The incomprehensible basis of reality in things, the irreducible [*nie aufgebende*] remainder that cannot be resolved into reason [*Verstand*].”

Moreover, the question “what am I thinking when I think what exists” is a question concerning the *source* of my thinking *what* I am thinking to the extent that, this unprethinkable ‘what it is that is’ does not merely entail, but rather drives a thinking that, accordingly, cannot be *of* it. In other words, ‘what is’ is not merely given, since if it were thus ready-made, it would be complete, and since something complete could by definition neither require nor cause any augmentation, it would be not a beginning but an end from which no issue would arise. Following Schelling, we may say that something thus inconsequent, such as a “formal and fruitless” matter (OR: 371), is not even antecedent, since an antecedent is one only when there is a consequent.²⁶ The thinking of what exists therefore poses the question not only of the source of thinking, but the source of existence, and thus bottoms out with the question of creation or “nature itself” (OR: 378), since only then is the problematic of the given truly defused: nothing is given because a product is one just if production eschews the ‘acquired finality’ in which it would consist were the product to exhaust its production.

The thinking therefore issues not from something given, but rather from what resists it, and against which ek-sistence then stands. The *thinking* of “what am I thinking when I think what exists?”, and all that this entails, does not suspend antecedence or “raise it up” into reason, because reflection on the question is precisely a *later* acquisition than the question itself. If the question flows downstream to expression, it accordingly flows further from its upstream, even when the question concerns it. But it would be a mistake to conclude that existence is thus lost to reason, since reason is, on this account, contributory to it. Rather than separating reason from its environment, the latter is dependent on the former when expression occurs, and the bond or copula *consisting in* dependent-yet-autonomous expression, issues not from a given but from “the

²⁶ See SW VII: 346; PIN: 18-19: “It would indeed be contradictory if that which is dependent or consequent were not autonomous. There would be dependence without something being dependent, a result without a resultant. . . , that is, the whole conception would vitiate itself.” In this case too, the antecedent is only an antecedent when there is a consequent, so that the antecedent’s dependency on the consequent for its antecedent status, renders it only consequently antecedent.

force of beginning posited in the expressible”, which force, according to the *Weltalter*, is again “the primordial germ [*Urkeim*] of living nature” (SW VIII: 243; WA: 30).

There is a third issue raised by this question, one that Schelling works out in his long examination of the copula, which extends from OR to WA, and the first pass at which is the focus of the present essay. The problem is this. In the question “what am I thinking when I think what exists”, its logical subject is the “what” I am putatively thinking, and its predicate is “I am thinking what exists”. If “what exists is what I am thinking” obtains, then according to the analyses of the proposition in PIN and WA, the copula in the proposition (“is”) expresses the following state of affairs: whatever it is that is x in what exists is also the x that I am thinking. Moreover, since the subject accordingly expresses the x in S , and the predicate the x in p , it follows that the identity asserted in the proposition expresses the unity of the proposition, of each of its terms, and of the copula.²⁷

The problem is, if the proposition is the expression of its unity as affirming the unity of its parts, whence the asymmetry in the question, whence the remainder, the darkness, the surd? We may also approach the same state of affairs in the reverse manner, starting this time from identity. If identity is only and always identity itself, so that whatever is, considered insofar as it merely is, is identity itself,²⁸ then since there are no instances in which identity is not expressed – hence, “absolute identity is not the cause of the universe, but the universe itself” (SW IV: 129; PMS: 154), neither is there one in which it exclusively is. Even ‘ $A=A$ ’ is and operates several formal differentiations: firstly, in the fact of expression; secondly, in the differentiation of subject and predicate; thirdly, in the function of the copula. If the expression of identity in the proposition entails the unity of the “three propositions” contained in it – the identity in S , the identity in p , and therefore the identities in ‘ S is p ’ insofar as both are identity and the copula

²⁷ Paraphrasing Schelling’s analyses at SW VII: 341; PIN: 13 and SW VIII: 213-4; WA: 8.

²⁸ SW IV: 120, tr. M. Vater as *Presentation of My System of Philosophy* (hereafter PMS) in M. Vater and D. W. Wood, ed., *The Philosophical Rupture between Fichte and Schelling. Selected Texts and Correspondance (1800-1802)* (Albany: SUNY, 2012), 149: “Absolute identity has surely never ceased being identity, and everything that *is* is, considered in itself, ... *identity itself*.”

asserts this²⁹ – this does not resolve identity into a logical simple, because the copula provokes an iteration of identity without end or issue, wherein each iteration differs from its antecedent and its consequent, but consequently upon differentiation. In other words, identity is environed insofar as the formal differentiation its iterations express are never summed, because the identity proposition is not extensional, that is, does not cover cases of entities that *are identical to one another*, but is iterative when anything exists. Hence even from the perspective of the unity lately expressed in the proposition, the asymmetry remains. Like the magnetic indifference point, identity only is if tensed in both directions, which tensions are identity divergently.

What of the universality of identity, or rather, the universe it is? No existent expresses a universal insofar as it genuinely is one, because no existent simply is it. If it were, the existing universe – nature – would not be identity, because identity would be just one amongst many existents. Accordingly, the universality of identity is achieved only if it cannot be conceived as separate from the “the universe” (SW IV: 125; PMS: 152), i.e. if it is not a finite form or a particular. Hence the putatively separable domain of logic or “space of reasons” is only such a domain consequently upon its “positively extaining [*positiv ausschließt*] the positive” (SW XIII: 152; GPB: 196, t.m.), or by being posited as such. Although therefore in the vicinity of existence, the being posited of the negative is the ground of its existence, an existence it shares with what it extains. Accordingly, the knowing of this means that extainment, too, is a copula (a disjunction), such that even in the case of the positing of the negative, or logic, as positively extaining the positive, the copula extends beyond it, connecting, as OR says, “the real and the ideal *in nature*”.

It follows that, to the question “what is the proper domain of the copula?” no domain may be given in answer that is not, insofar as it is a domain, similarly environed to the existents within it. The propositional expression of identity is the expression of a universe of propositions, which, if expressed, manifestly differs from the proposition expressing it insofar as such a

²⁹ SW VIII: 214; WA: 8: “There are actually three propositions contained in the above cited proposition [A = B]. The first, “A = x”, the second, “B = x”, and, following first from this, the third, “A and B are one and the same”, that is, “both are x”.”

proposition occurs and does so environedly. Similarly, the question “what am I thinking...?”, even when positively answered, and the empty subject position of the “what” consequently filled in, does not recover its dark upstream in its expressive downstream, but constitutes an iteration of what I have elsewhere called the “remains of the world”,³⁰ or what insuperably environs expression such that an expression is only the latest acquisition.

It is the same problem that makes matter and its idea “difficult and dark”: in a material universe, what part of it is matter?

2. (The Real and the Ideal) in nature: Is the Universe material?

Schelling begins OR by restating the Platonic problem of the darkness of matter, which is amphibolously³¹ dark both with regard to sense and intellect:

The darkest of all things, darkness itself according to some, is matter. Yet all the forms and living phenomena of nature result from the *involution, squaring* or *raising* [*Erhebung*] of this unknown root. Without the knowing of this, physics is without scientific grounds, even the science of reason is bereft of the copula connecting the idea to actuality.

(SW II: 359)

As with identity, so with matter: because “all forms” result from it, neither does it have, nor is it, a form itself. Matter cannot once be individuated, or has itself no position, because were it to be

³⁰ See my ‘The Remains of the World: Grounds and Powers in Schelling’s Later *Naturphilosophie*’, in *Schelling Studien* 1 (2014): 3-24.

³¹ For Kant, in the *Critique of Pure Reason* (A260-89/B316-46), the amphiboly stems from a confusion regarding the sourcing of a product in its faculty. To resolve the confusion, Kant proposes reflection concerning “in which of our cognitive faculties are our representations connected together? Is it the understanding, or is it the senses by which they are combined and compared?” Reflection achieves the proper environing of representations and the correct distribution of conjunctive and disjunctive judgments by the restriction of the copula. If reflection restricts the copula, Schelling’s intellectual intuition, diagrams, exhibitions, outlines and ectypes, are methods for its extension.

sufficiently local as to be susceptible of isolation, matter would be singular and isolated from the universe that it could no longer, in consequence, be.

To begin, we shall consider what predicates are attached to matter in this passage. Matter is first considered relatively, and then absolutely, dark. That is, it is first located amongst dark things, before it is said to be darkness itself, raising the distinction between exemplar and archetype, on the one hand, and between particular and universal, on the other. As regards the first: if matter merely exemplifies darkness, in what respect are other dark things dark? Are they, for instance, epistemically or merely sensibly opaque, that is, relatively dark but not darkness itself? If matter only exemplifies, but is not, darkness, darkness itself cannot be matter.

If, taking the second distinction, matter is particular, whatever else the universe might be, it will only partly be matter. If matter is a universal, however, in what respect is it differentiable, even on the scale of light and dark? In what respect, that is, would it be darkness itself, or *just* darkness, since its universality would entail that it also be instanced in light.

The analysis of identity has already shown that, for Schelling, the universe is the only measure of a universal, although in such a claim, it is rendered additionally particular. This is why the copula also connects the infinite and the finite, such that the latter is both an instance of the former, and the emergence of form from it.

Yet the passage does not only particularize matter as a logical universal. It additionally presents it as the “unknown root of all forms”, that is, that it is a morphogenetic universal or “the universe, the infinity of forms” (SW II: 362).³² Schelling’s particularization of matter as a *root*, precisely in the sense that it can be potentiated or raised, of a mathematically comprehensible morphogenesis,³³ is immediately countered by this root being qualified as

³² Biologist Alessandro Minelli writes, in *Forms of Becoming* (Princeton: Princeton University Press, 2009), 64: “the universe of possible forms can include a large, perhaps infinite, number that have not yet been realized. How then will we ever be able to know if one of our virtual butterflies can be included or excluded from the list of possible butterflies?”

³³ The tendency to consider morphogenesis mathematically, pioneered by Lorenz Oken’s mathematics of protoplasm, in *Elements of Physio-Philosophy*, tr. A. Tulk (London: Ray Society, 1847) and D’Arcy Wentworth Thompson’s *On Growth and Form* (Cambridge: Cambridge University Press, 1917), was reprised by René Thom in *Structural Stability and Morphogenesis* (Reading: Benjamin/Cummings, 1975). Yet morphogenesis is not reducibly

“unknown”. If, for example, the epistemic object that is a mathematical form is separable from the material essence that cannot be such an object, then the link between matter and morphogenesis is lacking, leaving the latter incomprehensible if the root remains unknown.

It is important to note, however, that Schelling’s claim is not that this root is a “thing”, sensibly or physically located amongst other things and merely therefore *in* a universe. Rather, as the root of a function, it obtains only when the function does. Since such functions do not terminate in their products, nor does the root enjoy finality of form, since (a) it can have none in itself, as we have seen, and (b) what forms it will generate are unlimited in principle.

Moreover, when the function does obtain, then as root of “all the forms and living phenomena of nature”, it must be subject to, as it were, a higher order exhibition that merely the existing or *present* universe. In other words, because matter is not said simply to *be* all forms, but rather their *root*, their “all” is subject to revision with every exhibition. Simply put, the “all” of forms has not obtained if the form in which this all is presented is not included amongst the others. Schelling’s qualification of this “all” as an infinity attests to its downstream non-finality,³⁴ since if this root is responsible for all forms, then the forms the exhibited all assumes must themselves derive from that same root, such that no exhibition exhausts it. Logically, too, the all is not-all precisely when it is posited, since the positing additionally environs the all with a form not included therein. Once this is known, the form in which the knowing is exhibited will itself be subject to the same non-finality, because the exhibition of all forms cannot in practise include the form of that exhibition.

This is why the root is separately unknowable, a condition the passage describes as threatening the scientific grounds of physics, for which therefore matter remains insuperably

biological, as Gilles Châtelet shows in *Les enjeux du mobile* (Paris: Seuil, 1993) and *L'enchantement du virtuel* (Paris: Éditions Rue d'Ulm, 2010). Émile Noël, ed. *Les sciences de la forme aujourd'hui* (Paris: Seuil, 1994) provides a general overview, while Alessandro Minelli, in *Forms of Becoming*, tr. R. Davies (Princeton: Princeton University Press, 2009) demonstrates the ways in which this program survives in contemporary evolutionary developmental biology.

³⁴ Minelli, *loc. cit.*, 89-90, discusses “finally getting rid of finality”, which entails two things. (1) Morphology must drop its prejudice concerning “mature” or “adult” form, since as chrysalis forming animals demonstrate, an organism has more forms than its adult state. (2) also dropping the geneticist assumption of the terminus of process in individuation, since not all processes individuate. Research is better served by a focus on *elementary operations*. (Minelli, *op. cit.*, 192-3.

dark, and the science of reason, for without knowing this root, it lacks the copula “connecting the idea to actuality”. Thus, in the first lines of OR, the copula’s function and range are explicit: it is because the copula connects idea to actuality that physics will have scientific, i.e. philosophical, *Wissenschaftliche*, grounds. Such grounds are not those of the special sciences, but precisely of the universal and systematic science associated with the German idealists’ concept of philosophy. Does this question qualify the discussion as reducibly epistemic or transcendental, concerned with the conditions under which alone knowing is known as knowing? Does it, moreover, demand that physics, the science of nature, has its ground *solely* in the satisfaction of this transcendental requirement, or that nature has its ground only in the knowing of it? This solution is immediately cast into doubt by the assertion following this apparent transcendental demand. The assertion concerns the copula or bond connecting the idea to actuality, which after all is how the essay is partly titled. So the question of the *knowing* of matter is tied to that of the *copula* or bond connecting the ideal and the real, or Idea and actuality (*Wirklichkeit*), which in turn provides the “scientific grounds” of physics.

As we have seen, the root is unsummable downstream, since the all to which it gives rise is made local in its exhibition. The root, that is, if, following its innumerable intermediary links,³⁵ descends throughout nature, is *drawn out of nature* in an exhibition that remains insuperably local insofar as it, being form and phenomenon, has this root in common with others and so adds to the universe of all forms. The point is not that the source is alone generative, so that, like Romantic explorers seeking Arctic light, the naturephilosopher must return there; rather, that forms are late acquisitions, i.e. generated, makes forms matter when generation is non-final. Matter, in other words, is not the subject of a finite set of properties, powers or ‘dispositional

³⁵ See SW III: 279, tr. K. R. Peterson as *Introduction to the Outline of a System of the Philosophy of Nature* in *First Outline of a System of the Philosophy of Nature* (Albany: SUNY, 2004), 199, where Schelling draws attention to the innumerable “intermediary links” obtaining in all natural phenomena if such phenomena form a coherent system of nature. It is not merely their number but their systematic interrelations that creates the problem that, if they are so coherent, then these links “may be unknown to us and remain hidden in the depths of nature”. Accordingly, the work of natural science, which consists in their discovery, and that of speculative physics, which exposes lacunae in the system, is not merely incomplete, but rather infinite.

predicates' (as he notes in the *Ideas for a Philosophy of Nature*, "a purely logical concept of matter is meaningless"),³⁶ but is only where morphogenetic potentials are expressed, since in being expressed, form is acquired in excess of the number of forms hitherto produced. Schelling therefore offers three reasons for the local character of matter:

- (1) It is itself "synthetic" (SW II: 235; IPN 188), 'copulative', or generated, the "sensible and visible *child* of nature" (OR: 360)
- (2) What is upstream of this root remains unknowable, because it is "unprethinkable" without the forms that arise from it, including the form in which it is therefore lately exhibited
- (3) Its downstream is material if it consists in additional forms, none of which are final, and this will always have been the case

In what then is "knowledge of this unknown root" to consist? In other words, what form are the scientific grounds of physics to assume? And if this ground is itself an expression of the connection of the idea to actuality, why do the grounds of physics require it?

Firstly, in accordance with this "synthetic concept of matter", we may note that the knowing of the unknown root occurs consequently upon it, both in the sense of after the fact, or better, after what it is I am thinking when I think what exists; and in the sense of being generated in consequence of it. Extrapolating from Schelling's analysis of the 'ground-consequent' relation in PIN, generation "in no way determines" what the generated is, but, since it is dependent on its generative root, only "that the dependent can only be as a consequent of that upon which it is dependent" (SW VII: 346; PIN: 18). Thus 'being generated' is a function of the copula insofar as this obtains in a material universe. The knowing of this universe will therefore be a form generated dependently upon it, and as such, will contribute to the matter of that universe, not in

³⁶ SW II: 235; tr. E. E. Harris and P. Heath as *Ideas for a Philosophy of Nature* (Cambridge: Cambridge University Press, 1988), 188. Hereafter IPN.

the sense that knowledge is made of the same *stuff*, but in the sense that the knowing of the universe obtains as a local element of it.

The copula connecting the idea to actuality is now supplied, although the form of the ground of physics remains to be established. If the “unknown root” presents a *deep field* for the knowing of nature, this is because it remains unknown insofar as it is insuperably upstream of the knowing of it. The form of the ground of science, however, is an *ultra-deep field problem*, because the knowing of the unknown root involves not only the unknowing of it because it is irretrievably past, like the Big Bang in respect to subsequent events in the universe, but additionally, because not only could no particular satisfy unprethinkable root-being, the “seed corn of the universe” (SW II: 223; IPN: 179) or the “primal germ” (SW VI: 388), but neither therefore could any conditions considered as necessary in the generation of forms provide the metric for any other. Hence the requirement that the universe of all forms be exhibited, and in being exhibited, that it be minimally one less than obtain, since the form of the exhibition of these forms cannot be amongst them, and that it be environed upstream and down by the *nie aufgehende* “what” that is locally thought.

3. The Natural History of Positing

The response to the problem concerning the source of generation, the *arche kineseos* or world soul from which, OR hypothesizes, morphogenesis across the totality of domains arises, is properly given in the *Würzburg System*: “everything is primal germ or nothing is” (SW VI: 388). What then is the totality of domains? According to this last claim, a totality is a totality only if it is additionally a primal germ, and, *qua* primal, not ultimate but made into an antecedent insofar as consequences that, by definition, cannot be it, issue downstream from it. That this totality is consequent does not therefore mean it is not totality, but that totality too is generative, that is, incomplete and environed. Similarly, a domain is one just when it produces another.

The essay at the centre of our inquiry notes in its title that the relation between the real and the ideal, between the matrix of natural generation and logic, is to be sought in nature. Yet nature does not answer the ‘totality of domains’ problem if nature consists in the isotropic morphogenesis Schelling hypothesizes it does. If nature is to be judged that ultimate environment from which all dimensional potentials issue, therefore the metadimensional source of dimensionality, the *arche kineseos*, then this is nature *posited*, whether by itself or by some other, somehow separated from it. Nature posited is nature expressed, and regardless of the medium of expression – gravity, light, logic, art or revelation – there is always an “earlier” one, as Schelling puts it (SW VII: 415; PIN: 98). Where therefore nature figures as *subject*, i.e. as the “what I am thinking when I think what exists”, but also in its “autarchy” (SW III: 17; FO: 17), it is already consequent upon its being expressed as such, that is, on the consequent predication of an antecedent, or on the production of grounds. This is not to say that there is a “nature itself”, an *abstract* nature without characteristics, but rather that where there are predicates, these follow a subject that only becomes what it is in that expression *by* that expression. Let us say then, that nature is source. What then would it be? The totality of what is antecedent to whatever it is that it is the source of. But what then would be consequent, since were the consequent not autonomous with respect to its antecedent, there would be no consequent. If what is consequent must be autonomous with respect of its antecedent, and if what is antecedent is nature, then the consequent is not nature, which is contrary to the hypothesis. In other words, the dimension of time does not facilitate the construction of the scientific construction of ground, if a ground is one when there is a consequent.

Perhaps we might claim instead, then, that nature is the “environment of all environments”. As we have seen, though, to be such a totality would entail that it be generative, in which case what exactly does it environ? Surely what environs is environed in turn if the primal, the root, is not to be located *once* or *only in one place*, but rather *eternally* and *in everything*? The primal, in other words, becomes one only if it is environed by generation. Moreover, since

matter is, according to Schelling, only the lately acquired morphogenetic root, and if the universe is a material one, it is similarly environed upstream as down. What then would the environment of all environments be? It certainly could not be spatiotemporal if these are dimensions of morphogenesis, since the environment of all environments must equally environ the production of forms, or no such meta-environment would obtain. Thus, nature is the environment of all environments on two conditions. First, that the morphogenetic universe is not the totality, but environs consequent totalities (the environment of all environments; the insuperable antecedent, and so forth). This means that the expressed or posited totality is a “universe in the universe” (SW VI: 207). Second, therefore, “Everything is primal germ” now states both that if there is emergence, there is only one case in which emergence does not occur: the case of nothing; and, if there is emergence anywhere, it is maximally non-local. Every exhibition of the universal exhibits the universe *in* a universe, but the exhibited universe is itself a morphogenetic instance.

We can now see the extent of the deep field problem of grounds or, as Schelling puts it, the infinity of forms: since no one candidate entity can satisfy the search for primals, all do. As Nicholas Rescher puts the point, “there is no limit to the number of natural kinds to which an entity may belong”.³⁷ This means that no intermediary link is not involved in the scientific transition from, let us say, the emergence of chemical matter, of gravitation and light, or of spacetime, to the emergence of positing, that is, the production of consequent primals in the extraction of logic *from* nature such that nature now *includes* this extracted logic as its consequently local exhibition. It further means that no set of dimensions or axes finally qualify as the unconditioned or absolute metric of nature’s exhibition, since this occurs wherever anything is at all. Thus, as the *form* of OR shows, positing has a natural history as dependent on chemistry, gravity and light as is planetary formation. Neither is there any difference in kind between the one and the other, since both produce their morphogenetic roots consequently upon their

³⁷ Nicholas Rescher, *Nature and Understanding* (Oxford: Oxford University Press, 2000), 24.

obtaining, and both sever nature into a before and an after, both of which, in both cases, nature remains.

What remains, therefore, of the form of scientific grounds? First, we have hinted at the topological complexity of Schelling's thought of the copula, to the fuller exhibition of which this essay is preparatory.³⁸ Suffice it to say two things in this regard for the present: first, with Schelling, that the copula in matter is not another, but only a "stricter" one than in reason (OR: 360). In other words, the Platonic problem of the *materiality of the idea* is satisfied by this account to the extent that the division between nature and logic must always be the effect of the understanding *in nature*, the "division of forces", as the *Freibeitschrift* describes its "first act" (SW VII: 361; PIN: 36).

Second, in the essay we have been considering, as in the *First Outline*, the *World Soul*, the *Universal Deduction of the Dynamic Process*, and the *Exhibition of the Natural Process*, but also in the dimensional diagrams that pepper UD, the magnetic lines that gradually transform into the *reduplicatio*³⁹ of propositions within propositions, and then into the *Weltformel*,⁴⁰ or the fascination with Aristotle's ethological modelling of behaviour in the *Darstellung des rein-rationalen Philosophie*,⁴¹ Schelling's project is the morphology or topology of the sheerly but not merely ideal insofar as this consists in the self-augmentation of the real, rather than as a supersession, suspension, replacement, or merely epistemic elimination, a "raising up" into something higher than it, of nature. This is why, I would suggest, naturalistic idealism outflanks eliminative realism of the side of the real, and why it outflanks the reducibly conceptual on the part of the ideal. If the ideal, finally, adds to the catalogue of real forms, this is because nature is generalizably transcendental with respect to its own sources. It is because of this ultra-deep field logic that nature remains the darkest of all things, or darkness itself, according to some.

³⁸ See my *Remains of the World: Schelling's Later Naturephilosophy*, forthcoming.

³⁹ For Schelling's account of *reduplicatio* or "reduplicative positing", see his *Einleitung in die Philosophie*, ed. W. E. Ehrhardt (Stuttgart-Bad Canstatt: Frommann-Holzboog, 1989), 55-6. See also SW X: 103, tr. A. Bowie as *History of Modern Philosophy* (Cambridge: Cambridge University Press, 1994), 117.

⁴⁰ SW VIII: 312; WA: 84

⁴¹ See especially Lecture 19, SW XI: 433-56.

